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REPORT

OF THE

COMMISSIONER OF EDUCATION

FOR

THE YEAR ENDED JUNE 30, 1910

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VOLUME I

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THE UNITED STATES
BUREAU OF EDUCATION.

Created as a Department March 2, 1867.

Made an Office of the Interior Department July 1, 1869.

COMMISSIONERS.

HENRY BARNARD, LL. D.,
March 14, 1867, to March 15, 1870.

JOHN EATON, PH. D., LL. D.,
March 16, 1870, to August 5, 1886.

NATHANIEL H. R. DAWSON, L. H. D.,
August 6, 1886, to September 3, 1889.

WILLIAM T. HARRIS, PH. D., LL. D.,
September 12, 1889, to June 30, 1906.

ELMER ELLSWORTH BROWN, PH. D., LL. D.,
July 1, 1906, to date.

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REPORT OF THE COMMISSIONER OF EDUCATION.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, October 1, 1910.

SIR: It is generally understood that we have in this country no national system of school administration. The primary responsibility for educational control rests with the several States. No one, I am sure, would seriously propose that the States be relieved of this responsibility or of the powers which accompany it. But the nation can not be indifferent to that which forms the character of its citizens, upon which every national hope and aspiration depends. While we have no national system of schools, we have a national programme of education. This programme, in the nature of the case, must grow with our national growth; and every enlargement of our national power, resources, aims, and influence calls for a reexamination of our educational establishment to see whether it is keeping pace with the new requirements.

The annual reports of the Commissioner of Education are in effect a running account of the progress made by the nation in the carrying out of this educational programme. But our aims become more definite as they are brought nearer to realization. So these reports are equally a record of the progressive definition of our programme. While we seem to have gone forward rapidly in both the understanding and the performance of the work we have to do, it is pretty well agreed that in many particulars we are still laggard. This annual record of movements and events should not only clarify our aims, but should concentrate attention upon those points where special endeavors are most needed.

AMERICAN EDUCATIONAL ORGANIZATION.

In this introductory chapter of my report for the year 1910, accordingly, a new attempt will be made to set forth some of the main features of the American educational programme and to point out some of the places at which there is need of improvement.

Our educational organization, answering as it does to our federal plan of government, presents peculiar advantages as regards the making of a varied, flexible, yet inherently unified system of instruction. It is an organization not readily understood by foreigners. It offers many obstacles to the carrying out of any plans for rapid and uniform improvement. Yet the self-governing character of its several members is of itself an incalculable advantage. Whatever unity is attained must be an inner unity, an agreement through conviction. There are a thousand forces working for unity and capable of giving us all of the unity that we need. To bring those forces to their finest influence, to do generously and effectively the things which under our form of organization may rightly be done, and by so doing to maintain through all the changes of history that national character which is to make us a unit of concentrated and uplifting influence among the nations—this is, in part, the work of American education.

Stated in the briefest terms, the essential elements of our educational organization are the following: First, the school and university systems of the several States; secondly, the same state systems as united in free cooperation in matters of common educational interest; thirdly, the provision made by the Federal Government for the encouragement and furtherance of education under these state systems.

Such provision by the Federal Government has taken three forms: The granting of public lands for education in the several States, beginning shortly before the adoption of the Federal Constitution and culminating in the grants for agricultural and mechanical colleges in 1862; the establishment, in 1867, of the Federal Education Office, which aids the States by its information service and furthers their cooperation; and, finally, the distribution of federal funds, under the oversight of the Bureau of Education, in aid of agricultural and mechanical colleges in all of the States, under the acts of 1890 and 1907.

Other facts necessary to the most general understanding of our national organization of education are the following: That our public systems, which form the backbone of the educational provision in all of the States, are freely supplemented by institutions privately supported and privately managed; that we have been working out a peculiarly close integration of the several grades of education, elementary, secondary, and higher; and that historically our education is in the main liberal and general in its character, instruction of a technical and professional sort being an offshoot from this central trunk.

If we add that in our educational activity we have shown ourselves hospitable in a marked degree to experiments, to incidental developments, and to all manner of popular extensions of the field of education, we have a fairly comprehensive statement of what American

education has been and is endeavoring to be. The following paragraphs of this introduction will deal with certain of the newer aspects of the programme outlined above, while the succeeding chapters of this volume and the statistical tables and miscellaneous matter to be presented later in its companion volume will give a more detailed view of the present situation, with particular reference to occurrences and movements of the past twelve to fifteen months.

THE BUREAU OF EDUCATION.

1. Inasmuch as the office occupies a position central, in a measure, to the whole problem and movement, it is fitting that some statement should be made at this point concerning the recent history of the Bureau of Education. We are here concerned simply with what has been done toward rendering this office better able to perform its part in carrying out our national programme.

The most marked advance of the past year in the work of the bureau appears in the employment of specialists in certain educational subjects, with particular reference to the work of those specialists "in the field." This office has long been provided with specialists in foreign educational systems. It has been seen that the employment, also, of competent specialists in various branches of American education would be necessary if it is to do its proper work. More and more it becomes clear that the activity of such specialists, both in the collection and in the diffusion of information, can best be accomplished through visits to educational institutions, offices, and conventions in different parts of the country. During the past year two men have been employed in such capacity, namely, Dr. Harlan Updegraff, as specialist in school administration (under the statutory designation of collector and compiler of statistics), and Mr. Arthur C. Monahan, as specialist in land-grant college statistics. Congress has further provided for a specialist in higher education, a position which will undoubtedly be filled in the near future.[a]

The work of the specialists in higher education and in land-grant college statistics will be mentioned later. (See pp. 9–10.) The specialist in school administration will give attention particularly to service in the interest, first, of the several state offices of education, and, secondly, of the offices of our city school systems. This work has already become of so great importance that a separate division has been erected in the Bureau of Education to deal with such matters, the specialist in school administration being designated as chief of that division.

The method of dealing with the work of this office which has been indicated above, has been received with evident approval in

[a] Since the above was put into type the position referred to has been filled by the appointment of Dr. Kendric Charles Babcock, for the past seven years president of the University of Arizona.

all parts of the country. Information has come to this office of a concerted effort on the part of many of our educational leaders to secure provision for carrying this plan into full operation. The step proposed would involve the employment of at least ten additional specialists, with provision for travel, publication, and other incidental expenses, involving an initial expenditure of $75,000 annually. In the estimates which I have submitted for the next fiscal year I have included this amount, distributed over the items indicated. The addition of even so modest a sum to the current appropriations would enable this office to make a fair beginning, though only a beginning, on the larger work which is now called for.

In my report for the year 1909 (p. 28), mention was made of the removal of the bureau to fairly commodious and convenient quarters in one of the large government buildings. The rearrangement of the library in these new quarters has made it a more serviceable instrument for the work of the office. The organization of a new corps of specialists and field agents renders the library more than ever a useful and indispensable part of the office equipment, particularly that large part of the collection which is made up of official documents, American and foreign. The library becomes a source of wide and accurate information on which the newly appointed specialists may lean with confidence.

Equally important for the success of the new undertakings is the publication service, through which the corps of specialists may gain the widest hearing for whatever of value they may have to present. This branch of the office has been strengthened by the addition of Mr. Milo B. Hillegas as editor. Mr. Hillegas has now become the head of the reorganized editorial division. Under his direction various changes are to be made with a view to rendering the publications of the office more immediately and generally useful.

William Torrey Harris, former Commissioner of Education, died at Providence, R. I., November 5, 1909. He was the fourth incumbent of the office, in which his term of service was the longest hitherto, extending to nearly seventeen years, from September, 1889, to June, 1906. The personal distinction which he brought to the office and the extraordinary service which he rendered in this position would call for extended notice were it not that eulogy of former officials has been held to be out of place in a governmental report. Appreciative reviews of Doctor Harris's life have appeared in numerous publications. A selected list of such articles is appended to this chapter. (See p. 25.)

HIGHER EDUCATION.

2. Proceeding to a consideration of recent developments touching our educational programme in its several branches and divisions, we come first to our institutions of higher education.

The lively discussion of college and university problems, which was so conspicuous a feature of the preceding year, was carried over into the earlier months of the year just closed. It showed our higher education as rounding a turn in the road. Every year, to be sure, in any living institution is a time of transition, but there can be little doubt that a turn of unusual importance has been taken here, and that the most of our higher institutions are affected by it. The talk has undoubtedly gone further than the turn. We see, indeed, more clearly what we are turning from than what we are turning toward. President Lowell recently remarked that "the fact is we know very little about higher education. The whole subject is one that needs to be scientifically studied, and as yet it has received very little attention of that kind." But while this discussion has thrown much of our scholastic tradition into the melting pot, the process of remolding is going on. It lacks as yet in clear conviction as to the changes which should be made. It can hardly be said that the assured and convincing leadership which is called for has yet appeared. There is need of more analytic study of the facts concerning our higher institutions, their endeavors and their performance, and still more need of constructive interpretation of those facts. I am confident, however, that the colleges and universities are making some progress toward finding themselves on the new track.

A few of the developments of the past year may be mentioned. They offer, here and there, some ground for the confidence which has been expressed:

An effort to make higher education more coherent has brought the subject of college electives into prominence. The discussions that prevailed during the earlier part of the year have been followed by action in several institutions. In his annual report to the trustees of Tufts College for the year 1909–10 President Frederick W. Hamilton says:

> I believe * * * that it is quite possible to do much to counteract the evil effects of the elective system upon the arts course in Tufts College without sacrificing the important principle whose recognition led to the establishment of the elective system. * * * Plans are now being prepared for a reorganization of our bachelor of arts courses which it is hoped to put into effect with the beginning of the fall term of 1910.

The faculty of arts and sciences of Harvard University has adopted new rules for the choice of electives. All the subjects taught in college are classified among four groups. A student must take something in each group, and at least six courses in one department or in one recognized field for distinction. With reference to this change President Lowell says:

> No one would claim that the new system is perfect. No doubt it can be, and will be, greatly modified and improved by experience. * * * It is an attempt

to construct a positive system of education upon definite principles, and a system that is well fitted to the traditions of Harvard College, because it leaves the initiative with the student himself. * * * The essence of the system is that it holds up before a student a positive standard of education, and the setting-up of that standard alone is of inestimable value.

The democratic movement in higher education has taken definite form in several important administrative changes. In October, 1909, the College of the City of New York entered upon a series of night sessions. Speaking of the character of the students, Dr. Stephen Pierce Duggan, director of the evening sessions, says "their experience in life gave them a consciousness of the need of education that could not be expected of the day students." Columbia University has reorganized its extension service, providing classes and laboratory work at the university during the evening and classes at various places in the adjacent country during the day. Fresno, Cal., is the first city to make provision for the two-year postgraduate high-school course recently authorized by the legislature of that State. It will aim "to carry students through the first two years of college or university work."

One of the noteworthy efforts to bring the higher education into closer relations with the industries has been the establishment of ten fellowships in industrial chemistry in the University of Kansas. The latest university catalogue declares that "the university believes the best training for an industrial chemist is pure chemistry. * * * It will accept from corporations or individuals of business standing and integrity fellowships for the solution of industrial problems of public importance."

Unusual interest attaches to the provision which has been made in several Commonwealths for uniting those higher institutions which are directly controlled by the State, under a single state board of control. The advantages in the way of economy and harmonious management which such a scheme presents are obvious.

The constitution of South Dakota, as also that of Montana, places all state institutions under the control of a single state board. Minnesota erected a state board of control of public institutions in 1901.

A Florida statute of 1905 concentrated the several state institutions of learning then in operation under a single board of control. This board, an appointive body, was made subject to the state board of education, which is a constitutional body, consisting of five of the principal officers of the political administration of the State, ex officio. This act has come into general notice because of a controversy regarding the respective powers of the board of control and the board of education.

West Virginia, in February, 1909, provided for the concentration of the educational management of the state university and state normal school and their branches, and two institutes for colored

students, under a state board of regents, subject to the financial oversight of a state board of control. The board of regents consists of four appointed members, receiving an annual salary of $1,000 each, and the state superintendent of free schools, ex officio. The board of control consists of three members, receiving an annual salary of $5,000 each. This board of control is charged with the additional duty of managing the state penitentiary, and various state schools and hospitals.

A month later Iowa concentrated the administration of its state university, college of agriculture and mechanic arts, and normal school, under a single state board of education of nine members, with the provision that " not more than five of the members shall be of the same political party," and " not more than three alumni of the above institutions, and but one alumnus from each institution may be members of this board at one time." This board appoints a finance committee of three members, also bipartisan, from outside of its own membership. Members of the state board receive a per diem and traveling expenses. Members of the finance committee receive each an annual salary of $3,500 and mileage, and devote their whole time to the duties of the office. Both the West Virginia act and that of Iowa went into effect on the 1st day of July, 1909, and have accordingly had their first trial during the past academic year.

Mississippi has followed, with an act of April 14, 1910, placing the administration of the University of Mississippi and three other state educational institutions under the sole supervision and control of one board of trustees. This board, appointed by the governor, with the approval of the state senate, consists of seven members, " one of whom shall be a practical farmer, one a practicing lawyer, one a practical builder or architect or factory man." One additional trustee is appointed for the university. The members of this board receive a per diem and mileage, their service beginning with the 1st day of July, 1910.

This movement toward a unification of state institutions of higher education must be regarded as one of large significance. Attention should be called, on the other hand, to one grave danger against which the States should be on guard in making any such adjustment. The ability of a higher institution of learning to serve the State depends upon its ability to maintain an honorable standing in the world of science and the arts. Any provision which should hamper it as regards the getting of first-rate men for its teaching body and first-rate students for its student body is to be avoided, if the institution in question is to have the continued respect and confidence of the State and continue to be an effective servant of the State.

The centering of public interest upon our state universities and their relations with other educational institutions is one indication of a

genuinely democratic movement in our higher instruction. Ezra Cornell proposed to establish "an institution where any person can find instruction in any study." President Van Hise has gone further, in declaring that: "So far as the University of Wisconsin is concerned we propose to take up any line of educational work within the State for which the university is the best fitted instrument." And he adds, "It is my ideal of a state university that it should be a beneficent influence to every citizen of the State."

One provision of great interest has been made in the State of Massachusetts to meet the wider need of collegiate instruction, through an institution which is private in form but closely connected with the public educational system. The Massachusetts College was incorporated in February, 1910, on the initiative of prominent citizens of that State and with the approval of the reorganized state board of education. It contemplates the giving of instruction of collegiate grade wherever it may be in demand throughout the State, using for that purpose on occasion public school buildings and the buildings of the state normal schools. Requirements for admission, courses of instruction, and the granting of degrees in this unique college are all to be subject to the approval of a committee on degrees, not otherwise connected with the college, and appointed for the purpose by a board of advisers representing the other institutions of higher learning in the State.

In an important sense, the work of higher education the country over is one great national undertaking, the prosecution of which is divided out among many institutions. By it our place in the world's civilization and our prestige before the more enlightened of our sister nations is largely determined. But in making secure our standing in the opinion of mankind, it has more tangible and immediate benefits to render to our people in their life at home. It is a patriotic duty of the highest order that our colleges and universities, in all of the States, should get away from the more injurious forms of competition and enter into more effective cooperation.

An agreement among the colleges with respect to admission requirements, which should do away with minor differences that harass the preparatory schools, would rid the educational situation of some of its most serious embarrassments. There is a great deal of possible division of labor, particularly as regards instruction and research in graduate schools, which is not yet realized. There is much to be done in the way of a general survey of our present provision for advanced instruction, with a view to determining where immediate enlargement is needed. The excessive variations in the worth of our academic and professional degrees is still a cause of reproach to us abroad and involves much of injustice as among our people at home.

The correction of these evils and weaknesses is in the main the work of the higher institutions themselves, for the highest must always make their own standards. The private foundations that have of late set forward so forcefully the standardization of colleges and schools, are a conspicuous illustration of that free interaction of public and private agencies which is a characteristic of the American plan. Yet these foundations will undoubtedly do some of their best service in awakening a public sentiment which shall eventually lead to public action. And when public action shall be taken in any of these important matters it will generally come to its best by proceeding in harmony with the best progressive opinion of the universities themselves.

These considerations accentuate the importance of a unification of university opinion on university questions which are of general concern. Such shaping of university opinion should proceed on the basis of thorough-going cooperative studies of the questions at issue. There are several national organizations in which the representatives of colleges and universities meet together from time to time. Conspicuous among these are the Association of American Universities, which held its eleventh annual conference at Madison, Wis., in January last, and the National Association of State Universities, which enjoyed last year the hospitality of Harvard University, meeting in the faculty room at Cambridge shortly after President Lowell's inauguration. These two organizations have both concerned themselves with the making of a working definition of a university. While the two definitions proposed are not in full agreement, they are not far apart. It is greatly to be desired that the two bodies should come to a common understanding in this matter. By so doing they can set up a standard which will give direction to the uncertain endeavors of many institutions and will give to our scholastic degrees in widely scattered institutions some ascertainable meaning.

There is no national association of colleges, of scope and character corresponding to that of the university associations mentioned above. This fact alone shows something of the separatism which has characterized our institutions of this type. It is a thing to be desired that American colleges should get together and recognize their work as a common and national work, as American universities have begun to do.

It will be no small part of the work of the specialist in higher education who is to be employed in the Bureau of Education to collect and give out information concerning matters which are of common interest to our colleges and universities. When his work is fully organized, it should facilitate the closer study of the problems of higher education and the cooperation of widely scattered institutions in the national service which they are to render. More specifically,

he will have to do with the improvement of the statistics and accounting of these institutions, and with those improvements in administration to which statistics and accounting are tributary; with the recording and reporting of such information concerning academic and professional standards as may be required in answer to inquiries at home and abroad; with the indexing of current graduate studies in this country, to the end of furthering cooperation among our graduate schools; and with a variety of special studies, publication, and other service which may be found useful and practicable.

Closely related to the duties of the specialist in higher education are those of the specialist in the work of the land-grant colleges. The notable group of institutions for higher instruction in agriculture and the mechanic arts which has been built up in this country under the direct encouragement of the Federal Government has begun to emphasize the national unity of their work through the Association of American Agricultural Colleges and Experiment Stations. An important outgrowth of that organization is the Graduate School of Agriculture, which meets from time to time for a summer session at some selected institution. A freer and more rapid diffusion, among the members of this group, of information concerning improvements in any one of them which might be the seed of improvement in others, would add much to the sum total of their contribution to the general welfare. I am convinced that there are much larger services to be rendered by some of these institutions than have hitherto been possible. The Nelson amendment, for example, with its provision that a portion of the new funds may be used in the training of industrial teachers, opens up ways in which they can greatly serve the States in which they are severally situated and the nation at large. The best efforts of the newly appointed land-grant college specialist will be devoted to this cause.

The land-grant colleges have been active during the past year in establishing and improving their facilities for the preparation of teachers of agriculture and the mechanic arts, and in establishing and developing their departments for extension work. Thirty colleges out of 52 are now giving special instruction in preparation for teaching; 19 have organized departments of agricultural or industrial education and are giving instruction in pedagogical subjects as well as in agriculture and the industries; 30 are conducting summer schools primarily for public-school teachers, where they may receive instruction in agriculture and agricultural teaching; and 40 have departments equipped for extension work.

The agricultural extension movement was stimulated by the action of the Association of American Agricultural Colleges and Experiment Stations at its annual meeting held in Portland, Oreg., in August, 1909, when an amendment to its constitution was adopted,

admitting a "section on extension work" upon equality with the two sections then in existence. The experiment stations, since their establishment in 1887, have accumulated a mass of practical and scientific information concerning agriculture, which the colleges now propose to bring to the farming population in usable form. By movable schools and farmers' institutes the teachers of agriculture and the experiment station investigators are coming into direct contact with these people and the contact is of mutual benefit. The new provision for traveling specialists in the States of Idaho and Georgia is a conspicuous example.

College departments of education and of agricultural extension are joined in a cooperative movement for the betterment of the rural schools. To this end, in addition to the summer schools already mentioned, the colleges in some of the States, notably Florida, Kansas, Massachusetts, and Pennsylvania, are offering correspondence courses for teachers, and several have established departments of rural education under the charge of an instructor who directs and gives advice in all matters relating to the teaching of agriculture and allied sciences in the schools. Such provision in the States of Florida, Kansas, Mississippi, Oklahoma, and South Carolina may be mentioned.

STATE SCHOOL SYSTEMS.

3. The fourth conference of state superintendents of public instruction with representatives of the Bureau of Education, was held at Indianapolis, on the 3d of March, 1910, the subject for discussion being "Desirable uniformity and desirable diversity in the educational legislation of the several States." Eighteen States were represented at this meeting, fifteen of them by their chief education officers. The third conference of this series, held at Denver, July 8, 1909, was mentioned in my annual report for 1909 (p. 65).

The spirit of state cooperation has found expression more recently in a conference of the representatives of eight States of the Middle West, which was held at Lincoln, Nebr., May 31–June 1, 1910, to consider the special question of desirable uniformity in the licensing of teachers and in the interstate recognition of teachers' certificates. This bureau was represented at the Lincoln conference by its specialist in school administration, who has undertaken, with the help of several state offices, the preparation of a general survey of the provision for the granting of teachers' certificates in all of the States. This inquiry is of itself important; but more important is the growing disposition on the part of the States to enter into cooperative undertakings, where the educational system in each of them may be strengthened by the concurrent action of all. A conference for the further consideration of state uniformity and interstate comity in the matter of teachers'

certificates will convene at Salt Lake City, on the 17th of November, 1910.

On the whole, the movements of the time are tending to strengthen the state education offices and to devolve upon them enlarged responsibilities. This is notably true of the various movements in the interest of industrial education. Individual state superintendents are accentuating this tendency by the positive leadership which they are contributing to a progressive educational programme in their respective States. The more frequent meeting together of representatives of the several state offices has quickened their activities. A striking example of such association was the tour of inspection of educational offices and institutions, and of certain cooperative enterprises in rural life, made by a group of thirteen Southern State superintendents under the auspices of the Southern Education Board in October, 1909. This party visited the rural schools in Page County, Iowa; a district agricultural school and several typical cooperative creameries, cooperative elevators, and cooperative stores in the vicinity of St. Paul, Minn.; the Dunn County School of Agriculture and Domestic Science, the Dunn County Training School for Teachers, and the Stout Institute and Manual Training School, at Menomonie, Wis.; the Winnebago County School of Agriculture and Domestic Science in Winneconne, Wis.; and the University of Wisconsin, at Madison.

It is plain to see that the growing centralization of educational influence and educational administration in the States is raising new problems touching the fundamental plan of state school organization. Reference has been made to the centering of public interest, in many of the States, upon the institutions of higher education, and particularly upon the state universities. These institutions have shown of late extraordinary power of appeal to the public imagination and to public confidence. In many of the States there is a growing disposition to repose in the universities responsibility not only for scientific instruction and research, in matters vitally affecting the public welfare, but also for the administration of affairs to which the sciences are severally related. Now, the universities bear a threefold relation to affairs of public education. They are the crowning members of closely integrated educational systems; they send many of their graduates into the schools as superintendents and teachers; their departments of education investigate questions relating to educational improvement, as their other scientific departments investigate other questions of public interest. These relations come to a focus in provision for the admission of high-school graduates to the colleges of the university, and in the highly organized systems of inspection of high schools which in many States have grown up with the admission of candidates on certificate.

Under these circumstances, the state education office, with its small staff serving under a superintendent whose tenure of office is relatively brief, even though backed up by statutes conferring considerable powers, can not exert the consecutive and cumulative influence in the educational affairs of the State which the academic institution exercises. In some States there are other state institutions, having large power and prestige, which further complicate the situation.

No State, I am sure, which has come to expect its schools to be guided and inspired by the highest academic influences will be content to give up that advantage for a system of merely bureaucratic control. On the other hand, where administrative responsibilities come to crowd and interrupt the scholastic pursuits of university faculties, some relief must be found through a well-adjusted division of labor. In other words, a bureaucratic school administration, if such were erected, could not permanently satisfy any State, neither could an incidental administration by bodies organized for academic purposes be permanently satisfactory. It seems inevitable that these conditions, so rich in elements of the greatest significance for the civilization of a State, must lead to modifications in many of our state systems of school administration. Such modifications must, to all appearance, take the form of a better distribution of academic and administrative functions, together with a better coordination of those functions.

Important school legislation has been enacted in several of the States during the past year, notably in New York, Ohio, and Virginia. The reappointment of Doctor Draper as commissioner of education of the State of New York for an indefinite term, while not unexpected, was a significant event. The reorganization in that State of the whole system of local school supervision outside of cities promises a large improvement in the efficiency of the rural schools. In Virginia the new state supervisors, of both white and colored rural schools, have made a most hopeful beginning, and such provision is extending to other Southern States. Massachusetts, Ohio, and Virginia have strengthened their legal provisions touching the labor of children, and New Jersey its provisions relating to juvenile delinquents. Virginia has brought about a coordination of several forms of agricultural extension through the establishment of an agricultural board. New York has provided for the pensioning of teachers in state institutions, without deductions from their salaries. The recasting, on large lines, of the state educational system of Massachusetts has gone steadily forward. These few notes will give some indication of the wholesome trend of current educational enactments and measures of administration. A list of references to recent publications having to do with the organization of state educational systems is appended to this chapter (see p. 26).

The heaviest and most direct responsibility for educational performance is generally that which rests upon our city systems of schools; and there is no point where accurate and intelligible statistics are of more use in the improvement of educational practice. A committee on uniform statistics was appointed by the Department of Superintendence of the National Education Association at its meeting at Indianapolis in March, 1910. This committee concerns itself with city statistics as well as with those of the States and of minor areas of administration. When it comes to city systems, the superintendents' committee meets with the activities of a still younger body, the National Association of School Accounting Officers, whose cooperation promises to be of the greatest value.

A preliminary meeting for the organization of this association was held at Washington, in the office of the Commissioner of Education, the 16th and 17th of May, 1910. The new organization voted to include in its inquiries not only the financial side of the school administration, but also the wider range of city school statistics, in so far as they have a direct bearing upon the measurement of results. The Director of the Federal Census, as well as the Commissioner of Education and other representatives of both bureaus, participated in the discussions, along with others concerned in a more general way with the improvement of educational reports. The valuable cooperation of the Census Office in the endeavor to improve the fiscal reporting of the larger city systems was mentioned in my report for the year 1909 (p. 28).

The Bureau of Education is in a position to serve as the pivot and focus of these simultaneous undertakings. The fact should not be disguised that, even with all of these forces operating concurrently, the thoroughgoing reform of our statistical and accounting systems must proceed slowly. But I am now confident that within three or four years substantial progress will be visible under such cooperation, and that the improvement in statistics and reports will work toward very considerable improvements in education. This bureau will give its best efforts to the advancement of the undertaking by the shortest possible course.

The year has shown the usual progress in the city school systems of the country. Interest here has centered upon such special activities as the open-air schools of Boston, New York, and Chicago, and the steady extension of medical inspection; the continued advance of the trade-school idea in New York, Philadelphia, and other cities; the combination of schooling and apprenticeship in Cincinnati, Fitchburg, and Providence; arrangements for finding employment for graduates of the schools, as in Boston and Louisville; and the increasing attention paid to backward and otherwise exceptional children in special schools and classes.

The interest in provision for exceptional children in the schools was strikingly illustrated and furthered by the meeting of the department of superintendence of the National Education Association at Indianapolis in March, 1910, the programme of which was almost wholly devoted to a consideration of various differences among children which should be reflected in the provision for instruction and training in the schools.

Generally speaking, it may be said that moral training, industrial education, and education for health, are paramount concerns in the forward movement of this present time. The attention which they command is justified by immediate needs. They present intricate and difficult problems, and the contributions of any one year to the solution of those problems must be fragmentary at best.

Among the recent landmarks in the literature of industrial education are the reports concerning trade schools presented respectively to the American Federation of Labor at its Toronto meeting in November, 1909, and to the National Association of Manufacturers at its New York meeting in May, 1910; the committee report adopted by the National Society for the Promotion of Industrial Education at its Milwaukee meeting in December, 1909, calling for a general investigation of the subject, under federal authority; the report on conditions in the State of New York, prepared by Mr. Charles R. Richards and published in the twenty-sixth annual report of the New York bureau of labor statistics (1909); and the monograph on "Education for efficiency in railroad service," prepared by Mr. James Shirley Eaton and published in the bulletin of the Bureau of Education (1909). A valuable annotated bibliography is appended to Director Richard's report.

The Dolliver bill for the granting of rederal aid to the several States for the promotion of secondary instruction in agriculture and the mechanic arts was favorably reported from the Senate Committee on Agriculture and Forestry shortly before the close of the recent session of Congress. The Davis bill in the House, containing the same provisions, has not been reported.

Two important contributions to the literature of education for health have been made during the year in the volume on "Open-air schools" by Dr. Leonard P. Ayres, of the Russell Sage Foundation (Doubleday, Page & Co., 1910, p. 17+171), and the series of articles in the American Physical Education Review (1909–10) by Prof. William H. Burnham on "The hygiene of physical training."

SECONDARY EDUCATION.

4. In different portions of the country the old-time controversy respecting the relations of public high schools to colleges and universities has been revived with more than its usual intensity. The

objections to conditions now obtaining where there is a state university admitting students on certificate, have been forcibly set forth by State Supt. C. P. Cary, of Wisconsin, in a communication to the board of university regents of that State. Superintendent Cary refers to the fact that his office is required by law to organize, inspect, and approve of high schools, and to grant state funds to those approved and withhold such aid from all others. He presents the following objections to the present arrangement:

1. The present system is a double-headed one in which the state department finds it exceedingly difficult to perform in a satisfactory way the duties required of it by law.

2. University inspection of high schools is often done by experts, each of whom wants his specialty to have the lion's share.

3. Educational affairs to-day, as relates to the course of study particularly, are in great ferment and a crisis is imminent.

4. A university is essentially a conservative institution and yields to modern movements with great reluctance.

The case of an eastern high school, where there is no state university and students are more generally admitted to college on examination, was recently set forth as follows by Mr. John P. Cushing, head master of the New Haven High School:

Some of our trouble in high schools in the past has arisen from the dictation from higher institutions. All of the well-known numerical commissions on one study or another have been controlled by college men; and each committee has been impelled by the desires of its own specialists. These findings, in turn, have been handed over to the high schools for adoption. The result is that we have a mass of stuff, each subject arranged in due order by its own promoters, without much regard to the other subjects; and the result has brought about a decided overburdening of our courses, and the end is not yet.

On the other hand, the New York *Nation*, commenting editorially in its issue of July 14, 1910, on some of the papers presented at the meeting of the National Education Association at Boston, said:

Now, in simple truth, a great deal of the talk about colleges by such persons as those from whom we have quoted is merely rubbish. * * * The terrible hardship of differentiating between courses designed to be followed by a college training and those that are not rests, so far as we can see, upon the idea that a college has no rights that a true democrat is bound to respect. It may be that the objects which a college pursues are not worth pursuing; but so long as it does pursue them, it must of necessity demand, on the part of entering students, such preparation as is necessary for their attainment.

On the subject of the injury done to secondary schools by the dominant part played by college-entrance examinations much might reasonably be said. The need of taking the examinations into account does unquestionably hamper many an earnest and enthusiastic teacher, and prevents him from giving to his students all that he might give through a freer play of his individuality. It is probable that ways and means might be found by colleges to lessen this evil. But the question to which these outbursts of hostility or contempt direct attention is far deeper than this. They touch not college methods, but college aims. They challenge the underlying idea of college education.

Still more recently, Dr. Marion LeRoy Burton, in his inaugural address as president of Smith College, spoke as follows:

> In regard to the matter of entrance requirements in America we have arrived at no entirely satisfactory solution. * * * If a method of entrance to college could be devised which would relieve the secondary schools of many of the deadening evils incident to the present system, * * * much would be accomplished for our educational system as a whole. * * * Such far-reaching results are probably to be found in the adoption of some form of the method of college entrance now in vogue in some institutions which is based almost entirely upon a personal knowledge of the student's record, ability, and personality. Examinations and certificates are not to be discontinued, but they alone should neither admit nor exclude a student.

One of the institutions to which Doctor Burton refers is undoubtedly Columbia University. The Columbia plan was described by President Butler in an address before the Association of Schoolmasters of New York and Vicinity in April, 1909, which closed with the following declaration:

> The introduction of the human element into the administration of college admission requirements and into the college admission examinations is the way out of our difficulties. In the creation of the committee whose existence and functions I have described, we at Columbia have done the best we know how to do toward accomplishing this end. (Educational Review, v. 38, p. 172, September, 1909.)

The high school indeed occupies a critical point, in the center of the field, and different fires converge upon it. This is in part the reason why the high school question is the one which reveals most clearly the change which, gradually and without observation, has been coming over our state systems of educational administration, and out of which more obvious and organic changes are undoubtedly to come.

There are two considerations of a general character which are central to this whole problem: In the first place, it is not merely a demand of the universities, but a genuinely popular demand that our high schools should bridge the gap between the grammar schools and the colleges, offering to all pupils a well articulated series of educational opportunities, from the lowest to the highest. In the second place, where the standards of secondary education are uncertain and fluctuating, the colleges must fix their own standards of admission or give up the hope of maintaining an honorable position in the academic world.

The historic situation, in which our secondary schools have been held up to a creditable grade of excellence by the admission requirements of the colleges has, then, been amply justified in the past. It is not yet outgrown. But every year it becomes more unsatisfactory, in spite of many incidental improvements made in the past genera-

tion; and we must now look forward to a time when it can be superseded by some different arrangement, which shall be as good for the colleges and better for the schools.

Now that a large part of the responsibility for college preparation falls to the public high schools, it is not to be forgotten that the college and university authorities, in prescribing their entrance requirements, are in effect passing legislation for the control of public education. It is of the utmost importance that such quasi legislation should be based on a broad understanding of the position and needs of the secondary schools. Irritation naturally arises when high-school men discover or believe that this or that specific entrance requirement is the result of a compromise between rival departments of a given college or university, in which departmental aspirations rather than the essential requirements of secondary education have been the sole consideration; or when it is found that some other requirement insists upon the preparation of students for the pursuit of a given subject in college, when, under an elective system, great numbers of students never pursue that subject in college.

What is really needed from the side of the colleges is chiefly this, that the high schools bring their students up to an intellectual stature and maturity fairly corresponding to their age at high-school graduation, with that combination of disciplines, intellectual, esthetic, and moral, which enables competent freshmen to lay hold upon a difficult scholastic undertaking and compel it to yield to them its goods. Wherever the high schools can be depended on to do this, the colleges may safely accept what such schools may send them, only guarding occasional courses by special examinations after the candidates shall have matriculated. Or, to adopt a more moderate and objective statement, whenever the high schools of a given area shall have reached a point where in the absence of entrance requirements they would send to college students as well trained and as mature as those they now send, then the colleges may fairly dispense with detailed entrance requirements. There might be added the proviso of a reasonable expectation that the quality of the candidates should continue to improve with a reasonable advance of college standards from year to year. It is doubtful whether the high schools of any State have as yet reached this general level. How could it be expected, indeed, when the attendance on high schools is increasing so rapidly and the demand for competent high-school teachers is growing with the growth of the supply? In the country at large we are undoubtedly far from any such consummation.

The situation is one which calls for patience and continual readjustment on both sides. It is, moreover, on both sides beset with serious dangers.

As regards the universities, particularly those under public control, there is the danger that in some States the irritation which arises over this question from time to time may result in unfavorable legislation, limiting the power of the higher institutions to determine their own entrance requirements. This danger makes clear an obligation which rests equally upon all colleges and universities, that they study objectively the needs of the schools and the effect of their own requirements upon the schools. There is no subject, I think, which calls for more careful investigation by university methods, uninfluenced by concern for the narrower interests of the university as an institution, than does this subject of public secondary education. And whatever the universities may do for the elevation of the secondary schools by other ways than that of using their own entrance requirements as a lifting jack, is worthy of their thoughtful attention.

The dangers of the situation as regards the high schools are no less acute. These schools are affected by forces pulling upon them, not only from the colleges above and the grammar schools below, but from the varied life of the communities which they serve. The new demands, which may be roughly grouped under industrial and commercial education, must give them anxious thought. There are those who fear that the high school as an institutional type may fall into disfavor unless it can readily adapt itself to the new needs of the time, as the Latin grammar school of colonial days declined before the rising academies, and less than a century later the academy declined before the new popularity of the high schools. Either a modified and broadened high school or a school of different type altogether may fairly be expected in time to dispute the preeminence of the high school as it is to-day. But the high school is still on a rising tide, and its possibilities of readjustment to new needs are very great.

It can, indeed, command the present situation if it can bring together its forces on a strong, progressive programme. In many of the States the teaching force of the high schools, if they were agreed upon definite improvements touching their relations with the colleges, would be met with full and ungrudging acceptance of their proposals. It is a responsibility resting upon the general body of high-school teachers and accentuated by the highest considerations of public service and patriotism that they study the ways in which these schools can best serve the public good and make clear that the new courses and methods which they may propose are as sound and disciplinary and uplifting as the older alternatives.

If the situation, on the whole, is one that calls for patience, it is not one that calls for inaction. There is need rather of active effort

toward improvement. Such effort may fairly have in view as its ultimate end, whether near or remote, a system of secondary education so well organized and conducted that it may be trusted to prepare students for entrance upon the higher education in the ordinary course of imparting a good secondary education, without close prescription from above of the subjects to be pursued and without the need of a separate test from above of each individual specimen of its product. It goes without saying that such a system of secondary education must have standards of its own, and reasonably high and constant standards. While much freedom for local variation is desirable, there must be back of it some generally recognized norms of excellence, which shall take account of all of the larger relations and responsibilities of high-school instruction.

One illuminating passage in the year's history of our secondary education was the controversy in the North Central Association of Colleges and Secondary Schools respecting the relation of the Chicago high schools to the accrediting board of that body. Much interest has been shown in the experiment now making in Berkeley, Cal., with a six-year high school following a six-year elementary school, and in the proposal by a committee of school men of a similar plan for the city of New York. Attention has been drawn also to new high-school buildings in several cities, as in Altoona, where unusually close relations have been established betwen the public schools and the shops of the Pennsylvania Railroad, and in Los Angeles, where an interesting group of buildings has been erected for the technical high school.

A list of references to recent publications bearing on the relations betwen high schools and colleges is appended to this chapter (see p. 29).

MARGINAL ACTIVITIES.

5. There are many activities closely related to education which have received a large measure of attention in recent months. Libraries and museums, apprenticeship, public playgrounds, home-and-school associations—such interests as these are sometimes treated as lying just outside of the educational inclosure. There is, however, an unmistakable tendency to widen the inclosure, and to bring these things into some relation with the regular scholastic administration.

There are, moreover, numerous undertakings which look to an extension of educational opportunities to those who have left school and have passed the age of compulsory schooling. Evening and other " continuation " schools, public lectures, correspondence courses, home studies of the Chautauqua type, are all familiar examples.

Some of these things are distinctively American, and have helped to make our reputation for educational enterprise abroad. Others are

better done in foreign countries than in our own, and we are learning from their experience. The thing to be noted here is the way these undertakings, even if privately managed at first, keep gravitating toward the main body of our educational system.

It is well to look forward and see to what end such changes are tending. I have no doubt that we shall always have a variety of these marginal enterprises under private direction; pioneer work, largely, in fields that have not been fully explored. But the taking over of such activities into our public systems of education may lead to results which are seldom even imagined.

It may bring us to a new interpretation of "universal" education, broader than that which fired the zeal of the advocates of common schools in the eighteenth and the early nineteenth century, and larger even than that indicated by the liberal utterance of Ezra Cornell; no less, indeed, than this, that modern States shall eventually see to it that any citizen of any age, who seeks instruction in any subject, shall find such instruction provided for him, according to his desires, his needs, and his ability to learn: not necessarily provided in soft ways nor always at public expense, but made actually available by ways that are within his reach. The newer plans of the University of Wisconsin venture a long way in this direction.

The new attention to playgrounds and play opens up another avenue of approach to this end; for play is closely connected with the educational interests of health, of free expression, and of music, the drama, and the dance, through which we come into the field of the fine arts. Moreover, those associations of parents and teachers which are accomplishing a great enlargement of the out-of-school uses of our public-school buildings bring work and play together in ways that are wholesome and interesting.

The annual convention of the Playground Association of America, held at Rochester in June, 1909, laid a strong emphasis on such ideals as have been suggested above. This convention, held in a city which has been conspicuous for its leadership in these activities, was largely attended and made a deep impression upon those who witnessed the proceedings.

SOME FUNDAMENTALS.

6. It seems clear that the enlargement of the scope of public education, referred to above, is destined to go on indefinitely. Indeed, such a forward movement is not only inevitable, but desirable, representing as it does one of the best tendencies of our democracy. The legal bearings of this movement were briefly set forth, as follows, in the opinion of the supreme court of Michigan in the Kalamazoo high-school case, in 1874:

> Neither in our state policy, in our constitution, or in our laws do we find the primary school districts restricted in the branches of knowledge which their

officers may cause to be taught or the grade of instruction that may be given if their voters consent in regular form to bear the expense and raise the taxes for the purpose.

In these days the voters consent with all readiness to bear the expense and raise the taxes for a great variety of these newer activities. While this attitude is to be applauded and the most of the newer activities are to be regarded as calling for unqualified support, there is occasion also for the strongest possible emphasis upon the old and basic needs of our educational establishment. There be three of those needs which occasion anxious thought; yea, four of them will have the attention of wise men in our generation: The need of good teachers, of good schoolhouses, of good school attendance for full terms of school, and—equally important under modern conditions—of adequate supervision.

As regards all of these needs, it may be said that we have become so habituated to present conditions that we fail to see how discreditable some of them are to us as a nation and how unfair to many of our young citizens.

The recent growth of our state normal schools and the spread of provision for the professional training of teachers in colleges and universities on the one hand, and in rural high schools on the other hand, is on the whole encouraging. Yet the circumstances attendant upon the teaching profession are still unsatisfactory, the membership of the teaching body is still too unstable, and the proportion of teachers who are equipped with professional training or adequate experience or both is still too low. Far-reaching improvements, much farther reaching than any that have recently been made, will be necessary to enable the teaching force of this country to measure up to the responsibilities with which it is charged.

Our expenditures for school buildings excite the wonder of foreign visitors, and many of the single buildings of this class in our towns and cities are undoubtedly among the best in the world. Yet, on the other hand, money is often wasted on ornamentation which is not even ornamental, the sanitary condition of city schoolhouses is in many instances unsatisfactory, and in many country districts the schools are still wretchedly housed. A number of our state and city offices of education are laboring assiduously to remedy these defects, and progressive county superintendents, not a few, are rendering good service in the same direction. Many years ago this office put forth a circular of information (1891, No. 3, *Sanitary conditions for schoolhouses*, by Albert P. Marble), which has been widely useful in furthering improvement in schoolhouse construction, and is in demand to the present day. With a view to giving further stimulus and guidance to such improvement, I have had a bulletin prepared on schoolhouse construction, which is now in press and will appear in

the near future. (Bulletin, 1910, No. 5, *American schoolhouses*, by Fletcher B. Dresslar.)

In my first report I called particular attention to the need of increased effort for the improvement of school attendance (see Report of the Commissioner of Education for 1905, p. xlix–l). The extension of the area of compulsory school attendance has gone forward, but the number of young Americans who are allowed to grow up with only meager schooling is still distressingly large. Several independent statistical studies of school attendance in cities have been made within the past four years and considerable difference of opinion has appeared touching the interpretation of the data at hand. Yet the curves of school attendance plotted by the several statisticians who have made these studies all show essentially the same form for the higher elementary or grammar grades, and all alike indicate a lamentable falling off in those grades.

The subject of county and rural school supervision received special attention in my annual report for the year 1907 (p. 19–25). Some important advances have been made in this regard within the past three years. There is no form of public school improvement which shows good results more quickly and unmistakably than an improvement in supervision. I have been particularly impressed of late with the changes which have been made in this way in Vermont and other New England States, in which the supervision is by townships or unions of townships; and in Virginia and other southern States, in which a positive advance is led by agents attached directly to the office of the state superintendent of public instruction. The new law for school supervision in the State of New York is also full of promise. Yet there is much more to be done, and many other forms of betterment are waiting upon better provision for supervisory activities.

There are many educational organizations outside of the teaching profession which are carrying on a propaganda in behalf of better schools for our people. The attention of such organizations and of our citizens generally is called with all urgency to the four things of fundamental concern which have been mentioned in these later paragraphs. A long and hard campaign will be required to bring our American education up to what it should be in these particulars, with due regard for our prestige abroad and for the general welfare at home.

The topics touched upon in this introduction and many others are mentioned in the chapters following, which are largely devoted to a careful presentation of such facts as could be obtained and verified, up to this time, concerning the more important educational movements and occurrences of the past year. The second volume of this report, which is to appear about three months later than the one

presented herewith, will contain statistical tables showing recent educational progress in this country, together with an account of the Alaska service of the Bureau of Education. Particular mention should be made of the committee under whose immediate oversight the present volume has been prepared, a committee consisting of Mr. L. A. Kalbach, chief clerk and acting commissioner; Miss Anna Tolman Smith, translator; and Mr. Alexander Summers, statistician. Owing to losses from the staff of the editorial division, and particularly to the fact that for a large part of the year that division was unavoidably without a head, the volume has been prepared under unusual difficulties. It is due to the extraordinary labors of the committee referred to and of those associated with them that it goes to the printer in better form than might have been anticipated and at the time appointed.

All of which is respectfully submitted.

ELMER ELLSWORTH BROWN,
Commissioner.

The SECRETARY OF THE INTERIOR.

WILLIAM TORREY HARRIS.

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CHAPTER I.

CURRENT TOPICS.

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I. EDUCATIONAL BOARDS AND COMMISSIONS.

GENERAL EDUCATION BOARD.

The following statement of the work of the General Education Board was furnished by the assistant secretary of the board, Mr. E. C. Sage:

The General Education Board has three main lines of work:

(1) The promotion of practical farming in the Southern States;

(2) The development of a system of public high schools in the Southern States; and

(3) The promotion of higher education throughout the United States.

I. THE PROMOTION OF PRACTICAL FARMING IN THE SOUTHERN STATES.

For the first three years of its existence the board, through its representatives, made a careful study of public education in the Southern States. As a result of this study it reached the conclusion that the greatest present need of that part of our country is the increased productive efficiency of rural life. Eighty-five per cent of the people of the Southern States live in the country and by farming.

Careful inquiry was therefore made in the United States and in other countries regarding methods of delivering to farmers the practical agricultural knowledge that has been developed by national and state departments of agriculture, experimental farms, etc. In the course of this inquiry the representatives of the board met Dr. Seaman A. Knapp, who by demonstration farms was successfully combating the boll weevil in Texas and Louisiana. It was the opinion of the board that the demonstration-farm methods of Doctor Knapp could be employed successfully in promoting general agriculture as well as in combating the specific enemy of the cotton industry. A conference was therefore had with Secretary Wilson, of the United States Department of Agriculture, who agreed that Doctor Knapp, who is a special representative of the Department of Agriculture, might supervise the work in other States than Texas and Louisiana, provided funds for that purpose might be secured. The General Education Board, through the Department of Agriculture, under the above agreement, beginning in the early part of 1906, has made contributions for this purpose now aggregating $398,700. For the fiscal year 1909–10 the appropriation was $113,000. The latest report from Doctor Knapp shows that in the States thus aided by the General Education Board 162 men are at work supervising the demonstration farms and 19,843 farmers are pursuing improved agricultural methods under such direction. He further estimates that 187,680 farmers are pursuing similar work as influenced by those farmers who are under the immediate supervision of the agents. This work has attracted the favorable attention of the Farmers' Union of the Southern States, of agricultural colleges, public school authorities, and the public press. Under the auspices of Doctor Knapp special state agents have been appointed in the several Southern States, who are conducting demonstration work among the boys of the public schools. Several thousands of boys from 12 years of age and up, under the general designation of Boys' Corn Clubs, are "learning by doing;" that is, instead of studying text-books on agriculture they are performing practical agricultural demonstration on their fathers' farms and are making these experiments the basis of agricultural study in the schools. In his latest communications to our office Doctor Knapp says that the work is developing in importance and value far beyond his most sanguine expectations.

II. THE PROMOTION OF PUBLIC HIGH SCHOOLS.

The general study on educational conditions in the Southern States led the board to believe that the greatest lack in that region and, therefore, the greatest need was of public high schools. It is the policy of the board to do this work through existing organizations. Arrangement was therefore made with the several state universities in the Southern States whereby such universities could assume the leadership and direction of a movement designed to develop systems of high schools. Appropriations have been made by the General Education Board to the state universities in the following States: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

The General Education Board appropriates to each university a sum sufficient to pay the salary and traveling expenses of a special high school representative. This man, representing the university and the state department of education, goes to counties throughout the State, arouses and organizes public sentiment favorable to high schools and secures the establishment and maintenance of public high schools. In the following States we are able to give exact figures. The following high schools have been established: Alabama, 33; Florida, 10; Georgia, 46; Louisiana, 22; Mississippi, 37; North Carolina, 198; South Carolina, 85; Tennessee, 43; Virginia, 229.

As a result of this cooperative initiative on the part of the General Education Board 703 new high schools have been established and $6,390,780 have been raised by the people for buildings and equipment.

Of this work President Eliot, who has recently made a journey through the Southern States, has said: "It is the most valuable piece of constructive educational work now going on in the United States."

III. THE PROMOTION OF INSTITUTIONS OF HIGHER LEARNING.

The General Education Board uniformly makes its gifts for endowment. Colleges throughout the country decide how much money they wish to raise at a given time. Application is made to the General Education Board. A careful study of the institution is made covering both its financial and educational strength. It is studied not only as a particular institution of learning, but in its relation to higher education generally in a particular State. Then to approved institutions the board makes contributions toward the total sums which they themselves have decided to raise. These contributions are made absolutely to the trustees of the several institutions and the General Education Board exercises no supervision or control in any case. It first decides that the institution is worthy of aid and then makes its gift without any string attached to it. It is the conviction of the members of the board that they ought not to assume any supervision or control of the educational work in colleges.

Appropriations by the board for higher education have been made as follows:

In the Southern States	$1,537,500
In the Western States	2,185,000
In the Eastern and Middle States	1,555,000
Total	5,277,500

These gifts on the part of the General Education Board are toward an approximate total of $23,000,000, which total sum represents the increase of educational endowment and equipment, largely made possible by the contributions of the General Education Board.

SCHOOLS FOR NEGROES.

The board since its organization has contributed $464,015 to schools for negroes. The greater part of this contribution has been made to schools which train teachers. Contributions have also been made to schools founded and maintained by negroes where such schools have had connection with organizations that afford supervision and audit.

In this connection it should be said that negro farmers have shared fully in the cooperative demonstration work supported by the board under the supervision of Doctor Knapp.

CONCLUSION.

It should be noted that the policy of the General Education Board is to work through existing institutions and agencies and not itself to undertake independent educational work.

These contributions for agricultural demonstration work are expended under the supervision of the United States Department of Agriculture, which, through its accredited representatives, has entire control of such expenditures. Payments are made by the General Education Board for this work on vouchers certified by representatives of the Department of Agriculture.

It seeks to promote public high schools not by sending its own agents into the several States to do this work, but by enabling state universities and state departments of education to do the work. Here, again, the direction and supervision of the work is entirely in the hands of the accredited representatives of the States.

Its contributions to colleges are not for specific departments in colleges or universities nor for particular kinds of education. The contributions are made to the trustees of the colleges, who have full power to direct the expenditure thereof. The only promise required by the board in making its gifts is that the money which it gives shall be invested and preserved inviolable for the endowment of the college or university.

Appropriations made by the General Education Board during the year ending June 30, 1910.

To colleges and universities	$1,210,000
To public high-school propaganda	30,200
To farmers' cooperative demonstration work	113,000
To schools for negroes	87,000
To other objects	17,451
Total	1,457,651

The following is a summary of the financial report of the board, giving a general view of the principal, income, and expenditures of the different funds under the jurisdiction of the board for the year ending June 30, 1910:

(1) *John D. Rockefeller special fund* (subject to order of Mr. Rockefeller).—The principal of this fund amounted to $12,390,176. The income (including balance and amount accrued but not yet paid) was $1,236,194. Gifts to institutions were: University of Chicago, $290,909; Rockefeller Institute for Medical Research, $462,597.

(2) *The Rockefeller fund.*—Principal, $30,918,064; reserve, $1,196,810; total, $32,114,873; total net income, $4,399,681.

Payments made on account appropriations.

Agnes Scott College	$31,892
Howard University	11,975
Knox College	40,405
Western Reserve University	58,692
University of Wooster	24,812
Union College	95,167
Yale University	137,819
Coe College	26,712
Maryville College	21,333
Western College for Women	17,906
Morningside College	50,000
Macalester College	64,945
Mercer University	11,000
Washington University	89,929
Spelman Seminary	12,000
Richmond College	27,857
Randolph-Macon College	5,938
Wofford College	3,796

Fisk University	$5,000
Wake Forest College	4,952
Lafayette College	10,607
Hampton Normal and Agricultural Institute	10,000
Tuskegee Normal and Industrial Institute	10,000
Total	772,737

The remainder of the income is accounted for as follows: Expenses, $23,426; investments, $2,708,577; income receivable, $205,290; balance in hand, $689,393; Lafayette College, interest on installment not yet paid, $258.

Payments on account of appropriations for salaries and expenses of professors of secondary education.

University of Alabama	$3,000
University of Arkansas	3,000
University of Florida	1,000
University of Georgia	1,700
State department of education, Louisiana	3,000
University of Mississippi	2,500
University of North Carolina	3,000
University of South Carolina	3,000
University of Tennessee	1,922
University of Virginia	3,000
University of West Virginia	1,250
Total	26,372

Payments on account of appropriations to educational institutions.

Americus Institute	$3,000
Florida Baptist Academy	1,000
Calhoun Colored School, in full	2,625
Jeruel Academy, in full	1,000
Howe Institute, in full	2,000
Mississippi College, on account	4,540
Union University, on account	5,062
Total	19,227
Southern Education Board: Appropriation for year 1909–10	10,000

(3) *John D. Rockefeller annuity fund.*—Receipts: Balance July 1, 1909, $12,261; received from Mr. Rockefeller on account of pledge, $165,000; interest, $705; miscellaneous, $50; total, $178,016.

Payments on account of appropriations for farmers' cooperative demonstration work.

Administration	$5,309
Alabama	3,121
Florida	6,258
Georgia	23,137
North Carolina	18,707
South Carolina	14,944
Virginia	15,548
Total	87,024

(4) *Rockefeller Institute for Medical Research.*—Principal of fund, $2,632,840 (June 30, 1910, Mr. Rockefeller gave $3,641,236 additional to this fund); income, $145,565; amount forwarded to treasurer of institute, $124,500.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING.

In the Fourth Annual Report of the Carnegie Foundation for the Advancement of Teaching (October 1, 1908–September 30, 1909) President Pritchett discusses the following questions: Current business for the year, the working of the rules for retirement, tax-supported institutions, educational administration, and educational problems and progress.

During the year 115 names were added to the roll of those receiving retiring allowances, and the total grant for the year amounted to $176,890. Of those admitted to the benefits of the foundation, 62 were professors and 13 were widows of professors in accepted institutions; 37 were professors and 3 widows of professors in institutions not accepted. Forty-seven of the number were retired on the basis of age, 40 on the basis of service, and 12 on the basis of disability. The general average of retiring allowances for the year was $1,538.17. The total number of beneficiaries September 30, 1909, was 318, and the total grant in force at that date was $466,320. Six institutions were admitted to the privileges of the foundation during the year, as follows: Swarthmore College, University of Michigan, University of Minnesota, University of Toronto, University of Wisconsin, University of Missouri, and Coe College.

The Randolph-Macon Woman's College was withdrawn by action of the trustees of the college from the privileges of the foundation, and George Washington University was retired from the accepted list.

During the year the state legislatures of 32 States adopted resolutions requesting the admission of their respective state institutions to the privileges of the foundation.

In one State, that of Nebraska, the resolution favoring this action was defeated, and the resolution passed by the Texas legislature was not signed by the governor of the State.

The exchange of secondary school teachers between the United States and Prussia has been in operation for two years. The details of the exchange are in charge of the Prussian minister of education for Prussian teachers and the Carnegie Foundation for American teachers. During the year 1908–9, 9 American teachers were assigned to Prussian schools and 6 Prussian teachers were assigned to schools in the United States.

In regard to the benefits to be derived from an exchange of teachers, President Pritchett says:

I wish again to call attention to the fact that American secondary schools and those who are in charge of them have not yet begun to appreciate, in my judgment, the benefits to be had from this exchange. One can scarcely imagine a better means of stirring the life of the American high school than to receive into its corps of teachers for a year a well-trained teacher from a German gymnasium, nor can one imagine any experience any more likely to quicken the life of a secondary school than to have its head master or one of its teachers spend a corresponding time in a German gymnasium. Notwithstanding these evident advantages, the exchange still presents some singular anomalies. There are many American teachers ready to pay their expenses in order to have this opportunity, but very few American secondary schools are ready to go to any expense in order to enable the teachers to take advantage of the opportunity. Furthermore, very few secondary schools have as yet been willing to accept a Prussian teacher. It has been hard to overcome the idea that these teachers take the place of regular teachers of German, whereas the plan carefully provides that such a teacher is an additional influence in the school, dealing with the teaching of the language from an entirely different point of view and bringing also the help of the experience of a well-conducted school in another country.

On the other hand, Prussian schools are glad to take American teachers for a year and to give such teachers full access to their schools and full share in the associations which the school life brings.

There are, therefore, many openings for the American teacher who may volunteer, but hitherto there have been few openings in the United States for the German teachers who are ready to come.

The most important action of the trustees of the foundation during the year was the amendment of the rules for retirement. The rules now in force were adopted November 17, 1909, and are as follows:

RULE 1. Any person sixty-five years of age, who has had not less than fifteen years of service as a professor, or not less than twenty-five years of service as an instructor or as instructor and professor, and who is at the time a professor or an instructor in an accepted institution, shall be entitled to an annual retiring allowance, computed as follows:

(*a*) For an active pay of twelve hundred dollars or less, an allowance of one thousand dollars, provided no retiring allowance shall exceed ninety per cent of the active pay.

(*b*) For an active pay greater than twelve hundred dollars the retiring allowance shall equal one thousand dollars, increased by fifty dollars for each one hundred dollars of active pay in excess of twelve hundred dollars.

(*c*) No retiring allowance shall exceed four thousand dollars.

Computed by the formula: $R=\frac{A}{2}+400$, where R= annual retiring allowance and A= active pay.

RULE 2. Any person who has had twenty-five years of service as a professor or thirty years of service as a professor and instructor, and who is at the time either a professor or an instructor in an accepted institution, shall, in the case of disability unfitting him for the work of a teacher as proved by medical examination, be entitled to a retiring allowance computed as follows:

(*a*) For an active pay of twelve hundred dollars or less, a retiring allowance of eight hundred dollars, provided that no retiring allowance shall exceed eighty per cent of the active pay.

(*b*) For an active pay greater than twelve hundred dollars, the retiring allowance shall equal eight hundred dollars, increased by forty dollars for each one hundred dollars in excess of twelve hundred dollars.

(*c*) For each additional year of service above twenty-five for a professor, or above thirty for an instructor, the retiring allowance shall be increased by one per cent of the active pay.

(*d*) No retiring allowance shall exceed four thousand dollars.

Computed by formula: $R=\frac{A}{100}(b+15)+320$, where R = retiring allowance, A = active pay, and b = number of years service.

RULE 3. A widow who has been for ten years the wife of a teacher, who at the time of his death was in receipt of a retiring allowance, or who at the time of his death was eligible to a retiring allowance, or who had had twenty-five years of service as a professor, or thirty years of service as an instructor and professor, shall receive as a pension one-half of the retiring allowance to which her husband was entitled under Rule 1, or would have been entitled under Rule 2, in case of disability.

RULE 4. In the preceding rules, years of leave of absence are to be counted as years of service, but not exceeding one year in seven. Librarians, registrars, recorders, and administrative officers of long tenure whose salaries may be classed with those of professors and assistant professors are considered eligible to the benefits of a retiring allowance.

RULE 5. Teachers in the professional departments of universities whose principal work is outside the profession of teaching are not included.

RULE 6. The benefits of the foundation shall not be available to those whose active service ceased before April 16, 1905, the date of Mr. Carnegie's original letter to the trustees.

RULE 7. In counting years of service toward a retiring allowance it is not necessary that the entire service shall have been given in institutions upon the accepted list of the foundation, but only years of service in an institution of higher education will be accepted as an equivalent.

RULE 8. In no case shall any allowance be paid to a teacher who continues to give the whole or a part of his time to the work of teaching as a member of the instructing staff of any institution.

RULE 9. The Carnegie Foundation for the Advancement of Teaching retains the power to alter these rules in such a manner as experience may indicate as desirable for the benefit of the whole body of teachers.

FLEXNER REPORT ON MEDICAL EDUCATION.

The most important publication issued by the Carnegie Foundation during the year is the report on medical education, prepared by Mr. Abraham Flexner. The president of the foundation, Dr. Henry S. Pritchett, in his introductory statement, has explained very fully the considerations that gave rise to the investigation, the results of which are embodied in this report. Apart from those financial considerations that determine in great measure the nature and spirit of such investigations, as conducted by the foundation, the report will undoubtedly prove of great aid in the efforts made by the medical associations and medical schools to raise the standard of medical education. The value of the investigation, in this respect, is recognized even by those who take exception to many of its findings and conclusions. The

subject will be treated somewhat fully under the head of medical education, in the second volume of the commissioner's report.

JOHN F. SLATER FUND.

At the forty-second meeting of the trustees of the John F. Slater fund, held in New York City May 6, 1909, the finance committee recommended that $80,000 be designated for appropriations for the year 1909–10, and the educational committee presented a report recommending that the sum of $66,950 be appropriated to 34 schools and colleges for the colored race. At the forty-third meeting of the trustees of the fund, held in New York City December 8, 1909, the educational committee recommended that $4,500 additional be appropriated for the year 1909–10 to 11 schools for the race named. Upon recommendation of the educational committee the following resolution was adopted at the latter meeting:

Resolved, That in future appropriations in aid of public schools be in the form, where practicable, of appropriation for equipment or buildings, preferably for industrial work, in return for a stipulation of annual support.

The trustees of the fund for the year 1909 were as follows: William A. Slater, president; Melville W. Fuller, vice-president; John A. Stewart, Alexander E. Orr, Cleveland H. Dodge, Seth Low, Wallace Buttrick, David F. Houston, Wickliffe Rose, Richard H. Williams, Walter H. Page.

The field agents are G. S. Dickerman, New York City, and W. T. B. Williams, Hampton, Va.

PEABODY EDUCATION FUND.

The trustees of the Peabody education fund, at a meeting held in Washington, D. C., January 31, 1910, arranged to convey $1,000,000 of the principal of the Peabody education fund to the George Peabody College for Teachers, located at Nashville, Tenn. The action was taken in view of the fact that the prescribed conditions, namely, that the State of Tennessee, the city of Nashville, and Davidson County should donate the sum of $500,000, had been fulfilled.

The contribution from the Peabody fund is to be held as a permanent endowment, only the net income to be applied to the maintenance of the college; the bonds issued by the city of Nashville ($200,000) are to be used "for the erection of buildings, or providing equipment, or for the increasing of the permanent endowment;" the donation of the State of Tennessee ($250,000) is for "the establishment, support, maintenance, and use" of the George Peabody College for Teachers.

STATE EDUCATIONAL COMMISSIONS.

The policy of appointing state commissions to advise as to the means of bringing state systems of education into closer accord with

present demands has been adopted during the year by the five States named below. Reports are also noted showing the continuance and progress of previous commissions.

ARKANSAS EDUCATION COMMISSION.

The Arkansas education commission, recently appointed by the governor of the State, held its first meeting July 28, 1910, and decided to issue at an early date a preliminary report embracing the following subjects:

1. Historical statement of formation of commission.
2. Review of the work of similar commissions in other States.
3. Need of work of commission in the State of Arkansas.
4. Discussion and suggestions for the improvement of the state school system along the following lines: (*a*) Establishment of a state board of education; (*b*) consolidation of weak schools; (*c*) state aid for town and country high schools.
5. General appeal invoking the sympathetic cooperation of all patriotic citizens.

It was proposed, also, to hold public meetings in different parts of the State, and to issue a series of bulletins from time to time on the progress of the work.

For the purpose of crystallizing public sentiment and eventually influencing legislation, the commission issued circular letters to the ministers of the State, asking them to deliver sermons on public-school education in Arkansas during the month of August.

The officers of the commission, which consists of 21 members, are George B. Cook, state superintendent of public instruction, ex officio chairman, Little Rock; Dr. Henry S. Hartzog, secretary, Arkadelphia; B. A. Fletcher, Augusta; R. H. McCullough, Beebe; J. H. Reynolds, Fayetteville; B. B. Hudgins, Harrison; J. T. Cowling, Ashdown; J. W. Kuykendall, Fort Smith; W. E. Womble, Womble; Jacob Trieber, Little Rock; J. H. Heiskell, Little Rock; Clio Harper, Little Rock; A. C. Millar, Little Rock; B. D. Brickhouse, jr., Little Rock; Mrs. T. P. Murray, Little Rock; J. J. Doyne, Conway; Jack Bernhardt, Dumas; J. C. Knox, Monticello; J. H. McCollum, Hope; and R. N. Garrett, El Dorado.

COLORADO EDUCATIONAL COMMISSION.

Upon recommendation of the superintendent of public instruction, and in conformity with a resolution passed by the State Teachers' Association, the governor of Colorado, under date of March 21, 1910, appointed an educational commission, charged with the following duties:

To make a thorough investigation of the school system and all the educational interests of Colorado, and the laws under which the same are organized and operated; to make a comparative study of the school systems of Colorado and the laws of such other States as may seem advisable; and to submit to the chief

executive of Colorado a report, embracing such suggestions, revisions, corrections, and amendments, as the committee shall deem appropriate, to the end that the free public-school system shall be maintained for the good of the public in a most thorough and uniform manner, as contemplated and directed by the constitution.

The members of the commission are Hon. Frank E. Gove, Hon. William B. Tibbetts, Hon. John J. Tobin, Charles E. Chadsey, superintendent of city schools, Denver; Prof. W. B. Mooney, State Normal School, Greeley; Frank E. Thompson, superintendent of city schools, Canon City; and Mrs. Katherine Cook, state superintendent of public instruction.

IDAHO STATE SCHOOL LAW COMMISSION.

An act of the legislature of Idaho, bearing date March 15, 1909, provides for a commission charged with substantially the same duties as those of the Colorado commission.

The Idaho commission is required to submit a report to the eleventh session of the legislature of Idaho, which report shall show the results of all investigations made as above provided; together with a complete statement of the proposed amendments or additions to the school laws of Idaho. The sum of $500 was appropriated to carry out the provisions of the act.

The commission, which is to continue in office until April 1, 1911, consists of three members, one of whom, by the terms of the law, must be the state superintendent of public instruction.

MAINE COMMITTEE FOR THE INVESTIGATION OF INDUSTRIAL EDUCATION.

An act of the legislature of the State of Maine, approved March 12, 1909, authorized the expenditure of $1,000 for the year 1909, and a like sum for the year 1910, under the direction of the state superintendent of public instruction, for the purpose of making a special investigation of the needs of the State in relation to a system of vocational or industrial education, together with an investigation into the methods adopted by other States and countries for meeting similar needs.

Dr. Payson Smith, state superintendent of public instruction, appointed the following persons to serve on the committee: Francis R. North, principal of high school, Portland, secretary; Dr. George E. Fellows, president of the University of Maine; William E. Sargent, principal of Hebron Academy; C. S. Stetson, Greene; E. M. Blanding, Bangor; and Charles O. Beals, Auburn.

A report of the committee will be made at the next session of the legislature which convenes in January, 1911.

SOUTH CAROLINA EDUCATIONAL COMMISSION.

An act of the general assembly of the State of South Carolina, approved February 23, 1910, provides for an educational commis-

sion charged with the work of examining and revising the common and high school laws, and with power to recommend any change in the existing law. It is further provided that the commission shall consist of the state superintendent of public instruction, the inspector of high schools, the president of one of the state institutions of higher education, one person familiar with graded and common school systems, and one person learned in the law, and that the members not specifically designated shall be appointed by the governor.

In accordance with this provision, the following persons have been appointed members of the commission: John E. Swearingen, state superintendent of public instruction, chairman; William H. Hand, inspector of high schools, secretary; D. B. Johnson, president of Winthrop Normal and Industrial College; Samuel H. Edmunds, city superintendent of schools, Sumter; and M. L. Smith, Camden. They have entered upon the preliminary investigation, a report of which will be submitted to the general assembly at its next session.

[For notices of the formation of previous state commissions, see Report of the Commissioner of Education, 1908, Vol. I, pp. 42–49; and Report, 1909, Vol. I, pp. 44–52.]

ILLINOIS EDUCATIONAL COMMISSION.

The Illinois educational commission, authorized by the forty-fifth general assembly, 1907, and appointed by the governor to study the school system of the State of Illinois and the laws under which it operates, to codify these laws and to suggest such amendments as seemed necessary, was unable for want of time to complete its work. The codification of the school laws and one of the amendments suggested were enacted into law by the forty-sixth general assembly and $5,000 appropriated to the department of public instruction to complete and publish the work of the commission. In order that the work begun might be properly completed, Governor Deneen reappointed the old members of the commission, filling two vacancies by the appointment of new members. The commission as reappointed is as follows: Francis G. Blair, superintendent of public instruction, Springfield, ex officio chairman; President Edmund J. James, University of Illinois, Urbana; President A. J. Burrowes, St. Ignatius College, Chicago; Principal Alfred Bayliss, Western Illinois Normal School, Macomb; W. L. Steele, city superintendent of schools, Galesburg; A. F. Nightingale, county superintendent of schools, Chicago; Principal Harry Taylor, Harrisburg; R. E. Hieronymus, Eureka, secretary of the commission.

The previous commission made a final report to the general assembly in 1909. Among the recommendations contained in the report are the following:

I. The adoption of the revised, simplified, condensed, and codified form of the existing school law, published in the commission's Bulletin No. 6.

II. The amendment of this revised general school law in the following particulars:

1. Providing for a uniform system of bookkeeping by township treasurers, and promptness in their accounts.
2. Extending minimum school term from six to seven months.
3. Making school month four weeks of five days each (instead of calendar month).
4. Making 18 years minimum age for teaching.
5. Forbidding anyone to teach unless holding due certificate.
6. Prescribing a classified register of pupils to be kept by teachers in addition to the daily register.
7. Forbidding, in cities of less than 100,000 inhabitants, school boards to discharge teachers except for cause, upon written charges, and after a hearing.
8. Permitting school boards to employ a superintendent for periods of four years after two years' probation.
9. Limiting school boards in districts of from 1,000 to 100,000 inhabitants (not under special charters) to a president and six members.
10. Authorizing school boards in cities of more than 10,000 inhabitants to purchase sites and build schoolhouses without taking a vote of the district.
11. Providing for the purchase of libraries and apparatus "when needed."
12. Traveling expenses of county superintendents to be paid by county board.
13. Providing unequivocally for free high school privileges to pupils residing where no high school is established.
14. So phrasing the school tax law that the state aid to schools will be increased from $1,000,000 to about $2,500,000.

The commission had previously introduced in the legislature five bills embodying their larger amendments, containing provisions as follows: (1) For a state board of education; (2) for a uniform system of examinations for intending teachers; (3) for a permissive township system of school organization; (4) for an increase in the salaries of county superintendents; (5) for county teachers' institutes.

Recommendations 9 and 10 above are designed to offer inducements to cities under special charters to surrender their charters and organize under the general school law. The 35 districts now under special charters "give rise to more vexatious legal questions than all of the 11,785 other school districts put together."

The commission recommended the enactment of a law making the minimum salary of teachers holding second-grade certificates $45, first grade $55.

MARYLAND EDUCATIONAL COMMISSION.

Hon. J. Charles Linthicum, chairman of the Maryland educational commission, in his report to the governor, dated December 10, 1909, made, among others, the following recommendations:

I. Against state adoption and purchase of text-books (which had been proposed), but requiring the approval by the state school board of the selections of

books and contracts for purchases made by county boards. Instead of the State making a specific provision of $150,000 annually for free text-books, as heretofore, it was recommended that county boards be required to furnish the necessary books to all pupils.

II. The devising of some plan for increasing the attendance at the State Normal School, or, failing that, the establishment by county boards of teachers' training classes in approved high schools.

III. The establishment of a manual training department and a commercial course in each high school.

IV. Provision for making education of an industrial character a part of the daily instruction of every colored school.

V. The continuation of the school tax rate of 16 cents for general school purposes.

VI. Financial aid to the colleges of the State in the form of scholarships, covering tuition fees and board, to be given to worthy young men and women, otherwise unable to go to college; this in view of the State having no university of its own.

VII. The articulation of the courses of the various grades of instruction from the high school to the university. To this end is suggested "a committee or board to be composed of the presidents of the Johns Hopkins University, the colleges receiving state appropriations, and the state superintendent of education, who shall meet from time to time to consider the several curricula so as to prevent overlapping of work."

VIII. Instruction in the elements of agriculture in all the schools, and a closer union between the state agricultual college and the public-school system.

IX. The apportionment of the state school tax upon the basis of the number of children actually attending school, the number of teachers, and the county school tax.

X. The formulation of some plan for expert county supervision.

VIRGINIA EDUCATION COMMISSION.

The Virginia education commission, created by an act of the legislature March 13, 1908, and charged with the duty of devising a stable and systematic method for the maintenance, management, and expansion of the higher educational institutions with reference to a definite and harmonious educational system, was continued by an act of March 15, 1910, and instructed to report at the next session of the legislature.

The sum of $500 was appropriated by the legislature to continue the work of the commission, and the trustees of the Peabody education fund donated $3,000 to meet the expenses of a thorough investigation and to pay the salary of a permanent secretary.

The commission is composed of Dr. Edwin A. Alderman, president of the University of Virginia, chairman; Mr. Charles G. Maphis, president of state board of examiners, secretary; Hon. Richard E. Byrd, speaker of the house of delegates; Mr. Joseph D. Eggleston, jr., state superintendent of public instruction; Dr. Joseph L. Jarman, president Farmville Normal School; Hon. E. E. Holland, state senator; Dr. Charles M. Hazen, Medical College of Virginia; and Dr. W. W. Smith, president Randolph-Macon Woman's College.

II. EDUCATIONAL ASSOCIATIONS, CONFERENCES, ETC.

NATIONAL EDUCATION ASSOCIATION.

OFFICE OF THE SECRETARY,
Winona, Minn., October 5, 1910.

MY DEAR SIR: By the provisions of section 4 of the act of incorporation of the National Education Association by Congress, approved June 30, 1906, I am required to render to you, on behalf of the corporation of said association, an annual report stating the amount of property, real and personal, held by the corporation and the various receipts and expenditures during the past year.

I am submitting herewith such a report, as follows:

The association holds as personal property approximately 10,000 volumes of proceedings in the depository of the association at the office of the secretary in Winona, Minn., valued at $10,000; 5,000 pamphlets and reprints, valued at $800; office furniture, cases, and equipment, valued at $500; total personal property at Winona, $11,300.

An office is maintained in the city of Washington, at the Buckingham, in accordance with section 8 of the act of incorporation, but the association owns no property, real or personal, in the city of Washington.

The business of the association is transacted at the office established by authority of the board of directors at Winona, Minn.

The association has a permanent invested fund, referred to in section 7 of the act of incorporation, which is in the charge of the board of trustees. This fund, at the close of the last fiscal year, June 30, 1910, amounted to $170,100, as per the accompanying Exhibit A, which constitutes the twenty-fourth annual report of the board of trustees.

You will note that the net revenue from this fund amounted to $6,761.73, which was transferred to the treasury of the association for current expenses.

The fiscal year of the association is from July 1 to the following June 30, the last fiscal year closing June 30, 1910. For this last fiscal year the total receipts for current expenses from all sources were $34,787.97; the total expenses for the year were $30,235.92, leaving a balance in the treasury June 30, 1910, of $4,552.05.

The chief sources of revenue are membership fees, proceeds of sale of volumes and reports, revenue from the invested fund.

The chief sources of expense of the association are the printing and distribution of the annual volumes, the maintenance of the secre-

tary's office and clerical force at Winona, Minn., and the expense of preparing for and conducting the annual convention.

While a large part of the revenue comes from the associate membership fees received at the annual convention, a still larger amount comes as annual dues of $2 for each member from approximately 7,000 active (permanent) members of the association.

The last convention of the association, held at Boston, Mass., July 2 to 8, was in every respect successful, but no special action was taken which would probably be deemed essential or important to embody in this report.

I am, respectfully, yours,

IRWIN SHEPARD, *Secretary.*

Hon. ELMER ELLSWORTH BROWN,
Commissioner of Education of the United States,
Washington, D. C.

EXHIBIT A.

Exhibit A, referred to in the foregoing report of the secretary of the association, consists of a condensation of the twenty-fourth annual report of the board of trustees, for the year ending June 30, 1910. This report is taken up with a detailed statement of the permanent fund of the association, which amounted on July 1, 1910, to $170,100. There had been no additions to it during the year. Following is a summary of the principal items:

Income account.

Receipts:		
Income from various bonds and mortgages	$6,757.50	
Interest on cash balance in bank	73.76	
Income of property in Chicago	203.35	
		$7,034.61
Disbursements:		
Accrued interest on bonds	51.00	
Fees of banks	221.88	
Net income paid to treasurer of association	6,761.73	
		7,034.61

Principal account.

Receipts:		
Cash on hand for investment July 1, 1909	$997.50	
Mortgage, 5603 Madison avenue (Lewis), paid July 1, 1909	2,500.00	
Lemont, Ill., school bond, paid December 1, 1909	500.00	
		$3,997.50
Disbursements:		
For purchase of bonds	2,888.75	
Cash on hand for investment July 1, 1910	1,108.75	
		3,997.50

Securities held for the permanent fund.

Municipal and school bonds	$91,940.00
Railroad bonds	71,551.25
Real estate (4762 Lake avenue, Chicago)	5,500.00
Cash on hand awaiting investment	1,108.75
Total	170,100.00

Property at 4762 Lake Avenue, Chicago.

Receipts:		
Rents received by First Trust and Savings Bank, Chicago, Ill		$330.00
Disbursements:		
Taxes for 1909	$101.60	
Special assessment (paving Forty-seventh street)	1.84	
Repairs	6.71	
Fees of 5 per cent of First Trust and Savings Bank on $330 rents collected	16.50	
Net income	203.35	
		330.00

The report is signed by the trustees as follows: Nicholas Murray Butler, James M. Greenwood, Henry B. Brown, James Y. Joyner, and Carroll G. Pearse.

The total registration at the Boston convention (the forty-eighth) was 12,385. The most prominent feature of the convention was the opening session held in the stadium of Harvard University, which was addressed by the President of the United States, William Howard Taft, on "The relation of education to democratic government;" by Hon. William Walton Kitchin, governor of North Carolina, on "The development of American independence under our common-school system;" and by President David Starr Jordan, of Leland Stanford Junior University, Stanford University, Cal., on "War and manhood." The exercises were interspersed with music by the Handel and Haydn Society of Boston, accompanied by Stewart's military band. The numbers sung in which the great audience joined were "America," "To Thee, O Country!" "Unfold, Ye Portals!" and "The Star Spangled Banner."

The other general sessions and the sessions of all of the seventeen departments were unusually successful. Although a great variety of important topics were discussed, the subjects of industrial education, physical education and school hygiene, special education for backward children, and rural and agricultural education were prominent.

It should be said that the following societies held profitable sessions on the same dates, usually meeting in the afternoons so as to avoid conflict with the department meetings of the association, viz: The American School Peace League, The American Home Economics Association, Federation of State Teachers' Associations, The Religious Education Association, National Committee of Agricultural Education, Educational Press Association of America, Conference of Teachers of Agriculture, Massachusetts Medical Gymnastic Society, The School Garden Association, The Moral Education Board. These societies held their sessions under the auspices of the National Education Association, which had arranged for their accommodation and had published their programmes with its own.

The following officers were elected for the ensuing year: President, Supt. Ella Flagg Young, of Chicago, Ill.; vice-presidents, James Y.

Joyner, of North Carolina (the outgoing president); Miss Julia Richman, of New York; F. L. Cook, of South Dakota; George A. McFarland, of North Dakota; Thomas C. Miller, of West Virginia; Charles S. Foos, of Pennsylvania; Homer H. Seerley, of Iowa; F. O. Hayes, of Oklahoma; E. T. Fairchild, of Kansas; Samuel Avery, of Nebraska; and C. A. Duniway, of Montana; treasurer, Durand W. Springer. Irwin Shepard was reelected general secretary for a term of four years by the board of trustees.

DECLARATION OF PRINCIPLES AND AIMS.

The following declaration of principles and of aims was made by the association in convention assembled:

The National Education Association, now holding its forty-eighth annual convention in the city of Boston, representing every educational interest of the nation, makes the following declaration of principles:

1. We reaffirm our faith in the schools of the Republic, believing that it is impossible for the citizens of a great democracy to develop power and efficiency without the public schools, owned and controlled by the people.

2. A federal office of education is necessary to the best development of education in the several States. The National Bureau of Education has for many years rendered a splendid service in disseminating information and developing educational ideals. During the past few years its increasing service and enhanced efficiency have been marked and stimulating. The plans which are now projected have the earnest approval and the enthusiastic indorsement of the educational interests of the entire country. The members of this association hereby express their appreciation of the provision made for the better housing of the bureau and the enlargement of its staff. We further respectfully urge on the Congress an increased appropriation for its support. In particular we urge that in addition to the usual appropriations the sum of $75,000 be made available at the next session of Congress for the organization of a more adequate staff of specialists, with particular reference to work in the field.

3. In the judgment of the National Education Association the time has arrived for the formation of an international council of education, to be composed of leading educators from all the principal nations of the globe, the first meeting of the council to be held in Washington, D. C., at some time during the year 1911. The association hereby appoints the United States Commissioner of Education, the president and all living ex-presidents of the National Education Association, and seven others, to be chosen by the above designated persons, as a committee to formulate plans for such an international council and to attend to their execution.

4. The fundamental consideration in any system of schools is the development of inflexible integrity and strong moral character in those receiving instruction. The Republic can not survive without a citizenship with high ideals of patriotism, duty, and service. This association, therefore, commends most heartily the growing interest in the moral development of the children of the nation.

5. While the members of this association are of the opinion that the old courses of study, which had as their chief object the giving of culture to the individual and of transmitting to him the best ideas and ideals of the past, should in no manner be weakened, we, nevertheless, very sincerely indorse the movement to make the courses of study offered in our schools more democratic, that they may meet the conditions of our modern commercial and industrial

life. However, to meet adequately these new demands imposes upon the schools of the country additional financial responsibilities, and this association appeals to the nation and to the States for more liberal appropriations for educational purposes in order that this additional work in agriculture, in the trades and industries, and in home economics may be effectively undertaken.

6. No country that is physically weak or physically diseased can attain its possible greatness. All efforts, therefore, to make the condition of our educational plants more sanitary and to impress upon the minds of the children and the citizens of the nation the importance of the proper observance of the laws of health—public and individual—should receive the support and hearty cooperation of American teachers.

7. The abuses attending the employment of children in industrial occupations tend to limit their educational opportunities, and this association, therefore, indorses all such wise and humane legislation as shall make possible the broadest development of all the children.

8. The character and efficiency of the schools must depend in the future, as in the past, upon the character and efficiency of the teachers. The profession of teaching should therefore attract men and women of the highest intellectual attainments, broadest culture, most thorough training, and loftiest ideals; to this end the salaries paid American teachers should be commensurate with salaries paid in other professions and in commercial and industrial pursuits.

9. The association reaffirms its declaration in the year of the last Hague conference of the preeminent duty of the teachers of the United States, and of all the nations, to advance this commanding movement of our time for the world's peace; and we record our profound satisfaction at the noteworthy development of attention to this high interest in our schools and colleges, and the rapid progress of the cause among all peoples. We herewith express our special satisfaction in the recent declaration of the President of the United States in behalf of the settlement by arbitration of all differences whatever between nations. With equal gratitude we indorse the resolution adopted by the Congress of the United States for the appointment of a commission to consider measures for the reduction of the burdensome armaments of the nations.

10. The National Education Association reaffirms its unalterable opposition to any division of the public school funds among private or sectarian schools and believes that any appropriation from the federal or state treasuries in support of private educational institutions is in direct contravention of the fundamental principles upon which our system of American public-school education has been founded.

Respectfully submitted.

JULIUS I. FOUST, of North Carolina, *Chairman.*
JOSEPH SWAIN, of Pennsylvania,
HOMER H. SEERLEY, of Iowa,
GEORGE B. COOK, of Arkansas,
KATHERINE D. BLAKE, of New York,
Committee on Resolutions.

Adopted by unanimous vote of the active members in session, July 7, 1910.

IRWIN SHEPARD, *Secretary.*

REORGANIZATION OF DEPARTMENTS.

In the report of last year a statement was made of the action of the board of directors, consolidating certain departments with others and

reducing the entire number to nine. The carrying out of this action was delegated to the executive committee of the association. This committee found it difficult to put the new plan into effect, partly because officers had been elected for all of the different departments, and also because of earnest opposition to the plan by the officers and members of several of the departments on the ground that the action had been taken without due notice and without giving an opportunity for the advocates of the separate departments to be heard in the interests of separate organization.

Accordingly, the executive committee submitted to the board of directors, for a vote by correspondence, a proposition for delaying the execution of the plan for one year. The result of this vote was that 62 directors voted in favor of postponement, 4 voted against postponement, and 12 directors did not vote.

Accordingly, the various departments were continued and met at Boston under their separate organizations, except that the departments of technical education and of Indian education were discontinued in accordance with application from the officers of these departments; and the department of art education was combined with the department of manual training under the title of the department of manual training and art education, in accordance with the joint action of the two departments taken at the Denver convention.

The question of consolidation, therefore, came before the board of directors at a special meeting held to consider the same on July 5. After full consideration and hearing representatives of several of the departments affected by the action taken a year ago, the directors voted to rescind that action excepting in so far as it applied to the department of manual training and art education. By a subsequent resolution the question was again referred to the original committee on the consolidation of departments, as reconstructed by the action of the directors at the Denver convention. The effect of this action is to continue the departments as heretofore for the current year, pending another report by the committee on consolidation, which will be made at the next annual meeting.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: SECTION L—EDUCATION.

[From a report made to Science by C. R. Mann, secretary of section L.]

The annual meeting of the American Association for the Advancement of Science was held in Boston December 27–31, 1909.

The sessions of Section L, Education, were conducted in accordance with the policy adopted at the previous meeting—the attention of the members at each session being concentrated upon a single topic. Dr. John Dewey, the retiring vice-president, presented a paper on

the subject, "Science as method and as information." The subjects considered in the successive meetings were as follows: "Formulated scientific problems in general education," "Scientific studies of the American college," and the report of the committee on the "Distribution of students in college courses."

The report above referred to was presented by Prof. E. L. Thorndike, chairman of the committee. The following resolutions embodied in the report were adopted by the section:

Resolved, That samples of the facts concerning the number of students taught by one instructor be sent to the colleges and universities on the list of the United States Bureau of Education.

That those in charge of collegiate instruction in each of these institutions be requested to report in print or to this committee any facts concerning the relation of the size of class to efficiency in teaching, with special reference to the following questions:

1. Is not the number of students taught at one time by a single individual in many college courses so great as to reduce that individual's knowledge of the attitude, preparation, difficulties, errors, and achievements of his students to almost zero?

2. Is not the number of students taught at one time by a single individual in many college courses so small as to involve an enormous waste of the instructor's time and an improper distribution of the appropriations for teaching?

3. Other things being equal, should not the teaching of more than 40 college students at one time by one person be avoided? Should not any department have reasons of weight for any such case?

4. Other things being equal, should not the use of a quarter or more of a professor's teaching hours for a year for the instruction of fewer than 10 students in one undergraduate course, counting one-twentieth or less of the degree's total requirement, be avoided? Should not any department have reasons of weight for any such case?

5. Should not the traditional method of having the ratio which the number of class meetings is to the number of "points" credit the same, regardless of whether the class enrollment is 1, 5, 20, or 100, be abandoned in many of the undergraduate courses enrolling less than 10 students?

6. When, in a college course given annually, the number of students is less than 6, should not the course be offered only once in two years, except for reasons of weight?

Resolved, That those in charge of collegiate education in the colleges and universities on the list of the United States Bureau of Education be requested to consider the advisability of reporting for 1910, and once in every ten years thereafter, a detailed statement of the work done for the bachelor's degree by each member of the graduating class or by each of 100 students chosen at random from it.

Joint sessions of the section were held with the American Federation of Teachers of the Mathematical and Natural Sciences, the Social Education Club of Boston, and Section B, Physics, of the American Association for the Advancement of Science. "Equal opportunity for all" was the general topic for discussion at the joint meeting with the Social Education Club. President Albert Ross Hill, of the University of Missouri, was elected vice-president of

Section L for 1910, and Dr. John Dewey, of Columbia University, was elected member of the sectional committee.

AMERICAN FEDERATION OF ARTS.

The American Federation of Arts held its first annual convention in Washington, D. C., May 17–19, 1910, with delegates from about one hundred affiliated organizations in attendance.

Committees were appointed to report at the next convention on exhibitions and lectures in universities, art in the public schools, and teaching the history of art in universities and colleges. The federation maintains permanent offices in the city of Washington, and during the past year has loaned collections of paintings by American artists to a number of cities for exhibition purposes, and has also provided for illustrated lectures on American painting, American art, and civic art.

Art and Progress, a monthly journal, is published by the federation.

The following officers were elected for the ensuing year: President, Charles L. Hutchinson; first vice-president, Herbert Adams; secretary, F. D. Millet; treasurer, Marvin F. Scaife.

AMERICAN FEDERATION OF THE TEACHERS OF THE MATHEMATICAL AND NATURAL SCIENCES.

The annual meeting of the council of the American Federation of the Teachers of the Mathematical and Natural Sciences was held at the Massachusetts Institute of Technology in Boston, Mass., December 27, 1909. Twenty-two representatives of eight associations were present. The report of the executive committee showed that six associations had joined the federation during the past year. The total number of paid-up members in the associations that belong to the federation now amounts to 2,040.

The committee on a syllabus in geometry reported that the work was in progress and outlined their plan under the following divisions:

1. Logical considerations, including axioms, definitions, symbols, new terms, forms of proof, treatment of limits and incommensurables, purpose (whether formal or practical), place in the curriculum, etc.

2. Lists of basal theorems, including types of courses as given in various countries, types of courses for different classes of students, e. g., for boys, for girls, for technical students, for college preparation, for noncollege preparation, minimum list of theorems for various standard courses, grouping or classification of theorems, etc.

3. Exercises and applications, including the grading and distribution of exercises, relative importance of algebraic and geometric work, special classes of exercises such as loci problems, correlation with other subjects, such as trigonometry, concrete applications related to drawing, decoration, architecture, ornamental design, mensuration, surveying, machinery, etc.

The committee on college entrance requirements recommended that a committee of three be appointed to confer with the college entrance

examination board on the matter of defining the various units in mathematics and science.

The officers elected for 1910 are as follows: President, C. R. Mann, University of Chicago; secretary-treasurer, Eugene R. Smith, Brooklyn Polytechnic Institute, New York City.

ASSOCIATION OF SCHOOL ACCOUNTING OFFICERS.

A meeting of school auditing officers, called by the Commissioner of Education at the request of several of the officials referred to, was held May 17, 1910, at the Bureau of Education, Washington, D. C., and an association was organized at that time for the purpose of bringing about the standardization of fiscal, physical, and educational data of school systems.

The officers of the association are as follows: President, Joseph McBride, auditor of board of education, Los Angeles, Cal.; secretary, William Dick, secretary of board of education, Philadelphia; treasurer, Alonzo Tweedale, auditor, District of Columbia, Washington, D. C.

The following-named members were appointed to serve as a committee on standardization: Henry R. M. Cook, auditor of the board of education, New York City; William T. Keough, business agent school committee, Boston; and Charles P. Mason, secretary and treasurer board of education, St. Louis, Mo.

ASSOCIATION OF COLLEGES AND PREPARATORY SCHOOLS OF THE MIDDLE STATES AND MARYLAND.

The twenty-third annual convention of the association was held in Washington, D. C., November 26–27, 1909, under the auspices of the universities, colleges, and schools of that city. The association comprises 187 schools and colleges and was represented at the convention by 102 delegates.

The committee on entrance requirements in English presented a report embodying the requirements adopted at the conference on uniform entrance requirements in English February 22, 1909, which was adopted by the association.

The principal officers for the year 1909–10 are: President, James M. Green, State Normal and Model School, Trenton, N. J.; secretary, Arthur H. Quinn, University of Pennsylvania, Philadelphia, Pa.

ASSOCIATION OF COLLEGES AND PREPARATORY SCHOOLS OF THE SOUTHERN STATES.

The fifteenth annual meeting of the Association of Colleges and Preparatory Schools of the Southern States was held at Charlottes-

ville, Va., November 5–6, 1909. The association now numbers 21 colleges and universities and 38 preparatory schools.

The officers are: President, Dr. Robert E. Blackwell, Randolph-Macon College, Ashland, Va.; secretary and treasurer, Prof. Frederic W. Moore, Vanderbilt University, Nashville, Tenn.

CATHOLIC EDUCATION ASSOCIATION.

The sixth annual meeting of the Catholic Education Association was held in Boston, July 12–15, 1909.

The roll of the association comprised 67 colleges, 16 seminaries, and 980 members and schools in the parish school department; delegates were present from all the States and from the Dominion of Canada.

The association is organized in three departments: A college department with sections devoted to Latin, science, history, modern language and Greek, and philosophy; a parish school department with sections for the instruction of deaf-mutes, and for superintendents; and a seminary department. The science section was created April, 1909. A committee previously appointed to consider the advisability of creating a high-school department reported progress at the meeting referred to and was continued to report at the next meeting.

The report of this committee at the present session covered all the factors that enter into the high-school or secondary-school problem of the hour. In the discussion of the report emphasis was placed upon the fact that the "system of coordinating the high school with the college," after the model of "the German gymnasium and the French lycée," represents the "tradition of Catholic colleges."

The principal officers for 1909–10 are: President-general, Very Rev. T. J. Shahan, Washington, D. C.; secretary-general, Rev. Francis W. Howard, Columbus, Ohio; treasurer-general, Rev. Francis T. Moran, Cleveland, Ohio.

Detroit was selected as the next place of meeting.

CLASSICAL ASSOCIATION OF THE MIDDLE WEST AND SOUTH.

This association, one of the largest organizations of classical teachers in the world, was formed in 1905 and has 1,700 members. Its territory now includes 28 States, and extends as far west as Idaho and as far as Virginia and the States along the southern coast.

The fifth annual meeting was held April 29 and 30, 1910, at the University of Chicago.

The officers of the association are: Prof. F. C. Eastman, University of Iowa, president; Theodore C. Burgess, director of Bradley Polytechnic Institute, Peoria, Ill., permanent secretary-treasurer.

CONFERENCE OF CHIEF STATE SCHOOL OFFICERS.

The fourth conference of the United States Commissioner of Education and the chief state school officers of the several States was held in connection with the meeting of the department of superintendence in Indianapolis, Ind., on the evening of March 3, 1910. The Commissioner of Education was chosen as chairman, and George B. Cook, state superintendent of Arkansas, as secretary. After an introductory address by the chairman, Robert J. Aley, state superintendent of Indiana, opened the discussion of the topic chosen for the conference, "Desirable uniformity and desirable diversity in the educational legislation of the several States." Dr. Harlan Updegraff, specialist in school administration in the United States Bureau of Education, outlined the immediate plans of the bureau in relation to the state education offices, prominent among which is the purpose to render assistance in all matters pertaining to educational legislation. These two addresses furnished the basis for the general discussion, which was participated in by the following state education officers: Mrs. Katherine M. Cook, of Colorado; John F. Riggs, of Iowa; T. H. Harris, of Louisiana; C. G. Schulz, of Minnesota; E. C. Bishop, of Nebraska; J. E. Clark, of New Mexico; A. S. Downing, first assistant commissioner of New York; J. Y. Joyner, of North Carolina; N. C. Schaeffer, of Pennsylvania; F. M. Bralley, of Texas; and C. P. Carey, of Wisconsin. Eighteen States were represented.

Among other matters, the speakers emphasized the desirability of the following:

(1) A combined digest of the educational legislation of the several States. (2) Uniform standards in statistical reports. (3) Uniform standards in the licensing of teachers. (4) Closer relations in the recognition of teachers' certificates among the various States. (5) A systematic provision for keeping the various state officers informed regarding successful new procedures in the conduct of state school systems, as for example, in the improvement of teachers in service through institutes, summer schools, and reading circles. (6) Diversity in educational legislation in those matters closely related to the general civil administration, as in territorial units of control, form and authority of local school offices, and methods of taxation. (7) Diversity in permitting the trial of a wider range of methods of administration.

After the passing of a standing vote of approval and appreciation of the recent action of the Bureau of Education in the interest of the state education offices, which was moved by Mr. Bralley, of Texas, the conference adjourned subject to the call of the United States Commissioner of Education.

CONFERENCE FOR EDUCATION IN THE SOUTH.

The Thirteenth Annual Conference for Education in the South was held in Little Rock, Ark., April 6–8, 1910, with a registration of 1,200 members in attendance. As is customary, the meetings of the associations of Southern State Superintendents and Supervisors of Women's School Improvement Work were held in conjunction with the conference.

In accordance with the request of the conference, the president, Mr. Robert C. Ogden, introduced the meeting by a historical review of the purposes and work of the organization. He said in part:

Our association is called the Conference for Education in the South. It is, so far as I know, the only popular civic organization in the interests of education in the country. Other sections of the country need it, and, in the judgment of many, it should have a national character. The Nation is treated as a whole by civic organizations for the improvement of municipal government, for the beautifying of towns and cities, for charities and correction, for industrial education, for the standardizing of higher education. Why not then for emphasizing the duty of the citizen, the man in the street, in respect of education?

I am almost led to exclaim, and would, were it not for some reasons that will follow: "May the time come, and come soon, when this organization may broaden its influence until it shall be wide as the continent and long as the land."

Some advantages exist, however, in the more limited and local character of the conference work. It took the organization four years to find itself. Happily, when its mission was discovered it was not so big as to lose itself in its own vastness. Social influences have always surrounded it, and it has been a dynamic power in the development and uplift of many a lonely soul. Throughout the States represented here there were, before this association came into being, thousands of people in rural places, with clear vision as to the educational needs of the rural people, whose lives were consumed with hopeless longing, whose minds were keen as to what ought to be done and yet could not see even the faintest glimmer of the early dawn of a better day. There are many such yet, but the class that has been brought into large and sympathetic fellowship by this conference, in whom inspiration and faith have been developed, would of itself alone justify all the cost in labor and in money that has been expended upon it. One of the clearest thinkers and ablest writers on educational, economic, and social questions in the South has said that this conference has taught the South to know itself in educational matters. And I am sure he is right.

Another local advantage is found in the fact that while the South has all the general questions of education that pertain to all the rest of the country, it has superadded certain conditions peculiarly its own. In summing up the reasons for the existence of this conference it may be concluded that for the immediate future at least it will be found advantageous to allow it to live its life upon present lines.

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I am told, and I think the statement is accurate, that during the last seven years the public appropriations for education in the States under the influence of the Southern Education Board have increased $16,000,000 per annum. These figures are difficult of verification, but probably are greater than I have

stated. We have had something to do with this result; how much may not be a subject for definite calculation.

This conference has reproduced itself in many directions. In Virginia it developed the Cooperative Education Association with which the Southern Education Board is in sympathetic and material relation. This association has created branch organizations in many countries of the State; has raised money with which to carry forward its own work; has vigorously promoted the high school idea; has issued remarkable and original matter for the guidance of public speakers and the instruction of the people.

In North Carolina the commissioner of public education has been enabled to carry on a propaganda for the local tax which has brought hundreds of school districts to the uplifting idea of self-help through the levying of the local school tax by popular vote. In harmony with this the Women's School Improvement League has made a steady advance in improving the conditions of schoolhouses by means of decorations and various betterments. But over and above all this perhaps the crowning benefit to this State has been found in the erection of some thousands of new schoolhouses, modern in design and convenient in equipment. North Carolina has a little experiment now in progress that may well serve as an inspiration to other States. Several rural schools have had school ground under cultivation, not primarily for eduction, but for profit. Crops of cotton and hay have been raised and the terms have thereby been lengthened two or more months in the school year, and thus the communities in which they are located have seen a great light. This school agriculture pays, and pays well, and so, from an economic experience the farming population quickly learns the value of practical agricultural education and then the education follows. How much more valuable is an educational idea evolved from within and not imposed from without. My only purpose is to drop this hint in the hope that at the proper point in these proceedings Superintendent Joyner may give further information upon this general subject.

In South Carolina, Georgia, Kentucky, and Alabama the women's organizations and work have been very specially powerful. The whirlwind campaign in Kentucky at the last Thanksgiving holiday was a powerful and potent force in the revival of the educational idea.

The conference for education in Mississippi has been organized especially for the promotion of the normal-school idea. The conference for education in Texas has not only supported itself thus far by generous contributions, but has controlled and improved legislation and increased appropriation for education. It now has before it the large and important task of instructing the people concerning the great advantages secured by their own laws. Upon this interesting subject we shall hear from Mr. Clarence Ousley, of Fort Worth, Tex., the inspirer and leader of the movement, in the course of our deliberations.

The unceasing agitation in Tennessee by means of meetings and conferences, under the guidance of the chairman of the campaign committee of the Southern Education Board, has brought about remarkable results. The beginnings of organized work in Arkansas and the quiet progress in Louisiana are also subjects of great interest.

Each State has its own peculiar points of attractive study, as you will have noticed from the condensed detail just given concerning Virginia, North Carolina, and Texas.

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The twelve years that measure the life of the Conference for Education in the South have been years of great originality in the development of American education. The American spirit in education has crowned our institutions of

higher education with many highly creditable developments for the general instruction of men and women and the creation of classes of scholarly specialists. It has created by the communism of experience many progressive ideas in elementary and high-school education that have brought vast benefits to the cities, but which are still denied to the greater part of the rural districts. It has, however, done more than this. It has taught us to so examine and understand our methods that, while appreciating all their merits and usefulness, we shall also understand their great and glaring defects, look squarely at the conditions, discover why so much of our alleged education is practically no education at all in any true sense, when the preparation of the pupil for the facts of life are compared with the demands of daily experience.

The discovery of these defects has brought out much research of causes and needs, which in their turn have developed enormous plans of improvement and have evolved clear ideas that act as light-houses to mark the channel of progress toward better things.

Thus things have been found equally valuable with books as means of instruction, and so industrial education has taken a great hold upon the educational mind. But the educational mind needs much instruction upon industrial education. The phrase slips lightly off the tongue, but it has vast possibilities, knowledge of which may not be acquired by hasty glances at a carpenter shop or a printing office. Closely asociated with and indeed a part of industrial education is agricultural education, and again closely connected with this is the whole problem of rural life. The workshop and the soil should afford the most interesting opportunities of active, productive, and useful life. But they have been mainly the sphere for merely the "daily round and common task." The old dreary notion of pious life would commend them to us as a "means of grace," while the better ideas of a progressive religion, taking account of science and of history, tell us they should be a "hope of glory." And out of this agitation comes a vast impulse to find the way to higher things. We learn of the waste of our natural resources—our lands should produce three times their present crops; our forests should be protected and preserved; irrigation should be promoted, and the vast wealth already produced should be proven only a thriftless waste of the largeness bestowed by a bountiful Providence. It is only a short time since I learned in this State of a product of one and three-quarters bales of cotton per acre upon land in a neighborhood where half a bale to the acre was generally considered a good crop. So much for tilling the land with brains.

Most significant is the recent National Commission upon Rural Life. The investigations and findings of this commission are now, or soon will be, accessible to every one caring to read them. But the center of study and action upon this subject has been and is the central Northwest. Wisconsin, Iowa, and Minnesota have developed a surprising amount of practical and scientific knowledge that has so appealed to the imagination of our executive secretary as to lead him in the creation of his admirable programme to make "the keynote of the conference the improvement of conditions in the open country."

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This organization exists for the promotion of a universal civic spirit of education. Our institutions of higher and lower education will simply reflect the popular demand. In a democracy the people set the pace, evolve the standards, determine the quality of institutions. Schools from the kindergarten to the university will in their quality be simply responsive to the best intelligence of the people. With only the limitation of material resources the schools will be

no better, no worse, than the people demand. Therefore our efforts should be and are directed toward elevating the demand.

The remarkable influence already apparent in the efforts of the Carnegie Foundation and the General Education Board working in complete harmony to standardize higher education will proceed by a long process through painful steps and slow to complete realization. But it will come. Incongruous colleges will cease to call themselves universities. Alleged colleges, which are merely preparatory schools, will fall into proper place. Names will have a true value and a real meaning. Young women will not be satisfied with the review of so-called finishing at female seminaries, and young men will find out the real value of a diploma. When that time comes the value of accuracy and honesty will appear in education as in all other things. And so, as among men each takes his tone from the man next above, will our schools fall into line naturally and easily. But that good time is in the beyond. It is, however, great and beautiful to live in even the early glimmer of the dawn of better days.

The attention of the present session of the conference centered very largely in the problems of agricultural education, a special conference being devoted to this subject, which was attended by 200 delegates, including representatives of agricultural schools and colleges, state commissioners of agriculture, representatives of the United States Department of Agriculture, state superintendents of public instruction, presidents and secretaries of farmers' unions, and others. The general topic for discussion was, "What should be the nature and scope of agricultural education in the rural community?"

The following is the substance of the principal resolutions adopted by the conference:

1. That increasing attention should be given by state legislatures, public school officials, and teachers in all schools to the extension of practical industrial training, including the essentials of agriculture and home economics, to all schools, rural as well as urban, elementary as well as secondary. Inasmuch as 85 per cent of our population is rural, the general question of rural economy is of vital importance to all our people. We therefore especially commend the various agencies at work for the betterment of rural conditions and urge such coordination of these agencies that the unnecessary duplication of effort may be avoided.

2. We recognize the imperative need of more efficient service in our schools, and to that end we recommend the broadening and strengthening of normal schools and departments of education in colleges and universities, and urge the improvement of county supervision by requiring higher qualifications and by providing better remuneration than usually obtain at present.

3. We recognize the work of local school-improvement associations and other voluntary cooperative bodies as a potent element in educational progress, and urge teachers and school officials to encourage the formation of such local organizations in all communities, urban and rural, throughout the States of the South.

4. Recognizing the value of local initiative and local interest in school maintenance, we recommend the enactment of laws providing for local taxation by districts, as the method by which state and county revenues for schools should be supplemented.

5. That this conference indorses the principle underlying the work of the General Educational Board, as announced by the president of the conference in his annual address, and expresses the conviction that it should be the aim and the policy of all philanthropic effort to initiate plans and constructive movements which shall be cooperative with existing institutions and recognized administrative agencies.

The following officers were elected for the year 1910–11: President, Robert C. Ogden, New York City; vice-president, Wickliffe Rose, Washington, D. C.; treasurer, William A. Blair, Winston-Salem, N. C.; executive secretary, P. P. Claxton, Knoxville, Tenn.

GENERAL FEDERATION OF WOMEN'S CLUBS.

The tenth biennial convention of the General Federation of Women's Clubs was held in Cincinnati, Ohio, May 11–18, 1910. The activities of the federation are confined chiefly to the work of committees, of which several relate either directly or indirectly to educational work, as indicated by the committee reports noticed below:

The chairman of the art committee brought to the convention an interesting collection of arts and crafts work accomplished by the mountain women of the South. The object of this work is threefold: To provide remunerative work and to give a new interest in life to women in isolated homes; to teach them how to make articles of value and beauty; and to reestablish the old-time crafts.

The economics committee reported that 371 clubs have home economics departments, that 258 clubs have helped materially in creating sentiment to establish home economics in public schools, and that 104 clubs have accomplished some educational or philanthropic work in cities.

The chairman of the committee on literature and library extension reported that 495 clubs maintained traveling libraries and had supplied books to rural schools, hospitals, and sailors. Libraries have been established by 889 clubs.

The chairman of the health department, civics committee, reported that during the past year many clubs had worked in support of school inspection, antituberculosis, sanitary school conditions, abolition of the public drinking cup, traveling health libraries, etc. The plan of work suggested by this committee has been adopted in many States. Fifty clubs reported the need of outdoor schools; 38 clubs reported need of camps, sanatoria, or hospitals; 37 reported needed sanitary buildings and streets; 92 reported need of visiting nurses' associations; 89 clubs reported need of antituberculosis associations; 311 clubs reported the need of medical inspection in the schools.

The chairman of the forestry committee reported that 266 clubs had provided lecture courses on forestry and were working to have elementary forestry introduced into the public schools.

The waterways committee of the general federation offered prizes to school children in many States for the best essay on "Inland waterways," and in one State over 5,000 children have entered this contest. Conservation as a public-school study is favored by many clubs, and, with the cooperation of superintendents and teachers, efforts have been made to introduce it into the course of study. The state federations having waterways committees number 39. This subject was reported as having been introduced into 33 schools, and included in the arbor-day exercises in 45 States; 619 clubs reported themselves as interested in the subject.

The report of the education committee of the federation was presented by the chairman, Miss Laura Drake Gill, who reiterated the platform adopted for this department four years previously, as follows:

Aim: That all children in the United States shall have equal educational opportunity.

Principles: (1) Strong and well-enforced child labor and compulsory education laws in every State; (2) a sufficient number of well-equipped and well-cared-for schoolhouses in every community; (3) a properly trained and properly paid teaching force; (4) expert paid supervision of all school work; (5) training for the hand and moral instruction in all public schools.

The chairman called attention to the fact that—

the formal resolution of the last biennial convention recommended some one of these five lines of work to each club interested in education, yet it did not narrow the range to any particular interest. However, the special workers in education believed that greater results would be attained by more definite emphasis; they therefore voted in special session that they would stress the fifth principle, "training for the hand and moral instruction," for the biennial period now closing.

In preparation for the tenth biennial convention, the chairman of correspondence on education sent to the state federations a questionnaire relative to the educational work carried on by the federated clubs in the respective States. The particulars to which the inquiries were directed are indicated by the topics in the following summary of the returns. It should be explained that the responses, as a rule, refer to directions of effort. An exception is the case of scholarships; the report under this head relates to funds actually contributed by the clubs. The clubs included in the report represent all the States excepting Arizona.

Number of clubs in States, 5,356; total number of clubs replying, 2,373.

Nature of educational work reported by clubs.

	Clubs reporting.		Clubs reporting.
Active in education	1,387	Improved buildings	145
Studying education	736	Decoration	150
Industrial education	439	Libraries	146
Moral education	284	Better salaries	55
Medical inspection	175	Better preparation	41
Drinking conditions	26	Pensions	24
School lunches	34	Truancy	74
School gardens	92	Better school laws	80
Kindergartens	92	School prizes	51
Playgrounds	26	Women on school board	31
Parents' associations	129	Regular school visiting	45
Evening and vacation schools	86	Penny savings	14
Scholarships	658		

At the educational conference of the federation there were discussions on out-door schools (where children are taught orally or from nature studies), humane work and humane education, the anticigarette movement, the congress of mothers, and kindergartens. The state chairmen of education from ten States made reports as to lines of school betterment in their States: 1. Kentucky had school-improvement leagues doing effective work in 112 of the 119 counties. 2. North Carolina emphasized special activity in introducing domestic science in the schools and the establishing of a chair of domestic science in the new Eastern Training School. Many parents-teachers' meetings were also held. 3. Mississippi, under head of a school-improvement organizer, reported that scholarships are being endowed, training schools for rural teachers established; that material improvement has been made in school houses and grounds, and that as a result of the introduction of the individual drinking cup and emphasis upon cleanliness the average school attendance in one school was increased 27 per cent. 4. Illinois reported vacation schools and one open-air school. 5. Minnesota reported that $1,800 had been raised by the club women for a loan fund to worthy girls. 6. Oregon reported the appointment of a club of women to act as sponsor to each country school, and that legislation providing for the use of school buildings as social centers of school neighborhoods had been enacted. 7. Wisconsin reported great activity in regard to industrial education throughout that State. 8. Maryland reported the appointment of women upon school boards, also a county fund of $3,000, devoted to home economic interests. 9. New Hampshire reported the appointment of women to school boards, and a scholarship fund.

Miss Juliet Stuart Ponits, who was awarded the English scholarship of the federation, will study economics and sociology at either Oxford or Cambridge University, or at the London School of Economics.

The following resolution outlines the plan of work for the next biennial period:

Resolved, That we will work for—

1. Better equipped, better ventilated, and cleaner school buildings.
2. More numerous, larger, and better supervised playgrounds.
3. Medical school inspection and school nurses.
4. Physical education and instruction in personal hygiene.
5. Instruction in normal schools in wise methods of presenting the essentials of personal and sex hygiene.

Upon unanimous recommendation of the committees on household economics, food sanitation, and education the general federation indorsed the Davis revised bill for vocational education.

The principal officers of the federation elected in 1910 are: Mrs. Philip N. Moore, 3125 Lafayette avenue, St. Louis, Mo., president; Mrs. George O. Welch, Fergus Falls, Minn., recording secretary; Mrs. Frank N. Shiek, Wheatland, Wyo., corresponding secretary; Mrs. John Threadgill of Oklahoma, treasurer.

LAKE MOHONK CONFERENCE OF FRIENDS OF THE INDIAN AND OTHER DEPENDENT PEOPLES.

The Twenty-seventh Annual Lake Mohonk Conference of Friends of the Indian and Other Dependent Peoples met at the Lake Mohonk Mountain House, October 20–22, 1909. About 200 members were present as the invited guests of Mr. Albert K. Smiley.

In the discussions, which are printed nearly in full in the report of the twenty-seventh annual meeting, considerable attention was given to the educational needs of the Indians, and in the Philippines, Porto Rico, Hawaii, and Alaska. The part of the platform concerned with education, adopted by the conference, is as follows:

> The ultimate end of all just government is self-government. Keeping this end ever in view, it is the duty of the nation to give to all under its authority * * * schools which shall furnish industrial and moral as well as academic instruction. * * *
>
> * * * It means for all—North American Indian, native races of Alaska, Porto Ricans, Hawaiians, and Filipinos— * * * adequate systems of education for their mental and moral development, and the improvement of their industries by providing industrial training.

The officers of the conference were: President, Dr. Elmer E. Brown, United States Commissioner of Education; secretary, Dr. Charles F. Meserve, Raleigh, N. C.; business committee, Hon. James S. Sherman, Vice-President of the United States, chairman.

Mr. Albert K. Smiley, in the closing remarks, spoke as follows concerning the continuance of the conferences:

> Now, we always expect to hold these conferences. The time will come when the Indian question will not require much attention, but probably the Philip-

pine question and the Porto Rican question will require attention for a long time; and there will doubtless be new problems needing discussion. Of course, I realize the limitations of life, and I am looking forward to the time when these conferences will fall into other hands. I feel sure in my own mind that they will be carried on just as well when I am gone as now, because my brother and his wife are deeply interested in them; they have children who will help them, and they also have a grandchild. This property will be turned over to them with the confident hope and expectation that this mountain top and this house will continue to be a center of influence in the elevation of the world. All this makes me feel very happy.

NATIONAL ASSOCIATION FOR THE PROMOTION OF KINDERGARTEN EDUCATION.

The National Association for the Promotion of Kindergarten Education was incorporated October 19, 1909. Its purpose is "to foster the intellectual, moral, and physical training of children in the United States." It proposes to do this—

First, by urging kindergarten legislation in all the States where no provision has been made for public kindergartens; second, by sending thousands of printed articles on the subject to educational and civic gatherings; third, by supplying speakers competent to set forth the various phases of this important subject, and especially the importance of maintaining a high educational standard; fourth, by the systematic use of the press; fifth, by cooperation with organizations looking to the betterment of living conditions.

The following persons are members of the board of directors: Mrs. Roger C. Aldrich, Mrs. John D. Archbold, William S. Ball, Charles W. Bogart, Mrs. F. L. Cranford, Miss Cynthia P. Dozier, Horace Fletcher, Mrs. William D. Gaillard, John Greenough, Herbert F. Gunnison, Miss Mary Harriman, Henry H. Hollister, 2d, Miss Bessie Locke, Edgar L. Marston, Mrs. George Grant Mason, Mrs. Robert Overfield, George W. Perkins (treasurer), Mrs. Henry Phipps, Miss Agatha Schurz, Frederick S. Wait, and Hon. Henry A. Wise.

NATIONAL CONFERENCE COMMITTEE ON STANDARDS OF COLLEGES AND SECONDARY SCHOOLS.

As an outgrowth of two annual conferences of delegates from a number of associations, colleges, and preparatory schools in this country, the National Conference Committee on Standards of Colleges and Secondary Schools was organized in April, 1908. The committee consists of delegates from the New England Association of Colleges and Preparatory Schools, New England College Entrance Certificate Board, Association of Colleges and Preparatory Schools of the Middle West and Maryland, College Entrance Examination Board, North Central Association of Colleges and Secondary Schools, Association of Colleges and Preparatory Schools of the Southern States, National Association of State Universities, and the Carnegie Foundation for the Advancement of Teaching. The United States Commissioner of Education is, ex officio, a member.

The committee assembled at Cambridge, Mass., October 9, 1909, at the call of President George E. MacLean, and adopted a definition of a unit for the measurement of admission requirements. (See p. 89.) It was voted that the committee record its approval of the tendency shown by many colleges to make their definitions of admission requirements conform to those of the College Entrance Examination Board, and that the committee make known its belief that it is highly desirable that the definitions of admission requirements published by that board come into universal use.

The officers of the association are: President, George E. MacLean, State University of Iowa; vice-president, Wilson Farrand, Newark Academy; secretary-treasurer, Frederick C. Ferry, Williams College.

NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

The National Society for the Promotion of Industrial Education was founded in 1906, its objects being, as stated in the constitution—

to bring to public attention the importance of industrial education as a factor in the industrial development of the United States; to provide opportunities for the study and discussion of the various phases of the problem; to make available the results of experience in the field of industrial education, both in this country and abroad, and to promote the establishment of institutions for industrial training.

At the third annual meeting of the association, held December 2–4, 1909, the final report of the committee of ten on the relation of industrial training to the general system of education in the United States, was presented. The report dwelt largely with the nomenclature of industrial education. (See Standardization, pp. 95–96.)

The following resolutions, submitted by the committee and adopted by the association, are here cited from Senate Document No. 516 (61st Cong., 2d sess.), in which the entire report is reproduced:

1. *Resolved*, That the National Society for the Promotion of Industrial Education at its meeting in Milwaukee respectfully transmit to the President of the United States, to the Vice-President and Chairman of the Senate, to the Speaker of the House of Representatives, and to the Secretary of the Interior, and to the United States Commissioner of Education, these two reports by a committee of ten members of this society upon the matter of industrial education.

2. *Resolved*, That the National Society for the Promotion of Industrial Education commend most earnestly to these high authorities of the Government the importance of this whole matter of industrial education from the standpoint of our national and economic welfare, and urge upon them the duty of an adequate consideration of this subject by those responsible for the national progress. No other factor in modern civilization requires closer study by those who lead the nations of this generation.

3. *Resolved*, That the National Society for the Promotion of Industrial Education earnestly recommend to the President and to the Members of the Senate and the House of Representatives the wisdom of an adequate appropriation to enable the United States Department of Education to undertake such a study as

that which is here suggested, and for that purpose the society respectfully requests that the President call upon the United States Commissioner of Education for an estimate of such sum as will enable him to undertake and carry through, within a reasonable time, the study here suggested.

4. *Resolved*, That the officers of the National Society for the Promotion of Industrial Education are instructed to present these memorials to the high officers of the Government designated above in such form as may seem most fitting.

The members of the committee of ten, all of whom signed the report, were: Henry S. Pritchett, Paul H. Hanus, M. W. Alexander, E. J. James, Thomas M. Balliet, Leslie W. Miller, Charles S. Howe, William H. Maxwell, L. D. Harvey, and V. Everit Macy.

The officers of the association for 1910 are as follows: President, Charles R. Richards, director of Cooper Union, New York City; treasurer, Frederick B. Pratt, New York City; secretary, Edward H. Reisner, 20 West Forty-fourth street, New York City.

PLAYGROUND ASSOCIATION OF AMERICA.

The Fourth Annual Congress of the Playground Association of America was held in Rochester, N. Y., June 7–11, 1910, with 250 delegates in attendance. The activities of the association comprise field work, including loans of photographs, cuts, lantern slides, and playground models, an employment agency for playground workers, and the publishing of a monthly magazine. The investigation of problems in connection with playgrounds is conducted by committees appointed at the successive congresses.

At the meeting above referred to the committee on recreational buildings for large and small cities recommended that school buildings be used for recreational purposes and that playground commissioners unite with civic clubs in the erection of new buildings.

The committee on story telling reported a list of fifty stories suitable for playground use and presented recommendations as to the best methods of conducting this feature of the work.

At a meeting of the board of directors of the association it was decided that under the direction of the president and secretary of the association a number of local playground institutes should be held in different parts of the country during the coming year.

The following officers were elected for the ensuing year: President, Joseph Lee, Boston, Mass.; treasurer, Gustavus T. Kirby, New York City; secretary, H. S. Braucher, 1 Madison avenue, New York City.

SOUTHERN EDUCATIONAL ASSOCIATION.

The twentieth annual session of the Southern Educational Association was held in Charlotte, N. C., December 28–30, 1909.

The topics for addresses and discussion included moral and religious education, relation of the college to the high school, agricul-

tural education, southern educational problems, future of the denominational college, education and business. A paper was presented showing the marked progress in the Southern States in respect to the improvement of public schoolhouses and reports from the different state superintendents indicated general progress throughout the section.

Exhibits from a number of the public schools of the South, including different phases of manual work, drawing, pictures, etc., excited considerable interest. Among the cities and towns so represented were Asheville, Charlotte, and Durham, N. C.; Atlanta, Ga.; Charleston, S. C.; Birmingham, Ala.; Danville, Va.; Memphis, Tenn.; and Hammond, La.

Resolutions were adopted pledging the cooperation of the association in the movement for universal peace.

The officers elected for the ensuing year are as follows: President, D. B. Johnson, Winthrop Normal College, Rockhill, S. C.; first vice-president, Chancellor James H. Kirkland, Vanderbilt University; treasurer, E. P. Burns, Atlanta, Ga. The secretary, Dr. H. Elmer Bierly, Chattanooga, Tenn., was elected at the Atlanta meeting, 1909, for a term of four years.

SPECIAL COMMITTEES AND CONFERENCES.

Important commissions, committees, or conferences, originating in the collective action of school officers, teachers, or societies, have been formed during the year in many States. Special notices of the following have reached this office:

California.—In accordance with a resolution adopted by the State Teachers' Association of California, at its meeting in San Francisco, in December, 1909, a commission on industrial education was appointed to investigate the conditions bearing upon industrial and technical education in the State, and to report, if possible, in October, 1910. Mr. Harris Weinstock, a merchant, was invited to act as chairman of the commission and, in accordance with the authority conferred upon him, has appointed a truly representative body of associates which insures a full inquiry into all the interests concerned in the investigation.

Ohio.—The committee on resolutions of the Ohio State Teachers' Association, at its annual session, June 28–30, 1910, presented a series of recommendations which were adopted by the association. The principal recommendations were as follows:

> The passage of a bill by the next general assembly authorizing the appointment by the governor of a commission to collect facts concerning industrial education and training; to investigate the educational needs of persons engaged in the different industries, trades, and the agricultural, commercial, and domestic occupations of this State.

The encouragement of all efforts on the part of rural and village districts to make practical application of the sciences to agriculture; and provision for various forms of industrial education in the normal schools.

The further lengthening of the tenure of office of the state superintendent; compulsory supervision of rural schools; the supervision of plans for village, township, and special district schoolhouses, and for the remodeling of the same in the office of the commissioner of common schools; legal provision for an adequate system of state pensions for teachers.

Under the belief that the Federal Government alone can adequately meet the present requirements for information that will enable public instruction to keep pace with the rapid advance of social and industrial demands, the association recommended that urgent efforts be made to secure an additional appropriation of at least $75,000 to the appropriation usually made for the United States Bureau of Education, for the maintenance of a staff of specialists to be employed in the first-hand investigation of present educational conditions and problems.

Pennsylvania.—In order to secure uniformity in the efforts for promoting educational legislation, an educational alliance was formed in Harrisburg, Pa., May 26, 1910, by 50 men and women representing school boards, civic associations, and educational and professional associations in different parts of the State. The conference which resulted in the formation of this comprehensive alliance was called by the president of the State Federation of Women. The officers of the alliance are: Dr. Martin G. Brumbaugh, city superintendent of schools, Philadelphia, president; Dr. J. R. Flickenger, Lock Haven, recording secretary.

South Dakota.—At the annual session of the State Educational Association of South Dakota, held at Lead, November 1–3, 1909, the indorsement of the association was given to committees appointed by the Association of School Executives and the Association of County Superintendents for the following purpose: "To consider and advise upon the revision of the school laws and the enactment of further laws looking to the improvement of the common schools." At a joint meeting of the two committees, held in Sioux Falls, measures were agreed upon looking to the removal of the schools from the sphere of partisan politics; the creation of a school commission by legislative enactment, with an appropriation of at least $5,000 for the purpose of studying the school conditions and problems of the State, and investigating the ways in which some of the older States have met and solved similar problems; the professional uplift of county and state supervision; the increase of the areas of school organization with a view to securing greater efficiency in the rural schools; the establishment of county high schools; provision of hygienic and medical inspection of schools and school children.

The purpose of the committees to secure the largest freedom for the development of the means of public education in the State is especially indicated by the recommendation that all educational financial measures shall be freed from the limitations imposed by the necessary requirements of other appropriation bills.

They declare in favor of laws similar in scope and character to those of the neighboring States of Nebraska, Minnesota, and North Dakota, and which have deservedly given their school systems an enviable reputation, which shall render state aid to rural schools and to high schools from funds derived from state-wide taxation and upon such conditions and limitations as to raise the standard of the schools, assist weak and struggling districts, and secure competent instruction for the agricultural and industrial arts and sciences in central schools.

The chairman of the joint committee is Anson H. Bigelow, superintendent of city schools, Lead; and the secretary, Dr. Franklin B. Gault, president of the University of South Dakota.

Texas.—At the fourth annual meeting of the Conference for Education in Texas, held at Waco, April 21–22, 1910, the following report of the committee on the recommendations made by the educational commission and the executive board of the conference was submitted by Dr. F. M. Bralley and adopted by the conference:

Whereas the educational interests of Texas are the paramount interests of the Commonwealth, the virtue, intelligence, and patriotism of the citizen guaranteed through an efficient system of education being the only safe and permanent basis of the peace, happiness, and prosperity of the people; and

Whereas Texas is making great and commendable progress in the development of her natural resources and her commercial possibilities, and great expansion and growth in both population and legitimate industry are taking place; and

Whereas the conditions and times in Texas demand a marked advance and orderly improvement in the organization, the support, and the administration of the educational affairs of the State: Therefore be it

Resolved, (1) That we indorse the recommendations made by the joint meeting of the board of regents of the University of Texas and the board of directors of the Agricultural and Mechanical College, to wit: (*a*) The extension of the term of office of the members of the two boards to eight years, two members to retire every year.

(*b*) A special tax at a rate sufficient to raise revenues for the maintenance, building, and equipment needs of the Agricultural and Mechanical College, and the complete separation of the Agricultural and Mechanical College from the University of Texas.

(*c*) Authority to the legislature to provide for the investment of the permanent funds of both institutions in such securities and other properties as the legislature may designate.

2. That we recommend such constitutional amendments and enactments of statutory law as will provide for the support of the State's educational institutions by a special tax.

The adoption of this plan will not require an additional tax; it will simply change the method of support to a reasonable, just, and businesslike one.

3. That we declare in favor of longer terms of office for superintendents of schools and for the governing boards of all state educational institutions and for all boards of school trustees, and the terms of the members of each board to be so classified as to prevent the retirement of the majority of any board at one time, and assert it as our belief that such a policy will give a better business administration of educational affairs and at the same time will protect the schools from the interference of factional politics.

4. That we demand the submission of a constitutional amendment by the next legislature providing for the democratic principle of majority rule in the levy of local school taxes by cities that have assumed control of their public free schools.

5. The country schools of Texas are in need of systematization and administration. While the average term of the country public schools of the State is about six months in each scholastic year, the statistics show that more than 2,000 public schools are taught each year for a shorter term than five months; that several hundred schools are taught for a shorter term than three months; that more than 100,000 children of scholastic age are not annually enrolled in the public schools; that 397,000 children of scholastic age are daily absent from the schools while they are in session; and that the country children are practically without high schools.

As a conservative measure for the betterment of these unfavorable conditions and for the improvement of the country public schools we favor the establishment of a county board of education, to consist of five or seven members, to be chosen by the county at large by popular vote. The said county board of education shall be vested with the authority now lodged in the commissioners' court with respect to public-school affairs, and shall, in cooperation with the district board of trustees and the county superintendent, promote the efficiency of the public schools of the county and encourage the establishment of county high schools wherever practicable. This proposition does not involve the abolishment of local boards of district trustees nor any change in the present manner of electing the county superintendent of schools.

III. UNIVERSITIES AND COLLEGES—HIGHER EDUCATION.

ANNIVERSARIES OF UNIVERSITIES AND COLLEGES.

College of California.—Exercises commemorating the opening of the College of California were held at the University of California, May 14–18, 1910. The event was known as the "Golden-jubilee week." Dr. Arthur T. Hadley, president of Yale University, delivered the oration.

Louisiana State University and Agricultural and Mechanical College.—The semicentennial of the opening of Louisiana State University and Agricultural and Mechanical College was celebrated at Baton Rouge, La., January 2–4, 1910. Rev. Dr. Lyman Abbott, of Brooklyn, N. Y., delivered the jubilee sermon.

University of Montana.—The University of Montana at Missoula celebrated its fifteenth charter anniversary February 18, 1910. Charles R. Leonard, of Butte, Mont., delivered the chief address.

INAUGURATION OF COLLEGE AND UNIVERSITY PRESIDENTS.

Harvard University.—On account of the age and importance of the institution concerned, the inauguration of Dr. Abbott Lawrence Lowell as twenty-fourth president of Harvard, October 6, 1909, attracted much attention. Delegates were present from 31 foreign institutions and from 167 institutions in the United States. At the conclusion of the inaugural address, President Lowell conferred thirty honorary degrees.

Dartmouth College.—Dr. Ernest Fox Nichols was inaugurated as tenth president of Dartmouth College, Hanover, N. H., October 14, 1909. A notable feature of the exercises was a speech of congratulation in behalf of the English founders and benefactors by the British ambassador, Hon. James Bryce.

Wesleyan University.—Dr. William Arnold Shanklin was inaugurated as ninth president of Wesleyan University, Middletown, Conn., November 12, 1909. An interesting feature of the exercises was the presence of both the President and Vice-President of the United States. President Taft delivered one of the congratulatory addresses.

Notices of the following inaugurations have reached this bureau:

Clark College.—Dr. Edmund Clark Sanford was inaugurated as the second president of Clark College, Worcester, Mass., on Founder's Day, February 1, 1910.

Colgate University.—Dr. Elmer Burritt Bryan was inaugurated as sixth president of Colgate University, Hamilton, N. Y., October 20, 1909.

Fisk University.—Dr. George Augustus Gates was inaugurated as third president of Fisk University, Nashville, Tenn., March 31, 1910.

Franklin and Marshall College.—Dr. Henry Harbaugh Apple was inaugurated as sixth president of Franklin and Marshall College, Lancaster, Pa., January 7, 1910.

Kansas State Agricultural College.—Prof. Henry Jackson Waters, D. S. A., was inaugurated sixth president of the Kansas State Agricultural College, Manhattan, Kans., November 11, 1909.

Mills College.—Dr. Luella Clay Carson was inaugurated as second president of Mills College, Mills College, Cal., December 11, 1909.

Southwestern Presbyterian University.—Dr. William Dinwiddie was inaugurated as the sixth chancellor of Southwestern Presbyterian University, Clarksville, Tenn., June 7, 1910.

University of North Dakota.—Dr. Frank L. McVey was inaugurated as fourth president of the University of North Dakota September 29, 1910.

IMPORTANT MEETINGS.

Association of American Universities.—The Association of American Universities held its eleventh annual conference in Madison, Wis., January 4–5, 1910. This association is founded for the purpose of considering matters of common interest relating to graduate study.

The discussions at the conference were grouped about the following topics: "The problem of the assistant professor," a paper prepared on behalf of Leland Stanford Junior University by Prof. Guido Hugo Marx and presented by Prof. Charles H. Huberich; "University extension," a paper presented on behalf of the University of Wisconsin by Prof. Louis E. Reber; "Position and importance of the arts course as distinct from the professional and semi-professional courses," a paper presented on behalf of Princeton University by President Woodrow Wilson. (For the report of the committee on nomenclature, see page 94.)

The officers are representatives of the following institutions: President, University of Pennsylvania; vice-president, University of Wisconsin; secretary, Harvard University.

The Association of Kentucky Colleges.—The Association of Kentucky Colleges is an incorporated body, which will hereafter hold a meeting each December at Lexington, Ky. Two meetings were held in 1909, in January and in December. Through a committee on accredited schools the association has been influential in securing uniform entrance requirements on the part of the colleges and universities of the association.

The National Association of State Universities.—The National Association of State Universities held its fourteenth annual meeting at Cambridge, Mass., October 8–9, 1909. Forty members were present during the session. The guests were: James Bryce, British ambassador to the United States; Edwin E. Sparks, president of Pennsylvania State College; Robert Alexander Falconer, president of University of Toronto.

The University of South Carolina applied for membership and was admitted. All the state universities are now represented in the association.

The discussions, which covered topics of vital interest to the members, are printed in Transactions and Proceedings of the National Association of State Universities in the United States of America, No. 7. (For the action taken by the association upon nomenclature, see page 94.)

The officers are: President, Brown Ayres, University of Tennessee; vice-president, M. H. Buckham, University of Vermont; vice-president (ex officio), Hon. Elmer Ellsworth Brown, United States

Commissioner of Education; secretary-treasurer, George Emory Fellows, University of Maine.

Association of Presidents of Women's Colleges in North and South Carolina.—The Association of Presidents of Women's Colleges in North and South Carolina held its third annual meeting at Meredith College, Raleigh, N. C., March 30 to April 1, 1910. The leading subjects considered were: Better standards in secondary schools and colleges; the use of certificates for entrance and for advanced standing; the amount and kind of work required for the B. A. degree; and health and exercise.

Association of Collegiate Alumnæ.—The annual meeting of the Association of Collegiate Alumnæ was held in Cincinnati, Ohio, October 27–30, 1909. The report of the secretary shows that the association has 4,100 members in 47 branches.

The report of the committee on corporate membership suggests that the time seems ripe to leave to other agencies the standardization of colleges in academic and financial matters, and to direct its efforts to maintaining suitable conditions for women in those institutions which admit them. The committee therefore makes the following recommendations regarding institutions which are to be admitted:

1. There shall be a reasonable recognition of women in faculties and in the student body, and proper provision for the intellectual and social needs of women students.

2. Much weight shall be given to the fact where women are on the board of trustees, especially in women's colleges.

3. In the consideration of a coeducational institution great weight shall be given to the fact that such an institution has a dean or adviser of women above the rank of instructor giving instruction and counted a regular member of the faculty.

4. Women on the faculty shall receive approximately the same salaries as men of the same rank.

5. No coeducational institution shall be considered in which there is not special provision, through halls of residence or in other buildings, for the social life of the women students.

COLLEGE ELECTIVES.

The subject of college electives has been treated in several addresses delivered before important college and university gatherings. The attitude of the speakers toward this subject is indicated in the following extracts taken from their addresses:

The middle of the last century saw the beginning of several intellectual movements. Natural science got under way earliest by establishing the doctrines of evolution and energy. The bearing of these broad principles soon became as necessary to our modes of thought as they were immediately recognized to be for our material development. To-day there is no branch of knowledge which has not in some wise been extended and enriched by the philosophical bearing

of these wide-sweeping laws which, at first, were the individual property of natural science. So intimately have they become the guiding principles of all modern constructive thinking, that, steer how he will, the man in college can not escape their teachings. Although these principles are still most significantly presented in the laboratories in which they arose, the student will as surely find their progeny in philosophy and history, in theology and law.

The progress of half a century in the social sciences (history, economics, sociology, politics) has been of equal importance. Though no such fundamental and far-reaching doctrines as those of evolution and energy have there been discovered, yet social studies have become vital to the interpretation and upbuilding of modern life and service.

What response did our colleges make to this revolution in thought, this sudden widening of intellectual and spiritual horizons, this modern renaissance? For a time practically none, for the curriculum was strongly entrenched in an ancient usage. Something called a "liberal education" was a kind of learned creed. The intellectual atmosphere outside the college grew broader, stronger, freer than in it. Forced by a rising tide, the colleges first made a few grudging and half-hearted concessions, but still held for the most part firmly to their creed. The defenders could always point in unanswerable argument to the men of profound and varied talents who have been trained under their discipline—a discipline which all must freely admit has never been excelled. But times had changed, professional schools and real universities had come into existence in America, and more kinds of preparation were demanded of the college. Modern life in its vastly increased complexity had outgrown the straitened mold of a pedagogical and clerical curriculum.

Finally, in an awakened consciousness, some colleges made the mistake inevitable after too long waiting, and not only established the newer subjects in numerous courses, but took the headlong plunge and landed in an unbridled elective system.

Under this unhappy system, or lack of system, for every student who gains a distinct advantage by its license several of his less purposeful companions seek and find a path of least resistance, enjoy comfort and ease in following it, and emerge at the other end four years older, but no more capable of service than when they entered. Many another youth, neither lazy nor idle, but lacking both rudder and chart, angles diligently in shallow waters, goes no deeper than the introductory course in any department, comes out with many topics for conversation, but no real mental discipline and but little power to think.—(Inaugural address, October 14, 1909, Dr. Ernest Fox Nichols, Dartmouth College.)

President Eliot pointed out with unanswerable force that the field of human knowledge had long been too vast for any man to compass; and that new subjects must be admitted to the scheme of instruction, which became thereby so large that no student could follow it all. Before the end of the nineteenth century this was generally recognized, and election in some form was introduced into all our colleges. But the new methods brought a divergence in the courses of study pursued by individual students, an intellectual isolation, which broke down the old solidarity. In the larger institutions the process has been hastened by the great increase in numbers, and in many cases by an abandonment of the policy of housing the bulk of the students in college dormitories, with the result that college life has shown a marked tendency to disintegrate, both intellectually and socially.

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If the changes wrought in the college have weakened the old solidarity and unity of aim, they have let in light and air. They have given us a freedom

of movement needed for further progress. May we not say of the extreme elective system what Edmond Scherer said of democracy; that it is but one stage in an irresistible march toward an unknown goal? We must go forward and develop the elective system, making it really systematic. Progress means change, and every time of growth is a transitional era; but in a peculiar degree the present state of the American college bears the marks of a period of transition. This is seen in the comparatively small estimation in which high proficiency in college studies is held, both by undergraduates and by the public at large, for if college education were now closely adapted to the needs of the community, excellence of achievement therein ought to be generally recognized as of great value. The transitional nature of existing conditions is seen again in the absence, among instructors as well as students, of fixed principles by which the choice of courses of study ought to be guided. It is seen more markedly still in the lack of any accepted view of the ultimate object of a college education.

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If, then, the college is passing through a transitional period, and is not to be absorbed between the secondary school on the one side and the professional school on the other, we must construct a new solidarity to replace that which is gone. The task before us is to frame a system which, without sacrificing individual variation too much or neglecting the pursuit of different scholarly interests, shall produce an intellectual and social cohesion, at least among large groups of students and points of contact among them all. This task is not confined to any one college, although more urgent in the case of those that have grown the largest and have been moving most rapidly. A number of colleges are feeling their way toward a more definite structure, and since the problem before them is in many cases essentially the same, it is fortunate that they are assisting one another by approaching it from somewhat different directions.—(Inaugural address, October 6, 1909, Dr. Abbott Lawrence Lowell, president of Harvard University.)

Amidst the epidemic, now happily lyterian, toward the free and easy options of the extreme elective system, some of us have persistently denied that "all subjects are equally valuable," and have held fast to certain disciplines as not exclusive, but as indispensable to the well-formed mind. We have refused to fall in line with that mischievous "scrap heap" educational fad which is now coming to be recognized as such even by many who until recently accepted it. Nor does this mean that I am not a believer in the fundamental idea of an elective system—namely, that of individuality and the cultivation of aptitudes; but that idea has found poor expression through the unscientific system, or rather lack of system, now so largely in use. Happily, we are in the midst of a salutary reaction against the excesses of the elective system. The pendulum is swinging back.—(Inaugural address, November 12, 1909, Dr. William Arnold Shanklin, president Wesleyan University.)

There are some who are suspecting that the elective system has somehow gone too far and is unnecessarily complicating the problem of higher education. When we have every kind of knowledge quantified, we have the elective system, a system which is not totally unrelated in its fundamental character to the unit system. It may be, however, that the latter has within it the potencies which shall appear as the corrective of those limitations which have become glaring in the former.

The tendency to telescope the academic and professional interests and to trade off even in the matter of credits marks a serious danger in higher educa-

tion. Here the unit system may become a great defense or it may be a means of destruction. Every one must recognize the necessity of shortening the total time of schooling for the individual, but if the mathematical unit operates in such a way as to fatten the youth in order to rob him later, we may call it more than a chance misfortune.—(Address before Association of Colleges and Preparatory Schools of the Middle States and Maryland, November 22, 1909, Prof. Edward F. Buchner, Johns Hopkins University.)

The second task to which not only the individual universities but especially this National Association of State Universities must address themselves is the establishment of a curriculum for freshmen and sophomores in place of the old New England curriculum which has gone and the no-curriculum of the elective system, which experience has proved a worse substitute. I regard this matter as one of the most urgent problems now before our universities. It can not be settled for the nation by any one institution, but it can, I believe, be settled by this association, representing the universities of the several States. What we do in this matter, if we can reach a unanimous conclusion, would, I have little doubt, be adopted by the Nation. And think what vast interests are involved. It is nothing less than the displacement of the chaos which now reigns supreme, not only in our universities and colleges, but in our high schools and academies, by a curriculum of study based on sound pedagogical principles and adapted to the spirit and needs of twentieth-century civilization. I admit that the task is one of colossal difficulty, but that is no reason why it should not be undertaken. Difficulties exist to try the spirit of men.

The general indifference of the faculties of our universities to this problem is due, I believe, to that exclusive absorption in departmental interests which the elective system has developed amongst us. The professor tends to look at all educational questions from the point of view of his own subject, his own classes, his own laboratory or seminary. A visitor from Mars investigating our universities might suspect that students existed for the sake of the professor's specialty. What studies are best for the student, and at what age? are themes seldom discussed and rarely thought of. Yet, in spite of research and in spite of service to the community, it is still true that universities exist for the sake of students. And the time has come for a reaction in favor of the student's interests. We must face and settle the question what subjects should be studied by freshmen and sophomores, who, according to the formal declaration of this association, can not, like upper-class men and graduates, be left free to elect their own courses and to engage in specialization or investigation.—(President's address before the National Association of State Universities, October 8, 1909, Dr. Jacob Gould Schurman, president Cornell University, Ithaca, N. Y.)

The third cause for the declining numbers in the arts courses is one which I believe to have been very influential. I believe that the introduction and development of the elective system has had an influence only second to that of the commercial demand for technically trained men in reducing the interest in the arts course. It is interesting to observe that it is in the arts courses alone that the elective system is effective. Technical schools offer courses for the most part prescribed. Science courses are commonly prescribed. The student in the arts courses, in most colleges, is left very much to his own devices. * * *

While there is no doubt that the demand for a new type of educated man has enormously increased the number of persons seeking collegiate education, I firmly believe that it was not simply a coincidence that the decline of the arts course set in about the same time that the elective system became thoroughly established. I am confident that the apparent indefiniteness and consequent

uselessness of the bachelor of arts course has deterred many male students from taking it. I believe, however, that it is quite possible to do much to counteract the evil effects of the elective system upon the arts course in Tufts College, without sacrificing the important principle whose recognition led to the establishment of the elective system. I am glad to say that this conviction is shared by the faculty, and that plans are now being prepared for a reorganization of our bachelor of arts courses, which it is hoped to put into effect with the beginning of the fall term of 1910. It is proposed to organize a considerable number of courses leading to the degree of bachelor of arts on the same general principle and with the same degree of definiteness as that shown in the scientific and technical courses. It is proposed to lay out a considerable number of courses in the School of Liberal Arts practically identical in the freshman year but diverging thereafter, leading to preparation for law schools, for teaching, for journalism, for social service, for business, either directly or in preparation for admission to the Braker School of Business Administration, and probably ultimately for other occupations. Together with these the present course will be retained for the use of those who desire a culture course without distinct vocational training or who have not yet determined their vocation. It is claimed, however, that it will make the possibilities of the bachelor of arts course evident, that its usefulness as a vocational course will be made clear, and that the reproach of vagueness and uncertainty will be removed from it. The essential principle of the elective system will be substantially retained. At the same time the control of education will also be retained in the hands of the faculty, and the School of Liberal Arts will come much nearer to educating its pupils than it has for the many years during which the tendency, less strong at Tufts than in many other places, has been not so much to educate the student as to allow him to get an education.—(Annual report to the trustees of Tufts College for 1909–10, President Frederick W. Hamilton.)

The faculty of arts and sciences of Harvard University at its meetings on December 14 and 21, 1909, adopted the following rules for the choice of electives, which will go into effect with the class entering in 1910:

I. Every student shall take at least six of his courses in some one department, or in one of the recognized fields for distinction. In the latter case four must be in one department. Only two of the six may be courses open to freshmen or distinctly elementary in character.

II. For purposes of distribution all the courses open to undergraduates shall be divided among the following four general groups. Every student shall distribute at least six of his courses among the three general groups in which his chief work does not lie, and he shall take in each group not less than one course, and not less than three in any two groups. He shall not count for purposes of distribution more than two courses which are also listed in the group in which his main work lies.

The groups and branches are:

1. Language, literature, fine arts, music. (*a*) Ancient languages and literatures. (*b*) Modern languages and literatures. (*c*) Fine arts, music.

2. Natural sciences. (*a*) Physics, chemistry, astronomy, engineering. (*b*) Biology, physiology, geology, mining.

3. History, political and social sciences. (*a*) History. (*b*) Politics, economics, sociology, education, anthropology.

4. Philosophy and mathematics. (*a*) Philosophy. (*b*) Mathematics.

The committee of nine appointed from the faculty to prepare general rules for the choice of electives was granted authority to arrange the various courses under the different groups and subgroups by agreement with the departments in which the various courses are given.

III. Prescribed work shall not count either for concentration or for distribution.

The committee was instructed in administering these general rules for the choice of electives by candidates for a degree in Harvard College to make exceptions to the rules freely in the case of earnest men who desire to change at a later time the plans made in their freshman year, and to make liberal allowances for students who show that their courses are well distributed, even though they may not conform exactly to the rules laid down for distribution. In making exceptions to the rules, a man's previous training and outside reading are to be taken into account.

President A. Lawrence Lowell says the object to be attained by these new rules is twofold: "To require every student to make a choice of electives that will secure a systematic education, based on the principle of knowing a little of everything and something well;" and further "to make the student plan his college curriculum seriously, and plan it as a whole."

MISCELLANEOUS ITEMS.

Evening and correspondence courses at the University of Minnesota.—Evening and correspondence courses have been established in the department of economics and political science of the University of Minnesota within the past year, chiefly for the benefit of business men and others interested in political and economic subjects. The evening courses for the first semester included: Principles of political economy, currency and banking, the public relations and regulations of business, current economic problems, and principles of accounting. Similar courses, consisting of 24 lessons each, were offered for correspondence instruction.

University extension lecture courses are given by the department of economics and political economy. It is also proposed to establish extension courses in the school of education. Previous to the past year the University of Minnesota has not offered extension work except through extension lecture courses.

Degree of associate in arts at Harvard University.—By a vote of the president and fellows of Harvard University, approved by the board of overseers at their meeting April 6, 1910, the degree of associate in arts is established in Harvard University. The courses accepted for this degree will consist mainly of those of the summer school and the extension courses. The degree will also be granted to women by Radcliffe College. Neither an entrance examination nor

residence at the University will be required for the degree. The following rules were adopted:

I. For the degree of A. A. a candidate is required to pass in studies amounting to the same number of courses as is regularly required for the degree of A. B., of which the equivalent of not less than five full courses shall be courses given by officers of instruction of Harvard University or by authority of Harvard University.

II. Of these courses one shall be taken from each of the following four groups of subjects:

1. Language, literature, fine arts, music.
2. Natural sciences.
3. History, political and social sciences.
4. Philosophy and mathematics.

III. Not more than five of these courses shall be elementary courses in any one department.

IV. The administrative board of the department of university extension is directed to present annually to the committee on instruction of the faculty of arts and sciences a list of courses offered by Harvard University and the cooperating institutions, to be approved by the faculty as acceptable for the degree of A. A.

Educational conferences at the University of Vermont.—For the past five years the University of Vermont has held an annual educational conference with the secondary schools of the State. The first of these conferences, held in January, 1906, was on English; the second in March, 1907, on the study of the classics; the third in 1908, on the teaching of mathematics; the fourth, in March, 1909, on the best methods of teaching the sciences, especially chemistry and physics; and the fifth, held March 10 and 11, 1910, was on modern language teaching in the schools.

The conferences have been held in response to a desire on the part of teachers and friends of education for cooperation and leadership in educational progress, and the aim has been to bring expert advice to bear on some of the more important educational problems. The university, in this way, has also been able to render a service to the effort which is being made to improve, elevate, and unify the educational institutions of the State.

The five conferences are reported to have been successful, and that on each occasion more than a hundred of the teachers in the secondary schools of the State were in attendance.

Honor system to advance scholarship at Yale University.—The question of raising the standard of scholarship and of raising the estimate of scholarly attainment at Yale University, has been under discussion by the alumni advisory board of the University during the past year, and has also been the charge of a special committee of the faculty.

The committee proposes the following scheme of honors in connection with certain groups of courses which it is believed will be influential in raising the standard of scholarship:

Our proposition is to offer a limited number of honors groups, each embracing at least two related subjects. In these the work is to be prescribed for sophomore and junior years, but left more or less elastic in senior year. One or more freshman courses would also be involved as fundamental and preparatory. The total amount of work called for in these honors courses would then aggregate about one-half of the total sixty hours per week, distributed through the four years, now required for graduation. In other words, the candidate for honors would still have left one-half his time for other elective work, except as this may be limited by the proposed requirement that honors students shall have a reading knowledge of French and German by the end of junior year. Of the honors courses, it is proposed that fifteen hours shall be embraced in the work of the sophomore and junior years.

The scheme would be laid before incoming freshmen in outline, but the choice as to the definite-honors group would not be expected from the student till the end of sophomore year. The honors competition would be open to all, irrespective of previous rank, and the final grading would depend on the work in the honors courses alone.

Two related subjects are called for in the scheme in order that the work of a given student may not be too narrow and specialized; but it is contemplated that in senior year it may be possible for the candidate for honors to devote himself more or less exclusively to one of the two subjects which he has pursued up to that point. The work of senior year would also in many cases be more free from the minor classroom restrictions than would be the case with the ordinary man. As examples of the grouping of subjects for honors courses thus far tentatively laid out may be mentioned the following: History and economics, philosophy and economics, Greek and Latin, French and German, physics and mathematics, chemistry and geology, chemistry and physics, and some others.

While the plan is not yet complete, the subject has been repeatedly considered by the permanent faculty at its meetings since January, 1909, and the expression of opinion is strongly in favor of developing the scheme and putting it into action as soon as practicable.

Teaching fellowships at University of Wisconsin.—For the benefit of university graduates who expect to engage in teaching, the regents of the University of Wisconsin have established a number of teaching followships to be awarded each year to members of the graduating class. These fellows will devote half of the year to teaching in one of the city high schools of the State, under the supervision of the principal and teachers, and the other half to advanced study of the subject they wish to teach and to the study of pedagogy. Eight of the high schools of the State are cooperating with the university in this plan for training teachers. Six fellowships were awarded for the year 1910–11.

Goucher College (formerly Woman's College of Baltimore, Md.).—On February 2, 1910, the trustees of the Woman's College of Baltimore, Md., changed the name of the institution to Goucher College,

in honor of its founder, Rev. Dr. John S. Goucher, of the Methodist Episcopal Church.

Reed College.—After a thorough investigation of the needs of the West, the trustees of the endowment fund of $3,000,000 left by the late Mrs. Amanda Reed, have decided to establish a college of liberal arts, to be known as Reed College. William Ladd has donated 40 acres of land bordering on the Willamette River, within the city limits of Portland, for a campus. William Trufant Foster, professor of education, Bowdoin College, has accepted the presidency, and expects that the college will open for instruction in September, 1911.

The American Society for Extension of University Teaching.—The report of the board of directors of the American Society for Extension of University Teaching for the academic year 1909–10 contains the following items: One hundred and twelve courses were conducted at 91 centers located in towns and cities in 7 States of the East, with an aggregate attendance of 165,199. Attention is called to the social service of the society in connection with the free-lecture systems at Atlantic City and elsewhere and the joint free-library courses of the American Society and the free library of Philadelphia. Eight syllabi were issued during the year. The reported membership for 1910 is 1,323.

The officers of the association are: President, Henry La Barre Jayne; treasurer, J. Rodman Paul; secretary, Charles D. Atkins.

Degree of doctor of public health established at Harvard University.—At a meeting of the Harvard Corporation, held June 28, 1910, it was voted to establish a degree of doctor of public health, to be administered in accordance with the following regulations:

1. The degree shall be known as "doctor of public health."

2. Candidates for the degree of doctor of public health should first have the degree of M. D., or otherwise be properly qualified.

3. Candidates for the degree of doctor of public health shall spend no less than one year in work upon a special subject and present a thesis containing some original research acceptable to the faculty of medicine.

4. Candidates for the degree may be given credit for any course offered in any department of the university, provided it has the approval of the faculty of medicine.

5. Candidates for the degree may be admitted to advanced standing. A minimum of one year in residence shall be required.

6. The president of the university shall appoint three members from the committee of full professors of the faculty of medicine, who shall constitute a "committee on the degree of doctor of public health." It shall be the duty of this committee to consider all matters pertaining to the courses, admission to advanced standing, and other matters concerning the administration of the degree. The committee on the degree of doctor of public health shall report its recommendations to the faculty of medicine.

IV. STANDARDIZATION OF EDUCATION.

[See Report of the Commissioner of Education, 1909, Vol. I, pp. 92, 99.]

During the year the subject of standardization of education has received considerable attention. The meaning of the term and the significance of the results are made clear in the following:

CERTIFICATION OF TEACHERS.

[See page 216.]

Illinois.—The Illinois education commission in its final report to the forty-sixth general assembly recommends a bill to provide a uniform system of examining applicants for teachers' certificates.

Ohio.—The last Ohio state legislature passed a bill to provide for certification of teachers in the public schools.

General.—The following resolutions, which were adopted by the Conference of Chief State Education Officers held in Lincoln, Nebr., are to be presented at a larger conference of these officers to be held at Salt Lake City, Utah, November 17–21, 1910:

That we recognize the state life certificate secured by uniform state examination, subject for subject, which represents, in the main, scholarship and training equivalent to graduation from a four-year college course; provided, that the standard of the examination in the State where the certificate is issued is as high as that in the State to which the candidate seeks to be certified.

That we favor the mutual recognition of state certificates based upon a degree from a standard college or university. A standard college or university is defined as one requiring for entrance a four-year high school course and for graduation a four-year college course of not less than 120 semester hours, in which shall be included not less than 15 hours of educational work.

That we recommend the recognition of certificates based on the completion of a two-year course in standard state normal schools, for teaching in the elementary schools; and the recognition of certificates based upon the completion of a four-year course in like schools for teaching in secondary schools. By a standard normal school we mean a school requiring four years' high-school work for entrance and in addition thereto two years' work, including a thorough review of the common branches and one maintaining a well-equipped training school for observation and practice.

It is the sense of the state superintendents at this conference that the conference be continued at another meeting to be held next fall at which the question of further deciding upon the question of interstate certification and other questions of educational work in which the States here represented are particularly interested be discussed; that a committee of three, to consist of Superintendent Bishop, Doctor Updegraff, and Superintendent Schulz be appointed to prepare an outline of the subjects to be discussed; that the invitation of Superintendent Nelson, of Utah, for the conference to meet at Salt Lake City be accepted; that the committee be directed to especially invite state superintendents from as far east as Ohio and north of the Ohio River, and west of the Mississippi River.

COLLEGE AND HIGH SCHOOL STANDARDS.

The American Philological Association.—The commission appointed by The American Philological Association, and authorized to formulate and to further the adoption of college entrance requirements in Latin, met in Cleveland, Ohio, October 29–30, 1909, and formulated the following college entrance requirements in Latin:

I. AMOUNT AND RANGE OF THE READING REQUIRED.

1. The Latin reading required of candidates for admission to college, without regard to the prescription of particular authors and works, shall be not less in amount than Cæsar, Gallic War, i–iv; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Virgil, Æneid, i-vi.

2. The amount of reading specified above shall be selected by the schools from the following authors and works: Cæsar (Gallic War and Civil War) and Nepos (Lives); Cicero (orations, letters, and De Senectute) and Sallust (Catiline and Jugurthine War); Virgil (Bucolics, Georgics, and Æneid) and Ovid (Metamorphoses, Fasti, and Tristia).

II. SUBJECTS AND SCOPE OF THE EXAMINATIONS.

1. *Translation at sight.*—Candidates will be examined in translation at sight of both prose and verse. The vocabulary, constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above.

2. *Prescribed reading.*—Candidates will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias, and Virgil, Æneid, i, ii, and either iv or vi at the option of the candidate, with questions on the subject-matter, literary and historical allusions, and prosody. Every paper in which passages from the prescribed reading are set for translation will contain also one or more passages for translation at sight; and candidates must deal satisfactorily with both these parts of the paper, or they will not be given credit for either part.

3. *Grammar and composition.*—The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose. The words, constructions, and range of ideas called for in the examinations in composition will be such as are common in the reading of the year, or years, covered by the particular examination.

Brown University.—The committee on college entrance requirements of Brown University Teachers' Association recommended that the association present the following petition to the authorities of Brown University:

1. That the texts to be read in preparation for the requirement in Latin be four books of Cæsar, seven orations of Cicero (or six orations, if the Manilian Law be included), and six books of Virgil; or the equivalent of this requirement.

2. That two years' study of German or two years' study of French receive the same credit for admission to college as is now given for two years' study of Greek.

3. That elementary Latin receive three points of credit for admission to college instead of two.

The College Entrance Examination Board.—The College Entrance Examination Board was organized November 17, 1900. Its purpose was to bring about as rapidly as possible an agreement upon a uniform definition of each subject required by two or more colleges for admission; to hold, or cause to be held, a series of college admission examinations with uniform tests in each subject; and to issue certificates based upon the results of such examinations. Each year the board issues circulars stating the places at which examinations are to be held, the names of the examiners, and the scope and requirements of the subjects in which examinations are to be held.

The examination board is composed of the following representatives of colleges, universities, and secondary schools named:

Colleges and universities: Adelphi College, President Levermore; Barnard College, Acting Dean Brewster; Brown University, President Faunce; Bryn Mawr College, President Thomas; Bucknell University, Dean Rockwood; Case School of Applied Science, President Howe; Colgate University, Dean Crawshaw; Columbia University, President Butler (chairman); Cornell University, President Schurman; Dartmouth College, Dean Emerson; Goucher College, Dean Van Meter; Harvard University, Dean Hurlbut (vice-chairman); Johns Hopkins University, Dean Griffin; Massachusetts Institute of Technology, Professor Tyler; Mount Holyoke College, President Woolley; New York University, ———; Rutgers College, President Demarest; Smith College, ———; Stevens Institute of Technology, President Humphreys; Swarthmore College, President Swain; Union College, Dean Ripton; University of Pennsylvania, Professor Fisher; Vassar College, President Taylor; Wellesley College, Dean Pendleton; Wesleyan University, Professor Nicolson; Western Reserve University, President Thwing; Williams College, Dean Ferry; Yale University, President Hadley.

Representatives of the secondary schools: N. Henry Black, Boston, Mass.; James G. Croswell, New York, N. Y.; John H. Denbigh, New York, N. Y.; Wilson Farrand, Newark, N. J.; William Gallagher, South Braintree, Mass.; Edward J. Goodwin, Brooklyn, N. Y.; Edward L. Harris, Cleveland, Ohio; James L. Patterson, Philadelphia, Pa.

Dr. Thomas S. Fiske, of New York City, is secretary of the board.

The following extracts from the constitution (as amended to May 11, 1907) explain the purposes of the board, who shall constitute its membership, and the method of conducting the examinations:

I.

The College Entrance Examination Board shall consist of the president or an authorized representative of each participating college or university and of representatives of secondary schools.

II.

A college or university may upon application be admitted to membership, provided that in the college applying for admission—

(1) There shall be specifically defined and consistently carried out, whether by examination or certificate (or for the admission of special students), requirements for admission which shall in every case be equivalent to a four-year course in a college-preparatory or high school of good grade, able to prepare its pupils for admission to the colleges already belonging to this board.

(2) The members of the faculty shall have an academic training adequate to maintain a high standard of teaching; they shall bear a proper proportion to the students to be taught, and shall be sufficient in number to permit of proper specialization in the subjects assigned to each individual instructor.

(3) The breadth of the college curriculum, the standard of graduation, the grade of work, and the amount of work demanded shall be proper subjects of inquiry by the executive committee and shall constitute factors in determining their decision.

(4) There shall be no preparatory department under the government or instruction of the college faculty.

(5) There shall have been for at least three years preceding the application for admission an average of at least fifty students in the regular entering classes (courses in arts and in science to be reckoned together for this purpose).

(6) There shall be a free income-bearing endowment, yielding in no case less than twenty thousand dollars annually, or in the case of state universities and colleges an equivalent annual appropriation from public funds, expended exclusively on the undergraduate department; as well as libraries, laboratories, buildings, and equipment adequate to maintain the degree of efficiency and the standard of scholarship contemplated in the above provisions.

III.

Every college desiring to be admitted to membership in the board shall be required to file with the secretary at least three months before the stated meeting of the board at which action on the application is desired an application made upon a form to be furnished by the secretary, and to give such additional information or proof of the statements submitted as may be desired by the executive committee; and any recommendation or recommendations of the executive committee for membership shall be communicated to the members of the board at least one month before said stated meeting.

IV.

Colleges shall be admitted to the board on a two-thirds vote of the executive committee confirmed by a two-thirds vote of the members of the board.

V.

Representatives of the secondary schools shall be appointed in such manner as the association choosing them may direct by the New England Association of Colleges and Preparatory Schools, the Association of Colleges and Preparatory Schools of the Middle States and Maryland, the Association of Colleges and Preparatory Schools of the Southern States, the North Central Association of Colleges and Secondary Schools, and such other similar associations as may hereafter be recognized by the board. Each association may appoint one secondary-school representative for every three colleges and universities, members

of the board and represented in such association, provided, however, that one representative may be appointed on the admission to the board of one such college or university, and provided, further, that the number of secondary-school representatives appointed by any one association shall in no case exceed five.

Representatives of secondary schools may also be appointed directly by the board, to the number of five.

VI.

Annual dues of one hundred dollars shall be imposed on every college holding membership in the College Entrance Examination Board, said fees to be used primarily for the proper conduct of the examinations.

VII.

The board shall elect at each annual meeting a chairman, a vice-chairman, a secretary, and a treasurer. The secretary and treasurer need not be members of the board.

VIII.

The board shall choose annually an executive committee, to consist of five members, including at least one representative of the secondary schools, which shall have such powers and duties as the board may, from time to time, determine.

IX.

The board shall have power, from time to time, to adopt and publish a statement of the ground which should be covered and of the aims which should be sought by secondary-school teaching in each of the following subjects (and in such others as may be desirable) and a plan of examination suitable as a test for admission to college: Botany, chemistry, drawing, English, French, geography, German, Greek, history, Latin, mathematics, physics, Spanish, zoology.

X.

The chairman of the board shall, with the approval of the executive committee, appoint annually a committee of review, to consist of seven members, three of whom shall be representatives of secondary schools. This committee shall consider all criticisms and suggestions that may be made to the board in regard to its requirements, and shall make definite recommendations in regard to any modification of these requirements that may from time to time seem desirable. The committee may cooperate with committees of other bodies appointed to formulate entrance requirements, or may, with the approval of the board, arrange for the appointment of such committees.

XI.

Not later than December of each academic year the board shall designate for each subject named in Section IX a college teacher to act as chief examiner, and one additional college teacher and one secondary-school teacher to act as associate examiners, and shall fix their compensation. It shall be the duty of the examiners so appointed to prepare examination questions, or other appropriate tests, in the several subjects, to be used at the annual examinations to be held under the direction of the board. When the several question papers or other

tests have been agreed on by the respective groups of examiners, they shall be submitted for approval or revision to a committee to consist of the chief examiners and of not less than five representatives of the secondary schools upon the board. The action of this committee of revision shall be final.

XII.

Not later than May of each academic year the board shall appoint a staff of readers to inspect and give a rating to the answer-books or other tests offered at the examinations, and shall fix their compensation. Both college and secondary-school teachers shall be eligible for such appointments.

XIII.

The examination papers shall be transmitted as soon as adopted by the committee of revision to the secretary of the board, and shall be printed and distributed, under the secretary's direction, to such examination centers and in accordance with such regulations as the board may from time to time determine.

XIV.

The examinations shall be held at such times, in such places, and under such supervision as the board, or its executive committee, may from year to year determine.

XV.

Immediately on the completion of an examination the answer-books or other records shall be forwarded in sealed packages to the secretary of the board, who shall assign them for inspection and rating to such readers as the board or the executive committee may have chosen. The answer-books and other records, together with the rating accorded them, shall be returned by the reader within one week after their receipt to the secretary of the board, who shall issue a certificate as to the name and residence of the candidate, the subjects in which examinations were taken, the rating accorded in each subject, and the place and date of the examinations.

XVI.

Answer-books shall be marked on a scale of 100, books marked from 100 to 90 being regarded as excellent (A), from 90 to 75 as good (B), from 75 to 60 as fair (C), from 60 to 50 as doubtful (D), from 50 to 40 as poor (E), and below 40 as very poor (F). No answer-book shall be finally marked below 60 until it has been passed upon by two readers. No revision of any answer-book will be made after its mark has been determined. All books marked below 60 shall be kept for two years. At any time within that period they will be sent, at the request of the candidate, to any designated college.

At a meeting held in April, 1909, the board indorsed the scale of values of college entrance requirements adopted by the Carnegie Foundation for the Advancement of Teaching, namely, that each unit represent one year's work in a secondary school, with four or five periods a week.

The tenth annual report of the secretary shows that the examinations given June 20–25, 1910, were held at 168 points, and that 22,189 different answer papers were written by 3,731 candidates.

The following table classifies candidates examined, according to residence:

Year.	New England.	Middle States.	South and West.	Foreign.	Not stated.
1906	457	1,489	464	12	10
1907	711	1,769	550	11	7
1908	812	1,802	615	17	4
1909	1,026	1,783	630	25	2
1910	1,129	1,865	696	30	11

The following table classifies candidates examined, according to the institutions that they expect to enter:

Year.	New England.	Middle States.	South and West.	Canada.	Not stated.
1906	884	1,291	37	2	218
1907	1,273	1,444	75	0	256
1908	1,327	1,510	69	2	342
1909	1,727	1,341	85	0	313
1910	1,968	1,333	58	1	371

The number of readers required to examine the answer books was 140, of whom 82 were representatives of colleges and 58 were representatives of secondary schools.

National Education Association, department of secondary education.—The department of secondary education of the National Education Association, at a meeting held July 6, 1910, adopted the following resolutions:

Whereas a wide range of high-school subjects is now demanded in view of the varied needs of society and the diversified interests of the different students; and

Whereas manual training, commercial branches, music, home-making science and art, agriculture, etc., when well taught and thoroughly learned, are justly entitled to recognition in college-entrance credits; and

Whereas colleges in certain parts of the United States continue to require two foreign languages of every applicant regardless of his own interests; and

Whereas this requirement, in addition to such work in English, mathematics, history, and science as is essential to the high-school course of every student, precludes the possibility of giving adequate attention to these subjects: Therefore, be it

Resolved, That it is the sense of this department that the interests of high-school students would be advanced by the reduction of the requirements in foreign languages to one such language, and by the recognition as electives of all subjects well taught in the high schools; and be it further

Resolved, That it is the sense of this department that until such modifications are made by the colleges, the high schools are greatly hampered in their attempts to serve the best interests of the boys and girls in the public schools.

New England College Entrance Certificate Board.—The New England College Entrance Certificate Board is composed of the following colleges and universities which admit students by certificate: Amherst College, Boston University, Bowdoin College, Brown University, Dartmouth College, Mount Holyoke College, Smith College, Tufts College, University of Maine, University of Vermont, Wellesley College, Wesleyan University, and Williams College.

The following are the most important regulations governing the admission of schools:

No school will be approved unless it has shown by the record of its students already admitted to college its ability to give thorough preparation for college.

A school shall be judged by the record of students who have entered college with the consent of its principal.

Certificates coming from any school approved by the board and covering all the requirements for admission made by any college represented on the board shall be valid at such college, and certificates that do not so cover the entire requirements shall be treated by each college according to the rules which that college established for such certificates. No certificate from a school not approved by this board shall be valid for admission at any cooperating college unless the school lies outside the jurisdiction of the board.

A general report of the work of pupils from approved schools for at least one-third of their first year in college shall be made to the board, and such other reports as the board may require, and all complaints of insufficient preparations shall be made to the board with specifications as to subjects and individuals, but such complaints shall not interfere with reports to the schools about students entering from them.

No school shall be approved for more than three years. The approval of a school shall date from the first day of January of the year in which the approval is granted.

North Central Association of Colleges and Secondary Schools.—At the fifteenth annual meeting of the North Central Association of Colleges and Secondary Schools held at Chicago on March 25–26, 1909, the following report of the commission on accredited schools and colleges was adopted:

1. The standard American college is a college with a four years' curriculum with a tendency to differentiate its parts in such a way that the first two years are a continuation of, and a supplement to, the work of secondary instruction as given in the high school, while the last two years are shaped more and more distinctly in the direction of special, professional, or university instruction. For students who are not to enter professional or graduate schools, and for those who are willing to lay a broader foundation for their professions than is laid by those who specialize at the end of the sophomore year in the university, the four years' college work may be treated as a unit. For those who have chosen their professions, the last two years in the best independent colleges should provide ample opportunities for training preliminary to the professions. The independent college may thus become a cooperative university college.

2. The minimum scholastic requirement of all instructors shall be equivalent to graduation from a college belonging to this association, and graduate work equal at least to that required for a master's degree. Graduate study and

training in research equivalent to that required for the Ph. D. degree is usually necessary, but an instructor's success is to be determined by the efficiency of his teaching and not by his research work.

3. The college shall require for admission not less than fourteen secondary units, as defined by this association.

4. The college shall require not less than twelve college units, or 120 semester hours for graduation.

5. The character of the curriculum, the efficiency of instruction, the scientific spirit, the standard for regular degrees, the conservatism in granting honorary degrees, the tone of the institution shall be chief factors in determining eligibility.

6. The college should be provided with adequate books in the library and laboratory equipment to develop fully and illustrate each course taught.

7. The number of hours of work given by each instructor will vary in the different departments. To determine this the amount of preparation required for the class and the time needed for study to keep abreast of the subject, together with the number of students, must be taken into account.

8. The college must be able to prepare its graduates to enter without conditions as candidates for advanced grades reputable graduate schools.

9. No institution shall be considered for membership or retain membership, unless a regular blank has been filed with the commission, and is filed triennially unless the inspectors have waived the presentation of the triennial blank.

10. The local inspector shall be the organ of communication between the college and the commission.

University senate of the Methodist Episcopal Church.—The university senate of the Methodist Episcopal Church, which is charged with regulating and maintaining the educational standards of the schools and colleges of the church, met in Baltimore, Md., December 15–16, 1909.

This organization decided that after 1912 no institution of the Methodist Episcopal Church should be officially recognized as a college or university which did not require four years of preparatory work for the freshman class, four years of instruction for the bachelor's degree, and which did not possess at least six teachers giving all their time to college as distinguished from preparatory or professional work. And, further, that such institutions should have at least fifty students regularly enrolled in the college department and at least $100,000 productive endowment.

After the year 1916 there must be at least $200,000 of endowment in order to maintain college rank.

The following resolutions were passed relative to reports of institutions and to secondary schools:

That in reporting the attendance in our colleges the board of education hereafter be requested to give only bona fide college students, and to see that institutions having preparatory departments shall give the report of such departments in the list of secondary schools and entirely separate from their college report.

That it is the sense of the senate that no secondary school under our auspices should be permitted to grant any academic degree.

That it is the sense of the senate that an institution shall be required to offer at least 12 units above grade work in order to be classed as an academy.

FISCAL.

Illinois.—The Illinois educational commission in its final report to the forty-sixth general assembly recommended an amendment to the revised general school law to provide a uniform system of bookkeeping by the township treasurers of the State and to secure promptness in the inspection and auditing of their accounts.

National Association of School Accounting Officers.—The National Association of School Accounting Officers at their meeting in Washington, D. C., May 17, 1910, appointed a committee on standardization of fiscal, physical, and educational data of school systems. The committee consists of Henry R. M. Cook, auditor of the board of education, New York City; William T. Keough, business agent, school committee, Boston, Mass.; and Charles P. Mason, secretary and treasurer, board of education, St. Louis, Mo.

National Education Association, department of school administration.—Following an address on "School reports and publicity," by Dr. David Snedden, secretary of the Massachusetts state board of education, at the National Education Association, in Boston, July 6, 1910, a committee was appointed to draw up resolutions expressing the sentiment of the department for good school reports and urging the United States Commissioner of Education to prepare a handbook for the use of school administrators.

The following committee was appointed: David S. Snedden, Boston; George D. Strayer, New York City; Frank B. Dyer, Cincinnati, Ohio; R. G. Kinkead, Columbus, Ohio; and W. S. Small, Washington, D. C.

National Education Association, department of superintendence.—The following resolution was adopted by the department of superintendence of the National Education Association at the annual meeting in Indianapolis, Ind., March 1–3, 1910:

That, because the statistics published in school reports are inadequate for the purpose of comparison, the president of this department is hereby authorized to appoint a committee of five to formulate and report at the next annual meeting of this department a system of statistics which will secure uniformity in reports in all points of common concern.

The following committee on school statistics was appointed: Payson Smith, state superintendent of public schools, Augusta, Me., chairman; Charles M. Lamprey, head of the department of history and director of the model school, Boston, Mass.; William H. Elson, superintendent of schools, Cleveland, Ohio; E. C. Warriner, superintendent of schools, East Saginaw, Mich; George D. Strayer, professor of educational administration, Teachers College, Columbia University, New York City.

NOMENCLATURE.

[See Report of the Commissioner of Education, 1909, Vol. I, pp. 88–93.]

Association of American Universities.—At the eleventh annual conference of the Association of American Universities held in Madison, Wis., January 4–5, 1910, the following definitions were adopted:

1. That the term *group* be restricted to a combination of related subjects.
2. That the term *curriculum* be restricted to a combination of courses leading to a degree.
3. That the term *division* be used to indicate any organic portion of a university which is larger or more independent than a department, and which does not adapt itself to classification under the terms already adopted by the association.

National Association of State Universities.—The following report of the committee on nomenclature of the National Association of State Universities was adopted October 8, 1909:

1. That the term *department* be restricted to the various subjects taught in the university; as for instance, the department of Latin, department of mathematics, department of physics, etc.
2. That the term *course* be restricted to the subdivisions of a subject; as for instance, course 1 in English.
3. That the term *college* be restricted to a part of the university, the standard of admission to which is the equivalent of that required by the Carnegie Foundation for the Advancement of Teaching,[a] and which offers instruction leading to a first degree in arts, letters, or sciences.
4. That the term *school* be restricted to a part of the university, the standard of admission to which is not less than the equivalent of two years' work in the college, and which offers instruction in not less than two years' duration leading to a technical or professional degree.

National Conference Committee on Standards of Colleges and Secondary Schools.—The National Conference Committee on Standards of Colleges and Secondary Schools held a meeting at Harvard University October 9, 1909, and adopted the following definition of a unit:

A unit represents a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work.

This statement is designed to afford a standard of measurement for the work done in secondary schools. It takes the four-year high-school course as a basis, and assumes that the length of the school year is from thirty-six to forty weeks; that a period is from forty to sixty minutes in length, and that the study is pursued for four or five periods a week; but under ordinary circumstances a satisfactory year's work in any subject can not be accomplished in less than one hundred and twenty sixty-minute hours or their equivalent. Schools organized on any other than a four-year basis can, nevertheless, estimate their work in terms of this unit.

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[a] An institution to be ranked as a college must have at least six professors, giving their entire time to college and university work, a course of four full years in liberal arts and sciences, and should require for admission not less than the usual four years of academic or high-school preparation, or its equivalent, in addition to the preacademic or grammar school studies.

National Education Association—Report of the committee on the place of industries in public education to the National Council of Education.—The report of the subcommittee on industrial and technical education in the secondary school says:

From careful analysis of the existing practices in secondary, industrial, and technical schools, and of the needs of this field of education, as evidenced by the testimony and expressions of opinions from a great number of educators, the committee has formulated the following definitions of three types of schools:

A. The *manual-training high school*, or the *manual-training school*, is a school of secondary grade in which a greater or less amount of hand work is included in the curriculum and in which the greater part of the academic instruction is similar to that found in other high school and college preparatory schools, neither the manual nor the academic instruction being especially planned to be of direct vocational service.

B. The *secondary technical school*, or the *technical high school*, is a school of secondary grade having the distinct purpose of preparing its pupils for industrial leadership—that is, for positions in industrial life requiring skill and technical knowledge and of greater importance and responsibility than those of the skilled mechanics. In such a school the instruction deals not only with the important manual operations, but also with those principles of science and mathematics and their direct applications to industrial work that will help to prepare the student for successfully mastering the more fundamental processes and problems of those groups of industries which the school is designed to reach.

C. The *trade school* and the *preparatory trade school* are schools which have for their definite purpose the preparing of boys or girls for entrance to the skilled mechanical trades and which deal with their pupils during a briefer course and allow for earlier preparation for practical work than the technical high school. Such schools place their greatest emphasis upon practical handwork instruction under conditions resembling as closely as possible those prevailing in commercial practice. Such schools relate the academic instruction at every point closely to the practical work and include little that is not of direct bearing on trade work.

National Society for Promotion of Industrial Education.—The National Society for Promotion of Industrial Education adopted the following definitions December 2–4, 1909:

1. *Industrial education.*—This term should be used to mean training for the intelligent practice of any trade, including, of course, agriculture. It includes training in all the processes of a trade and in the theoretical foundations of that trade. It is intended to develop both industrial intelligence, and skill in the particular vocation. It does not properly begin until the pupil is at least 14 years old.

2. *Industrial schools.*—Industrial schools are those established with the purpose of training boys and girls, men and women, in industrial efficiency by means of industrial education. The purpose of such a school is therefore not general education, but specialized education, although at the outset the school may give a considerable amount of general trade experience, either in the shop, in the garden, or at the bench, together with related subjects like drawing, mathematics, history, or civics. An industrial school lays such a foundation in the essentials of a trade and the whole of it that, with subsequent practice and experience in his employer's trade, the pupil may quickly become a skilled

workman, just as the student trained in the engineering school may become in the factory or in the field an engineer. The school gives not only such acquaintance with the methods, tools, and materials which enter into the trade as will enable the student to do his work with a certain degree of facility, but it inculcates efficiency and workmanlike methods, careful habits, intelligent planning, and economy and care in the use of important materials and tools. It does more than this at its best, for it develops enthusiasm for work and broadens the field for progress with the trade and an appreciation of the possibilities of it. Under such a conception industrial schools are not a part of existing public schools, but a supplement to them, meeting a need which has arisen since the beginning of the last century with the evolution of the world's industry and commerce. Their leading motive is vocational training, not general culture, and the efficiency of a school depends on its leading motive.

The curriculum which such a school offers and the time which the course of study will cover must vary with the nature of the trade and the demands of the locality. Such schools are fundamentally local, serving the communities and the region in which they exist.

For pupils admitted at the lower limit of age—say 14 years—the course would naturally be four years; for more mature pupils it may be two or three years.

3. *Industrial continuation schools or industrial improvement schools.*—Schools conducted under these names are industrial schools wherein apprentices or other persons already engaged in the industries may secure training for advancement in their several callings appropriate to their previous education and experience. Such schools have been conducted ordinarily at night, and where they are conducted as day schools, instruction should be so planned as to interfere as little as possible with the pupil's work in the trade.

4. *Agricultural schools.*—Agricultural schools are industrial schools whose main purpose is to train for the trade of agriculture. They are in fact agricultural trade schools as distinguished from the agricultural colleges, which, while in the past offering a certain amount of industrial instruction in agriculture, have, in the main, trained men for professional places, such, for example, as professors in agricultural colleges, workers in the Department of Agriculture and experiment stations, and occasional managers of large agricultural plants. The agricultural trade school can have no more relation to the agricultural college than the trade school for training mechanics can have to a college of engineering.

5. *Manual training.*—Manual training means training in the use of tools and materials so as to provide appropriate elementary training in a number of mechanical occupations, but no specialized training in any one of them. It is an appropriate instrument of education at every stage of a pupil's development, whether he subsequently learns a trade or not. It gives, if well done, general acquaintance with constructive and productive activities; it may also give to a pupil manual dexterity, and hence, if well done, may, among other things, prepare a pupil for specialized work in industrial education.

6. *Manual-training schools.*—Manual-training schools are schools for general education, like other academic schools. They serve to give pupils a high-school education, using manual training as one of the principal studies, and, like other high schools, may prepare pupils for professional training in some college or engineering school. This definition is applicable to the manual-training schools as they have hitherto existed and as they still exist. In the United States there are a few manual-training schools at the present day which may give elementary industrial training.

SCHOOL SUBJECTS.

Writing.—Dr. E. L. Thorndike, professor of educational psychology, Teachers College, Columbia University, New York, has completed and published a standard for the measurement of quality in handwriting.

V. PUBLIC SCHOOLS.

The most important movement affecting the public schools of the country at the present time has to do with economic conditions. It has taken two directions—one agricultural in its aim, the other industrial; or, rather, the one rural, the other urban. These two divisions of a common movement are the subject of special and separate treatment in the present report. The spirit of this movement, however, is not wholly industrial, and does not exhaust itself in purposes that are mainly vocational. It manifests itself in the changing conception of school activities in general; of their relation to life and to all the agencies by which individual character is shaped to the highest purposes of national existence. This enlarged conception is signally illustrated by the recent change in the system of education of New York, which brought Hon. Andrew S. Draper into the position of state commissioner of education, to which office he was reelected on March 31, 1910, and by the recent measures for the reorganization of the Massachusetts system of education under the direction of Dr. David S. Snedden, appointed state commissioner of education on November 15, 1909.

In the larger sense, the movement is not at present easy to define or to trace in all its course; but in this relation, isolated and even futile attempts at modifying established traditional school procedures become worthy of attention. It is this alone which gives significance to the following notes, relating for the most part to modifications made or proposed in existing high schools.

REPORT ON HIGH SCHOOLS.

A committee of the New England Association of School Superintendents, Principal W. A. Baldwin, of the State Normal School, Hyannis, Mass., chairman, appointed to consider current discussions and criticisms of the high school, at a meeting of the association in 1909 presented a report embodying the recommendations cited below:

The committee premise:

We have placed these recommendations under four general heads, viz:

1. Standardization.
2. Modification of curriculum.

3. Professional training of teachers.
4. Method.

As to the first, standardization, we would call attention to the fact that the chief criticism has to do with the standardization by the college, with which many would be quite willing to dispense. To your committee such college standardization seems very valuable, but needing to be balanced up by standardization from two other sources, viz, the local community and the educational authority of the State.

The community is already making itself heard, and should be encouraged to continue its demands for practical education. In the State of Massachusetts the state board of education has designated certain schools whose graduates may be received into the state normal schools without examination, and it has influenced high schools somewhat through the visitation of its agents and through teachers' institutes under their direction. It is fair to say that thus far little has been done by the state board of education in this State toward standardizing the high school. * * * In other of the New England States much more is done in this direction, especially in Maine. * * * Your committee recommend, then:

1. Standardization:
   (*a*) By colleges continued.
   (*b*) By community encouraged.
   (*c*) By State enlarged.

The order here given indicates existing conditions rather than any recommendation of the committee.

2. Modifications in curriculum:
   (*a*) Less emphasis upon classics.
   (*b*) More emphasis upon subjects having to do with the care and development of the body—physiology, physical training, and the physical side of industrial education.
   (*c*) More emphasis upon subjects preparing directly for occupations.
   (*d*) More attention to civics, sociology, and political economy in concrete, simple forms.
   (*e*) A course in practical ethics growing largely out of school and neighborhood conditions.
   (*f*) Continuation or high-school extension courses to meet the needs of the community for regular and irregular students. * * *

3. Professional training for all teachers of high schools, a part of this training to consist of practice in a school of high-school grade and one in which a modern curriculum is presented by modern teachers in accordance with modern methods.

It may be said that if the first recommendation were fully carried out and we should have standardization of the high school by college, community, and State, then there would be no need for the second and third, as the curriculum would be properly modified and the training of teachers would be cared for. * * *

4. We recommend as to method that every subject shall be so presented as to become a very part of the student, leading to broader thinking, wider sympathies, and more noble living, even as he lives from day to day in the high-school home.

BERKELEY (CAL.) PLAN OF SCHOOL ORGANIZATION.

From a report to the board of education by City Superintendent Frank F. Bunker it appears that a plan for the reorganization of the Berkeley schools, with a view to providing class rooms in suffi-

cient number to meet the prospective growth of the high school, was introduced during the year 1909–10.

The plan provides for three groups of schools: The high school proper, comprising the tenth, eleventh, and twelfth years; the second group, called the introductory high-school group, comprising the seventh, eighth, and ninth years; and a third group, the elementary schools proper, comprising all children of the first six years.

It is proposed that the seventh, eighth, and ninth grades shall be assembled at certain schools "which shall be organized for work of this character; that the ninth-year work be no longer done at the high school proper, but at these centers; and that the other schools of the department comprise grades no higher than the sixth grade, the same to be feeders to the centers."

The grounds stated by Superintendent Bunker in support of the plan are as follows: "It gives a greater high-school capacity, it will increase the school life of the child, and it gives an opportunity for greatly increasing the efficiency of school work."

FRESNO (CAL.) JUNIOR COLLEGE.

An act of the California legislature, approved March 1, 1907, provides that the board of trustees of any city, district, or county in the State may prescribe postgraduate courses of study in their respective high schools. Such courses must approximate the studies prescribed in the first two years of university courses.

Under the provisions of this act two years of postgraduate work have been added to the high-school course at Fresno. The new department is to be known as the Fresno Junior College. The courses for the first year include mathematics, science, agriculture, English, foreign languages, history, economics, and technical work. The admission requirements will correspond to those of the University of California, and a certificate or diploma will be awarded to students completing the two years' course. A tuition fee of $40 per year will be charged nonresident students.

An annex to the Fresno High School building is in process of erection which will provide accommodations for the new department. The college will open in September, 1910.

LOUISIANA STATE HIGH-SCHOOL PRINCIPALS' CONFERENCE.

A conference of state high-school principals of Louisiana was held at Shreveport, La., January 12–13, 1910, for the purpose of observing the teaching of history and science as carried on in the Shreveport High School, and of discussing the methods thus illustrated, as well as other problems of importance to the high schools of the State. Among the subjects covered by the discussion was that of teaching

the "importance and care of the forests," in connection with the subjects of nature study, geography, and botany. As a result of the discussion the following resolution was adopted:

That we, the high-school principals of the public schools of Louisiana, do hereby indorse the movement to have "conservation of our natural resources" taught in the public schools of Louisiana. We will lend our influence, and will put forth efforts to have this subject introduced in the text-books to be issued in the future. We also pledge our support to have instruction in this subject given to the teachers of the summer normals and teachers' institutes, and to promote the cause of conservation in every way possible.

CONTINUATION SCHOOLS IN BOSTON.

Three schools of the continuation type were organized in Boston in the month of April, 1910. One for those engaged in the shoe and leather industry, another for employees in the dry-goods business, and a third in "preparatory salesmanship." A large room convenient to the business district was rented and equipped for school purposes, and a submaster in one of the elementary schools of the city was detailed to supervise the work. The expenses of the schools were borne in part by the Boston school committee and in part by business firms interested in the undertaking.

The class in the shoe and leather industry began its sessions April 5, meeting on Tuesday and Thursday afternoons from 3 to 5 o'clock. Instruction was given by employers and experts in the industry. The course of study included the production and distribution of leather, tanning processes, leather manufacture, recognition of kinds, grades, and comparative values of leathers, manufacture and classification of shoes, commercial arithmetic, commercial geography, commercial correspondence, salesmanship, efficiency training.

Classes for employees in the dry-goods business met on Monday and Friday afternoons from 3 to 5 o'clock, instruction being given by experts as in the case of the school for those in the shoe and leather industry. The courses of instruction follow: Fibers; cotton and cotton goods; wool, worsteds, and woolens; silk and silk fabrics; linen and linen fabrics; recognition and comparison of mixed fabrics; simple tests for determining quality, coloring materials, and color preservation; mercerization; noninflammable fabrics; care of stock; commercial arithmetic; commercial geography; commercial correspondence; salesmanship; efficiency training.

Two classes in preparatory salesmanship were established, one for boys and the other for girls. In these classes the instruction was given principally by one of the teachers in the public schools, who was especially fitted for the work, and was as follows: Commercial correspondence, facility in oral and written expression, store arithmetic, sales-slip practice, sources of merchandise and its distribution,

raw materials, textiles, penmanship, color and design, hygiene, practical talks on the fundamental principles of success, salesmanship. Employers bore the expense of instruction.

An advisory committee of business men was selected for each of the schools and frequent visits were made to the classes. Mr. Thornton T. Appollonio, secretary of the Boston school committee, says of the schools:

The principal feature of the instruction in all these classes is the practical talks and lectures, each one hour in length, given by men who have built up large business enterprises, and by skilled men in their employ. These lectures are stenographically reported, and have been published to some extent in trade papers, such as the Boot and Shoe Recorder, Shoe and Leather Reporter, and American Shoemaking. The instruction in salesmanship is of a more elementary character and is not reported.

The various lecturers bring large quantities of material to the classes for illustrating their talks. This material includes leathers, shoes, and fabrics in all stages of their manufacture. They also make considerable use of the blackboard.

All pupils have become members of the class through their own initiative or at the suggestion of their employers. They show a very remarkable interest in these talks and frequently spend their noon hour at the school studying the stenographic reports. Many have already visited manufactories to study processes, and members of the dry-goods course have spent many of their evenings at the textile exhibit in Mechanics' Building.

The members of the classes are required to write theses, which are always on file for the inspection of their employers. Those who satisfactorily complete a course will be granted a certificate of proficiency.

It has not been considered wise for the present, at least, to establish any age limits for pupils attending these classes, except that no pupils over 18 years of age are admitted to the classes in preparatory salesmanship. The ages of the pupils in the other classes range from 15 or 17 to 28 or 30. Some of the pupils are extremely well educated and are college graduates, but the majority have not graduated from high schools. Each class is composed of from 40 to 50 pupils. The attendance averages about 98 per cent, and no disciplinary requirements are necessary.

REVISED COURSE OF STUDY FOR NEW YORK STATE.

The general features of the revised course of study for the elementary schools of New York State are indicated in the following abridgment of the address delivered before the Massachusetts Teachers' Association, November 26, 1909, by Andrew S. Draper, New York state commissioner of education:

The manual training movement has created schools that differ very little from our other secondary schools; they do not direct children toward the industrial life and they do not train workmen. The educational system of the country has discriminated against the work that is done by the hand, and therefore against the children of the people who work with their hands. There will be no cure for this until the work of the public elementary school is done more expeditiously, less fancifully, and more completely than it is now

done, nor until those schools are supplemented by a system of schools which will provide real instruction in the mechanical trades.

Separate industrial and tax-supported schools in absolute articulation with and under the same management as the public schools was the plan enunciated by the New York State education department more than two years ago. It was without any conference with the labor leaders, but in the confidence that it was so logical and right that the interest of the working masses in their work, and particularly in their children, as well as their common honesty and patriotism, would impel them to accept it.

We believe that very generally the courses in the elementary schools are too much prolonged, that the grades and the years are more than need be, that some unnecessary branches are included, and that some others are too much attenuated, and that there are often more grades of text-books than are desirable in the same branch.

Therefore, we shall soon recommend an elementary course of study with but six grades, and normally occupying six years, instead of eight. in the confidence that it will be more, rather than less, educationally efficient.

We would follow this great and universal elementary school system, so simplified and strengthened, with a system of secondary schools, which for the present and in our State shall be distinctly separated at the very beginning into three great classes: First, the present literary high schools; second, commercial or business schools; and third, general industrial or trades schools.

The schools of the third branch are of immediate interest now. We propose that they occupy buildings that look like shops; that they be taught by skilled workmen who can teach, rather than by teachers with a little mechanical skill; that to a moderate extent they use books which are really germane to the work to be taught, but that their main instruments be machinery and tools; and that they be much more shoppish than bookish. We propose that these schools be of two general classes, namely, general industrial schools, training in general mechanics those who will work in factories with machinery and many other workmen, and trades schools for those who will own their own tools and work essentially by themselves. It is proposed that these schools be of a character which will be adaptable to almost any industrial conditions, and that wherever there are 20 or 25 boys or girls who want instruction in any vocation they shall have it; that these schools shall be open day and evening to accommodate the circumstances of as many as may be.

We are not going to assume that the training of our industrial schools will make finished workmen any more than the training of our law schools makes finished lawyers. We are aiming at a surer fundamental English education for workmen and a mechanical training which will shorten the time required to make a good journeyman, and which in time will make a more intelligent and skillful mechanic than is promised in any other way.

As to just how much has actually been accomplished: The law looking to such schools as a part of the public school system, authorizing the certificating of teachers and the approval of courses for them by the state education department, and assuring them the definite financial aid of the State, went into operation a year and a half ago. Before schools could actually be opened the sentiment in each city or large town had to concentrate, the funds had to be provided through the ordinary financial machinery, teachers had to be secured, and buildings and equipment had to be arranged. But we have schools operating under this law in Albany, Buffalo, Gloversville, Hudson, New York, Rochester, Schenectady, and Yonkers. The public opinion of the State is strongly in favor of the movement, and it seems very certain to gather in volume and force very rapidly. Another year will see the organization of many more schools.

According to the new course the first six grades constitute the elementary course and the seventh and eighth grades the intermediate course. Commissioner Draper, in his annual report (1909) says that—

as much of the present elementary course as has seemed feasible has been placed in the first six years. In the two years' intermediate course the elementary work will begin to differentiate. It includes arithmetic, history, English, physiology, modern languages, and other subjects which have previously been considered in academic work. Certain work from the academic course, elementary in its nature, is brought down to the seventh and eighth in the place of nonessentials which have been eliminated. It also includes work specially adapted to prepare pupils for commercial and industrial courses in high schools and trades schools.

By way of explanation the report says:

It has not been claimed that the school years of a child are to be shortened under this course. Indeed, the school life of the child is to be lengthened and each year made more profitable. The changes authorized in the syllabus will not afford a short cut to academic or collegiate instruction. It is claimed, however, that these changes in the fundamental direction of elementary instruction will save much of the time which pupils now waste. Essentials only are to be taught; these more thoroughly and intensively, and presented in that related order of the course where a child is able to get a more comprehensive grasp of the subjects.

The execution of this plan will not involve friction or embarrassment of any kind in the present organization of our elementary school system. It does not involve any question of school buildings. It simply means that the superintendents and teachers shall substitute the new syllabus for the old and with the equipment which they now possess adjust their instruction to the new lines. If the progress of the work calls for additional preparation, service, or equipment, those in charge of these schools will meet the obligation and responsibility as they have met others in the past.

It is stated here, as it has been previously stated, that no district or city is to be coerced in adopting this syllabus. It is submitted on its merits and in the firm belief that those schools operating under it will prepare their boys and girls for more efficient and profitable service.

REVISION OF NEVADA HIGH-SCHOOL COURSES OF STUDY.

A meeting of Nevada state high-school principals and representatives from the State University was held at Reno, Nev., January 28–29, 1909, for the purpose of revising the state courses of study for high schools. An outline was completed embracing the following courses: Classical, science, general, agricultural, and commercial.

At a meeting of the state board of education, February 4, 1910, the work of this body was indorsed and the courses of study adopted as revised. In adopting the course the following supplementary resolutions were passed by the board:

That the state board adopts the unit of work as presented in this report—180 periods of forty minutes, or its equivalent.

That the state board agrees with the committee that uniformity of text-books for the high school is not desirable.

That any student who has completed a minimum of 15 units in any one of these high-school courses of study shall be granted a diploma of graduation.

That the state board commends the view of the committee that a high-school teacher should not be required to teach more than six classes daily.

That the state board of education requires every high school in the State of Nevada to provide for instruction in one or more of these courses.

That in regard to industrial and kindred courses, these may be added as soon as the high schools need them.

REORGANIZATION OF PUBLIC SCHOOLS, COLUMBUS, OHIO.

In order to relieve the crowded condition at the North High School in Columbus and ultimately in other high schools, and to meet the increasing demands upon the upper elementary grades, the board of education of that city has declared itself in favor of the junior high-school system and has directed that the new Indianola School be organized as a junior high school.

The system contemplates placing the seventh, eighth, and ninth grades in buildings by themselves, conveniently located as centers, and so organizing the work as to include all that is essential in the work of the seventh and eighth grades, including manual training and domestic science, and the first year high school as now organized.

Under this plan the city school system will consist of: (1) Elementary schools, six years; (2) junior high schools, three years; (3) senior high schools, three years. The length of the entire school course will not be changed.

WILLIAM PENN HIGH SCHOOL FOR GIRLS.

In September, 1909, the new building for the William Penn High School for Girls, of Philadelphia, was completed and opened for use. The building was erected to provide better facilities than were afforded at the Commercial High School for Girls, the work of which the new school will continue. The organization of the new high school and the courses of study in general were arranged in accordance with the preliminary recommendations of the committee of the board of education on high school and commercial high school for girls. These recommendations were based upon a study of the methods employed in similar institutions in other cities, together with a study of local needs made by Supt. Martin G. Brumbaugh, and are as follows:

That there be established five departments, to be known respectively as academic, commercial, library, sewing, millinery and dressmaking, and domestic science departments. That the pupils on entering the school be permitted to elect the course they desire to pursue, as is now done on entrance to the other high schools of the city.

That the time to be devoted to these several departments of study be substantively as follows: Academic, 65 per cent; commercial, 35 per cent; library, 25 per cent; sewing, millinery, and dressmaking, 25 per cent; domestic science,

10 per cent, and the students electing the library or the sewing, millinery, and dressmaking course must also pursue the academic and domestic science courses, and the pupils electing the work of the commercial department must also pursue the academic study.

That all the pupils in the school shall be required to take the work prescribed in physical culture.

REVISION OF VIRGINIA HIGH-SCHOOL COURSE OF STUDY.

State Superintendent of Public Instruction J. D. Eggleston, of Virginia, constituted a committee on the revision of the course of study for high schools, which entered upon its work in April, 1910. The courses of study as revised for three classes of high schools are as follows: Class 1, with a four-year course; class 2, with a three-year course; and class 3, with a two-year course. The high school of the first class shall offer 16 units of instruction (a unit is understood to mean a recitation of forty minutes, five times a week, for thirty-six weeks). The second-class school shall offer 12 units and the third-class at least 8 units.

The minimum instruction proposed for each class of schools is as follows:

First class: English, 4 units; mathematics, 3 units; history, 2 units; science, 2 units; electives, 5 units. (Electives: Language, 4; mathematics, 1; history, 2; science, 2; manual arts, 4.) In laboratory work and in manual arts the eighty-minute period is required as the equivalent of the forty-minute recitation period. Second class: English, 3 units; mathematics, 2 units; history, 2 units; science, 2 units; electives, 3 units. (Electives: Mathematics, 1; science, 1; history, 1; manual arts, 3.) Wherever a foreign language is chosen as the elective in either a second or third grade school at least two sessions must be completed in this foreign language. Third class: English, 2 units; mathematics, 2 units; history, 1 unit; science (physical geography three times a week; agriculture twice), 1 unit; electives, 2 units. (Electives: Foreign language, 2; science, 1; history and civics, 1; manual arts, 2. Manual arts includes cooking, sewing, manual training, and drawing.)

The committee on revision is as follows: Dr. Bruce R. Payne, professor of secondary education, University of Virginia; Prof. Algar Woolfolk, principal Greenesville County High School; Prof. Jackson Davis, state school examiner; Prof. Harris Hart, city superintendent of schools, Roanoke; Miss Lula Andrews, State Normal School, Farmville; Prof. Charles G. Maphis, president state board of examiners; Dr. J. A. C. Chandler, city superintendent of schools, Richmond; Prof. E. H. Russell, secretary state board board of examiners; Prof. C. J. Heatwole, Harrisonburg Normal School.

BEADLE DAY IN SOUTH DAKOTA.

South Dakota has emphasized the importance of the public school cause by a movement for raising funds by popular subscription for the erection of a marble statue in the state capitol at Pierre in honor

of Gen. H. H. Beadle, superintendent of public instruction from 1879 to 1885. Mr. Beadle drafted the provision of the state constitution which prohibits the sale of an acre of the lands set apart for common schools for less than $10, a provision which has since been copied by the constitutions of several States subsequently admitted to the Union. January 21, 1910, was generally observed as Beadle day in the schools of the State by exercises appropriately commemorating the service for public education accomplished by this founder of the state system. For twenty-five years General Beadle has been engaged in normal-school work, and at the age of 72 is still a member of the faculty of the State Normal School at Madison, S. Dak.

VI. DEPARTMENTS AND BRANCHES OF STUDY.

COMMERCE.

THE BOSTON HIGH SCHOOL OF COMMERCE.

[Compiled from information furnished by the head master.]

The High School of Commerce is organized with six departments, namely, English, modern languages, economics, mathematics, business technique, and science. The heads of these departments are men of superior ability and acquirements, and are paid a correspondingly higher salary.

The head of the department of economics has charge of all subjects dealing with business theory, such as commercial geography, local industries, economic history, etc. He consults with business authorities and makes himself acquainted at first hand with the business conditions of the community, and arranges for special courses and talks by business experts not teachers by profession. Among such courses are the following: Advertising, 15 lectures; local industries, 20 lectures; railroad operation, 6 lectures; salesmanship, 6 lectures; municipal government, 6 lectures.

The head of the department of mathematics studies the methods and processes of mathematics in use in representative business houses, so as to supplant traditional practices with more approved forms, and collects typical problems peculiar to the businesses which the students are likely to enter.

The head of the department of business technique is a certified public accountant, and has had ample experience in the accounting part of business to make him well able to train the young men in this field. He studies contemporaneous practice and keeps his department abreast of newer ideas.

The school committee, at an early period of the school's development, invited to serve and caused to be organized a representative committee of twenty-five business men, which should advise the new school in its initial policies and guide its development. It has been one of the purposes of this committee to organize the vocational part of the work, which could not be done except through the cooperation of business houses. The school has sought to use the business house as the laboratory for practical work. Each summer efforts have been made to secure employment for the students in business establishments where insight into practical conditions might be gained and real standards of business efficiency met. During the summer of 1909, 50 per cent of the second-year class, 77 per cent of the third-year class, and 70 per cent of the fourth-year class secured summer employment affording them valuable practical experience.

The following circular letter of Mr. Frederick P. Fish, chairman of the executive committee of the business men's committee, indicates the character of the appeal for cooperation made to the business men of Boston:

DEAR SIR: The High School of Commerce is now [fall of 1909] entering upon the fourth year of its existence. As a Boston man, you undoubtedly know that the aim of the school is to secure commercial efficiency in its graduates. In pursuance of this end, a large number of pupils in the three upper classes have, in the past, obtained summer employment in business houses. Last summer 65 per cent of the young men in these classes were so employed. This experience forms an invaluable part of the business training which the school desires to give, supplementing, as it does, the theoretical teaching of the class room.

We feel that the results thus far secured are highly encouraging; but we aim to increase the efficiency of this feature of our work by forming an even closer connection than now exists between the school and the business interests of the city.

Our plan in brief is as follows: We desire to secure 300 positions for summer employment at a minimum wage of $2 per week. This limit is set to give the boys employed sufficient money to pay car fares and buy lunches. It is not essential that no higher pay shall be received, but wages are a minor consideration. The chief aim is to give the boys business experience.

It seems to us that two or three summers spent in a position of this kind will make our graduates much more efficient and ready for immediate service with any business house. We know of no other way in which the merchants of Boston can more effectively show their interest in commercial education, and, at the same time insure the opportunity of securing intelligent and efficient young men in the near future, than by agreeing to employ boys of the High School of Commerce under those conditions and thus participating in their development.

We desire to secure promises of positions for next summer as soon as possible. With this end in view, a representative from the school will call upon you in the near future.

Trusting that we shall receive your cooperation, I am,

Very truly, yours,

F. P. FISH,

Chairman Executive Committee.

DOMESTIC ECONOMY.

AMERICAN HOME ECONOMICS CONVENTION.

The second annual convention of the American Home Economics Association was held in Boston, Mass., December 30, 1909, to January 1, 1910. Papers were presented on the following topics: Dietetics, domestic science, sciences in relation to home economics, high-school work, domestic art, and newer professional fields.

The subject of child nurses called forth some discussion and a committee was appointed to study the question with reference to its vocational bearing and to report at the next meeting.

The association voted to hold a summer meeting in connection with the National Education Association. The officers for 1910 are: President, Mrs. Ellen H. Richards, Boston, Mass.; first vice-president, Miss Isabel Bevier, Urbana, Ill.; secretary-treasurer, Dr. Benjamin R. Andrews, New York City.

COURSE IN COOKERY FOR NEBRASKA GIRLS' DOMESTIC SCIENCE CLUBS.

The department of public instruction of Nebraska has issued a course in cookery for the use of the Nebraska Girls' Domestic Science Clubs. The plan for organization and use of the course is as follows:

> The girls form a club limited in membership to those who are especially interested in the subject and who, without neglecting the regular school work and their home duties, can give a short but definite time each week to the work. A president and secretary are elected to look after the executive work and to keep the records carefully. A teacher in the school who is interested in the work and in the girls becomes the adviser of the club.
>
> Meetings of the club are held once or, in some cases, twice a week, generally from twenty to thirty minutes in length, and held at a time when it will not conflict with the school work. Monday or Tuesday after the close of school, or at some time during school hours which does not conflict in any way with the school work, seems most convenient generally for clubs meeting once a week.
>
> A certain recipe or direction is taken for the work each week, and each member tries it at her home. Two, four, or more members, or in small clubs all the members, are requested to bring results of their efforts to the next meeting for a special report, and all members are called upon to report results and make comparisons. Then a new recipe is taken, or a variation of the old one is tried for the next week. Thus during the year a definite course of study is carried out.

The outline is prepared especially for high-school pupils, but is also adapted for the use of grammar grades and for older girls in rural schools. It is stated that the number of domestic science clubs has so increased and that there is such a general demand for a course of lessons that the bulletin is issued especially to meet such needs.

MOVABLE SCHOOLS OF DOMESTIC SCIENCE.

During the months of April and May, 1910, the extension department of the Kansas State Agricultural College conducted a series of "movable schools of domestic science" in connection with some of the high schools of the State. The schools were equipped by the college and conducted for a period of one week at a place. They were for the benefit of high-school students. The forenoon sessions were devoted to lessons in cookery and the afternoon sessions to lessons in sewing. Schools were conducted at Beloit, Cawker City, Kirwin, Phillipsburg, Minneapolis, Hays, Garden City, Burlington, Harper, Howard, Fredonia, and other towns.

GIRLS' HIGH SCHOOL OF PRACTICAL ARTS, BOSTON.

The Girls' High School of Practical Arts was opened in September, 1907, and has for its aim "to develop womanly attributes and to train for distinctly feminine occupations."

The course of study comprises two departments, the academic and the industrial, and is arranged for a period of four years, with the following subjects of instruction: English, history, modern languages, science and mathematics, art, household science, dressmaking, and millinery.

During the first year the course is the same for all pupils, six periods per week being given to sewing and four to cooking and housewifery and ten periods to academic subjects. At the beginning of the second year the students elect either household science, dressmaking, or millinery and devote to the subject ten periods a week, besides required work in the academic department. For household-science work two kitchens are equipped with utensils and accommodate 24 students at a time, so that every day about 150 girls cook and the food is sold to the teachers and pupils at lunch hour. The money obtained pays the cost of materials. Meals are also planned and prepared by the students and served to invited guests. Heating, ventilation, plumbing, and general sanitation are studied in connection with the work in science.

A flat of six rooms is rented near the school for lessons in laundry work, cleaning, and general care of the house.

ENGINEERING.

COOPERATIVE PLAN OF INSTRUCTION AT UNIVERSITY OF PITTSBURG.

The University of Pittsburg at the opening of the fall term, 1910, introduced the cooperative plan of engineering instruction. Special arrangements were made with manufacturing establishments whereby students will serve as regular employees under the existing labor

laws and conditions four terms of three months each during their four years' course. For such service they will receive the regular wages of student apprentices. "By this plan the student gets the usual theoretical course and in addition twelve months of practical work all in the space of four years, the school work being arranged so that successive groups of students will furnish continuous service to the employer."

It is claimed that the cooperative plan will enable the student to observe in detail the methods of production and the conduct of business, and that, consequently, he will be able to do his school work more effectively. That upon graduation he will be of greater use to his employer, and, further, that the money consideration received for his practical work will ordinarily be sufficient to meet the tuition expenses for the entire course at the university. Cooperative work may be done in connection with the courses in civil, electrical, chemical, and sanitary engineering.

The courses in engineering are made up of eleven terms of eleven to twelve weeks each spent in school and four terms spent in the engineering industries of the Pittsburg district, making a total of fifteen terms' work required for graduation.

The schedule of work in the cooperative plan adopted is as follows: During the first three terms, the middle term, and the last three terms of the course all students of the same class are together in school, while during the rest of the time each class is divided into two sections, which alternate quarterly between school and practical work. Each section doing practical work is further divided into two sections in order to furnish continuous service in any particular kind of engineering employment and at the same time permitting each student to have a greater variety of practical work.

CONSERVATION ENGINEERING AT THE UNIVERSITY OF MICHIGAN.

In recognition of the widespread interest in the subject of conservation, the regents of the University of Michigan at a meeting held November 4, 1909, established a six-year course in conservation leading to a degree of master of conservation engineering. The course as outlined is broad in scope and is comprised of subjects selected from other courses given in the university.

The following are the subjects and hours proposed: Cultural subjects and language, 45 hours; law and political economy, 15 hours; mathematics and astronomy, 27 hours; physics and chemistry, 18 hours; geology and mineralogy, 15 hours; biology, botany, zoology, and forestry, 20 hours; drawing and surveying, 21 hours; engineering, 41 hours; elective, 8 hours; total, 210 hours.

Railway administration is the subject of another new course which was offered at the University of Michigan during the past year. The course extends over a period of four years and aims to give students a thorough knowledge of the different departments of railway work.

COURSE IN HIGHWAY CONSTRUCTION AT UNIVERSITY OF VIRGINIA.

A course of lectures and practical demonstrations on good roads construction was given at the University of Virginia during the spring term of 1910. A limited number of free scholarships were offered for the benefit of citizens of the State who expect to engage in highway construction work, which were awarded upon recommendation of county boards of supervisors. The course comprised 57 lectures and 27 practical exercises on construction of streets, county roads, and county bridges; surveying, leveling, and drawing; and road materials.—(University of Virginia Alumni Bulletin, April, 1910.)

JOURNALISM.

University of Michigan.—At a meeting of the faculty of the University of Michigan, held February 7, 1910, it was voted to establish a general course in journalism leading to the bachelor's degree and a number of special courses for the benefit of those who desire to prepare for a particular kind of writing or a special department of the newspaper. The administration of the courses will be intrusted to a standing committee of the faculty, which will issue a special certificate to students who, in covering the requirements for the bachelor's degree, complete a programme of studies approved by the committee. The courses recommended, with the number of hours, are as follows:

General course: Rhetoric (16), practical newspaper work (8), English (10), foreign languages (16), history (24), government (12), economics (10), sociology (4), philosophy (3), law (2), science (2).

Special courses: 1. For students who wish to specialize in history, government, and politics: Rhetoric (16), practical newspaper work (8), English (10), foreign language (16), history (24), government (12), economics (10), sociology (4), international law (4), law (6).

2. For students who wish to specialize in economics and sociology: Rhetoric (16), practical newspaper work (8), English (10), foreign language (16), history (16), economics (24), sociology (12), law (6).

3. For students who wish to specialize in reviewing and in dramatic art and musical criticism: Rhetoric (16), practical newspaper work (8), English (24), foreign language (24), philosophy (7), music or other arts (10).

4. For students who wish to specialize in technical journalism: Rhetoric (16), practical newspaper work (8), English (10), foreign language (16), history (16), government (6), economics (20), sociology (4), law (6), science (4).

The committee recommends that the Michigan Daily and other student or university publications be utilized for practical newspaper experience.—(From the Michigan Alumnus.)

Ohio State University.—At a recent meeting of the board of trustees of the Ohio State University, Harry Franklin Harrington was appointed assistant professor of English, with the understanding that he will give, in connection with his other work, certain courses in journalism.

This work is being undertaken in response to a demand for specific instruction designed to develop proficiency in this profession.—(University News-Bulletin, June 27, 1910.)

Agricultural journalism at University of Wisconsin.—The course in agricultural journalism at the University of Wisconsin is designed to meet the needs of students who wish to become contributors or editors of agricultural journals or bulletins. The work includes lectures, practice in the preparation of articles of the various classes, editing, proof reading, reviewing, interviewing, preparation of special articles, etc., and practice in photography for the press.

A seminar in practical editing provides for conferences on editing and publishing, circulation, and advertising, with special reference to the Student Farmer, a local periodical.

Journalism in other institutions.—In addition to the above mentioned, courses in journalism are now offered in the following list of institutions: University of Illinois, Urbana, Ill.; Indiana University, Bloomington, Ind.; Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa; University of Kansas, Lawrence, Kans.; Massachusetts Agricultural College, Amherst, Mass.; University of Minnesota, Minneapolis, Minn.; University of Missouri, Columbia, Mo.; University of Nebraska, Lincoln, Nebr.; Columbia University, New York, N. Y.; Miami University, Oxford, Ohio; University of Oregon, Eugene, Oreg.; University of Washington, Seattle, Wash.; University of Wisconsin, Madison, Wis.

LIBRARY TRAINING.

LIBRARY COURSE FOR TEACHERS AT THE UNIVERSITY OF WISCONSIN.

A course in library methods for teachers was given at the summer session of the University of Wisconsin, June 27 to August 6, 1910, in recognition of an increasing demand in Wisconsin for teachers who have a working knowledge of library methods.

The subjects of the course included the elements of cataloguing; the simplified decimal classification; mending and care of books; keeping of records essential in school libraries, such as accession and shelf list records; and the use of reference books, especially those most valuable in school libraries.

LAW.

ASSOCIATION OF AMERICAN LAW SCHOOLS.

The ninth annual meeting of the Association of American Law Schools was held at Detroit, Mich., August 25–26, 1909.

The committee on pre-legal studies, appointed to suggest a programme of university courses for students preparing for the study of law, offered the following recommendations, which were adopted by the association:

First, that students devoting only two years to such work take English (rhetoric and composition), two years; Latin or Greek, two years; German or French, two years; mathematics or a natural or physical science, one year; history, including English and American constitutional history, two years; experimental psychology.

Second, that students devoting three or four years to such preparation take, in addition to the above, courses in economics, political science, sociology, and other courses in history, philosophy, and the natural or physical sciences. * * *

Courses in economics, political science, and sociology are strongly recommended because of their helpfulness to a thorough understanding of the law. It is believed, however, that their study should be in the main postponed until the third or fourth year of the prospective law student's curriculum.

The following officers were elected for the year 1909–10: President, John C. Townes, University of Texas; secretary-treasurer, William R. Vance, George Washington University; for members of the executive committee, in addition to the officers named, George P. Costigan, jr., Chicago, Ill.; Charles H. Huberich, Madison, Wis.; Charles Noble Gregory, Iowa City, Iowa.

DEGREE OF DOCTOR OF LAW AT HARVARD.

At the meeting of the board of overseers of Harvard University, held on April 6, 1910, it was voted to establish the degree of doctor of law (juris doctor). This degree will be conferred upon all persons who—

having already received a degree in arts or sciences, and having fulfilled the requirements for the degree of bachelor of laws in Harvard University, accomplish one additional year of work under the regulations of the faculty; or who, having already received a degree in arts or sciences, and having been graduated from any other law school approved for this purpose, accomplish the work of two additional years under the regulations of the faculty.

The course of study will consist chiefly of elective studies open to students in the second and third years of their course. To be admitted as a candidate for the degree of doctor of law the student must be qualified to enter the Harvard Law School as a candidate for the bachelor's degree, and must have completed his course with high rank.

FELLOWSHIP IN LAW AT UNIVERSITY OF WISCONSIN.

The first fellowship to be offered in the law school of the University of Wisconsin was established during the past year by a gift from Mr. Nathan Pereles, of Milwaukee. It will be known as the Nathan Pereles fellowship in law, and is valued at $250 a year. The faculty has decided to award it to some student of the second or third year class on the basis of high scholarship.—(University of Wisconsin Press Bulletin.)

MEDICINE.

AMERICAN MEDICAL ASSOCIATION.

The sixty-first annual meeting of the American Medical Association was held in St. Louis, Mo., June 6–10, 1910. The most important educational event was the report of the council on medical education. The council is a permanent committee on education of the association and holds a special conference during the year. The sixth annual conference of the council was held at Chicago, Ill., February 28 to March 2, 1910, and was devoted to a discussion of medical education standards. Addresses were delivered by Dr. Elmer Ellsworth Brown, United States Commissioner of Education; President Henry S. Pritchett, Carnegie Foundation for the Advancement of Teaching; President Jacob G. Schurman, Cornell University; Dr. Victor C. Vaughan, University of Michigan; and others. The report of the council presented at the St. Louis meeting of the association is based on an extensive study of the problems of medical education, and consequently indicates to some extent the present status and the standards desired. A part of it is printed herewith:

Report of the Council on Medical Education.

To the members of the house of delegates of the American Medical Association:

During the past year the second tour of inspection of the medical colleges of the United States has been completed and much additional data collected. From the fact that the medical colleges of Canada furnish so many medical practitioners to the various States and reliable information regarding them has been lacking, these colleges were included in the second tour of inspection, so that now the council has first-hand information regarding all the medical schools of the United States and Canada. Since the completion of the actual inspection work the reports regarding the various colleges have been carefully reviewed and compared, department by department, with a view of finding the average condition. Incidentally, a mass of other data received from reliable sources was found to corroborate the data obtained by the inspections. From this careful study of the conditions actually existing and with a view of the immediate needs of medical education, the following outline of the "Essentials of an acceptable medical college" was prepared. Omitting from consideration a number of the

utterly worthless medical colleges, this outline represents in the majority of points a line considerably below the average of conditions existing in all the colleges of the United States and Canada. The outline is as follows:

1. Strict enforcement of all standards and requirements, the college itself to be held responsible for any instances where they are not enforced.

2. A requirement for admission of at least a four-year high-school education superimposed on eight years of grammar-school work, or the actual equivalent education; this to consist of 14 units as defined by the College Entrance Examining Board and required by the Carnegie Foundation for the Advancement of Teaching.

3. As soon as conditions warrant, the minimum requirement for admission should be enlarged to include at least one year's college work each in physics, chemistry, and biology, and a reading knowledge of at least one modern language, preferably German or French.

4. A requirement that students be in actual attendance in the college within the first week of each annual session and thereafter.

5. That actual attendance at classes be insisted on except for good cause, such as for sickness, and that no credit be given under any circumstances for less than 80 per cent of attendance on each course.

6. That advanced standing be granted only to students of other acceptable colleges, and that in granting advanced standing there shall be no discrimination against the college's full-course students.

7. Careful and intelligent supervision of the entire school by a dean or other executive officer who holds, and has sufficient authority to carry out, fair ideals of medical education as interpreted by modern demands.

8. A good system of records showing conveniently the credentials, attendance, grades, and accounts of the students.

9. A fully graded course covering four years of at least 30 weeks each, exclusive of holidays, and at least 30 hours per week of actual work; this course should be clearly set forth in a carefully prepared and printed schedule of lectures and classes.

10. Two years of work consisting largely of laboratory work in thoroughly equipped laboratories in anatomy, histology, embryology, physiology, chemistry (inorganic, organic, and physiologic), bacteriology, pathology, pharmacology, therapeutics, and clinical diagnosis.

11. Two years of clinical work largely in hospitals and dispensaries, with thorough courses in internal medicine (including physical diagnosis, pediatrics, nervous and mental diseases), surgery (including surgical anatomy and operative surgery on the cadaver), obstetrics, gynecology, laryngology, rhinology, ophthalmology, otology, dermatology, hygiene, and medical jurisprudence.

12. At least six expert, throughly trained instructors in the laboratory branches, salaried so they may devote their entire time to instruction and to that research without which they can not well keep up with the rapid progress being made in their subjects. These instructors should rank sufficiently high to have some voice in the conduct of the college. There should also be a sufficient number of assistants in each department to look after the less important details.

13. The medical teaching should be of at least the same degree of excellence as obtains in our recognized liberal arts colleges and technical schools.

14. The members of the faculty, with a few allowable exceptions, should be graduates of institutions recognized as medical colleges and should have had a training in all departments of medicine. They should be appointed because of

their ability as teachers and not because they happen to be on the attending staff of some hospital or for other like reasons.

15. The college should own or entirely control a hospital in order that students may come into close and extended contact with patients under the supervision of the attending staff. The hospital should have a sufficiently large number of patients to permit the student to see and study the common varieties of surgical and medical cases as well as a fair number in each of the so-called specialties.

16. The college should have easily accessible hospital facilities of not less than 200 patients which can be utilized for clinical teaching (for senior classes of 100 students or less), these patients to represent in fair proportion all departments of medicine.

17. The college should have additional hospital facilities for children's diseases, contagious diseases, and nervous and mental diseases.

18. Facilities for at least five maternity cases for each senior student, who should have actual charge of these cases under the supervision of the attending physician.

19. Facilities for at least 30 autopsies during each college session (for senior classes of 100 students or less).

20. A dispensary, or out-patient department, under the control of the college, the attendance to be a daily average of 60 cases (for senior classes of 100 students or less), the patients to be carefully classified, good histories and records of the patients to be kept, and the material to be well used.

21. The college should have a working medical library to include the more modern text and reference books and 10 or more leading medical periodicals, the library room to be easily accessible to students during all or the greater part of the day, to have suitable tables and chairs, and to have an attendant in charge.

22. A working medical museum having its various anatomic, embryologic, pathologic, and other specimens carefully prepared, labeled, and indexed, so that any specimen may be easily found and employed for teaching purposes.

23. A supply of such useful auxiliary apparatus as a stereopticon, a reflectoscope, carefully prepared charts, embryologic or other models, manikins, dummies for use in bandaging, a Roentgen ray, or other apparatus now so generally used in medical teaching.

24. The college should show evidences of reasonably modern methods in all departments and evidences that the equipment and facilities are being intelligently used in the training of medical students.

25. A statement in which the college's requirements for admission, tuition, time of attendance on the classes, sessions, and graduation are clearly set forth should be given, together with complete lists of its matriculates and latest graduating class in regular annual catalogues or announcements.

DEFINITIONS OF A MEDICAL COLLEGE[a] AND A MEDICAL SCHOOL.[b]

"An institution to be ranked as a medical college must have at least six (6) professors giving their entire time to medical work, a graded course of four full years of college grade in medicine, and must require for admission not less than the usual four years of academic or high-school preparation, or its equivalent, in addition to the preacademic or grammar-school studies."

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[a] This definition of a college is based on that given in the revised ordinances of the State of New York, and which also was adopted by the Carnegie Foundation for the Advancement of Teaching as their standard.

[b] Based on the definition of the term "school," adopted in 1909 by the Association of American Universities.

By a medical school as differentiated from a medical college is meant a part of a university requiring for admission the equivalent of two years of collegiate work and which offers instruction of not less than two years' duration, leading to the degree of doctor of medicine.

Taking the above outline as a standard, although, as already stated, it represents in most particulars a very low average of the conditions actually existing, the colleges were rated on a civil-service basis on the scale of 100. The data relating to each college were grouped under ten general heads in such manner that the groups would have as nearly equal weight as possible, each group allowing a possible 100 points (10 per cent), and the ten groups aggregating, therefore, a possible 1,000 points (100 per cent). The ten heads under which the data were arranged are as follows:

1. Showing of graduates before state boards.
2. Requirements and enforcement of satisfactory preliminary education and the granting of advanced standing.
3. Character of curriculum.
4. Medical school buildings.
5. Laboratory facilities and instruction.
6. Dispensary facilities and instruction.
7. Hospital facilities and instruction.
8. Faculty, number of trained teachers, all-time instructors, especially of the laboratory branches and extent of research work.
9. Extent to which the school is conducted for properly teaching the science of medicine rather than for the profit of the faculty, directly or indirectly.
10. Libraries, museums, charts, etc.

Those colleges receiving a rating of 70 per cent or above are listed in Class A, those receiving a rating of from 50 to 70 per cent in Class B, and those rated below 50 per cent in Class C. Class A colleges may be considered, therefore, as acceptable colleges, those of Class B as colleges which require certain definite improvements to make them acceptable, and those of Class C as colleges in which complete reorganization would be required to make them acceptable.

Following the first tour of inspection, the council was criticised in certain quarters for not publishing outright its classification of medical colleges. That classification was not published, however, because the council desired to give a number of colleges which were contemplating improvements the opportunity to make good. The delay has been more than justified. Many colleges have secured additional facilities, numerous mergers have been brought about, and, on the whole, the situation has greatly improved. The general conditions as revealed by the first inspection, however, were given the widest possible publicity, so that at the present time any plea of ignorance of the demands of modern medicine is unworthy of consideration, and further delay in the presentation of a classified list would not be justified and would unnecessarily prolong the existence of low standards.

With the knowledge that only about half of our medical schools are teaching medicine in an acceptable way, and with the power possessed by the majority of the state boards to determine what constitutes a medical school in good standing it would seem easily possible for the state boards, acting either independently or conjointly, to bring about a rapid improvement. * * *

The council believes that the coming American standard will be: A four-year high-school education; a year or two in the university laboratories of chemistry, physics, and biology; four years in the medical school, and a clinical year as an interne in a hospital.

About two-thirds of the acceptable schools of the country have either already put into force the requirement of college physics, chemistry, and biology or will put this requirement into force this fall. This requirement is the one adopted by Germany, Great Britain, France, and all of the advanced countries of the

world. Medical educators agree that a thorough training in these branches is practically necessary to the student beginning the study of modern medicine. * * *

Sixteen medical schools are now requiring as a minimum for entrance two or more years of work in a college of liberal arts in addition to a four-year high-school education. These colleges and the years when the requirement became effective are as follows:

Johns Hopkins University, Medical Department	1893
Harvard Medical School	1900
Western Reserve University, Medical Department	1901
University of Chicago, Rush Medical College	1904
University of California, Medical Department	1905
University of Minnesota, College of Medicine and Surgery	1907
University of North Dakota, College of Medicine	1907
University of Wisconsin, College of Medicine	1907
Cornell University, Medical College	1908
Wake Forest College, School of Medicine	1908
Leland Stanford Junior University, Department of Medicine	1909
Yale Medical School	1909
University of Kansas, School of Medicine	1909
University of Michigan, College of Medicine	1909
University of Nebraska, College of Medicine	1909
University of South Dakota, College of Medicine	1909

Ten other colleges in their printed announcements have clearly stated their intention to require two years of liberal arts' college work as their minimum standard of preliminary education for the session of 1910–11 and thereafter. These colleges are as follows:

University of Colorado, School of Medicine; Indiana University, School of Medicine;[a] State University of Iowa, College of Medicine;[a] Drake University College of Medicine;[b] University of Missouri, Department of Medicine;[c] Dartmouth Medical School; Columbia University College of Physicians and Surgeons; Syracuse University, College of Medicine;[a] University of Pennsylvania, Medical Department;[a] University of Utah, Medical Department.[a]

The 21 following colleges either already require in addition to a four-year high-school course one year of work in a college of liberal arts, including courses in physics, chemistry, and biology, or have made definite statements in their printed announcements or otherwise that they will require that standard of preliminary education in and after the year given:

	In force.
Northwestern University, Medical School	1908
Fordham University, School of Medicine	1908
Hahnemann Medical College of the Pacific	1910
Denver and Gross College of Medicine	1910
Howard University, School of Medicine	1910
Kansas Medical College	1910
Tulane University, Medical Department	1910
St. Louis University, School of Medicine	1910
University Medical College, Kansas City	1910
Washington University, Medical Department	1910
Ohio-Miami Medical College, University of Cincinnati	1910
College of Physicians and Surgeons, Cleveland[d]	1910
University of Oregon, Medical Department	1910
University of Texas, Medical Department	1910

[a] One year required for the session of 1909–10.

[b] The printed announcement for 1909–10 contains no mention of the advance in entrance requirements, but an official letter states that two years of collegiate work will be required for admission, beginning September, 1910.

[c] One year has been required since 1906.

[d] Since consolidated with medical school of Western Reserve University.

	In force.
University of Virginia, Department of Medicine	1910
West Virginia University, College of Medicine	1910
Marquette University, Medical Department	1910
Wisconsin College of Physicians and Surgeons	1910
Medical School of Maine	1912
Boston University, School of Medicine	1912
University of Vermont, College of Medicine	1912

Twelve other colleges sent official notices to the council that an increase in requirements would be made. Six of these have since rescinded their action, 2 have been advised by the council not to make the requirement at the present time, and 4 others have not made clear statements of the proposed increase in their printed announcements.

At least 6 medical colleges have provided an optional fifth year of hospital work for which the degree of M. D. *cum laude* is granted. These colleges are:

Boston University, School of Medicine.
Indiana University, School of Medicine.
Rush Medical College.
St. Louis University, School of Medicine.
University of Nebraska, College of Medicine.
University and Bellevue Hospital Medical College.

The deans of at least 25 medical colleges have stated that they have more internships each year than they can fill. For these schools, therefore, the final requirement of the American Medical Association's "ideal standard," namely, "A sixth year as an intern in a hospital," could be easily enforced.

From the fact that 47 medical colleges have adopted higher entrance requirements it is interesting to note that 7 state examining boards have also adopted preliminary requirements in advance of a four-year high-school education. These are as follows:

	Number of years required.	Affects students matriculating.	Affects all applicants.
North Dakota	2	1907–8	1911
South Dakota	1	1907–8	1911
Minnesota	2	1908–9	1912
Colorado	1	1908–9	1912
Connecticut	1	1910–11	1914
Kansas	1	1910–11	1914
Indiana	2	1910–11	1914

There are several other States which are contemplating similar increases in their requirements in the near future.

In conclusion, it should be said that although there is still much to be done, splendid progress is being made, and we can all look forward to the future confident that within a few years medical education and medical licensure in this country will be on a satisfactory basis.

Respectfully submitted.

ARTHUR DEAN BEVAN, *Chairman.*
N. P. COLWELL, *Secretary.*

The report of the council was referred to the reference committee on medical education and through that body adopted by the association.

The public-health education committee, which was created in accordance with a resolution adopted June 10, 1909, reported that

they had given in the one year of their existence 2,250 lectures free from technicalities, had reached 102,575 people, and that many physicians, both men and women, have promised, through the committee, to give gratuitous lectures during the ensuing year. A general idea of the nature of these addresses may be gained from the following subjects: 1. The cause and prevention of ordinary colds. 2. The value of pure food and the physiology of digestion. 3. The chemistry and economic value of food. 4. The care of the food at home. 5. The relation of pure water to the public health. 6. Water-borne diseases. 7. The value of exercise and rest to the public health. 8. The air we breathe and the value of ventilation. 9. Pure milk and infant hygiene. 10. The relation of the teeth to good health. 11. The causes and results of eye strain. 12. How to instruct children regarding the origin of life. 13. The causes and prevention of deafness. 14. The hygienic management of nervous children.

The committee endeavors to provide lecturers for women's clubs, mothers' and teachers' organizations, Young Women's Christian Associations, church and social settlement clubs, etc., on any of the above and other subjects.

Dr. John B. Murphy, Chicago, Ill., was elected president of the association for 1910–11, and Dr. George H. Simmons, Chicago, was elected secretary.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES.

At the twentieth annual meeting of the Association of American Medical Colleges held in Baltimore, Md., March 21–22, 1910, the following amendments to the constitution were adopted:

For the present Latin requirement of two years (4 points) there may be substituted four years of either high-school French or German, or its full equivalent, provided a satisfactory examination is passed in the elements of Latin grammar.

Each annual course must be of not less than thirty-two weeks' duration instead of thirty weeks, as heretofore. This time includes examination periods, but does not include any vacation period. It was estimated that about two weeks would be consumed by examinations, leaving thirty actual teaching weeks, and on this basis the new curriculum is established.

No college a member of this association will be permitted to employ a paid solicitor for the purpose of inducing the attendance of students, nor shall any college offer to anyone, either directly or indirectly, any reward or inducement for securing the attendance of students.

The university matriculation certificate of the Association of American Universities may be accepted as a minimum requirement for admission.

The committee on medical education indorsed the combined baccalaureate and medical course now given by many universities, and also the concentration plan of teaching. It recommended that there

be submitted at the next annual meeting a curriculum for the five-year medical course.

The committee on curriculum recommended a 4,000-hour schedule, without any allowable diminution, the distribution of the hours among the subjects to be left to the authorities of each college.

The officers for the ensuing year are: President, Dr. J. A. Witherspoon, Vanderbilt University; vice-presidents, Dr. Horace D. Arnold, Tufts College Medical School, and Dr. Charles R. Bardeen, University of Wisconsin; secretary-treasurer, Dr. Fred C. Zapffe, University of Illinois.

REPORT OF THE COMMITTEE TO VISIT THE HARVARD MEDICAL SCHOOL.

In their report, April 6, 1910, the committee appointed by the board of overseers to visit the Harvard Medical School made the following suggestions:

> That the sole requirements for admission should be a bachelor's degree from a recognized institution, or that the candidate should show that he has done work equivalent to that required by any recognized college or scientific school for a bachelor's degree.
>
> That the class of special students who are candidates for a degree should be abolished, and every person admitted under the above requirements should come in without qualifications or disability of any sort.
>
> A student holding a bachelor's degree or its equivalent who is an applicant for advanced standing should be admitted on producing a certificate of time spent in medical studies and satisfying the head of each department that he has passed a satisfactory examination in that branch of medical study.

The report is signed by George B. Shattuck, chairman; J. Collins Warren, Alexander Cochrane, Henry H. Sprague, Luther D. Shepard, Henry Saltonstall Howe, William Lambert Richardson, Charles P. Briggs, and James C. White.

MUSIC.

MUSIC TEACHERS' NATIONAL ASSOCIATION.

The thirty-first annual meeing of the Music Teachers' National Association was held at Northwestern University, Evanston, Ill., December 28–30, 1909. There were eight regular sessions of the meeting. Reports of conferences on college music, public-school music, voice, piano, and harmony were read. The association has a membership of 439. The officers elected for 1910 were: President, Rosseter G. Cole, Fine Arts Building, Chicago; secretary, Francis L. York, Detroit Conservatory, Detroit, Mich.; treasurer, Ralph L. Baldwin, Hartford, Conn.

VII. RELIGIOUS AND ETHICAL EDUCATION.

RELIGIOUS EDUCATION ASSOCIATION.

The seventh general convention of the Religious Education Association was held at Nashville, Tenn., March 8–10, 1910. The general theme of the convention was "Church and education," but while recognizing the responsibility of the church in this matter, the association emphasized that of the home, as indicated by the following citation from the declaration of principles adopted at the meeting:

We affirm that no school or church or other organization can take the place of the home or can remove from parents their primary responsibility for the moral and religious training of their own children. While the swift social changes of the present day may change the occupations of the home and modify its mode of life, it must remain true that the finest result of family life is not bread winning but character building. Every attack upon the home is an attack upon the state and the nation. Whatever conserves the home as not merely an economic arrangement, but a divinely given instrument for religious education, calls for our heartiest encouragement and our united support.

We affirm that the great power of the press in this country should be more clearly recognized and utilized in the furtherance of moral and religious education. Publicity, already efficacious as a deterrent to that which is evil, is equally an encouragement to that which is good. The achievements of the church, often full of heroism, should be more fully set forth in the daily press, and the ideals and attitudes inculcated by religion should through the same channel be carried into the homes of the people. That some of the newspapers of our country are becoming increasingly sensitive to their moral responsibility and increasingly desirous for cooperation with all agencies for the moral uplift and enlightenment of the people is a cause for encouragement. But moral leaders have hardly begun to avail themselves of this agency. In the press of to-day there is offered to church and school an unrealized opportunity for spreading ideals through the nation and educating men and women to deeper conceptions of duty, character, and public service.

The report of a commission of twelve on pretheological education, appointed at the previous meeting of the association, was presented by Dr. Shailer Mathews, dean of the Divinity School of the University of Chicago, and was adopted by the department of theological seminaries. The memorandum of the report prepared by the committee is as follows:

1. Your committee attempted at first to draw up a complete curriculum for the four college years. Such a curriculum, however, was seen to be impracticable on account of the different studies, number of hours, and other conditions required by the different colleges for their degrees. It seemed best, therefore, to the committee to draw up a list of courses which are especially adapted to prepare men for work in theological seminaries.

2. It has seemed advisable further to distinguish between two classes of courses: Those which seem absolutely essential in training for practical efficiency in the ministry (List A), and those which are highly important for

the development of the more technically theological efficiency of the ministry (List B).

It is the recommendation of the committee that the studies in List A be pursued by all students for the ministry, and that Course B be pursued by those who wish to prepare themselves in the fullest degree for the philological and exegetical studies of the seminary curriculum. In so far as the student's aptitude and opportunities permit the committee would suggest that the studies in both lists be pursued.

3. As regards the amount of time to be given to each study the committee has chosen as its unit a course running three hours a week for an entire college year. In colleges where a given study fills a different number of hours per week the adjustment will be easily made.

The committee further assumes that the total number of hours per week required in a college will not exceed 15 or 16.

The committee has deemed it best to leave a certain number of units free for electives, permitting more thorough study of such courses of the suggested curriculum as particularly appeal to a student.

4. The student is advised to consider the instructor as well as the course. In case a course is given by an inferior instructor the committee advises that the student substitute for it some other course in the corresponding group in the other list, or, if more advisable, even in some subject not suggested. It is the opinion of the committee that the influence of the teacher is as important as the material of a course.

List A.

Courses recommended for the practical efficiency of the ministry.

I. PREPARATION IN LITERARY EXPRESSION.

	Unit.[a]
English composition and rhetoric	1
Literature (principally English)	1
Public speaking (art of expression, vocal training, debating, etc.)	1

The student should take as much of the work in public speaking as possible, even when no academic credit is given for it.

II. LANGUAGES.

	Unit.[a]
At least one foreign language, preferably Greek	2

III. NATURAL SCIENCES.

Biology	1
Psychology	1

IV. SOCIAL SCIENCES.

History	2
Political economy	½
Study of society (introduction to the study of sociology, dependents, etc., socialization, social science)	2

V. PHILOSOPHY.

History of philosophy	1

[a] Of 3 hours per week for year.

LIST B.

Additional courses suggested as important preparation for technical theological study from which elections can be made.

I. LANGUAGES.

	Unit.[a]
Latin	2
German (if not taken in high school, otherwise 1)	2
Hebrew (for those whose aptitude and desire would lead them to pursue Hebrew in seminary courses)	1
Hellenistic Greek	1

II. NATURAL AND PHYSICAL SCIENCE.

Geology	1
Physics or chemistry	1

III. PHILOSOPHY.

Ethics	½
Introduction to philosophy	½
Logic	½

Bishop William Lawrence, Boston, Mass., was elected president of the association for 1910, and Henry Frederic Cope, Chicago, Ill., was retained as general secretary. The next convention will be held in New England, and will be devoted to the theme "Religion in the home."

YOUNG MEN'S CHRISTIAN ASSOCIATION.

The educational department of the Young Men's Christian Association was established by the international committee in 1894 for the promotion and supervision of educational work among the different associations. The establishment of such a department has made it possible for the committee to study the general needs of its special classes of students, to organize and outline uniform courses of study, and to exercise a general supervision over the work of the different associations.

The rapid advance under this department may be seen from the following items taken from the Association Yearbook for 1910: There were 6,517 talks, increase over 1909, 1,590; 2,443 paid teachers, increase 240; 52,247 different students, increase 5,170; $661,000 expenses, increase $91,000; $433,050 tuition receipts, increase $76,000; apprentice and trade schools 14, increase 5; students in day work 2,867, increase 900; employed boys in class work 8,407, increase 1,400; students in boys' summer schools 2,427, increase 500; English for foreigners 10,000, increase 3,000; associations doing work outside of building 87, increase 17; 1,774 international certificates, increase 600.

[a] Of 3 hours per week for year.

The educational activities of the different associations may be listed under the following headings: Reading rooms and libraries, lecture courses, educational clubs, evening schools and in some places day schools, summer schools for boys and adults, and schools to train for association work. The courses of study, as is shown by the list of subjects for examination, include the modern languages, science, industrial and commercial subjects, and in some associations the elementary subjects of the public schools.

NATIONAL TRAINING SCHOOL FOR THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

The training system of the Young Women's Christian Association for secretaries and other officers is extending and assuming more and more systematic form. The preparatory work is given in training centers and the professional training in the National Training School which was opened by the National Board of the Young Women's Christian Associations in New York, September, 1908.

ADDITIONAL ORGANIZATIONS.

Among additional organizations engaged in the promotion of religious and moral education may be mentioned the following:

The Moral Education Board, which has recently given special attention to the moral instruction of children by means of illustrated lessons. The chairman of the executive committee of the board is Mr. Bernard R. Baker. The offices are at 903 Calvert Building, Baltimore, Md.

The National Vacation Bible School Association, which was formed "to promote college and church ministry to children of the cities by establishing daily vacation Bible schools, and by securing the services of trained men and women adapted to such ministry." The movement had its origin in New York City in 1901, when five church buildings of the New York Baptist City Mission were opened daily in July and August for the instruction of neighborhood children by college students. The number of schools subsequently increased in New York and similar schools were opened in other cities. In 1907 the national association was organized, with headquarters at Bible House, New York City.

From a report of the association for 1909 it appears that there were 90 daily vacation Bible schools under the direction of the national association and other organizations, and that during the summer vacation 27,000 boys and girls were enrolled. These schools were open to all creeds and were conducted in 11 cities. In 51 of the schools, under direct supervision of the national association, 209 college men and women were employed.

The principal officers of the association for the present year are: Dr. Leighton Parks, New York City, president; J. Adams Brown, president New Netherlands Bank, New York City, treasurer; and Robert G. Boville, Bible House, New York City, national director.

The American Ethical Union held its third annual session of the Summer School of Ethics at Madison, Wis., June 27 to August 5, 1910. Courses of lectures were delivered on principles of moral education, ethics of great poets, social movements and social service, the ethical movement, ideals and methods of ethics teaching, and ethics of great religions. There were also evening lectures and conferences, in all comprising about 100 lectures and conferences. The previous sessions of the school have been held at the University of Wisconsin.

The officers of the school are: Dr. Felix Adler, New York City, dean of faculty of lecturers; Mrs. Anna Garlin Spencer, New York City, director; and Mr. Alexander M. Bing, New York City, treasurer.

VIII. COEDUCATION OF THE SEXES.

THE POLICY IN PUBLIC SCHOOLS.

As regards the coeducation of the sexes in the public schools of the United States the situation remains practically unchanged from year to year, although occasional experiments at what is technically termed segregation serve to keep the subject before public attention. Throughout the country the elementary public schools are coeducational, with the exception of a few schools in cities on the Atlantic seaboard, in which free public schools were first established for boys only, and the subsequent demand for similar provision for girls was necessarily met by new buildings and accommodations. This arrangement affects but a small proportion—not above 4 per cent—of the pupils enrolled in elementary schools.

Separate high schools have long been maintained in Boston (the old city), New York City, Philadelphia, Baltimore, Charleston, and New Orleans. In the West the high schools universally followed the course of the elementary schools in this respect until a very recent date. An experiment in segregating the boys and girls, during the first two years of the high-school course, cautiously made about four years ago by Principal Armstrong, of the Englewood High School, Chicago, has not only attracted wide attention, but has been followed in several other high schools, hence it may be said to represent a tendency of more than passing importance.

In a recent paper[a] Mr. Armstrong has reviewed the experience of the three and a half years under this plan, stating very fully what appear to him to be its positive advantages.

At the outset he disclaims any opposition to coeducation per se, with respect to which he says:

> I should want to be the last one to suggest a scheme by which our secondary schools should be rent in twain and the sexes educated in separate schools. In fact, I believe firmly that such a separation would be a distinct loss to both sexes in lessening the social and moral influences of each over the other.

There are, however, certain problems pertaining to the instruction of young people at the adolescent period which have been recognized by all teachers, and for which, in the opinion of Mr. Armstrong, segregation offers the best solution. The first of these problems is that of the immaturity of boys as compared with girls at the usual age of entrance upon the high school. In respect to this difference Mr. Armstrong says:

> When the boy comes to the high school at about 14 he is from one to two years less mature than the girls of the same age, and so is unable to approach the work with the same degree of seriousness and will power.

The second problem to be considered is the difference between the two sexes in respect to predominant interests and mental capacity.

> In all the languages [says Mr. Armstrong] the girl excels. The power of verbal memory being stronger and her patience with such a task being greater, she is better adapted to learning a language. * * * In all sciences the boy has the advantage in spite of his lack of general maturity. He is a keener observer and a more logical reasoner. The girl needs a more elementary course to train her powers to see and classify. The boy loves to try experiments and so is capable of doing much more work in that line.

From the excess of girls over boys in high-school classes it follows, according to Mr. Armstrong, that "the methods of the recitation have undergone an unconscious evolution to adapt them to the girl type." This explains in part, he thinks, the lack of interest shown by boys in high-school studies and their early withdrawal from the schools.

From a careful analysis of the work and the reports of classes in the Englewood High School during the experimental period, and comparison with corresponding data for previous years, it appears that the ratio of boys "rose from 31 to 34 per hundred pupils in the seven years before segregation and from 34 to 38 in the three years after." According to the report—

> this gain in the ratio of boys was not at the loss of the girls, for the actual number of girls also increased rapidly. In other words, while the girls increased in numbers during the ten years 38 per cent, only 6 per cent of this was gained

[a] School Review, May 10, 1910, pp. 339–350.

before the segregation and 94 per cent of it since. The boys gained 96 per cent during the ten years; 21 per cent of this was gained during the seven years before and 79 per cent of it during the three years since segregation.

Mr. Armstrong notes the following among other influences—

that have tended to make the great increase in the ratio of boys since the introduction of segregation: (1) The compulsory education law, (2) the opening of an addition to the school, (3) the introduction of manual training in the high schools of Chicago.

The first of these influences, the compulsory laws, has had little effect upon the high schools, as it applies to "first and second year pupils only, or to those under 16 years old."

Considering the remaining influences named Mr. Armstrong shows first that the opening of the addition to the Englewood School "tended to increase the number of girls more than the number of boys, and so operated against the increase in the ratio of boys."

He continues:

The introduction of manual training in other Chicago high schools has certainly operated strongly against the increase of the ratio of boys. A well-equipped manual-training school was opened in a district adjoining in the year 1906. Transfers are given freely to all pupils who wish to go to that school in order to take a four-year course. Few girls, if any, go there for manual training, but a large number of boys do so. Four-year manual-training courses in a building with all the appliances necessary attracted boys from all over the city; but in spite of all this the ratio steadily rose. I believe that there can be no doubt that the special attention given to boys attracted and held the boys in the school.

There is another consideration, namely, that of the adaptations of the teachers, which is discussed by Mr. Armstrong, but which seems of less consequence as a factor in the segregation policy. It is obvious, as he says, that "not all teachers are equally adapted to teach both sexes, nor does it follow that men are always the better teachers of boys, and women of girls. There are many exceptions both ways." These are distinctions which require adjustments upon whatever plan the school is organized.

Without further attention to the details of this interesting discussion, it must suffice to present the conclusion with which it closes:

I fully believe I am justified [says the writer] in the conclusion that the segregation of the sexes during the first and second years of high school holds more boys in school, greatly improves their scholarship, and removes from them the feeling of unfair comparisons due to difference in degree of maturity of children of the same age but opposite sex; and that the possibility of adapting the work to the needs of each sex will make it easy to train each sex for a higher degree of efficiency.

It will be interesting to compare with the report of the Englewood experiment certain facts respecting the Central High School, Cleveland, Ohio.[a] In regard to this school Principal Harris says—

[a] Cited from a letter written by Principal Edwin L. Harris, in response to an inquiry from this office.

there is segregation in the session or study rooms, which seat 56, and in the gymnasium classes and athletic sports. In all academic work the boys and girls recite together in class.

There are enrolled at present in the Central High School, in the different classes, the following:

	Boys.	Girls.	More girls than boys.
Seniors	125	136	11
Juniors	108	146	38
Second year	173	178	5
First year	196	231	35
Total	602	691	89

This makes about 47 per cent of the school boys—a larger per cent without segregation than where segregation has been tried.

During the last year a good specialized high school of commerce has been opened in this city and that course taken out of the senior and junior years of the other schools. This will account somewhat for the difference in those two classes. They were formerly like the second year, where the number is practically equal. In fact, several times there have been a few more boys than girls in the senior class.

There is another local condition. A finely equipped technical high school has been established, which did not draw pupils from the advanced grades, but has from the first-year pupils, i. e., those who would have entered.

Before the building of the fine new East High School there were over 2,100 in attendance at Central High School. The per cent of attendance of the boys has been as high as 49. It will be inferred that the course of study has not been planned for girls alone, nor have the methods of recitation "undergone an unconscious evolution to adapt them to the girl type."

A suggestion might be made of a kind of segregation that might be helpful, and that is a segregation of like abilities. The sentiment that "all men are created equal" sounds well, but if it were only true many of our difficulties would cease.

As an illustration of what is meant by segregation of like abilities the plan adopted at Central High School with the geometry classes may be interesting. First, there are the regular classes for those pupils of average ability. These classes take the usual amount of work, besides the demonstrated propositions of plane geometry. Secondly, there are other classes for those who will go no farther than the high school and who find trouble even with demonstrated propositions. These do no original work, but "confine themselves to the book." Thirdly, there is a class, or classes, for those who are really stars in mathematics and who are eager for all the original investigation and demonstrative work that may be given to them. These classes are open to girls as well as to boys, and there are as many of the former as of the latter.

This plan is possible in a large school for all subjects, but is especially helpful in mathematics and natural sciences.

Principal Harris states that he has been following with deep interest the experiment at Englewood on account of its bearing upon problems which have impressed him also. He expresses the opinion, however, that they can all be met by adjustments that are possible

under the coeducation plan, a conclusion which seems to him borne out by the record of his own school.

In connection with this subject it may be noted that the widespread movement for vocational training is introducing new determining factors into the conduct of public education. So far as can be judged at this incipient stage of the movement, it is likely to lead to the provision of separate schools or departments for boys and girls at the moment when vocational specialization begins. The considerations bearing particularly upon vocational training for girls were discussed by Doctor Snedden, state commissioner of education for Massachusetts, in a recent address, in the course of which he said:

Vocational education for girls is no less necessary in modern society than vocational education for boys. All women in civilized society should be workers and producers, and in order that they may work and produce well they should have training along the special lines of their aptitudes and probable fields of vocational effort. When it is said that all women should be workers and producers it is, of course, understood that the largest single vocation for women is that of home making, with all that that implies. Consequently vocations for women may be divided into two classes—the home making and the wage-earning.

The peculiarly difficult problem in the vocational education of girls arises from the fact that almost all women will and, in the nature of the case, must prepare for each of the above classes of vocations. The average American girl under present social conditions must serve a part of her life as wage-earner and the major portion of her life as home maker. The larger majority of American girls to-day are wage-earners from 15 and 16 to perhaps 20 or 21 years of age, after which they undertake home making as a career. If they enter upon the wage-earning occupations with no preparation they are destined to have low wages and incur the dangers of being exploited as many are at the present. If they enter upon the subsequent vocation of home making without preparation the conditions are disastrous to health and to the home.

A few conclusions then with reference to the vocational education of girls are manifest. As far as practicable the period up to 16 should be reserved for school life, and along with the necessary liberal education the latter years of this period should be made fairly rich in the vocational education which will contribute to health and mastery of the home arts and the social knowledge which may later function in home making. At the same time it must be realized that the girl must become a wage-earner in some calling which will claim her attention for anywhere from five to eight or ten years. As far as practicable those vocations should be sought for girls, preparation for which is not too far removed from ultimate efficiency in the home, but it must be frankly recognized that the vast majority of wage-earning callings to-day opening to young women have very little bearing on home efficiency.

* * * * * * *

In Massachusetts we have made only a beginning of the vocational education of girls. It remains to be seen whether it will prove desirable to open special vocational schools to take in from the ages of 14 to 16 the vast number of girls who are destined to work in factory processes at a comparatively moderate wage. My personal opinion is that it will prove highly desirable to have such schools, even if their courses are comparatively short.[a]

[a] Address before the New England Women's Club, as reported in the Boston Evening Transcript, December 27, 1909.

If these ideas are carried out, specialization for vocational training would begin at 14 years of age, which is about the average age for admission to high schools.

COEDUCATION IN HIGHER INSTITUTIONS.

RECENT ACTION OF TUFTS COLLEGE.

In the field of higher education, the most important event of the year, as regards coeducation, is the action of the trustees of Tufts College, Massachusetts, abandoning the coeducation plan. The action was taken in accordance with the recommendations of a committee which had been appointed for a complete investigation of the problem as related to this institution. In pursuance of their purpose, the committee freely consulted the members of the faculty of liberal arts, and also representatives of the associations of graduates of both sexes. The report submitted comprised a full statement of the reasons for the change recommended, many of which were peculiar to the institution immediately concerned. The conviction was expressed by the committee that there is a fundamental difficulty "in the way of success of coeducation in Tufts College, and that this difficulty lies in and pervades the whole student body, growing stronger rather than diminishing." It appeared from the investigation that the sentiment against coeducation prevented many staunch supporters of the college from sending their own daughters to Tufts, and in many cases, their sons also. Naturally, such persons would not recommend Tufts to others.

With respect to the new policy recommended, the committee say:

> It is our conviction that if and when any move for the segregation of the women in Tufts College is undertaken it must be full and complete. It being determined that the thing itself is desirable—no halfway steps are wise. What is done must certainly be so done that the women shall be able to say that they have equal opportunity with the men. It does not seem to us that this would be accomplished by opening a department for women, as we now have a department of engineering, but that to secure success a separate institution exclusively for women with a suitable and appropriate name and the right and power to grant its separate degrees, should be established. This institution should have its own officers and faculty. With this object in mind we have prepared a rough draft of certain amendments to the charter of this corporation which seem to secure the ends sought and still keep the government and control within the hands of this corporation and to permit the making of the two faculties in harmony and to a large extent composed of the same men. This last, of course, is highly desirable and in fact necessary in our present financial condition.
>
> Your committee, after carefully weighing and considering all the phases of the matter as herein set forth, respectfully present:
>
> That in their opinion the best interests of this institution require a separation of the sexes.
>
> That the best way of accomplishing this is by the establishment of an independent college for women.

That the importance of the matter is so great that even though the financial resources are not at this moment in hand to meet the extra cost, the action should be taken at the earliest possible moment, and efforts be made at once to secure the necessary funds therefor.

We recommend securing an amendment to the charter of Tufts College authorizing the establishment of a separate college for women to be known as Jackson College for Women, and that, with the opening of the next college year, a woman's department be established which shall be merged into the Jackson College for Women as soon as the legislation therefor shall be secured.

The resolution giving effect to these recommendations was adopted by vote of the trustees, April 12 of the current year, and in accordance therewith a bill was introduced into the legislature, passed, and approved June 15, authorizing "the corporation known as the 'Trustees of Tufts College' to establish and maintain for the education of women exclusively a college to be known as the Jackson College for Women."

The act declares that—

all the provisions contained in the act establishing the "Trustees of Tufts College," and in the acts in amendment thereof, shall relate to the Jackson College for Women, so far as they are applicable, except as provided in this act.

* * * * * * *

The corporation may, in the name of Jackson College for Women, confer any of the degrees which it is by law authorized to confer: *Provided, however,* That degrees so conferred in course shall be conferred exclusively upon women. It may also adopt and use upon diplomas, and other written instruments issued in the Jackson College for Women, a seal of a design differing from the common seal of the corporation.

In response to inquiries from many alumnæ of the institution as to the reasons for the new departure, the statement was made that a will had been written leaving to a college for women, to be separately chartered but to be operated by the trustees of Tufts College, a sum probably not less than $500,000. This money would not be available for a department of Tufts College. It is understood that this is the only definite promise of endowment for the college which has yet been made.

Pending the establishment of Jackson College, arrangements will be made within the existing college for a separate department for young women which will be conducted in the coming fall session upon the segregation plan.

The action of the trustees in this matter solves a problem which has troubled the administration of Tufts College for several years. Coeducation has been the subject of several presidential reports, and of repeated discussions in alumni meetings. Soon after his inauguration, President Hamilton pronounced himself in favor of separating the sexes, and the measure now adopted is largely the result of his personal efforts; at the same time, it appears to meet the approval

of nearly all persons directly responsible for the welfare of the institution.

Vigorous protests against this departure from the course that was adopted at Tufts eighteen years ago were made at a meeting of the "Women's Ministerial Conference," held in Boston in May. The sentiment of the meeting was voiced by Julia Ward Howe, who expressed deep regret that Tufts College should take such a backward step as that represented by the separation of the women students, and urged her listeners to bring this question before the public in every possible way. It was voted that each member use her influence to have a discussion of this matter introduced at the approaching Biennial of the Federation of Women's Clubs, to be opened in Cincinnati on May 10.

OPPOSITE TENDENCIES IN EASTERN AND WESTERN INSTITUTIONS.

The action of the trustees of Tufts College, following so soon after the similar action by the trustees of Wesleyan University, Middletown, Conn., which was reported in 1909, emphasizes the distinction between the Eastern States and the Western in respect to coeducation as a feature of their higher institutions of learning. Undoubtedly custom and sentiment in the East favor the idea of separate colleges for men and for women. This is clearly indicated by official statistics. Thus it appears that the ten colleges and universities in the New England States which are coeducational in their undergraduate departments (Tufts and Wesleyan not included) had in 1909 a total of 1,136 women undergraduate students, as against 4,877 in the corresponding departments of separate colleges for women. The provision of these separate colleges for women in the older States came about naturally from the fact that the colleges for men in that section antedate, as a rule, the demand for such provision for women; consequently when this demand arose it was met by the foundation of distinct institutions. It should be considered also that the higher institutions of the East are largely of private origin and endowment, and therefore are limited in various ways by special charter provisions or conditions of endowment, and do not so fully embody the democratic ideas of the people as institutions founded and maintained by public appropriations. The distinction in this respect is illustrated by the history of coeducation in the University of Wisconsin, which is reviewed by Mrs. Olin in her book entitled "The Women of a State University."[a] The work was called forth by events that were interpreted by some persons as adverse to the continuance of coeducation in that institution; these fears have been allayed, however, by the

[a] Olin, Helen R. The Women of a state university; an illustration of the working of coeducation in the Middle West. New York and London, G. P. Putnam's sons, 1909. 308 p. 12°.

resolution of the regents, adopted in 1908, reiterating the rules published twenty years before. The resolution declares "There shall be no discrimination on account of sex in granting scholarships or fellowships in any of the colleges or departments of the university."

GENERAL BEARING OF THE QUESTION.

On the whole, the question of coeducation appears more and more as one of adjustment to prevailing conditions, hence experiments at temporary segregation, or complete separation of students on the basis of sex, are not likely to effect any radical change in the prevailing policy of the different sections of the country in this respect. The reorganization of industry and the vast increase of municipal public services and of collective social activities are giving new measures of efficiency for both men and women, and will doubtless in time become the determining factor in regard to the methods and conditions of higher education of women. This bearing of the subject is comprehensively set forth by Prof. Marion Talbot in her recent work on "The Education of Women."[a] In the course of an analysis of college curricula with the purpose of illustrating their relation to public demands Mrs. Talbot incidentally shows that separate colleges for women have not adjusted themselves to modern conditions as fully as have state universities open to both sexes. The experiment of limited segregation at the University of Chicago is not referred to in this work, but in her recent report as dean of women in that university Professor Talbot presents interesting facts bearing upon the subject. In this report she says:

> Frequent inquiries are made of the dean of women as to the effect of separate instruction for men and women on the relative attendance of men and women. It seems timely to present some facts bearing on the subject. The impression is widespread that the sexes are entirely separated in instruction in the junior colleges, whereas recent reports from the dean of the junior colleges have shown that only about one-half of the first-year students and a very much smaller proportion of second-year students are affected by the system. These take from one-third to all of their work in classes divided on sex lines.

The report comprises two tables, giving the number of students in the junior and senior colleges and their distribution by courses of study since the opening of the university. So many circumstances, however, affected the attendance and choice of studies, both before and after the segregation plan was adopted, that the statistics are of little value for any light they throw upon the results of the policy. Among the circumstances that have affected the attendance of men the following are particularly noted in the report:

> Separate instruction for men and women was introduced in 1903–4. In the same year Hutchison Commons, Hitchcock Hall, and the Reynolds Club, and in

[a] Talbot, Marion. The Education of women. Chicago, University of Chicago press, 1910. 255 p. 12°.

the following year the Bartlett gymnasium, were opened for men; and there has been no increase in the accommodations or equipment for women. Moreover, in 1901 the university introduced a two-year medical course which might be counted as credit toward the bachelor's degree, and in 1902 the law school was opened, offering one year of law, which might be credited as the fourth year of college work. In 1906 Latin was made an elective entrance subject, except for the degree in arts, and elementary courses in engineering were offered. In view of all these facts, it is evidently impossible [continues Miss Talbot] to determine the extent to which the increase in the attendance of men is due to separate instruction, an increase from 1902 to 1906 greater than at any of the men's colleges of the East, or even of several of them combined. The figures show that fewer men, actually and proportionately, are taking a classical or literary course at the University of Chicago and more are taking a scientific or a commercial course, even though more of the instruction for the former is given in separate sections than for the latter courses. Apparently in general the men students are choosing their work irrespective of the presence of women in their classes. There are probably a few cases of men who are deterred from entering a class in French or in art because of the preponderance of women, and, on the other hand, there may be a few women who may not go into a class in municipal government or commercial geography because of large numbers of men. But, on the whole, it is evident that the Chicago student is going to study what he wants as he can get it.

UNIVERSITY DISTINCTIONS FOR WOMEN.

In the larger outlook of higher education for women the most important recent events relate to their admission to the graduate and professional departments of universities and the recognition of their public services by the award of scholastic degrees. A recent illustration of the former tendency is the admission of women to the courses of law and medicine offered by Columbia University for the summer session of the current year; notable instances of the university recognition of women honoris causa are the honorary degree of doctor of letters conferred upon Mrs. Schuyler Van Rensselaer, the author of "The History of the City of New York," by Columbia University at the commencement exercises of the year, and the honorary degree of master of arts conferred upon Miss Jane Addams by Yale University.

Professor Perrin, who presented the candidates at the Yale commencement, gave happy expression to the work which marks Miss Addams as the highest exponent of the newly forming social ideals. He said:

> Hull House is the most extensive and important social settlement in the United States. No other one institution perhaps has had more influence in shaping and inspiring the present movement toward social reconstruction in this country.
>
> Behind this vital institution stands the vital personality of Miss Addams. She has had a prophetic vision of what might be done, and militant courage, united with a high order of administrative, social, and political capacity, in doing and getting it done.

University recognition of public service rendered by women through the exercise of high esthetic talent or administrative ability will inevitably react upon the institutions themselves to break down barriers against women students, whether of closed doors or limited provision.

IX. SPECIAL EDUCATIONAL ACTIVITIES.

RIFLE PRACTICE IN SCHOOLS.

The annual meeting of the National Board for the Promotion of Rifle Practice was held in Washington, D. C., January 24, 1906. The question of building up an interest in target practice throughout the schools of the country was discussed, and a special committee was appointed to inquire into and report at the next annual meeting of the board upon the feasibility and advisability of some policy to inaugurate a system of rifle practice throughout the schools of the country. The committee visited New York City, where rifle practice had already been introduced into the schools, and, after inspecting the organization and methods, offered the following recommendations in their report to the board at the 1907 meeting:

1. That the largest possible publicity should be given to the methods that have been found to be so successful in the New York high schools.
2. That the educational officials of the different States should be urged to introduce instruction in rifle shooting in their schools among the boys of 13 years of age and upward, conforming to the New York methods as far as their situation will permit.
3. That this would be helped by the organization of a public schools athletic league in each educational center.

At the 1907 meeting of the board the by-laws of the National Rifle Association of America were amended as follows to provide for affiliated clubs from institutions of learning:

Fourth class, college rifle clubs.—To consist of rifle clubs, as far as shooting members are concerned, of students in colleges, universities, and institutions of learning conferring degrees. Five dollars membership fee and $5 annual dues, membership fee to cover first year's dues.

Fifth class, schoolboy clubs.—To consist of rifle clubs composed, as far as shooting members are concerned, of students in public schools, academies, preparatory and high schools, and private schools, being all schools which do not confer a degree. Two dollars membership fee and $2 annual dues, membership fee to cover first year's dues.

According to the report of the board for 1909, rifle clubs have been formed in 26 colleges and universities, and 60 clubs in high schools and academies. The latter class were in 47 different cities and towns in 23 States.

The course of rifle firing for outdoor and indoor qualifications, prescribed to the board for schoolboy clubs, is as follows:

Junior marksman, outdoor qualification.—Each member, not over 18 years of age, will fire 10 shots standing and 10 shots prone at 200 yards, 2 sighting shots allowed at the beginning of the firing. Those members making a score of not less than 35 points standing and 40 points prone, or a total of 75 points of a possible 100, will be designated as "junior marksman," and will receive a suitable decoration.

Junior marksman, indoor qualification.—Each member, not over 18 years of age, will fire 10 shots standing and 10 shots prone at 50 feet on the National Rifle Association 50-foot target. No sighting shots. Rifle, .22 caliber. Those members making a score of 38 points standing and 42 points prone, or a total of 80 of a possible 100, will receive a lapel button.

Qualification may also be made on the subtarget gun machine, a score of 45 standing being required.

Lieut. Albert S. Jones, Hibbs Building, Washington, D. C., is secretary of the National Rifle Association of America.

THE BOY SCOUTS OF AMERICA.

The boy-scout idea in America began some ten years ago as the result of papers on woodcraft and scouting written by Ernest Thompson Seton and published in various periodicals. The name of this brotherhood was "The Woodcraft Indians."

In 1908 Gen. Sir Robert Baden-Powell organized The Boy Scouts in England. With the modifications necessary to suit our conditions, this organization has been adopted here under the name The Boy Scouts of America. The object of the association is to direct the boys' enthusiasm into proper channels. The boys are taught to appreciate the things about them, and receive training in endurance, self-reliance, self-control, and helpfulness. A manual for The Boy Scouts of America has been prepared by Ernest Thompson Seton.

The officers of the committee on organization are: Chairman, Ernest Thompson Seton, New York City; secretary, Lee F. Hanmer, Russell Sage Foundation, New York City; treasurer, George D. Pratt, Pratt Institute, New York City. The office of the organization is at 124 East Twenty-eighth street, New York City.

SCHOOL SAVINGS BANKS.

School savings banks have been in existence in the United States since 1885, in which year the first bank was opened in a public school of Long Island City, N. Y., through the efforts of Mr. J. H. Thiry, the great promoter of the system in this country. From a recent report prepared by him on the subject it appears that there were on January 1, 1910, school savings banks in 108 cities in the United States. Deposits were collected at 7,330 schoolrooms or stations,

and the depositors numbered 166,525. In the twenty-five years since the first bank was established the total deposits have amounted to $4,618,734.96, the withdrawals to $3,893,637.47, leaving $725,097.49 in the banks January 1, 1910.

X. HEALTH AND HYGIENE.

AMERICAN SCHOOL HYGIENE ASSOCIATION.

The American School Hygiene Association held its fourth congress at Indianapolis, Ind., March 2–4, 1910, in joint session with the following societies: Department of Superintendence, National Education Association; and American Physical Education Association, with its allied society, the Public School Physical Training Society.

An important feature of the proceedings was the report of the committee on status of instruction in hygiene in American educational institutions.[a]

On account of the great scope of the investigation it was divided into two parts, the first comprising the subject as related to colleges and universities; and the second, as related to the public secondary schools. From the report of Dr. George L. Meylan, of Columbia University, who had charge of the first division, the following particulars are summarized: The analysis of replies to an elaborate questionnaire sent to 138 colleges and universities shows that in 1909 hygiene was taught in 97 leading colleges, and in 1910 was a prescribed course in 47 leading colleges.

An interesting fact brought out in the report is that of—

> the tendency to correlate all the interests related to the physical welfare of the students in the department of physical education or hygiene and physical education. The activities usually grouped in that department include the teaching of hygiene, gymnastics, and athletics, the care of the students' health and, in some cases, the supervision of sanitary condition of school buildings, dormitories, kitchen, water supply, and grounds. The further development of this growing tendency is limited only by the supply of men possessing the necessary character, general education, professional training, administrative ability, and sympathetic personality to properly direct a department of so broad and diversified interests.

Dr. Luther H. Gulick, who had charge of the investigation as related to the public secondary schools, submitted tables showing the status of physical education in 90 public normal schools and 2,392 public high schools in the United States, prepared by him from information collected by the United States Bureau of Education. A table comprised in his report, which follows, gives the average number of

[a] For full report of this committee, see Proceedings of the Fourth Congress of the American School Hygiene Association, 1910, pp. 167–183.

students in each kind of school, the per cent of institutions offering instruction in the different courses in physical education and the equipment of the schools for such instruction.

Averages and percentages of normal and high schools, United States.

	Normal schools.	High schools.
Number of schools reporting	90	2,392
Average number of students per school	350	155
Per cent of schools having department of physical education	53	5
Per cent giving regular instruction in hygiene	74	16
Per cent where instruction in hygiene is prescribed	59	11
Per cent giving credit for work in hygiene	50	8
Per cent having instruction in gymnastics	76	8
Per cent where gymnastic work is prescribed	68	5
Per cent giving credit for work in gymnastics	48	3
Per cent giving instruction in athletics	43	10
Per cent where athletic work is prescribed	11	1
Per cent giving credit for work in athletics	11	0.6
Per cent giving instruction in swimming	9	0.3
Per cent giving courses in playground administration	29	1
Per cent having medical examination of students	36	6
Per cent having sanitary inspection of buildings by physicians	19	12
Per cent having swimming pools	10	0.4
Per cent having gymnasiums	61	7
Per cent having military drill	9	1
Per cent having athletic fields	43	20
Per cent having tennis courts	58	14

The committee on the status of medical inspection of school children throughout the United States reported that their work had not yet been completed, and that a full report would be submitted to the press when complete.

The officers of the association for 1910 are: President, Dr. Luther H. Gulick, New York City; vice-president, Dr. Robert W. Lovett, Boston, Mass.; secretary-treasurer, Dr. Thomas A. Storey, New York City.

COMMITTEE ON THE PHYSICAL WELFARE OF SCHOOL CHILDREN, CALIFORNIA.

At the second annual meeting of the California Superintendents' Convention, held at Riverside, Cal., April 25–29, 1910, the report of a special committee appointed at the previous meeting on the physical welfare of school children was presented by Supt. Frank F. Bunker. The report comprised the following recommendations:

1. That vigorous measures be taken to prevent, so far as possible, disease among the school children, and we particularly urge that the state board of health prescribe the time during which children should be excluded from school on account of contagious diseases.

2. (*a*) That all school health officers shall be employed by and under the authority of school boards; and

(*b*) That school health officers be certificated and chosen because of their efficiency in health work rather than as practitioners.

3. That outside of cities the school authorities shall be given the authority by law to call upon county health officers for advice in health matters, and that within cities having no school health officers these duties shall devolve upon the city health officers.

4. That the vaccination law should apply to all schools alike, and that the burden of enforcement shall be placed upon the health officers, the schools furnishing such reports as may be required by law.

5. That a physical examination of teachers be required by law, such examinations to be approved by the health officers in such schools as have them and elsewhere by an examining board in each county, and that the form of certificate be prescribed jointly by the state board of education and state board of health.

6. That attention be given to the size of school grounds. No school building should be located on less than one-half acre with an additional one-fourth acre for each classroom, and we favor such a requirement by law.

7. That the state board of health and state board of education jointly be authorized to prescribe the minimum requirements in reference to the location, lighting, and sanitation of school buildings, to which all plans must conform before the same shall be approved by superintendents.

8. That steps be taken to bring about the physical examination of all children in our schools. Where this can not be done by health officials it should be done by teachers and principals.

9. That this convention appoint a committee to cooperate with the state board of health in reference to the matters recommended in this report and other health legislation relative to schools that may be proposed.

10. That hereafter such portions of the general health laws as relate to the schools shall be printed in the editions of the school laws.

11. That at the earliest opportunity the state board of education shall adopt a text-book in physiology, giving due attention to hygiene and sanitation.

12. That we urge all school authorities to devote themselves to the teaching of the evil effects of the use of tobacco and particularly to the great danger to youth in the use of cigarettes.

DENTAL INSPECTION IN THE CLEVELAND PUBLIC SCHOOLS.

The report of the Cleveland Dental Society on the proposed dental and hygienic work in the Cleveland public schools contains a summary statement of the campaign conducted by the association to introduce dental inspection and oral hygiene into the Cleveland public schools and the results thus far obtained. In 1898 the association first requested that dental inspection be introduced into the schools. The board of education did not grant the request, but consented to accept for use in the public schools a series of rules and instructions on the care of the teeth drafted by the association. These are still used as a basis for instruction in the schools. Other efforts have been made to introduce dental inspection since that date, and in order to show the need for such work the dental society obtained permission from the board (1908–9) to examine the mouths

and teeth of the children in four public schools, and noted the following defects: Murray Hill School, 864 pupils examined, 802 defective mouths with 3,920 dental cavities; Waterson School, 289 pupils examined, 284 defective mouths with 1,342 dental cavities; Doan School, 691 pupils examined, 671 defective mouths with 4,294 dental cavities; Marvin School, 824 pupils examined, 811 defective mouths with 5,505 dental cavities. Many of the children attending these schools are from the homes of the foreign-born population of the city.

As a result of the investigation the board of education accepted a proposition of the Cleveland Dental Society to conduct gratis for the year 1910 the following work: To make one dental examination of all pupils in the public schools within the year; to establish for the year four centrally located clinics for the treatment of the indigent poor; and to conduct a series of practical and illustrated talks on oral hygiene.

MEDICAL INSPECTION IN NEW JERSEY.

General rules relating to the medical inspection of schools were adopted by the New Jersey state board of education at a meeting held October 5, 1909. They specify that every local board of education shall appoint as medical inspector of schools in its district a regular practitioner for a period of one year and shall regulate his salary. Two or more adjoining school districts may unite, however, for the sake of economy, in the employment of an inspector.

The regulations require that rural schools shall be visited by the inspector at least twice each month, village schools and those of small towns at least once a week, those of towns and cities at least three times a week, and schools located in the crowded districts of large cities shall be visited daily. At the commencement of each school year the medical inspector shall make a systematic examination of each child in his district.

MILK CONTRACT FOR ST. LOUIS SCHOOL CHILDREN.

In order to provide a supply of pure milk, cream, and butter for pupils who procure luncheons at the schools, the St. Louis school board prepared for the year 1909–10 a special contract embodying such sanitary precautions as they thought necessary to insure purity in the dairy products supplied.

Sealed proposals from the dairymen desirous of contracting with the schools are received at the office of the supply commissioner.

PHYSICAL WELFARE OF SCHOOL CHILDREN.

The information in the following table was collected by the bureau of municipal research of New York City, April 1, 1910, and is intended to show what school authorities are doing to promote the

physical welfare of school children in cities having a population of 8,000 or more.

Particulars to which the inquiry was directed are sufficiently indicated by the table headings. The crosses in the table represent affirmative replies. The reference letters show, (*a*) the States in which no laws have been enacted requiring or authorizing the physical examination of school children; (*b*) States in which such examinations are authorized but not required; (*c*) States in which they are compulsory; (*d*) States in which they apply to certain cities; (*e*) compulsory for cities, permissible for rural districts; (*f*) law applies to examination for defects of sight and hearing only; (*g*) special schools.

Physical welfare of school children.

[Data collected by the bureau of municipal research, New York City.]

	Cities in which school children are examined for—					Cities reporting—			
	Transmissible diseases.	Defective vision.	Breathing troubles.	Defective teeth.	Tuberculosis symptoms.	Cooperation between schools and local dispensaries and hospitals.	One or more school nurses.	Instruction of parents in physical care of children.	Circulation of cards of instruction among parents.
Alabama: [a]									
Birmingham	×	×	×	×	×	×			
Mobile	×	×	×						
Montgomery	×								
Arkansas: [a]									
Fort Smith	×		×						
Hot Springs	×	×							×
Little Rock	×	×	×						
Pine Bluff	×								×
California: [b]									
Alameda	×								
Berkeley	×	×	×	×	×	×	×	×	×
Oakland	×	×	×	×	×	×	×	×	
Pasadena	×	×	×	×	×	×	×	×	×
San Francisco		×	×	×			×		×
San Jose	×	×	×	×	×	×		×	×
Colorado: [c]									
Denver	×	×	×			×	×		
Leadville	×	×	×	×	×				
Pueblo	×	×	×	×	×				
Connecticut: [b]									
Ansonia	×	×	×						
Bridgeport		×					×		
Danbury		×							
Hartford	×	×	×		×	×	×		×
Manchester	×	×	×	×	×	×			×
Naugatuck	×	×							
New Britain	×					×		×	×
New Haven	×	×				×	×		
New London	×	×				×			
Norwich		×							
Stamford		×							
Waterbury	×	×							
District of Columbia: [b]									
Washington	×						×		
Florida [a]									
Georgia: [a]									
Athens	×	×							
Atlanta	×	×	×	×	×	×	×	×	×

[Footnotes at end of table.]

Physical welfare of school children—Continued.

	Cities in which school children are examined for—					Cities reporting—			
	Transmissible diseases.	Defective vision.	Breathing troubles.	Defective teeth.	Tuberculosis symptoms.	Cooperation between schools and local dispensaries and hospitals.	One or more school nurses.	Instruction of parents in physical care of children.	Circulation of cards of instruction among parents.
Illinois: [a]									
Aurora		×	×		×				
Champaign							×		
Chicago	×	×	×		×	×	×		
Danville		×		×				×	
Decatur		×		×					
East St. Louis						×			
Evanston	×	×							
Freeport	×	×	×						
Galesburg							×		
La Salle									×
Lincoln		×							
Moline		×					×		×
Streator		×				×			×
Indiana: [d]									
Anderson	×								
Elkhart	×	×	×	×	×	×			
Fort Wayne	×	×	×						×
Indianapolis	×	×	×	×		×			
Kokomo	×	×	×	×					
Lafayette	×	×	×	×					
Muncie	×	×	×	×	×			×	×
New Albany	×	×	×	×		×			
Vincennes		×			×				
Wabash		×						×	
Iowa: [a]									
Council Bluffs			×			×			×
Des Moines	×	×	×	×		×	×	×	
Dubuque		×							×
Keokuk	×	×							
Marshalltown		×	×	×					
Oskaloosa	×					×			
Kansas: [a]									
Fort Scott	×	×							
Pittsburg	×	×							
Kentucky: [a]									
Covington	×	×	×		×				×
Louisville	×			×	×	×	×		
Newport	×	×	×			×	×		
Owensboro	×								
Louisiana: [a] New Orleans	×	×	×		×	×			
Maine: [c]									
Auburn	×	×	×	×					×
Augusta	×	×	×	×					×
Bath		×							
Biddeford		×							
Lewiston		×							
Maryland: [a] Baltimore	×	×	×	×	×	×	×	×	×
Massachusetts: [c]									
Adams	×	×	×	×					
Arlington	×	×		×		×			
Attleboro	×	×	×	×					
Beverly	×	×	×	×					
Boston	×	×		×	×	×	×	×	
Brockton	×	×	×	×		×	×	×	×
Cambridge	×	×		×	×		×	×	
Chelsea	×	×	×	×					
Danvers	×	×							
Everett	×	×	×						×
Fall River	×	×	×	×			×	×	×
Framingham	×	×	×						×
Fitchburg	×	×	×		×				×
Gardner	×	×	×	×	×	×	×		
Gloucester	×	×	×		×	×			×
Haverhill	×	×	×	×					
Holyoke	×	×	×	×					

[Footnotes at end of table.]

Physical welfare of school children—Continued.

	Cities in which school children are examined for—					Cities reporting—			
	Transmissible diseases.	Defective vision.	Breathing troubles.	Defective teeth.	Tuberculosis symptoms.	Cooperation between schools and local dispensaries and hospitals.	One or more school nurses.	Instruction of parents in physical care of children.	Circulation of cards of instruction among parents.
Massachusetts—Continued.									
Hyde Park	×	×							
Lawrence	×	×	×						
Lowell	×	×	×		×	×	×	×	×
Lynn	×	×	×	×		×			×
Malden	×	×	×						
Marlboro	×	×		×					
Medford	×	×	×	×					×
Melrose	×	×	×	×					
Milford	×	×							×
New Bedford	×	×	×			×		×	×
Newburyport	×	×							
Newton	×	×	×	×		×	×		
Northampton	×	×	×	×	×				
Peabody	×	×	×	×					
Pittsfield		×							×
Plymouth	×	×	×	×	×				×
Quincy	×	×	×						
Revere	×	×	×	×					×
Somerville	×	×	×	×					
Southbridge	×	×							
Taunton	×	×	×	×					
Wakefield		×							
Waltham	×	×	×	×		×	×	×	
Ware	×	×	×	×	×				×
Webster	×	×	×						
Westfield	×	×	×	×					×
Weymouth	×	×							
Woburn	×	×	×	×					
Worcester	×	×	×	×					
Michigan:[a]									
Ann Arbor	×	×							
Calumet		×				×			
Detroit	×	×	×	×	×	×	×	×	×
Grand Rapids							×	×	×
Iron Mountain	×								
Kalamazoo	×	×	×	×			×	×	
Lansing	×								
Marquette	×	×	×						
Muskegon	×	×	×	×		×			
Port Huron	×	×							
Saginaw, West Side	×	×	×				×		
Traverse City	×	×				×			×
Minnesota:[b]									
Mankato		×							
Minneapolis	×	×	×	×		×	×	×	×
St. Cloud	×	×	×		×				
St. Paul		×	×	×	×	×	×	×	×
Winona		×							
Duluth	×	×	×	×			×		×
Mississippi[a]									
Missouri:[a]									
Jefferson City		×	×	×					
Joplin	×	×	×	×					×
Kansas City	×	×	×	×	×	×			×
St. Louis	×	×	×	×	×	×	×		
Sedalia	×	×	×	×					
Montana:[a]									
Great Falls	×	×	×						
Helena		×	×	×					
Nebraska:[a] Lincoln	×	×		×					
New Hampshire:[a]									
Dover		×							
Manchester	×	×	×						
Rochester		×							

[Footnotes at end of table.]

Physical welfare of school children—Continued.

	Cities in which school children are examined for—					Cities reporting—			
	Transmissible diseases.	Defective vision.	Breathing troubles.	Defective teeth.	Tuberculosis symptoms.	Cooperation between schools and local dispensaries and hospitals.	One or more school nurses.	Instruction of parents in physical care of children.	Circulation of cards of instruction among parents.
New Jersey: [c]									
Arlington (Kearney)	×	×	×	×					×
Atlantic City	×	×	×						
Bayonne	×	×							
Bloomfield	×	×	×	×					
Camden	×	×	×			×	×		
East Orange	×	×	×	×					
Elizabeth	×	×	×	×		×			
Jersey City	×	×	×	×	×	×	×	×	×
Long Branch	×	×	×	×					×
Montclair	×	×	×	×	×		×	×	
Morristown	×	×	×	×					
Newark	×	×	×	×		×	×	×	×
New Brunswick	×	×	×	×		×	×		
Orange	×	×	×	×	×	×	×		
Passaic	×	×					×		
Paterson	×	×	×			×			×
Perth Amboy	×	×	×	×					
Plainfield	×	×	×	×		×	×		
Rahway	×	×	×	×					×
Trenton	×	×	×	×		×	×		×
Town of Union (Hudson County)	×	×	×	×	×				
New York: [a]									
Amsterdam	×	×							×
Binghamton		×		×					
Buffalo	×	×	×	×			×		×
Cohoes		×			×	×	×	×	
Dunkirk					×	×		×	
Elmira	×	×				×			×
Geneva	×	×	×	×	×		×		×
Hudson	×	×			×				
Ithaca	×	×	×	×	×	×	×	×	
Jamestown		×							
Little Falls		×	×	×					
Lockport									×
New York	×	×	×	×	×	×	×	×	×
Mount Vernon	×	×				×			×
New Rochelle	×	×	×	×		×			
Olean		×							
Peekskill		×							×
Poughkeepsie	×	×	×						
Rochester	×	×	×	×	×	×	×	×	
Saratoga Springs	×	×				×			
Schenectady	×	×		×	×	×	×	×	
Syracuse	×	×				×	×		×
Troy	×					×			
Watertown		×	×						×
Watervliet	×	×	×		×				
Yonkers		×	×	×		×	×	×	
North Carolina: [a]									
Newbern		×							×
Raleigh		×	×						×
Wilmington	×	×	×	×	×				
North Dakota: [a] Fargo	×	×							
Ohio: [e]									
Akron	×	×	×	×		×	×		
Bellaire		×							×
Cleveland	×	×	×	×		×	×	×	
Cincinnati	×	×		×	×		×		×
Columbus [g]									
Findlay				×					
Hamilton		×	×	×					
Marietta	×	×	×						
Newark		×	×	×					×

[Footnotes at end of table.]

Physical welfare of school children—Continued.

	Cities in which school children are examined for—					Cities reporting—			
	Transmissible diseases.	Defective vision.	Breathing troubles.	Defective teeth.	Tuberculosis symptoms.	Cooperation between schools and local dispensaries and hospitals.	One or more school nurses.	Instruction of parents in physical care of children.	Circulation of cards of instruction among parents.
Ohio—Continued.									
Sandusky		×	×						×
Springfield		×	×						
Steubenville		×	×						
Oklahoma: [a] Oklahoma City	×	×	×	×					×
Pennsylvania: [a]									
Beaver Falls		×	×	×					
Bradford		×	×						
Harrisburg	×	×	×	×		×	×	×	×
Hazleton		×	×						
Johnstown	×	×							
Lancaster	×	×				×			
Meadville	×	×	×	×					
Mount Carmel		×	×						
Norristown	×	×	×	×					
Philadelphia	×	×	×	×		×	×		
Phoenixville		×	×			×			
Pittsburg	×	×	×	×	×	×	×	×	×
Pittston		×							
Reading	×	×	×	×		×			
Warren	×	×	×						
West Chester	×	×		×		×			
Wilkes-Barre					×	×	×		×
Wilkinsburg	×	×	×	×	×	×			
Williamsport		×		×		×			
Rhode Island: [a]									
Central Falls	×	×	×						×
Cranston		×							
East Providence	×	×	×						×
Newport	×	×			×	×	×	×	×
Pawtucket	×				×	×			×
Providence	×	×			×				×
Woonsocket	×						×		
South Carolina [a]									
South Dakota: [a] Sioux Falls		×		×					
Tennessee: [a]									
Jackson	×				×				×
Knoxville	×	×		×					×
Memphis	×								×
Nashville		×							
Texas: [a]									
El Paso		×	×						
Galveston	×	×							
Houston	×	×			×				
Paris	×								
San Antonio	×	×	×						
Waco	×	×							
Utah: [a] Salt Lake City	×	×	×						×
Vermont: [f]									
Barre		×							
Rutland		×							
Virginia: [a]									
Alexandria		×							×
Danville		×	×	×					
Newport News		×				×			×
Portsmouth	×								
Richmond	×					×	×		
Washington: [b]									
Seattle	×	×	×	×	×	×	×	×	
Spokane	×	×		×		×			×
Tacoma	×	×		×			×		
West Virginia: [a]									
Charleston	×	×	×	×		×			
Parkersburg	×								
Wheeling		×	×						

[Footnotes at end of table.]

Physical welfare of school children—Continued.

	Cities in which school children are examined for—					Cities reporting—			
	Transmissible diseases.	Defective vision.	Breathing troubles.	Defective teeth.	Tuberculosis symptoms.	Cooperation between schools and local dispensaries and hospitals.	One or more school nurses.	Instruction of parents in physical care of children.	Circulation of cards of instruction among parents.
Wisconsin:[a]									
Appleton	×	×	×	×	×				
Ashland	×					×		×	×
Beloit	×	×	×	×					×
Kenosha	×	×	×	×					
Marinette		×	×						×
Milwaukee	×	×	×	×		×	×	×	×
Oshkosh	×	×	×	×			×		×
Racine	×	×	×				×		
Sheboygan		×	×	×					×
Superior	×	×	×	×					×
Wausau	×	×	×						

[a] No legislation. [b] Permissible. [c] Compulsory. [d] Special cities. [e] Compulsory for cities; permissible for rural districts. [f] Sight and hearing. [g] Special schools.

XI. COMPULSORY EDUCATION AND CHILD LABOR LAWS.

Statutory provisions relating to compulsory attendance and child labor.

COMPULSORY EDUCATION.				CHILD LABOR.	
State.	Age.	Annual period.	Penalty on parents for neglect.	Age under which specified employments are forbidden.	Educational restrictions on child labor.
Alabama				12 years, in any mill, factory, or manufacturing establishment.	No child, 12 to 16, may work in any mill, etc., unless attends school 8 weeks each year employed.
Arizona	[a] 8–14	6 months; 20 weeks consecutive.	$5 to $25		No child under 14 may be employed during school hours.
Arkansas	8–16	Not less than half the full term. Certain counties are exempt.	$10 to $25	12 years, in all cases in manufacturing establishments, except canning industries in vacation; 14, unless to support a parent or self, as specified by law; 14, in mines; females not at all in mines.	No child, 14 to 18, unable to write, may be employed in a manufacturing establishment unless he has attended school 12 weeks the preceding year.
California	8–14	Full term	First, not over $10 or 5 days' imprisonment; subsequent, $10 to $50, or 5 to 25 days, or both.	14 years, in any mercantile or manufacturing establishment, workshop, hotel, or as messenger, etc. Children 12 to 14, upon permit, may work if parents incapacitated or during vacation.	No minor under 16 may work for gain in school hours, unless he can read and write English or attends night school.
Colorado	[b] 8–16	do	$5 to $25	14 years, in any underground works, mine, smelter, mill, or factory. No female may be employed in a coal mine.	Unlawful to employ children under 14 during school hours unless they have complied with the school-attendance law; under 16, unable to read and write, unless attending day or night school.
Connecticut	[c] 7–16	do	Not exceeding $5 each week of absence.	14 years, in any mechanical, mercantile, or manufacturing establishment.	Children under 14 may not be employed while school is in session. Children 14 to 16 can not leave school to be employed, unless their education is satisfactory to the local or state school board.
Delaware	7–14	5 months (may be reduced by districts to 3).	First, not over $2; after, not over $5. On default, imprisonment 2 to 5 days.	14 years, in any factory, workshop, or manufacturing establishment, except in canning industry, etc., or to support widowed mother.	No child 14 to 16 may be so employed, unless he has attended day or night school 12 weeks the preceding year.
District of Columbia.	8–14	Full term	Not exceeding $20	14 years, in any factory, workshop, store, office, hotel, theater, as messenger, etc. Children 12 to 14 may get permit to work in certain cases.	Children under 14 may not do any work for wages during school hours; nor under 16 in preceding employments, unless can read and write, and attended school 130 days preceding year.

Florida				Children under 15 may not be employed more than 60 days without consent of legal guardian.	
Georgia				10 years, in or about any manufacturing establishment; 12 years after Jan. 1, 1907, except for support of self or parents in specified cases.	After Jan. 1, 1908, no child under 14 may be employed as in preceding column (with the exception there noted) unless able to write and has attended school 12 weeks the preceding year; under 18, unless so attended school.
Idaho	[d] 8–18	Full term	Not over $300 or imprisonment not over 6 months, or both.	14 years, in any mine, factory, workshop, mercantile establishment, laundry, hotel, etc., except over 12 during vacations.	No child under 14 may be employed in any way during school hours.
Illinois	[c] 7–16	Full term, to be not less than 6 months.	$5 to $20 and costs, and stand committed until paid.	14 years, in any mercantile institution, factory, office, theater, elevator, etc., or as messenger or driver; 16, in or about any mine. No female may work in or about a mine.	No child 14 to 16 unable to read and write may be employed unless attending an evening school, if there is one. No child under 14 may be employed at any work for wages during the school term.
Indiana	[f] 7–14	Full term	$5 to $25, and, in discretion of court, imprisonment 2 to 90 days.	14 years, in any manufacturing or mercantile establishment, mine, quarry, laundry, renovating works, bakery, or printing office. No female may work in a mine.	Children under 16 unable to read and write English may not be employed in foregoing employments except in vacation of public schools.
Iowa	[f] 7–14	16 consecutive weeks; first and second class city boards may require full term.	$3 to $20	14 years, in any mine, factory, mill, shop, laundry, packing house, elevator, or store where more than 8 persons are employed.	
Kansas	[f] 8–15	Full term [g]	$5 to $25	14 years, in any factory, workshop, theater, packing house, or in or about any mine; 16, in any dangerous, etc., employment.	Under 14 may not be employed in any way during school hours. No minor under 16 may work in a coal mine unless he can read and write and has attended school 3 months in the year.
Kentucky	[h] 7–14	8 consecutive weeks; full term in cities of first, second, third, and fourth classes.	First, $5 to $20; subsequent, $10 to $50.	14 years, in any mine, workshop, factory, store, office, hotel, as messenger, etc.	Under 14 may not be employed in any way during school term; nor from 14 to 16 in stated occupations unless can read and write, and attended school 100 days preceding year.
Louisiana				14 years, in any manufacturing or mercantile establishment, mine, laundry, carrying messages, etc.	Children under 14 may not be employed in foregoing employments, nor in clothing, dressmaking, or millinery establishments, unless thay have attended school 4 months in preceding year.
Maine	7–15	Full term	Not exceeding $25, or imprisonment not exceeding 30 days.	14 years, in any manufacturing or mechanical establishment.	Children under 15 shall not be employed in any manufacturing or mechanical establishment, except during vacation, unless they have attended school 16 weeks during preceding year.

[a] To 16, if unable to read and write English.
[b] Children 14 to 16 whose labor is necessary to their own or parents' support are excused.
[c] Not applicable to children over 14 lawfully employed to labor at home or elsewhere.
[d] Except children over 14 who have completed eighth grade, or have to support themselves or parents, or have other good cause to be exempt.
[e] Children 14 to 16 necessarily and lawfully employed are exempt.
[f] Inclusive.
[g] 8 weeks for children over 14 who can read and write English and are at work to support themselves or others.
[h] To 16 in cities of first, second, third, and fourth classes; holders of employment certificates excepted.

Statutory provisions relating to compulsory attendance and child labor—Continued.

COMPULSORY EDUCATION.				CHILD LABOR.	
State.	Age.	Annual period.	Penalty on parents for neglect.	Age under which specified employments are forbidden.	Educational restrictions on child labor.
Maryland[a]	[b] 8–12	Full term	Not exceeding $5	14 years, in mills and factories (except canning establishments), unless self, widowed mother, or invalid father solely dependent upon such employment. 19 counties exempt from law. 14 years, day messenger service; 16 years, night messenger service; 21 years, messenger duty to house of ill repute.	No minor 12 to 16, unable to read and write English, may be employed where there is an evening school unless attending that or another school.
Massachusetts	(c)	do	Not exceeding $20	14 years, in factories, workshops, or mercantile establishments; 21 years, dangerous occupations.	Children under 14 may not be employed at any work for wages during school hours; from 14 to 16 may not be so employed in any factory, workshop, or mercantile establishment if unable to read and write.[d]
Michigan	7–16	do	Fine of $5 to $50, or imprisonment 2 to 90 days, or both.	14 years, in any manufacturing or mercantile establishment, workshop, laundry, store, office, hotel, messenger service, etc.	Children 14 to 16 may not be employed unless they have attended school 100 days preceding year, and can read and write and know the elements of arithmetic.
Minnesota	8–16	do	Not over $50, or imprisonment not over 30 days.	14 years, in factories, mills, workshops, or mines.	Children under 14 years may not be employed in any service during school term; under school age (16 years), in any occupation during school term unless they have attended school the prescribed period; under 16, unable to read and write English, in any indoor occupation (except in vacation) unless attending day or evening school).
Mississippi				12 years, in any mill, factory, or manufacturing establishment.	
Missouri	[f] 8–14	Not less than ¾ of term. Full term in cities of over 500,000.	$10 to $25, or imprisonment 2 to 10 days, or both.	14 years, in any mine, manufacturing or mercantile establishment, laundry, etc., in cities of over 10,000; no females in mines.	No child 8 to 14 may be employed in any way in school hours unless he has complied with the attendance law. No boy under 16 may work in a mine unless he can read and write.
Montana	[g] 8–14	Full term; in no case less than 16 weeks.	$5 to $20	16 years, in mines or underground works.	Children under 14 not to be employed during school sessions unless they have completed the studies required by law; from 14 to 16, if unable to read and write English.
Nebraska	[h] 7–15	Two-thirds of school term; in no case less than 12 weeks. Full term in cities.	$5 to $25 (on truant officer)	14 years, in any manufacturing or mercantile establishment, office, hotel, etc.	No child under 14 may be employed in any service during school hours.

Nevada	8–14	16 weeks; 8 consecutive	First, $50 to $100; subsequent, $100 to $200; with costs.		
New Hampshire	*i* 8–14	Full term	First, $10; subsequent, $20	12 years, in any manufacturing establishment.	No child under 14 may be employed during school sessions, nor under 16 if unable to read and write English. No minor unable to read and write English may be employed unless attending day or evening school, if any is held.
New Jersey	*j* 7–17	do	"Punishable as a disorderly person."	14 years, in factories, workshops, mills, or manufacturing establishments, also mines; 15 years until July 4, 1911, 16 years thereafter, in factories, etc., between 6 p. m. and 6 a. m.	Children under 15 must have attended school 12 weeks the preceding year as a condition of employment.
New Mexico	7–14	do	$5 to $25, or imprisonment not exceeding 10 days.		
New York	7–16	Full term (not less than 160 days) in districts of over 5,000 population having a superintendent, for children 7–16; *k* elsewhere, for children 8–16, Oct. 1 to June 1. *k*	First, not over $5 or imprisonment 5 days; subsequent, not over $50 or imprisonment 30 days, or both.	14 years, in factories; if 14 to 16, the child must have attended school 130 days the preceding year, and be able to read and write English, and cipher. Similar provisions apply, in places of over 3,000 population, to work in mercantile establishments, business offices, restaurants, hotels, express or messenger service, except for children over 12 in small places during vacation. For work in or about mines 16 years is the minimum. No female may work in a mine *l*.	Unlawful to employ in any business or service child under 14 during school term; or one 14 to 16 in city of first or second class, unless he has an employment certificate (having certificate and not having completed elementary course, must attend evening or trade school); or one 14 to 16 elsewhere, in any factory, etc., unless has employment certificate, or in any service unless has certificate of school attendance, etc.
North Carolina *m*	8–14	16 weeks	$5 to $25	12 years, in any factory or manufacturing establishment (does not apply to oyster canning and packing); 12 years, in mines employing over 10 men (boys); children 12 to 13 may be employed in factories only as apprentices.	Apprentices 12 to 13 years must have attended school 4 months in preceding 12.

a The provisions tabulated for Maryland (except in fifth column) are those of the act of 1902, whose operation is limited to Baltimore City and Allegany County.
b To 16 unless regularly employed to labor at home or elsewhere.
c To 16 if wandering about public places without lawful occupation, or if unable to read and write.
d Must be able to so read and write as is required to enter the second grade in 1906, third in 1907, and fourth in 1908 and after.
e 8–18 in cities of the first class. Children who have completed studies of eighth grade exempt.
f To 16 years for children not lawfully, regularly, and usefully employed.
g To 16 if unemployed.
h To 16 years in cities.
i To 16 if unable to read and write English.
j Inclusive. Does not apply to children over 15 who have finished grammar-school course and are regularly employed; otherwise must attend grammar, or high, or manual-training school. Children over 14 may be employed in cases of necessity.
k Does not apply to children 14 to 16 lawfully employed.
l Other forbidden employment: under 16, on certain machines in box factories; under 21, night messenger service in certain cities; under 16, in bowling alleys and in places of amusement at night.
m Law does not take effect in any county until voted by the county; does not apply to children over 12 lawfully employed at home or elsewhere.

Statutory provisions relating to compulsory attendance and child labor—Continued.

COMPULSORY EDUCATION.				CHILD LABOR.	
State.	Age.	Annual period.	Penalty on parents for neglect.	Age under which specified employments are forbidden.	Educational restrictions on child labor.
North Dakota	8–14	Full term	$5 to $20 (on school official)	14 years, in mines, factories, workshops, mercantile establishments, etc.	Children under 14 may not be employed in any manner during school term, or those 14 to 16 unless they have attended school 120 days preceding year and know the elementary branches.
Ohio	[a] 8–14	Full term; in no case less than 28 weeks.	$5 to $20; on default, imprisonment from 10 to 30 days.	14 years, in any factory, workshop, business office, mercantile establishment, hotel, as messenger, etc.; 18 years, messenger service between 9 p. m. and 6 a. m.	No child between 14 and 16 may be employed in foregoing occupations without a schooling certificate.
Oklahoma	8–16	3 to 6 months [b]	$10 to $50	16 years, in mines (no girls in mines)	
Oregon	[cd] 9–14	Full term	$5 to $25 fine, or imprisonment 2 to 10 days, or both.	14 years, in any factory, store, workshop, in or about any mine, or in the telegraph, telephone, or public messenger service.	Foregoing employments forbidden to any child 14 to 16 unless attended school 160 days preceding year and can read English. No child under 14 may be employed in any work for compensation during school hours.
Pennsylvania	[e] 8–16	Full term; but the school board of each district has power to reduce this to not less than 70 per cent of the term.	First, not exceeding $2; subsequent, not exceeding $5; on default, imprisonment; first, not over 2 days; subsequent, not over 5.	14 years, in any employment, except domestic or farm labor. Girls may not work in or about coal mines.	No child 14 to 16 may be employed unless he can read and write English and has complied with the school laws.
Rhode Island	[f] 7–15	Full term	Not exceeding $20	14 years, in any factory, manufacturing or business establishment.	Children under 13 may not be employed except during school vacations.
South Carolina				12 years, in any factory, mine, or textile establishment, except that certain self-dependent children may work in the latter.	Children may work in textile establishments in June, July, and August if they have attended school 4 months during the year and can read and write.
South Dakota	[d] 8–14	Full term; but districts may reduce it to 16 weeks, 12 consecutive.	$10 to $20 and costs; stand committed till paid.	14 years, in mines	No child 8 to 14 to be employed during school hours unless he has attended school 12 weeks during the year.
Tennessee [g]	8–14	4 months or 80 days consecutively.	First offense, $1 for each day of absence.	14 years, in workshops, factories, or mines.	
Texas				12 years, in mills, factories, manufacturing or other establishments using machinery; 16 years in mines, distilleries, or breweries.	Unlawful to employ children 12 to 14 who can not read and write English, in mills, factories, etc., certain self-dependent children excepted.
Utah	8–16	20 weeks, 10 consecutive; in cities of the 1st and 2d class 30 weeks, 10 consecutive.	First, not exceeding $10; subsequent, not exceeding $30, with costs.	14 years in mines (constitution of State).	

Vermont	[h] 8–15	Full term	$5 to $25	12 years, for any railroad company or in any mill, factory, quarry, or workshop, or carrying messages.	No child under 16 who has not completed the 9-year school course may be employed in any railroad, factory, mine, or quarry work, or in delivering messages, except out of school hours.
Virginia [i]	8–12	12 weeks	First, $2 to $10; subsequent, $5 to $20.	13 years, after March 1, 1909; 14 after March 1, 1910, in any factory, workshop, mercantile establishment, or mine, except in certain cases of need over 12. [j]	
Washington	8–16	Full term	Not over $25	14 years (boys), 16 years (girls), at any labor not connected with house or farm work; 16 years in mines (girls not at all).	Children under 15 may not be employed during school hours unless excused by the school superintendent.
West Virginia	8–14	20 weeks	First, $2; subsequent, $5	12 years, in factories, workshops, mercantile or manufacturing establishments; 14 in mines (no girls may work in mines).	No child under 14 shall be so employed during school term if it hinders regular attendance.
Wisconsin [i]	7–14	Full term in 1st class cities; in 2d class cities not less than 8, elsewhere not less than 6 school months.	$5 to $50 and costs, or imprisonment not over 3 months, or both.	12 years, in any occupation; 14, in factories, workshops, mines; 14 to 16, in any occupation without specified written permit.	Children 12 to 14 may not be employed in any occupation, except during school vacations by specified written permit, in stores, offices, hotels, mercantile establishments, laundries, or public messenger service, where they reside (does not apply to farming or other outdoor work.)
Wyoming	[d] 7–14	Full term	Not exceeding $25	14 years, in mines; females may not work in mines. (Constitution.)	
United States laws (for Territories).				12 years, in the underground workings of any mine.	

[a] To 16 if not legally employed or if unable to pass fifth grade test in required subjects. Children in cities who have not completed eighth grade may be required to attend until they are 16.
[b] In the discretion of school boards.
[c] To 16 if unemployed.
[d] Inclusive.
[e] Not applicable to children over 13 who can read and write English and are regularly employed in useful service.
[f] Not applicable to children over 13 who are lawfully employed.
[g] The compulsory attendance act applies to 18 counties, in addition to which 13 counties are under special laws.
[h] Children over 15 or under 8, when once enrolled, must attend the full term they are enrolled for.
[i] Compulsory attendance law optional with the voters of any county, city, or town.
[j] Children under 17 may not be sent to immoral resorts.

XII. EDUCATION OF THE COLORED RACE.

HAMPTON INSTITUTE NEGRO CONFERENCE.

The fourteenth annual conference for negroes at Hampton Normal and Agricultural Institute was held July 13–14, 1910. The conference brought together several hundred negro teachers, lawyers, editors, insurance and business men, ministers, physicians, and farmers. Cooperation for right living was the central theme of the papers and discussions. Addresses were delivered on industrial education in Virginia schools, improvement of public welfare, negro press, antituberculosis movement, agricultural education and rural life, and other subjects. The resolutions adopted included recommendations for the organization of negro teachers for mutual improvement; the dissemination of agricultural information among the country people; and cooperation on the part of churches in the improvement of schools and providing wholesome and uplifting amusements for their respective communities.—(The Southern Workman, August, 1910.)

HAMPTON INSTITUTE SUMMER SESSION FOR TEACHERS AND BUSINESS MEN.

The summer session at Hampton Normal and Agricultural Institute for teachers was held under the joint auspices of the school and the Virginia board of education June 14 to July 12, 1910.

Two groups of courses of studies were offered, Group A comprising those studies required by the state board of education for a first-grade certificate, and Group B including the following industrial subjects: Cooking, dressmaking, manual training, poultry keeping, elementary sewing, and upholstery.

In addition to the session for teachers, a session for business men was also held, the announcement of which outlined the following course:

A consideration of the practical matters involved in the purchase, sale, and ownership of property, including a study of titles, bills of sale, deeds, wills, real-estate mortgages, chattel mortgages, deeds of trust, judgments, assessments, taxes, and mechanic's liens.

The different forms of investments, such as stocks, bonds, mortgages, etc., and the nature and advantages of each form for investment purposes will be studied.

The following subjects will be considered: Contracts, checks, notes, drafts, bills of exchange, interest, usury, bank, cash, and trade discounts, business letters, methods of advertising and accounting, and the factors of cost which enter into business transactions. The formation, incorporation, and management of banks, trust companies, building and loan associations, insurance, and cooperative organizations will be discussed.

The business course is intended for those who desire to enlarge their knowledge of the laws and operations of business.

The total registration for both courses numbered 191.

NEGRO RURAL SCHOOL FUND—ANNA T. JEANES FOUNDATION.

At the beginning of the school year 1909–10, $46,078 of the income of the Anna T. Jeanes Foundation was set aside for the salaries of teachers, supervisors, and organizers. The total number in employment April 1, 1910, was 149, distributed as follows:

Alabama	25	Mississippi	24
Arkansas	7	North Carolina	18
Florida	3	South Carolina	11
Georgia	14	Tennessee	4
Louisiana	22	Texas	10
Maryland	2	Virginia	9

The work is confined to 125 different counties, and in all 1,656 schools are under the direction of the foundation.

The following information regarding the work during the year has been compiled from statements made to the board by James H. Dillard, president and general agent.

From Statement VII, September 20, 1909.

After emphasizing the unique work which the board has undertaken, President Dillard continues:

Our purpose is to work for these isolated rural schools by trying to get more money for them from the public-school authorities, by trying to organize the people themselves for self-help, especially in the direction of extending the school term and having better schoolhouses, and by illustrating how the introduction of simple forms of manual training into even the smallest schools will improve their efficiency. Three plans are proposed for the improvement of the schools:

1. The plan which was followed last year in Henrico County, Va. This plan is, in brief, that a teacher give her time to visiting the schools of a county. She is, in fact, a constant supervisor, in addition to her work of introducing simple kinds of manual training, and is able to improve the schools in many ways.

2. The plan of locating a teacher at some central school as headquarters and having this teacher do extension work among a number of schools that may be within reach, again acting as supervisor.

3. The plan for putting a man into a county whose duty it is to go into each school district, organize the people for home and school improvement, and do whatever may seem possible for improving public sentiment for better schools. Such a worker would also be a supervisor of the schools.

In carrying out these plans next session I can say that our work is limited only by our means. The demand in each of the three methods far exceeds our funds. From all the teachers whom we pay next session I shall demand definite statistics for the counties in which they are working. I hope that in this way we shall be able to secure a body of reliable facts covering at least a hundred counties.

From Statement VIII, March 9, 1910.

We have 148 extension and supervising teachers and organizers now at work. At the end of each month I receive a report from all the teachers and organizers, giving the schools and communities visited, the number of visits made at each place, and a brief statement of the work attempted. * * * I am more and more convinced of the good influence of our plan of work, and very much hope that we may be able to extend it. Our teachers' salaries for February amounted to $6,652.50. We have spent so far this session for teachers' salaries a total of $25,933.50; for building and equipment, $2,435; and for extension of term, $275.

TUSKEGEE INSTITUTE DEPARTMENT OF SCHOOL EXTENSION.

An extension department was organized at Tuskegee Institute, Alabama, in 1910 for the purpose of systematizing the various activities of the school in this connection. The first division, under the head of school extension proper, comprises the following agencies of instruction: The annual Tuskegee negro conference, which is held two days in every year, in the month of January; local conferences, an agent is employed by the school, whose duty it is to organize local conferences in different communities in the State and visit those conferences already established in order to encourage and direct them in their effort to build up the local schools and improve family and community life generally; farmers' institute, monthly meetings are held in the school's agricultural building; short course in agriculture, which gives the farmers of the counties surrounding the school an opportunity to spend two weeks at the school in study and observation; the Jesup agricultural wagon; mothers' meetings, etc.

Under the second division is the continuation school, which offers to persons who have gone out from the institute and are engaged in teaching opportunities to continue their studies under the supervision of the institute.

XIII. INTERNATIONAL EDUCATION RELATIONS.

During his stay in Europe, ex-President Theodore Roosevelt visited several important universities and delivered addresses on the following subjects: "Citizenship in the republic," at the Sorbonne, Paris, April 23, 1910; "The world movement," University of Berlin, May 12, 1910; and "Biological analogies in history," University of Oxford, June 7, 1910.

At the conclusion of his lecture at the University of Berlin the honorary degree of doctor of philosophy was conferred upon him. The presence of Emperor William was a special mark of courtesy, for it was the first time the Emperor had attended a conferment.

On May 26, 1910, Cambridge University conferred upon ex-President Roosevelt the honorary degree of doctor of laws.

The British ambassador, Hon. James Bryce, during the year addressed several important college and university gatherings. At the inauguration of Dr. Ernest Fox Nichols as president of Dartmouth College, Ambassador Bryce spoke in behalf of the English founders and benefactors. During the year he delivered two series of lectures, one in the Henry Ward Beecher course at Amherst College on the subject of "The rise of political liberty;" the other series was delivered at Yale University on the subject, "The hindrances to good citizenship."

He was a delegate from the University of Oxford at the inauguration of President Abbott Lawrence Lowell. On this occasion Harvard University conferred upon him the honorary degree of doctor of letters. In conferring the degree President Lowell characterized the recipient as follows:

James Bryce, delegate from the University of Oxford, guide, honored and beloved by all students of political science, whose portrayal of our Government will last as long as books are read; an envoy who has earned the gratitude of two nations by drawing closer the ties that bind the children to a common stock.

RHODES SCHOLARSHIPS.

The following particulars relative to the Rhodes scholarships are derived from a statement for 1908–9 issued by the Rhodes Trust January, 1910:

The total number of scholars in residence at Oxford under the Rhodes bequest during the academic year 1908–9 was 179. Of these, 78 were from the colonies of the Empire, 90 were from the United States, and 11 from Germany. At the end of the summer term 33 scholars completed the period of their scholarships, while 31 new scholars came into residence in the October term. Five scholars have been given permission to suspend their scholarships temporarily, while 6 ex-scholars remain in residence engaged in teaching, research, or special study for examination. The total number of scholars and ex-scholars at the beginning of the new academic year 1909–10 was 178.

The scholars are distributed among the colleges as follows: Balliol, 15; Exeter, 13; Christ Church, Merton, and St. John's, 12 each; New College, Queen's, and Wadham, 11 each; Hertford and Worcester, 10 each; University and Lincoln, 9 each; Pembroke, 8; Oriel and Trinity, 7 each; Brasenose, 5; Magdalen and Jesus, 4 each; Corpus Christi and Keble, 1 each.

The wide range of study pursued by the scholars is shown by the following list of the numbers entered for the various schools and other courses of the university:

Honor schools for the B. A. degree.—Litteræ humaniores, 16; natural science, 20; jurisprudence, 39; history, 23; theology, 10; English literature, 10; mathematics, 3; modern languages, 3; engineering, 3; honor moderations—classical 1, mathematical 1.

Advanced or specialized course.—Law (B. C. L. degree), 13; science (B. Sc. degree), 10; letters (B. Litt. degree), 4; medicine (M. B. degree), 6.

Diplomas.—In economics, 12; in forestry, 5; in anthropology, 2; in ophthalmology, 1.

For the army, 1.

In the examination results for the year the record of American scholars is as follows:

Examinations.	Students.
Degrees:	
B. Litt.	C. H. Haring, Massachusetts, 1907 (New College).
B. C. L.	R. C. Beckett, Mississippi, 1907 (Pembroke), third class; L. C. Hull,[a] Michigan, 1907 (Brasenose), third class.
Final honor schools:	
First class—Jurisprudence	M. F. Woodrow, Kentucky, 1907 (Christ Church).
Second class—	
Jurisprudence	McK. F. Morrow, Idaho, 1907 (Christ Church); A. White, Alabama, 1907 (Christ Church).
Modern history	J. R. McLane, New Hampshire, 1907 (Magdalen); B. Tomlinson, Illinois, 1907 (Christ Church).
Theology	G. C. Vincent, Ohio, 1904 (Queen's); C. C. Wilson, Vermont, 1907 (Trinity).
Third class—	
Natural science (chemistry)	B. Blackman, Florida, 1907 (Queen's).
Jurisprudence	G. W. Norvell, South Dakota, 1907 (Queen's).

[a] Elected by Oxford students president of the Oxford Athletic Club. The first American ever elected to manage an Oxford team.

Diploma in economics "with distinction" was awarded to G. E. Putnam, Kansas, 1908 (Christ Church).

Athletics.—In athletic sports, out of 5 students chosen to represent Oxford against Cambridge 4 were Americans.

With regard to the 83 scholars from the United States who have completed their course at Oxford, it is stated that 82 have returned to their own country and 1 has taken work in England.

The following is the full list of Rhodes scholarship students from the United States at Oxford in 1910:

RHODES SCHOLARS.

United States of America.

Name.	State.	Name.	State.
1908.		1908.	
Barbour, William T.	Michigan.	Metzger, Frederick D.	Washington.
Blake, Robert E.	Tennessee.	Millen, William B.	Iowa.
Brown, Matthew A.	South Dakota.	Morris, Grover C.	Arkansas.
Burgess, Robert W.	Rhode Island.	Mosley, Thomas J.	Texas.
Campbell, Walter S.	Oklahoma.	McCarley, Theodore T.	Mississippi.
Carpenter, Rhys.	New York.	Olmsted, James M. D.	Vermont.
Cochran, Herbert G.	Delaware.	Pifer, Claude A.	Indiana.
Curtis, George H.	Idaho.	Potter, Francis M.	New Jersey.
Cushing, William S.	Connecticut.	Putnam, George E.	Kansas.
David, Charles W.	Illinois.	Rand, Oscar R.	North Carolina.
Frye, Lucius A.	Minnesota.	Reid, Albert G.	Colorado.
Giffen, Morrison B.	Missouri.	Reid, Frank A.	Virginia.
Hardman, Thomas P.	West Virginia.	Rodgers, J. J.	Alabama.
Holman, Frank E.	Utah.	Schellens, Richard.	Pennsylvania.
Huckaby, Grover C.	Louisiana.	Sinclair, James H.	Maryland.
Hydrick, John L.	South Carolina.	Smith, Joseph E.	Nebraska.
Johnson, Wistar W.	Oregon.	Spaulding, Clarence A.	Arizona.
Keith, Ballard F.	Maine.	Stockton, William T.	Florida.
Kennard, Earle H.	California.	Stuart, Winchester.	Kentucky.
Light, Frank C.	New Mexico.	Unsworth, William S.	Nevada.
Lincoln, Edmond E.	Ohio.	Williams, Henry L. J.	Georgia.
Meservey, Arthur B.	New Hampshire.	Wilson, Carol A.	Massachusetts.

United States of America—Continued.

Name.	State.	Name.	State.
1910.		1910.	
Boyce, James I.	Delaware.	Keith, Elmer D.	Connecticut.
Bryan, Hugh M.	New Mexico.	Loomis, Roger S.	Massachusetts.
Bland, William J.	Ohio.	Lange, Ray L.	Oklahoma.
Brownell, Henry C.	Vermont.	Lyans, Cecil K.	Oregon.
Bristow, F. B.	Kansas.	Morley, Christopher.	Maryland.
Crooks, T. T.	Idaho.	McLean, McDugald K.	Texas.
Crossland, C. E.	Alabama.	Nelson, Claude D.	Arkansas.
Davis, E. H.	Indiana.	Ormond, A. H.	New Jersey.
Disney, Lester.	Arizona.	Roberts, E. N.	Wyoming.
Ellingwood, Albert R.	Colorado.	Raney, William F.	Nebraska.
Eckel, Edward H.	Missouri.	Ransome, J. C.	Tennessee.
Farley, Leonard E.	Mississippi.	Stolz, Herbert R.	California.
Gaddy, W. M.	North Carolina.	Shephardson, Whitney H.	New York.
Hale, Robert.	Maine.	Stuart, W. A.	Virginia.
Hamilton, W. S.	Kentucky.	Tetlie, Joseph.	Minnesota.
Hooton, Ernest A.	Wisconsin.	Taber, Howard A.	Rhode Island.
Hubbel, E. S.	Illinois.	Worthen, Joseph W.	New Hampshire.
Hartley, R. L.	Utah.	Wilton, Stanley M.	Nevada.
Hoffman, Milton J.	Michigan.	Williams, W. L. G.	North Dakota.
Harrison, T. B.	Washington.	Zeek, Charles F.	Louisiana.
Kelso, Alexander P.	Pennsylvania.	Ziegler, W. A.	Iowa.

INTERNATIONAL COMMISSION ON THE TEACHING OF MATHEMATICS.

The international commission on the teaching of mathematics was inaugurated by the Fourth International Congress of Mathematics, held at Rome, April 6–11, 1908, in accordance with the following resolution:

The congress, recognizing the importance of a comparative examination of the methods and plans of study of the instruction in mathematics in the secondary schools of the different nations, empowers Messrs. Klein, Greenhill, and Fehr to form an international commission to study this question and present a general report to the next congress.

ORGANIZATION OF THE COMMISSION.

The commission was organized with Prof. F. Klein, of Gottingen, as president; Sir George Greenhill, of London, vice-president; and Prof. H. Fehr, of Geneva, secretary; these officers forming the central committee, which has the fullest powers. The remaining members consist of—

delegates representing the countries which have taken part in at least two of the international congresses of mathematicians with an average of at least two members. Each of these countries is entitled to 1 delegate. Those countries which have had an average of at least 10 members may have 2 or 3 delegates. In voting and in discussions of the commission each country will have, however, but one vote.

These countries, called "participating countries," which are invited to take part in the work of the commission, are the following:

Germany (2 or 3 delegates); Austria (2 or 3 delegates); Belgium (1 delegate); Denmark (1 delegate); Spain (1 delegate); Hungary (2 or 3 delegates); Great Britain (2 or 3 delegates); Italy (2 or 3 delegates); Norway (1 delegate); Portugal (1 delegate); United States (2 or 3 delegates); France (2 or 3 delegates); Greece (1 delegate); Holland (1 delegate); Roumania (1 dele-

gate); Russia (2 or 3 delegates); Sweden (1 delegate); Switzerland (2 or 3 delegates).

The countries which do not fulfill above conditions, but which by their institutions are able to contribute to the progress of the science, are invited to be represented by a delegate who will participate in the work of the commission, without, however, taking part in voting.

These countries will be called "associated countries." The following is a preliminary list, and is subject to enlargement:

Argentine Republic, Australia, Brazil, China, Cape Colonies, Egypt, India, Bulgaria, Canada, Chile, Mexico, Peru, Servia, Turkey, Japan.

The different delegations are invited to affiliate with themselves national subcommissions, comprising representatives of the various stages of the teaching of mathematics in the general schools and in the technical and professional schools. These subcommissions are designed to aid the delegates in the elaboration of the reports.

SCOPE OF THE WORK OF THE COMMISSION.

The text of the resolution of the congress at Rome mentioned only the teaching of mathematics in secondary schools. But, as the aim of these schools and the length of their courses vary in different countries, the commission extended its work "to include the whole field of mathematical instruction, from the earliest work to the higher instruction." Instead of confining its inquiry to institutions leading to the university, "it will study also the teaching of mathematics in technical and professional schools." Indeed, the commission has announced that "because of the growing importance of these schools and of the new requirements which are continually demanded of mathematical instruction, it will be necessary to accord in this inquiry a large place to applied mathematics."

The following is a synopsis of the elaborate plan of work outlined by the commission, which is to be adapted by the national subcommissions to the conditions of the respective countries covered by the inquiry:

General Plan of the Work.

FIRST PART.

Present state of the organization and the methods of mathematical instruction.

Section I. *The various types of schools.*—In this first chapter will be given a concise exposition of the various public institutions of learning in which mathematical instruction is given and the aim of each school will be indicated. Schools for girls will be included.

The institutions will be distributed according to the following classification:

(*a*) Primary schools, lower and higher.

(*b*) Middle schools or higher secondary (lycées, German gymnasiums and realschulen, etc.).

(*c*) Middle professional schools (technicum, etc.).

(*d*) Normal schools of the various grades (seminaries for teachers, "teachers' colleges," etc.).

(*e*) Higher institutions: Universities and technical schools.

It is desirable that this exposition be accompanied by a schematic table giving a general view and making evident the succession and correspondence between the diverse establishments and indicating also the average age of the students.

SEC. II. *Aim of the mathematical instruction and of the separate branches.*—This question will be studied for the various types of institutions mentioned above, taking into account, wherever necessary, applied mathematics, notably mechanics.

SEC. III. *The examinations.*—It is unquestionable that the system of examinations has a great influence on the method of instruction. The characteristics of the examinations in each category of schools should be concisely indicated, and particularly those which lead to "certificates of maturity," to "degrees," etc., and the examinations of candidates for teaching.

SEC. IV. *The methods of teaching.*—What are the methods used in the various institutions, from the primary schools to the higher institutions? Material of instruction; mathematical models; use of manuals, text-books, collections of problems. Theoretical problems; problems taken from the applied sciences. Practical work.

SEC. V. *Preparation of candidates for teaching.*—Here again are to be included the diverse types of schools, and there is to be indicated the requirements demanded by the school authorities: (*a*) With regard to theoretical preparation; (*b*) to professional preparation.

SECOND PART.

Modern tendencies of the teaching of mathematics.

SECTION I. *Modern ideas concerning school organization.*—Reforms in studies. New types of schools. The question of coeducation of the two sexes.

SEC. II. *Modern tendencies concerning the aim of instruction and of the branches of studies.*—Aim of instruction: New branches or new chapters to substitute for useless topics of study in the course, or those of secondary interest, but retained by pure tradition or by routine.

SEC. III. *Examinations.*—Projects for the transformation of the system of examinations or for their complete suppression.

SEC. IV. *The methods of teaching.*—Modern ideas concerning methods at different stages of instruction and in different types of schools. Correlation among mathematical branches. Relation between mathematics and other branches. Problems and practical applications; models and instruments. The use of manuals.

SEC. V. *The preparation of teachers.*—What are the conditions which a rational preparation of candidates for teaching should fulfill? How are the theoretic courses and the practical preparation to be organized?

PROGRESS OF THE INQUIRY IN THE UNITED STATES.

The United States members of the commission are Dr. David Eugene Smith, chairman; Prof. W. F. Osgood, of Harvard University; and Prof. J. W. A. Young, of the University of Chicago.

The following statement with respect to the progress of the inquiry in this country is furnished by the chairman. At the first general meeting of the commission, held at Brussels, August 9, 1910, the

American committee were represented by Prof. C. B. Upton, a member of one of the subcommittees:

They were able to report that the 15 committees to which had been assigned the various fields of investigation in this country had their reports nearly ready, and that the coming academic year would be devoted to preparing these for printing. Each of these communities has worked through subcommittees in the securing of material, and the results as thus far submitted are very gratifying.

This being the first international effort to find out exactly what all countries are doing at a given period in the teaching of mathematics in all of the types of schools, the methods of procedure have had to be developed with the help of no precedents, and hence these methods differ in the different countries. In some countries, moreover, the government has come at once to the financial assistance of the commissioners, while in others, notably in the United States, the funds assigned to educational purposes have permitted of no such help. In this country, however, the Bureau of Education has aided the movement in every way, furnishing statistical material on which to base several of the reports and offering its advice as to methods of procedure.

The financing of such an important and extensive undertaking has been a matter of difficulty, but this difficulty has been met, in part, through the wise counsel of Dr. R. S. Woodward, through whose personal initiative several American universities have contributed to the necessary expenses. It has been impossible, however, to more than meet the expenses of correspondence and clerical assistance, and it is a matter of regret that meetings of the several committees have been possible only through the financial sacrifice of the members. While Germany at once voted 10,000 marks to this purpose, our Government was able to do nothing.

It is, however, a matter of congratulation that the work has been pursued with such vigor in this country, eliciting the active help of a large number of our best mathematicians and teachers.

INTERNATIONAL INTERCHANGE OF STUDENTS.

The movement for the international interchange of students, which started in 1909, has taken practical form during the present year. The purpose of the movement is—

to provide opportunities for as many as possible of the educated youth of the United States, Canada, and the United Kingdom (who, it is reasonable to suppose, will become leaders in thought, action, civic and national government in the future) to obtain some real insight into the life, customs, and progress of other nations at a time when their own opinions are forming, with a minimum of inconvenience to their academic work, and the least possible expense, with a view to broadening their conceptions, and rendering them of greater economic and social value, such knowledge being, it is believed, essential for effectual leadership.

With this object in view, it was proposed by the leaders in the movement to provide "traveling scholarships for practical observation in other countries under suitable guidance." * * * "In addition to academic qualifications, the candidate should be what is popularly known as an 'all round' man, the selection to be along the lines of the Rhodes scholarships."

From the outset the enterprise commanded powerful support in Great Britain and Canada, and the United Kingdom section was organized with the Right Hon. Lord Strathcona and Mount Royal, G. C. M. G., chancellor of Aberdeen and McGill (Montreal) universities, as president; Sir Charles Eliot, K. C. M. G., vice-chancellor of the University of Sheffield, as chairman of the executive committee, and a large number of representative men as vice-presidents or members of the general committee. A central office was opened at Caxton House, Westminster, London, with Mr. Henry W. Crees as general honorable secretary or official chief of the organization.

As yet the movement has not reached the point of formal organization in the United States, but it has the indorsement of a notable body of university men and educational officials.

According to recent advices, the matter is so far advanced that a party of ten university men, under the auspices of the students' traveling bureau, left Liverpool on the 21st of June for a tour of the United States and Canada. The party included representatives of Cambridge, Edinburgh, Durham, London, and other universities, and their itinerary included Quebec, Montreal, Ottawa, Toronto, Hamilton, Cobalt, Sault Ste. Marie, Fort William, Winnipeg (near which city they spent four days at work on farms with a view to acquiring some insight into the conditions of Canadian agriculture), Madison, Wis.; Chicago, Ill.; Pittsburg, Pa.; Washington, D. C.; and Annapolis Junction, Md. The object of investigation at the last-named place was the National Junior Republic. The rest of the journey comprised visits to Philadelphia, New York, and Yale and Harvard universities. It is also reported that parties of students from Canada and the United States were making tours, under the same auspices, in the United Kingdom.

The realization of the scheme for the present year was made possible, it is stated, "by the generosity of a benefactor who wishes to remain anonymous." The American and Colonial clubs, composed of Rhodes scholars at Oxford, have passed a resolution strongly approving of the aims and objects of the Association for the International Interchange of Students.

Before efforts are made to obtain permanent endowment for the scheme, in an enlarged or revised form, it is proposed that funds shall be asked for its maintenance for an experimental period of three years, during which its value can be to some extent demonstrated.

CHINESE STUDENTS.

By a joint resolution approved May 25, 1908, Congress provided for the remission of a portion of the Chinese indemnity for losses and expenses sustained during the "Boxer uprising" in China in 1900. The amount remitted for the year 1910 is $483,094.90.

In recognition of this friendly act the Chinese Government decided to apply this fund to the education of Chinese students in this country. In accordance with this decision a large number of Chinese students, beneficiaries of the indemnity fund act, have already arrived in this country and have been assigned to various universities and colleges in the United States.

EXCHANGE PROFESSORS.

In accordance with the agreement entered into in 1904 by the University of Berlin and Harvard University for an annual exchange of professors for about one-half of the academic year, an exchange system between the two institutions was begun in 1905–6. The Harvard professors who have served at the University of Berlin under this agreement are as follows:

1905–6: Francis G. Peabody, D. D., LL. D., Plummer professor of Christian morals.

1906–7: Theodore W. Richards, Ph. D., Sc. D., professor of chemistry.

1907–8: William H. Schofield, Ph. D., professor of English.

1908–9: William Morris Davis, M. E., S. D., Ph. D., professor of geology.

1909–10: George Foot Moore, A. M., D. D., LL. D., professor of the history of religion.

1910–11: Hugo Münsterberg, Ph. D., M. D., LL. D., Litt. D., professor of psychology, and director of the psychological laboratory.

The professors representing the University of Berlin at Harvard University are:

1905–6: Frederick Wilhelm Ostwald, Chem. D., M. D., Sc. D., professor of chemistry at the University of Leipzig.

1906–7: Dr. Eugen O. K. Kühnemann, professor of philosophy in the University of Breslau.

1907–8: Paul Clemen, Ph. D., professor of the history of art in the University of Bonn.

1908–9: Dr. Eugen O. K. Kühnemann, professor of philosophy in the University of Breslau.

1909–10: Edward Meyer, professor of ancient history in the University of Berlin.

1910–11: Dr. Max Friedlander, professor of history of music in the University of Berlin.

In the year 1906–7 an exchange system was inaugurated between the University of Berlin and Columbia University upon a permanent basis established as follows: By means of a private contribution Columbia University endowed at the University of Berlin a permanent professorship with the title of the Theodore Roosevelt professorship of American history and institutions, which is filled annually by the Prussian ministry of education, with the approval of the German Emperor, upon the nomination of the trustees of Columbia University. The incumbents of the professorship are

required to lecture in the German language. The appointments made to the professorship have been as follows:

1906–7: John W. Burgess, Ph. D., LL. D., Ruggles professor of political science and constitutional law, and dean of the faculty of political science in Columbia University.

1907–8: Arthur T. Hadley, Ph. D., LL. D., president of Yale University.

1908–9: Felix Adler, Ph. D., professor of social and political ethics in Columbia University.

1909–10: Benjamin Ide Wheeler, LL. D., president of the University of California.

1910–11: Charles Alphonso Smith, Ph. D., LL. D., dean of the graduate school, University of North Carolina.

1911–12: Paul S. Reinsch, Ph. D., professor of political science in the University of Wisconsin.

The Prussian ministry of education on its part established in Columbia University the Kaiser Wilhelm professorship of German history and institutions, which is filled each year by the trustees of Columbia University upon the nomination of the Prussian ministry of education. The incumbents of this professorship are required to lecture in the English language. The appointments made to this professorship have been as follows:

1906–7: Hermann Schumacher, ordinary professor of political economy in the University of Bonn.

1907–8: K. G. Rudolf Leonhard, J. U. D., professor of legal science in the University of Breslau.

1908–9: Albrecht F. K. Penck, Ph. D., professor of geography and director of the Geographical Institute at the University of Berlin.

1909–10: Karl Runge, professor of applied mathematics at the University of Göttingen.

1910–11: Ernst Daenell, Ph. D., professor of modern history at the University of Kiel.

President Benjamin Ide Wheeler, of the University of California, brought his activities as fourth Theodore Roosevelt professor at the University of Berlin to a close late in February of the present year. His inaugural lecture, delivered on October 30, 1909, discussed the subject of "Public opinion as a governing factor in the United States." The general subject of President Wheeler's public-lecture course was "The university in a democracy," while the seminar dealt with "The organization of the higher instruction in the United States."

Prof. Charles Alphonso Smith, Theodore Roosevelt professor at the University of Berlin for the present year, is dean of the graduate school of the University of North Carolina. The subject of his lectures at the University of Berlin is "American literature."

The Theodore Roosevelt professor in the University of Berlin appointed for 1911–12 is Paul S. Reinsch, Ph. D., professor of political

science in the University of Wisconsin, and well known for his writings on questions of public policies. The subject announced for his course of lectures at the University of Berlin is "The expansion of the United States."

The Kaiser Wilhelm professor at Columbia University for 1910–11 is Dr. Ernst Daenell, of the University of Kiel. Doctor Daenell's literary activity, prior to the appearance of his "Blütezeit der Deutschen Hanse," in 1906, was confined mainly to the investigation of the history of the German Hanse towns.

Dr. Max Friedlander, professor of the University of Berlin, during his stay in this country gave a lecture-recital on "Das Deutsche Volkslied," under the auspices of the Germanistic Society of America, on October 21, 1909. This was the first of a series of biweekly lectures on German music given at Columbia University by the Germanistic Society in cooperation with extension teaching. (Columbia University Quarterly, December, 1909, p. 114.)

Mr. James H. Hyde, of New York, has maintained since 1903–4 a resident fellowship in the graduate school of arts and sciences of Harvard University, with an annual stipend of $600, the appointment to which is to be made by the president and fellows of Harvard College on the recommendation of the minister of public instruction of the French Republic. The incumbent for the present year was M. Émile Boutroux, member of the "French Institute." The lectureship established by Mr. Hyde at the Sorbonne, Paris, will be filled the coming winter by John H. Finley, Ph. D., LL. D., president of the College of the City of New York.

The following announcement appeared in the Harvard Graduates' Magazine, March, 1910, page 456:

> Two distinguished Englishmen are to take part in the university's programme of instruction during the second half of the present year. G. W. Prothero, LL. D., editor of the Quarterly Review, and formerly professor of history in the University of Edinburgh, will give a half course on "The creation of the British Empire," and Mr. Graham Wallas, a former member of the London school board and a lecturer in the London School of Economics, is to offer two half courses on English government.

At the autumn session of the Modern Language Conference, Prof. Otto Jespersen, of the University of Copenhagen, professor of English philology in Columbia University, 1909–10, presented a paper on "An artificial international language," which was discussed by Professors Cohn and Remy and other members of the division.

Prof. Hugo Münsterberg has been selected by the German Government to be Harvard visiting professor at the University of Berlin for 1910–11. During his stay in Berlin Professor Münsterberg will engage also in organizing the work of the newly established Amerikanisches Institut in that city.

Prof. Edward Meyer, of the University of Berlin, who was the visiting German professor at Harvard for the current year, conducted two half courses, one on general Roman history, and another, which has been opened to properly qualified school-teachers as well as to members of the university, on the history and monuments of the ancient East.

AMERICAN-SCANDINAVIAN EXCHANGE OF PROFESSORS AND STUDENTS.

Through the influence of the American-Scandinavian Society, an international organization for cultivating closer relations between the Scandinavian countries and the United States, and other agencies, a movement has been started for an exchange of professors and students with Scandinavian countries. Thus far Chancellor Henry M. MacCracken, of New York University; President Nicholas M. Butler, of Columbia University; and Dr. Samuel T. Dutton, of Teachers College, Columbia University, have lectured at Scandinavian universities, and Prof. Otto Jespersen, of Copenhagen University, has lectured at Columbia.

During the past year, through the influence of the same agencies, four Scandinavian students were in attendance at American institutions, three at the Carnegie technical schools in Pittsburg, and one at Columbia University. For the latter a graduate fellowship valued at $650 was established at Columbia University for the year 1909–10 by Mr. Niels Poulson, of Brooklyn, N. Y., and the expenses of the other students were provided by the society. On May 26, 1910, the American-Scandinavian Society received a gift of $100,000 from Mr. Poulson to be held in trust for the furtherance of its educational work.

The corporation of Harvard University has voted that for a period of ten years exemption from tuition fees be granted to advanced students from Scandinavian universities, not exceeding three students in any year, who may be nominated by their respective universities and recommended by the American-Scandinavian Society.

INTERNATIONAL SCHOOL OF PEACE.

The creation of The Hague Tribunal was the entering wedge in the movement for international peace. Since the founding of that tribunal a propaganda for peace has been carried on by various agencies in Europe and America, prominent among which may be mentioned the Lake Mohonk Peace Conferences. The Mohonk conferences stimulated Mr. Edwin Ginn, of the firm of Ginn & Co., publishers, to give generously to the cause of peace.

The establishment of the International School of Peace was made possible by the munificence of Mr. Ginn, who has set aside $50,000 a year for this purpose and proposes eventually to endow the institu-

tion. In a letter to the Nation, September 23, 1909, the founder outlines to some extent the proposed organization of the school and indicates various activities which the institution may undertake. Since the letter was written the school has been incorporated; books, periodicals, and pamphlet literature on the subject of peace have been collected, and a bureau of information has been established.

Mr. Ginn advocates also the inauguration of a bureau of education in connection with the school, which—

> should attempt to modify the courses of study in our schools, colleges, and universities by eliminating the use of such literature and history as tend to inculcate unduly the military spirit and to exaggerate the achievements of war. Too much of our history is now devoted to accounts of battles and to the exploits of war heroes; too little respect and attention are directed to the unselfish and self-sacrificing lives of thousands of noble men and women who have striven and achieved mightily for the benefit of the race in the fields of peace.

He recommends the international exchange of teachers and students—

> in accordance with the ideas which underlie the Rhodes scholarships, and the recent exchange of professors between Germany and America should be further extended, even among the teachers of our public schools.

In his opinion "one of the present great dangers of war is to be found in false, misleading, and inflammatory statements about international relations." To offset these conditions Mr. Ginn proposes the equipment of an editorial corps, in connection with the educational bureau of the school, "to furnish constantly to the press of the world material which would make for peace." He also advocates the cooperation of the clergy in the peace movement, as well as chambers of commerce and other similar associations.

In this connection he says:

> Is it not worth while for the governments of the world seriously to consider the establishment of a school for the education of their servants, and a bureau, under the control of a cabinet officer, whose duty it should be to study broadly international relations looking toward the peaceful development of each nation?

He argues for the institution of a political bureau, which should employ—

> men of statesmanlike grasp and power in all the main capitals of the world, to watch over the course of legislation and to work for the reduction of armaments.

An advisory council, consisting of men well known in the peace movement, he recommends, to assist the executive committee of the school.

AMERICAN SCHOOL PEACE LEAGUE.

The American School Peace League, which was organized in 1908, aims to secure the cooperation of the educational public of America in the project for promoting international justice and equity. The

league comprises representative educators from every State in the Union, and its plan is to organize state branches. Mrs. Fanny Fern Andrews, Boston, Mass., is the secretary. Plans are being formulated for the establishment of an International School Peace League, of which the American School Peace League will be the American branch. The league offers prizes for essays on topics relating to the opportunity and duty of the schools in the peace movement. international arbitration, patriotism, and allied subjects.

XIV. INTERNATIONAL CONGRESSES.

International congresses are assuming more and more the comprehensive scope indicated by their titles and becoming thus an index to the scholastic and social problems of common interest to the countries participating in their deliberations. The present year has been prolific in gatherings of this nature, a large number having been convened as adjuncts to the International Exposition at Brussels.

INTERNATIONAL CONGRESS ON HOME EDUCATION.

The Third International Congress on Home Education was held in Brussels August 21 to 25. The general object of this series of congresses is to discuss the best means of promoting the physical, moral, and intellectual well-being of children under home influences. The initial congress was held at Liege in connection with the Universal Exposition of 1905. As a result of the interest thus awakened a permanent commission was formed to provide for subsequent congresses, and preparations were at once begun for the second congress, which was held at Milan in 1906.

The organizing committee made elaborate preparations for the third congress, and were greatly aided in the preliminary work by the auxiliary committees formed in all the leading countries to promote its interests. In accordance with a request made to the Secretary of State by Baron Moncheur, the Belgian minister at Washington, the Commissioner of Education secured the cooperation of an American committee with Dr. W. V. O'Shea, of the University of Wisconsin, who rendered important service in a similar capacity in preparation for the first congress of the series, as chairman, and Dr. W. C. Bagley, of the University of Illinois, as secretary. Associated with these gentlemen was a company of men and women each of whom is a recognized authority in some one of the subjects covered by the subsections of the congress. As a result of their united efforts the United States played an important part both in the preliminary measures and the final proceedings of the congress.

In addition to a large number of delegates representing state and city systems of education and educational associations of the country, the following national delegates were accredited to the congress by the State Department: Mrs. J. Scott Anderson, Swarthmore, Pa.; Mrs. Frederic Schoff, president of the Mothers' Congress, Philadelphia, Pa.; Prof. Will S. Monroe, State Normal School, Montclair, N. J.; and Dr. Rudolph R. Reeder, superintendent of the New York Orphan Asylum, Hastings-on-Hudson, N. Y.

At a business session of the Home Education Congress it was decided to hold the next meeting in the United States. The following committee was appointed by the executive board to arrange, in cooperation with the reelected officers of the congress, the matter of place, date, etc.: Commissioner of Education Elmer E. Brown, president; Dr. M. V. O'Shea, vice-president; Prof. Will S. Monroe, secretary; Mrs. J. Scott Anderson, Mrs. Fanny Fern Andrews, Mrs. Ellen M. Henrotin, and Mrs. Frederic Schoff.

The sections of the congress were as follows: Study of childhood, general questions affecting the home and education, education before the school age, education during school age, education after school age, abnormal children, and various subjects bearing on infancy. The subsections or titles under which the papers were presented included such subjects as children's courts, children's benefit societies, organization of boarding schools, and preparation of those who are betrothed for marriage.

A report of the proceedings of the congress, by Prof. Will S. Monroe, one of the national delegates from the United States, will be found in Chapter XVI.

THIRD INTERNATIONAL CONGRESS ON POPULAR EDUCATION.

The Congress on Home Education was followed by the Third International Congress on Popular Education, organized by the Ligue belge de l'Enseignement, which association has long advocated in Belgium the most liberal and progressive ideas on the subject of popular education. In preparation for this congress the league sent out an elaborate, but well-classified, questionnaire covering the problems of popular education which are pressing for solution at the present time in the leading countries of Europe and America. The congress was organized in sections corresponding to the divisions of this comprehensive inquiry, and hence the report of the proceedings promises a body of information of timely interest to educators and legislators concerned in measures for the welfare of the young. The United States was represented at the congress by numerous delegates, among whom was Prof. Will S. Monroe, accredited as a national representative.

It is interesting to note, in this connection, that the society recently formed in Belgium to promote the scientific study of infancy and

youth, Société belge de Pédotechnie, is in great measure the outcome of the education league. The new society is affiliated to the Bibliothèque collective des sociétés savantes, and through this relation, and with the collaboration of Solvay Institute (Institut de sociologie Solvay) of the University of Brussels, commands unusual facilities for collating and publishing a bibliography of the scientific study of childhood, which is part of its proposed work.

At the seat of the society in Brussels [a] a bureau of pedotechnic consultations is maintained where, under the regular oversight of Doctor Henrotin, mothers are instructed in the care of their babes. Several nurslings are also taken at one time for complete care and examination as to conditions of growth, nourishment, etc.

The growing interest in the scientific study of childhood is illustrated, also, by the formation of an international committee for the organization of international congresses of pedology. The preliminary action in this matter was taken at the meeting of a provisional committee held at Geneva (island Rousseau) in August, 1909.

Other recent congresses pertaining to popular education, whose reports promise matters of interest, are:

SECOND INTERNATIONAL CONFERENCE ON ELEMENTARY EDUCATION.

This conference was held in Paris, August 4–7, 1910, at the Sorbonne. These conferences are organized by the international committee of teachers' federations (Bureau International des Fédérations d'Instituteurs), consisting of representatives of the various associations of teachers throughout Europe and in French colonies.

Since its formation in 1905, the permanent committee has held annual meetings, and has formulated a definite plan of continuous work for the purpose as expressed in its constitution:

> Of forming close bonds of friendship between its members and of international solidarity, contributing to the progress of popular education, promoting the moral and material welfare of teachers, and establishing peace and fraternity among the nations represented.

The general conferences, of which the first was held at Liege in 1905, are called to consider topics which have been the subject of special investigation by the permanent committee. The facts and opinions thus accumulated are published in advance of the conferences in order that the discussions may embody the views of the participants as supported by evidence. The programme of the conference for the present year included the following subjects:

1. (*a*) Educational result in different countries as displayed by statistics. (*b*) Compulsory attendance—its necessity. Conditions which lead to imperfect attendance where compulsion is legalized—suggested remedies.

[a] Rue de la Chapelle 10, general secretary, Professor Smelten.

2. Aim and object of elementary science teaching in primary schools—methods and curriculum.

3. The professional training of the teaching staff and the professional training of the staff engaged in the work of inspection and administration.

4. Educational continuation work in various countries, duty of public bodies, duty of the teacher, duty of the private individual.

Under the head of educational results, the committee had endeavored to collate statistics showing the average age for the withdrawal of pupils from primary schools in different countries; although much interesting information was thus brought together, it was found quite impossible to institute comparisons in this respect on account of the different terms of classification, methods of reporting, etc., employed in different countries. This failure emphasizes the importance of a uniform statistical scheme of wide application, such as has been repeatedly urged by the United States Commissioner of Education.

In a paper on "Motherhood, the home, and medical inspection," Mrs. Cloudesley Brereton, an English delegate, whose recent book[a] entitles her to rank as the chief authority on this topic, struck the keynote of that relation between the home and the school which it is one purpose of this congress to establish. In the opinion of Mrs. Brereton—

the mothers are the very foundation of successful medical inspection. * * * The schools are the most rational and convenient centers from which to work where children are concerned, but there is already a grave danger that parents should think that, as the schools are so ready to shoulder the burden of parents, they can themselves lay every parental burden down.

That is just what would be fatal, not merely because the schools have no right to make the parents think that they have no responsibilities, but because if the parents do not cooperate with the medical authorities the work of the latter will be worse than wasted. If there is no workable means of contact between the school and the home, the school doctor and the mother, the expense and experience of medical inspection will be largely thrown away.

The paper was not only a graphic presentation of the part the home, and even the humblest home, must play in the endeavor to educate "the sanitary conscience" of the nation, but it was full of pertinent suggestions of the cooperative and definite missionary effort which society, as a rule, must bring to bear upon that pivotal center.

In this connection Mrs. Brereton said:

The various parents' societies and child-study societies will doubtless in the near future realize how much they can learn from men and women interested in medical inspection of schools; and much is to be expected of those now powerful national and international societies. The women who belong to them as active workers, like the women on our various voluntary committees, are less and less, as years go on, mere amiable amateurs; there is an increasing number of highly skilled public workers, who only need to find suitable and organized

[a] Brereton, Mrs. M. A. Cloudesley. The mother's companion. London, Mills & Boon, limited [1909]. 162 p. 12°.

outlets for that skill and experience which they so unselfishly place at the service of the public.

In conclusion, it is surely a sign of the times that we are seeing the establishment of school crèches, where the babies of the home are supplying the link between home and school, between lessons and life. Instead of the children's staying at home to mind the baby, the baby goes to the crèche, and girls of school-leaving age are instructed by capable nurses in the care of these babies of their own class; and the boys in the carpentering shops may be taught to make simple cradles from old crates for twopence, to make wholesome little mattresses of sawdust, and so on.

This type of training between the ages of 14 and 16, those years which are generally spent in forgetting everything learnt at school instead of in applying it—the years spent too often in developing the hooligan and the apache—bid fair instead to be spent in manufacturing capable potential parents and useful citizens.

SIXTH INTERNATIONAL CONGRESS ON ESPERANTO.

At the sessions of the Sixth International Congress on Esperanto, which met in Washington August 14 to 20, 1910, much interest and enthusiasm were manifested, and substantial progress in extending the use of the language was reported. The inventor of Esperanto, Doctor Zamenhof, and various official delegates from foreign countries participated in the proceedings. The Bureau of Education was represented by Dr. John D. Wolcott.

INTERNATIONAL CONGRESS ON ENTOMOLOGY.

The International Congress on Entomology which was held in Brussels August 1–6, 1910, although strictly scientific in its nature, may properly be included under the head of congresses pertaining to higher education, as it was a gathering of scientists representing the principal universities and scientific societies of the world. Its membership reached a total of 202, of whom a large proportion (67) represented Great Britain. The United States was represented by Dr. W. Holland from the Carnegie Institute, acting also as co-delegate for the Entomological Society of America with Prof. Herbert Osborn and Dr. H. Skinner. The latter, who was a delegate also from the Academy of Natural Sciences, Philadelphia, excited much interest by a paper reviewing the history of entomology in the United States in the last one hundred years. As an illustration of the economic value of entomological investigations, Doctor Skinner called attention to the fact that—

> the State of Massachusetts has spent a million dollars on its campaign against the gipsy moth, which has devastated a hundred square miles and done some 50,000,000 dollars worth of damage, and the United States Government has appropriated 300,000 dollars to the work of confining its damage to the locality and preventing its spread to adjoining States.

It was decided that the Second International Entomological Congress should be held in the summer of 1912, and the representatives

of Oxford University cordially urged the members to accept an invitation to that old university town, which proposition was unanimously accepted.

INTERNATIONAL CONGRESS ON HIGHER TECHNICAL EDUCATION.

An International Congress on Higher Technical Education was held at Brussels, September 9 to 12 of the present year, under the patronage of the King of Belgium. The programme of the congress was drawn up by eminent representatives of the specialties to be considered and every effort had been made to secure the participation of delegates from the leading countries of the world, thoroughly experienced in the conduct of technical education and enterprises. The papers presented before the congress and the discussions which they called forth have just been published, but too late for full consideration in this report. They comprise information and opinions of importance to those engaged in the conduct of higher technical education.

The congress was marked by the active participation of representatives of technical education in the smaller kingdoms of Europe. Among these should be included Spain, in which there is a marked awakening in the problems of technical education.

Doctor Tombo, one of the three national delegates from the United States, in a brief note on the subject, calls especial attention to the announcement of the École de Commerce of the University of Brussels, and, in connection therewith, to two of the papers presented at the congress, viz: "La formation des ingénieurs commerciaux à l'École de Commerce Solvay," annexed to the University of Brussels, and "L'ingénieur commercial et l'économie nationale" (by Prof. Méhely of Hungary); and to a paper on the "Création en Belgique d'un Institut spécial d'enseignement technique des transports" (by Carlier), which contained reference, also, to American conditions and to the lively interest manifested in respect to the practical spirit in which Americans approach technical problems.

The following persons were accredited as national delegates from the United States: Dr. Edwin G. Cooley, La Grange, Ill.; Dr. Richard C. Maclaurin, president of the Massachusetts Institute of Technology, Boston; and Dr. Rudolf Tombo, jr., adjunct professor of Germanic languages and literatures, Columbia University, New York city.

INTERNATIONAL CONGRESS ON ADMINISTRATIVE SCIENCES.

In addition to the congresses relating immediately to educational subjects, several important congresses have been held during the year for the consideration of governmental and social problems, as regards

both their educational and public bearing. In this group belongs the International Congress on Administrative Sciences, which was held July 28 to 31, inclusive, under the patronage of the Belgian Government. The congress emphasizes the fact that a new order of administrative ability and of preparation for public service is required by the increased scope and complexity of public affairs. This demand has led, in the principal countries, to the creation of university faculties or courses of instruction pertaining to political and administrative sciences, and to the institution of special diplomas as the sanction of the new order of studies.

The public interest in the subject has led several cities to organize exhibitions of municipal activities. Dresden has maintained such an exhibition for several years; the Netherland federation of municipal secretaries and officials organized an exposition of this character in 1906; a similar exhibit formed a feature of the Brussels Exposition of the present year.

It appeared, therefore, to the leaders in the enterprise, that the time had come when the interests of public administration might properly be made the subject of an international congress, affording opportunity for formulating the most important administrative problems and for the interchange of views and experiences bearing upon their solution.

The programme, which was arranged with reference to interests common to all countries that are in the current of modern life, comprised four divisions, as follows: Municipal or local administration; relations between central and local administrations; general questions; circular forms and publications pertaining to the administrative service.

The plans for the congress were admirably developed and carried out so successfully that the principal countries of Europe, and the United States, were all represented at the congress by strong delegations.

In the section of local or communal administration (municipal and rural), attention was given to hygiene and sanitation, and public responsibility for these services was fully recognized. Intimately related to these considerations was that of municipal embellishments and the preservation of historic monuments as a means of artistic culture and patriotic inspiration. Labor problems and their solution by communal or socialistic control were discussed from various standpoints.

It is noticeable that this comprehensive programme makes no reference to problems of race education and the government of undeveloped peoples by the stronger powers which, in acute forms, are thrust upon ourselves at the present time.

The following-named persons were accredited as national representatives from the United States: Dr. John A. Fairlie, associate professor of political science, University of Illinois, Urbana, Ill.; Dr. Frank J. Goodnow, professor of administrative law and municipal science, Columbia University, New York City; and Dr. Charles Noble Gregory, dean of the College of Law, State University of Iowa, Iowa City, Iowa.

INTERNATIONAL ASSOCIATION OF ACADEMIES.

The International Association of Academies was inaugurated ten years ago in a preliminary meeting held at Wiesbaden, and since then regular triennial assemblies have taken place in Paris, London, Vienna, and finally in Rome, where the fourth meeting was held May 9–14, 1910, under the presidency of Prof. P. Blaserna, of the Accademia dei Lincei.

From an account of this meeting by Dr. Arthur Schuster, a delegate from the British Royal Society, the following particulars are taken:

In judging of the past activity and the prospects of the association it must be borne in mind that, having no funds at its disposal, its influence must be mainly a moral one. It is intended to coordinate international enterprises, to initiate and encourage undertakings, and to act as an advisory body where advice is asked for, either by governments or by the many special international organizations which have recently sprung up.

* * * * * * *

That part of the association's work which prevents the overlapping of international enterprises has been illustrated in Rome by the manner in which the proposal of the Swedish Academy to take international action toward the prevention of the diseases of cultivated plants was dealt with. Everyone agreed that the subject was a most important one and fell within the province of the association, but there is in Rome an international agricultural institute which might be expected to include remedial measures against the diseases of plants within its range of activity. Apparently, however, there are difficulties which have prevented the agricultural institute from attacking the problem; these are partly financial, but partly also due to the terms of the convention under which the institute was founded. After a full discussion the representative of the Swedish Academy accepted the following resolution, which was proposed by Colonel Prain, one of the representatives of the Royal Society:

"The International Association of Academies of Science, while in entire sympathy with the proposal that further international cooperation in the study of plant diseases is necessary, considers that the question of deciding what ought to be done in the direction of combating these diseases might appropriately be intrusted to the International Agricultural Institute.

"In the event of its being found that the terms of the convention of 1905, under which it was established, prevent the international institute from extending its activities so far as is desired in the interests of science and agriculture, this association recommends that the constituent academies bring to the notice of their respective governments the desirability of conferring adequate powers upon the International Agricultural Institute."

* * * * * * *

The association has further interested itself in the publication of the collected works of Leibnitz, which is being promoted jointly by the academies of Paris

and Berlin, and in that of Euler's works, which has been undertaken by the Société helvetique des Sciences Naturelles. The association has more especially approved at its recent meeting the decision to publish all memoirs in their original language. It may seem strange that such approval should be necessary, but it was called for by attempts that had been made to persuade the Swiss society to translate the Latin writings into a modern language.

A few words should perhaps be said on the literary side of the work of the association. The subjects dealt with included the preparation of an edition of the "Mahabharata," and of an "Encyclopædia of Islam," of Greek documents, and of a "Corpus Medicorum Antiquorum;" further, the very difficult question of an international exchange—by way of loan—of manuscripts belonging to public libraries.

* * * * * * *

At present the association has no legal status, not being subject to the laws of any country. It can not therefore accept any legacies, and it is rumored that it has lost in consequence a very considerable sum of money. * * * In order to evade the difficulty at present preventing the association from having funds of its own the committees of the association at a meeting held last year, at which nearly all the academies were represented, passed a unanimous resolution recommending that the different academies should declare themselves ready to accept legacies or gifts to be held in trust by them for the purposes of the association. When this resolution came up for discussion at the present meeting, objections were raised by several delegates, and the matter had to be referred to the several academies for an authoritative expression of opinion.[a]

WORLD'S CONGRESS OF INTERNATIONAL ASSOCIATIONS.

The World's Congress of International Associations was held at Brussels May 9–11, 1910. M. Beernaert, minister of state, who presided, was surrounded by a number of distinguished scientific men of Belgium and of foreign countries.

In his opening address Minister Beernaert called attention to the first congress of this nature, which was held at Mons in 1905. On that occasion it was resolved to form a central office of international associations, which appointed the committee of arrangement for the present congress.

The object of the World's Congress of International Associations is the study of international organization in all domains and under all forms—science and art, law and political organizations, social work, and the field of economics.

The questions submitted for the present congress were as follows:

1. The cooperation of international associations.
2. The legal regulations for international associations.
3. The international systems of units applicable to the sciences and technical professions (unification and coordination of systems, the metric system, the system of C. G. S.).

The following persons were accredited as national delegates from the United States: Dr. Julius Sachs, professor of secondary educa-

[a] Nature, May 26, 1910, pp. 370–372.

tion, and Dr. Frederick H. Sykes, director of technical education, both of Teachers College, Columbia University, New York City.

FIFTH INTERNATIONAL CONGRESS FOR PUBLIC RELIEF AND PRIVATE CHARITY.

The Fifth International Congress for Public Relief and Private Charity was opened August 9 at Copenhagan, in the presence of the King and Queen, the Crown Prince, and the principal ministers of the Kingdom. Although not strictly an educational congress, its deliberations pertained to problems many of which are fundamental to the welfare of children, and consequently school officers and teachers were invited, with the representatives of reformatory and penal institutions, to take part in its proceedings. Miss Julia Lathrop, of Rockport, Ind., long identified with important measures pertaining to the care and protection of children in that State, was accredited as a national representative from the United States.

UNIVERSAL PEACE CONGRESS.

The Eighteenth Universal Peace Congress was opened at Stockholm August 1. It was attended by nearly 500 members, including many women, representing 22 nations and nearly all the peace associations of the world.

Count Taube, minister of foreign affairs, welcomed the members in the name of the King of Sweden and the Swedish Government, and in the course of his address defined the purposes of the assembly as follows: "To impress on the nations the solidarity of the brotherhood of man, to make love prevail over hatred, right over might, and the blessings of peace over the horrors of war."

THIRD INTERNATIONAL CONGRESS ON SCHOOL HYGIENE.

The organization of congresses to deal with the special problems of school hygiene is due to the initiative of Dr. Hermann Griesbach, of the University of Basel, Switzerland, whose efforts in this direction resulted in the First Congress on School Hygiene, held in Nuremburg in April, 1904. This was followed by a second congress, held in London in August, 1907, which afforded proof of progress in all the countries represented in regard both to general interest in the subject and in practical measures for improving the hygienic condition of schools and safeguarding the health of school children.

According to the resolution adopted at the second congress, the Third International Congress on School Hygiene was held at Paris August 2 to 7 of the present year. The minister of public instruction, who had accepted the honorary presidency of the congress, used his influence to promote its interests, and the various societies which

are occupied in France with questions of the hygiene of childhood and the improvement of educational conditions combined to insure its success. The president of the organizing committee was Dr. Albert Mathieu, distinguished for his service in the hospitals of Paris, president of the permanent international committee on school hygiene, and also of the French association of school hygiene (Ligue d'Hygiène scolaire). The general secretary of the committee was Doctor Dufestel, medical inspector of schools, Paris. The secretary of the committee in charge of preparations for the exposition auxiliary to the congress was M. V. H. Friedel, of the Musée pédagogique.

Besides the central committee at Paris, branch committees were formed in the principal cities of the provinces to draw support to the congress, and auxiliary committees were formed for the same purpose in foreign countries. By these admirable preliminary measures not only was the success of the congress assured, but the widest publicity was given to the subjects which were to engage its attention and an interest excited in its proceedings which extended far beyond the membership of the congress.

The programme of the congress formed, as it were, an index to the accumulated body of facts and opinions developed by scientific investigations which are profoundly modifying the processes and ideals of elementary schools.

The following-named specialists represented the United States Bureau of Education at the congress: Dr. Arthur T. Cabot, fellow of Harvard University; Dr. Thomas F. Harrington, director of school hygiene, Boston, Mass.; and Dr. R. Tait McKenzie, professor of physical education, University of Pennsylvania, Philadelphia, Pa.

The Congress on Physical Education, held at Brussels August 10 to 13, dealt with subjects closely related to the above. The delegates from the United States accredited to this congress by the Department of State were the specialists named above, who represented the Bureau of Education at the congress on school hygiene, together with Dr. H. M. Bracken, secretary and executive officer of the Minnesota state board of health.

Reports of the two congresses, from the American delegates, will be found in Chapter XVI.

CHAPTER II.

EDUCATIONAL LEGISLATION.

CONTENTS.

PART I. EDUCATIONAL LEGISLATION, SIXTY-FIRST CONGRESS: First session.—Second session. 1. Appropriations for Department of State, War Department, Department of Justice, Navy Department, Department of the Interior, Department of Agriculture, Library of Congress, Smithsonian Institution, and District of Columbia.—2. Miscellaneous enactments relating to Indian schools, land grants, Indian reservations, United States Military Academy, United States Navy, District of Columbia, New Mexico, and Arizona.

PART II. RECENT EDUCATIONAL LEGISLATION, STATE AND TERRITORIAL: Introduction.—Summary of important legislation in Georgia, Illinois, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New York, Ohio, Porto Rico, Rhode Island, South Carolina, and Virginia.—Catalogue of laws enacted in the foregoing States relating to: 1. Educational commissions.—2. State boards of education.—3. State commissioner of education.—4. County school boards.—5. County school superintendents.—6. District superintendents.—7. School districts in two or more counties.—8. Consolidation of schools and transportation of pupils.—9. Local school boards; officers; school meetings.—10. School lands; funds.—11. Taxation; appropriations.—12. Bonds and indebtedness.—13. Gifts and trust funds.—14. Schoolhouses.—15. Public playgrounds.—16. Text-books.—17. Teachers' qualifications and certificates.—18. Teachers' salaries.—19. Teachers' pensions; retirement funds.—20. Teachers' institutes.—21. School census.—22. Contingent or incidental fee.—23. Compulsory school attendance.—24. Child labor.—25. Welfare of children; dependents and delinquents.—26. Separation of the races.—27. School year; length of session.—28. Holidays.—29. Branches of study.—30. Hygiene; tuberculosis.—31. High schools; secondary schools.—32. Industrial schools.—33. Schools and colleges of agriculture.—34. State universities; public higher education.—35. Normal schools.—36. Professions; professional schools.—37. Schools for defectives.—38. Educational corporations.—39. Libraries.

PART I. EDUCATIONAL LEGISLATION, SIXTY-FIRST CONGRESS.

First Session.

The tariff law of 1909, enacted during an extraordinary session of the Sixty-first Congress, contains provisions for the admission, free of duty, of books, maps, charts, etc., and philosophical and scientific apparatus and instruments, etc., imported for the use and by the order of any religious, educational, or scientific institution or society. (Paragraphs 519 and 650.) A "deficiency bill" also was passed at this session, containing the following appropriations: For completing the new building for the National Museum, $80,068.41; for the support of inmates of the National Training School for Boys, $3,000; for the balance of the salary of the register of copyrights, in the Library of Congress, $500.

Second Session.

APPROPRIATIONS.

The sum contributed by the United States Government during 1910 to the advancement of education was far in excess of the amount stated in the following summary, namely $17,565,981.26. This is

the aggregate of the cash appropriations of the second session of the Sixty-first Congress, together with certain moneys expended under continuing appropriations of previous Congresses. The contribution to colleges of agriculture and the mechanic arts is an example of such an appropriation. But in addition to these sums there were many items of which it is impossible to determine the amount, even in the maintenance of national institutions.

The instruction in the United States Military and Naval academies is given largely by officers detailed from the regular service. Their compensation is paid from the appropriations for the pay of the army and of the navy, respectively, and no reasonable effort can determine the amount of it. The salaries and allowances of officers detailed to colleges and military schools make an item of considerable importance, but this can not be included for a similar reason.

Large appropriations are made annually for scientific investigations of an educational character which are not included in the figures presented because of the difficulty of separating scientific from administrative work.

Appropriations of land are necessarily omitted, for no estimate of its value could approach correctness. The aggregate upon any basis of calculation is large, whether considered as a principal sum or in respect to the net proceeds for any one year.

The endowment of schools in the new States of Arizona and New Mexico, as explained under miscellaneous enactments, which follow, is liberal to a degree, though they are not the first to enjoy such liberality. Five per cent of the net proceeds of sales of public lands within the States will be devoted to schools in addition to four sections in each township, and large grants besides to individual institutions. Eight States in the Union have a total land area less than that granted outright to the educational system of each of these new States; and the four smallest States combined, namely, Rhode Island, Delaware, Connecticut, and New Jersey, would not make a principality as great as that which will endow the schools of New Mexico.

Summary.

Department of State	$31,450.00
War Department	2,234,598.06
Department of Justice	78,800.00
Navy Department	1,028,094.05
Department of the Interior	7,681,921.97
Department of Agriculture	1,628,580.00
Library of Congress	841,755.18
Smithsonian Institution	[a] 851,200.00
District of Columbia	[b] 3,189,582.00
Total	17,565,981.26

[a] Includes $57,500 to be paid from the revenues of the District of Columbia.
[b] One-half of this amount is to be paid from the revenues of the District of Columbia.

DEPARTMENT OF STATE.

STUDENT INTERPRETERS.

[Chapter 199, May 6, 1910.]

10 at the United States legation to China:	
Salaries	$10,000.00
Tuition	1,250.00
6 at the United States embassy to Japan:	
Salaries	6,000.00
Tuition	750.00
Quarters	600.00
10 at the United States embassy to Turkey:	
Salaries	10,000.00
Tuition	1,250.00
Quarters	600.00
Furniture	1,000.00
Total	31,450.00

WAR DEPARTMENT.

[Chapter 62, February 25, 1910; chapter 115, March 23, 1910; chapter 174, April 19, 1910; chapter 385, June 25, 1910.]

United States Military Academy:		
Pay	$615,227.87	
Current and ordinary expenses	137,098.00	
Miscellaneous and incidental expenses	51,880.00	
Buildings and grounds	1,206,252.00	
Deficiencies (current)	3,440.19	
		$2,013,898.06
Army War College, Washington		22,700.00
Service schools, Fort Leavenworth and Fort Riley		25,000.00
Coast Artillery School, Fort Monroe		28,000.00
Engineer School, Washington		25,000.00
Officers' schools at military posts		10,000.00
Buildings for post exchanges, schools, libraries, and reading rooms		70,000.00
Army Medical Museum and Library		15,000.00
Equipment and books for the instruction and use of state sea-coast artillery organizations		25,000.00
Total for the War Department		2 234.598.06

DEPARTMENT OF JUSTICE.

[Chapter 384, June 25, 1910.]

National Training School for Boys, Washington, D. C.—Appropriation for buildings, $30,000; support, $48,800· total, $78,800.

NAVY DEPARTMENT.

[Chapter 62, February 25, 1910; chapter 378, June 24, 1910.]

United States Naval Academy:		
Civil establishment	$186,704.00	
Current and miscellaneous expenses	44,500.00	
Maintenance	277,964.00	

United States Naval Academy—Continued.		
Buildings and grounds	$148,200.00	
Engineering experiment station	20,000.00	
Deficiency (heating and lighting)	10,000.00	
Total		$687,368.00
Naval War College, Rhode Island		72,475.76
Naval training stations, California, Rhode Island, and Great Lakes		278,250.29
Total, Navy Department		1,028,094.05

DEPARTMENT OF THE INTERIOR.

BUREAU OF INDIAN AFFAIRS.

[Chapter 62, February 25, 1910; chapter 140, April 4, 1910; chapter 385, June 25, 1910.]

Support of Indian day and industrial schools	$1,420,039.12
Construction of buildings, etc	350,000.00
Transportation of pupils (including $5,000 for securing employment for pupils)	70,058.50
Agricultural experiments, instruction in forestry, and matrons, farmers, and stockmen to teach Indians	350,000.00
Teachers, physicians, carpenters, etc., for fulfilling treaty stipulations: With Bannocks in Idaho, $5,000; Sioux in Montana, $99,000; Pawnees in Oklahoma, $5,400; Sioux in South Dakota, $10,400; Shoshones in Wyoming, $5,000; total	124,800.00
Advance to Chippewas in Minnesota, for sundry purposes, including erection and maintenance of day and industrial schools	150,000.00
Support, education, and civilization of Pottawatomies in Wisconsin	25,000.00
Indian schools:	
Fort Mojave, Ariz	38,100.00
Phoenix, Ariz	127,400.00
Truxton Canyon, Ariz	21,200.00
Sherman Institute, Riverside, Cal	134,574.26
Grand Junction, Colo	35,000.00
Haskell Institute, Lawrence, Kans	157,750.00
Kickapoos, Kansas	17,860.00
Sacs and Foxes, Kansas	200.00
Mount Pleasant, Mich	61,800.00
Pipestone, Minn	41,675.00
Chippewas, Minnesota	4,000.00
Genoa, Nebr	65,600.00
Carson City, Nev	56,900.00
Albuquerque, N. Mex	56,900.00
Santa Fe, N. Mex	58,500.00
Cherokee, N. C	28,050.00
Fort Totten, N. Dak	65,975.00
Wahpeton, N. Dak	50,200.00
Bismarck, N. Dak	42,296.00
Chilocco, Okla	90,000.00
Pawnees, Oklahoma (2 manual-labor schools)	10,005.60
Quapaws, Oklahoma	1,000.00
Five Civilized Tribes, Oklahoma—	
Schools	75,000.00
Choctaws, annuity for education	6,000.00
Chickasaws, tuition at St. Agnes Academy	1,368.00

Indian schools—Continued.	
Salem, Oreg	$132,550.00
Molels, Oregon	3,000.00
Carlisle, Pa	172,125.95
Flandreau, S. Dak	69,475.00
Pierre, S. Dak	56,584.54
Rapid City, S. Dak	53,850.00
Sioux, South Dakota	200,000.00
Utes, Utah	1,800.00
Hampton Institute, Va	20,040.00
Hayward, Wis	38,870.00
Tomah, Wis	46,450.00
Shoshone, Wyo	34,025.00
Total	4,566,021.97

PURCHASE OF LANDS FOR STATE COMMON SCHOOLS.

For the purchase of Indian lands to be donated to the several States named for common schools:

Sixteenth and thirty-sixth sections in each township, Pine Ridge Reservation, S. Dak. (chap. 257, May 27, 1910)	$125,000.00
Sixteenth and thirty-sixth sections in each township, Rosebud Reservation, S. Dak. (chap. 260, May 30, 1910)	125,000.00
Sixteenth and thirty-sixth sections in each township, Fort Berthold Reservation, S. Dak (chap. 264, June 1, 1910)	100,000.00
Sixteenth and thirty-sixth sections in each township, Cheyenne River and Standing Rock reservations, North Dakota and South Dakota, increase in appropriation (chap. 40, February 17, 1910)	190,000.00
Total	540,000.00

BUREAU OF EDUCATION.

[Chapter 62, February 25, 1910; chapter 297, June 17, 1910; chapter 284, June 25, 1910; chapter 385, June 25, 1910.]

Commissioner	$5,000.00
Chief clerk	2,000.00
Specialist in Higher Education	3,000.00
Editor	2,000.00
Statistician	1,800.00
Specialist in Charge Land-Grant College Statistics	1,800.00
Translator	1,800.00
Collector and Compiler of Statistics	2,400.00
Specialist in Foreign Educational Systems	1,800.00
Specialist in Educational Systems	1,800.00
2 clerks of class 4	3,600.00
2 clerks of class 3	3,200.00
4 clerks of class 2	5,600.00
8 clerks of class 1	9,600.00
7 clerks at $1,000	7,000.00
6 copyists at $900	5,400.00
2 copyists at $800	1,600.00
1 copyist	720.00
2 skilled laborers at $840	1,680.00
1 messenger	840.00

1 assistant messenger	$720.00	
3 laborers at $480	1,440.00	
1 laborer	400.00	
Total for salaries		$65,200.00
Books, etc., for library		500.00
Collecting statistics		4,000.00
Purchase, distribution, etc., of educational documents, etc		2,500.00
Education of natives of Alaska		200,000.00
Reindeer for Alaska		12,000.00
Allotment from appropriation for printing and binding of the Department of the Interior		50,000.00
Total for Bureau of Education		334,200.00

MISCELLANEOUS.

Colleges of Agriculture and the Mechanic Arts (continuing appropriation)		$2,000,000.00
Columbia Institution for the Deaf and Dumb (chapter 384, June 25, 1910; chapter 385, June 25, 1910):		
Support	$67,000.00	
Repairs	5,000.00	
To replace burned building	25,000.00	
		97,000.00
Howard University (chapter 384, June 25, 1910; chapter 385, June 25, 1910):		
Maintenance, repairs, etc	$104,700.00	
Heating plant (one-half of appropriation for Howard University and Freedman's Hospital)	40,000.00	
		144,700.00
Total for Department of Interior		7,681,921.97

DEPARTMENT OF AGRICULTURE.

OFFICE OF EXPERIMENT STATIONS.

[Chapter 256, May 26, 1910.]

Salaries	$46,180.00
Agricultural Experiment Stations	720,000.00
Increase to same (act of March 16, 1906)	720,000.00
Administration of last-named fund	33,400.00
Agricultural experiment stations in Alaska, $28,000; Hawaii, $28,000; Porto Rico, $28,000; Guam, $15,000	99,000.00
Farmers' institutes	10,000.00
Total	1,628,580.00

LIBRARY OF CONGRESS.

[Chapter 62, February 25, 1910; chapter 297, June 17, 1910; chapter 384, June 25, 1910; chapter 385, June 25, 1910.]

Services and general library expenses	$289,150.18
Increase of library	109,500.00
Copyright office	92,900.00
Printing and binding	202,000.00
Custody, care, and maintenance of building and grounds	148,205.00
Total	841,755.18

SMITHSONIAN INSTITUTION.

[Chapter 384, June 25, 1910; chapter 385, June 25, 1910.]

International exchanges	$32,000.00
American ethnology	42,000.00
Catalogue of scientific literature	7,500.00
National Museum	495,000.00
Elevators	10,000.00
Building and grounds, new National Museum	77,000.00
National Zoological Park (one-half payable by the District of Columbia)	115,000.00
Printing and binding	72,700.00
Total	851,200.00

DISTRICT OF COLUMBIA.

[Chapter 62, February 25, 1910; chapter 248, May 18, 1910; chapter 385, June 25, 1910.]

Of the appropriation $3,189,582, one-half is payable by the General Government, *i. e.*, $1,594,791, and one-half by the District of Columbia.

Free public library		$61,140.00
Public schools:		
Officers	$52,700.00	
Attendance officers	2,100.00	
1,734 teachers	1,334,550.00	
23 librarians and clerks	14,100.00	
Longevity pay for officers and teachers	355,000.00	
Allowance to principals	38,500.00	
Night schools	20,000.00	
Kindergarten supplies	2,800.00	
Janitors and care of buildings	113,960.00	
Medical inspectors	6,000.00	
Miscellaneous	367,562.00	
Buildings and grounds	705,000.00	
Total for public schools		3,012,272.00
Instruction of deaf and dumb		10,000.00
Colored deaf mutes		6,000.00
Instruction of indigent blind children		6,600.00
National Training School for Boys (care and maintenance of boys)		31,100.00
Reform School for Girls		21,960.00
Industrial Home School		24,000.00
Industrial Home School for Colored Children		16,510.00
Total		3,189,582.00

Miscellaneous Enactments.

INDIAN SCHOOLS.

Removal of per capita restrictions.—All moneys appropriated for school purposes among the Indians shall be expended without restriction as to per capita expenditure for the annual support and education of any one pupil in any school. (Chap. 140, April 4, 1910.)

This provision abolishes the former restriction limiting the expenditures of Indian schools to $167 per pupil for practically all purposes except permanent improvements.

Schools at Grand Junction and Fort Lewis, Colo.—The property of these schools is granted to the State of Colorado on condition that the State will maintain them as institutions of learning, admitting Indian pupils free of tuition and on terms of equality with white pupils. (Chap. 140, April 4, 1910.)

LAND GRANTS.

Lowell Observatory.—A section of land in the Coconino National Forest, Arizona, is granted to Percival Lowell for observatory purposes in connection with Lowell Observatory. (Chap. 261, May 30, 1910.)

Masonic Orphanage, El Reno, Okla.—To the Grand Lodge of Ancient Free and Accepted Masons is granted the preference right to purchase for a Masonic orphanage, home, and industrial school, 640 acres of land with buildings and appurtenances at El Reno, Okla., heretofore set aside as reservation for the Cheyenne and Arapahoe Agency and the Arapahoe Indian school, the price to be fixed by the Secretary of the Interior. (Chap. 21, January 31, 1910.)

Colorado State Agricultural College.—One thousand six hundred acres of land in Larimer County, Colo., are granted to the State of Colorado for the State Agricultural College for agriculture, forestry, and kindred purposes, upon the payment therefor of $1.25 per acre. (Chap. 420, June 25, 1910.)

OPENING OF INDIAN RESERVATIONS.

Pine Ridge Reservation, S. Dak.—The Secretary of the Interior may reserve lands for agency, school, and religious purposes, for the benefit of the Indians, and may issue patents in fee simple to missions and schools for lands heretofore set apart for their use. Reservation of lands for town sites is authorized, and not more than 10 acres may be set aside in such town sites for schools, parks, etc.; 20 per cent of the net proceeds of the sale of land in such town sites shall be set apart and expended for schoolhouses or other public buildings or improvements within such town sites.

Sections 16 and 36 shall not be subject to entry, but shall be reserved for the use of common schools and paid for by the United States at $2.50 per acre, $125,000 being appropriated for the purpose. (Chap. 257, May 27, 1910.)

Rosebud Reservation, S. Dak.—The act providing for the sale and distribution of surplus lands of Rosebud Reservation, S. Dak., includes provisions similar to the Pine Ridge act relating to granting

fee simple patent to established schools and missions; reserving land in town sites for schools, parks, etc.; setting aside 20 per cent of town site sales for schools, etc.; reserving sixteenth and thirty-sixth sections for schools, and granting them to the State of South Dakota, paying $2.50 per acre for same, and appropriating $125,000 therefor. (Chap. 260, May 30, 1910.)

Fort Berthold Reservation, N. Dak.—The act to provide for the opening of the Fort Berthold Reservation includes provisions similar to those described for Pine Ridge and Rosebud. The sixteenth and thirty-sixth sections of each township are reserved and granted to the State of North Dakota, the United States paying for the same at the rate of $2.50 per acre. (Chap. 264, June 1, 1910.)

Siletz Reservation, Oreg.—An act to authorize the sale of certain lands belonging to the Indians on the Siletz Indian Reservation, Oreg., includes a provision that the net proceeds from the sale of lands reserved for administrative, educational, and missionary purposes shall be used for purchasing sites for day schools, erecting the necessary buildings, and equipping, supporting, and maintaining the same. (Chap. 233, May 13, 1910.)

Yakima Reservation, Wash.—An act to amend an act approved December 21, 1904, to authorize the sale and disposition of surplus and unallotted lands of the Yakima Indian Reservation, Wash., provides for the reservation of town sites, in each of which not over 10 acres shall be set apart for schools, parks, etc. Not over 20 per cent of the net proceeds of the sale of lots in such town sites shall be set apart and expended for schoolhouses and other public buildings, etc. (Chap. 203, May 6, 1910.)

Cheyenne River and Standing Rock reservations, North Dakota and South Dakota.—The price to be paid by the United States for sections 16 and 36 in each township, reserved for common schools and granted to the States of North Dakota and South Dakota, is increased from $1.25 to $2.50 per acre, and the amount appropriated is increased from $225,000 to $415,000. (Chap. 40, February 17, 1910.)

UNITED STATES MILITARY ACADEMY.

Additional cadets.—Hereafter, for six years, from July 1, 1910, whenever any cadet shall have finished three years of his course, his successor may be admitted; and the corps of cadets is correspondingly increased. (Chap. 378, April 19, 1910.)

Hazing.—The superintendent shall, subject to the approval of the Secretary of War, make regulations for putting a stop to the practice of hazing, such regulations to prescribe dismissal, suspension, or other adequate punishments, and to embody a clear definition of hazing. (Chap. 378, April 19, 1910.)

Admission of a foreign student.—The Secretary of War is authorized to admit Mr. Juan Torroella y Rooney, of Cuba, to the academy. (Chap. 378, April 19, 1910.)

UNITED STATES NAVY.

Reorganization of the Naval Academy band.—The members of the band shall be enlisted in the navy and paid from "Pay of the navy." The leader shall have the pay and allowance of a second lieutenant of the Marine Corps. (Chap. 157, April 12, 1910.)

Additional professor.—The President is authorized to appoint Guy K. Calhoun as an additional professor of mathematics in the navy. (Chap. 209, May 6, 1910.)

Cutters for schools.—The law authorizing the loan of men-of-war's cutters to schools is amended so that such loans may be made to schools having 75 or more cadets in actual attendance instead of 140. (Chap. 378, June 24, 1910.)

DISTRICT OF COLUMBIA.

Parole of juvenile offenders.—Inmates of the Reform School for Girls who give evidence of reformation may be paroled. (Chap. 164, April 15, 1910.)

Branch public library.—The Commissioners of the District of Columbia are authorized to accept a donation from Andrew Carnegie of $30,000 for erecting a branch public library in Tacoma Park and to accept the donation of a site for the same. A building commission is provided. (Chap. 141, April 4, 1910.)

NEW MEXICO AND ARIZONA.

The act to enable the people of New Mexico to form a constitution and state government and be admitted into the Union, and to enable the people of Arizona to do likewise, contains the following provisions in relation to both New Mexico and Arizona:

SEC. 2. * * * Said (constitutional) convention shall provide, by an ordinance irrevocable without the consent of the United States and the people of said State * * *. Fourth. That provision shall be made for the establishment and maintenance of a system of public schools, which shall be open to all the children of said State and free from sectarian control, and that said schools shall always be conducted in English. * * *

SEC. 6. In addition to sections 16 and 36, heretofore granted to the Territory of New Mexico, sections 2 and 32 of every township in said proposed State not otherwise appropriated at the date of the passage of this act are hereby granted to the said State for the support of common schools. Selections in lieu of mineral lands or lands sold or reserved in said sections are authorized. Should any of said sections lie within existing national forests the grant of such sections shall not take effect until such lands have been restored to the public domain, but such sections shall be administered as parts of the national forests within which they are respectively situated. Each

year the Secretary of the Treasury shall pay to the State as income for its school fund its pro rata share of the gross proceeds of all national forests which include such school lands.

SEC. 7. In lieu of certain land grants for internal improvements, for agricultural colleges (act of July 2, 1862), and for university purposes, the following grants of land are made: For university purposes, 200,000 acres; * * * for schools and asylums for the deaf, dumb, and the blind, 100,000 acres; * * * for normal schools, 200,000 acres; for state charitable, penal, and reformatory institutes, 100,000 acres; for agricultural and mechanical colleges, 150,000 acres, and the national appropriation heretofore annually paid to the Territory for the agricultural and mechanical college is continued; for school of mines, 150,000 acres; for military institutes, 100,000 acres; for the payment of certain county bonds authorized and guaranteed by the United States, 1,000,000 acres: *Provided*, That so much of said land or the proceeds thereof as may not be required for the payment of said bonds and accrued interest thereon shall be added to the permanent school fund of the State, the income therefrom only to be used for the maintenance of the common schools of said State.

SEC. 8. The schools, colleges, and universities provided for in this act shall forever remain under the exclusive control of the said State, and no part of the proceeds arising from the sale or disposal of any lands granted herein for educational purposes shall be used for the support of any sectarian or denominational school, college, or university.

SEC. 9. Five per cent of the net proceeds of sales of public lands lying within the said State shall be paid to the State to be used as a permanent inviolable fund, the interest of which only shall be expended for the support of common schools within said State. (Chap. 310, June 18, 1910.)

PART II. RECENT EDUCATIONAL LEGISLATION, STATE AND TERRITORIAL.

Introduction.

The legislatures of twelve States have been in regular session during the year 1910: Georgia, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New York, Ohio, Rhode Island, South Carolina, and Virginia. In addition to these the general assembly of Illinois met in special session, and the fifth legislative assembly of Porto Rico convened on January 10 and adjourned March 10. The twenty-first biennial session of the general assembly of Vermont will begin in October, 1910, too late for its proceedings to be included in this chapter.

Common schools, compulsory school attendance, child labor, the protection of neglected and ill-treated children, and the detention and reformation of juvenile delinquents have become so intertwined in their interests and agencies that it is now practically impossible to separate the general treatment of one from the other. Attendance enforced by law is the natural sequel to the maintenance of schools from public funds, and is now considered a necessary concomitant to the public school system; the restriction of child labor is essential to compulsory attendance; the recognition of truancy

as an offense akin to crime, and the evident impracticability of bringing vicious and depraved children into contact with innocent children in the ordinary school classes involve a new relationship between the schools and custodial institutions; the interference with school attendance and with scholastic efficiency, that results from cruelty and neglect, not only gives to the teacher a direct interest in the home life of his pupil, but it is also a matter of increased concern to the community and the State which undertakes to prepare its children for useful citizenship through education. Thus it happens that officers employed originally for school work find themselves latterly in direct and vital connection with agencies which, though in a sense auxiliary to the main purpose of general instruction, are more properly social than educational in their character.

Furthermore, custodial institutions are becoming constantly more educational than penal. Until the establishment of the House of Refuge for Juvenile Delinquents in New York in 1825 instruction for convicted youthful offenders was a thing unknown in this country, and was then practiced in only a few recently established institutions in Europe. But the idea of reformation through education has developed, and its application has been extended until the detention of children for any offense is now invariably made the means by which they may be effectively instructed without injury to more innocent or more fortunate children. The juvenile courts are but the conduits through which this class of children pass from one form of compulsory education to another.

One result of these changed conditions is the coordination of efforts that relate to the welfare of children generally, and of agencies which have useful citizenship as their object. Regulation of child labor, prevention of cruelty, protection from evil influences, and reformation of delinquents are not merely related to the public-school system; all are essential parts of the same scheme of education for the good of the State.

This view has been markedly prevalent in the past few years, and in 1910 the several legislatures have been more than usually active in making laws for the welfare of children, such activity being so pronounced as to be easily the most conspicuous feature of the legislation of the year. Ten of the twelve regular sessions were marked by such laws.

Kentucky, New York, Rhode Island, and Virginia passed laws providing a penalty for neglecting, abandoning, maltreating, or exposing to crime any child under a specified age. Laws to this effect have become well-nigh universal, and the most of them have been passed within ten years. Asylums have been provided for abandoned children and punishment has been meted out to juvenile delinquents for many years, but strangely enough it has been but recently that

such laws as these have been in existence to punish the adults who were primarily responsible for the conditions.

The influence of the national child-labor committee may be clearly seen in the new laws relating to child labor. By means of its excellent organization and energetic methods, and with the cooperation of state and local child-labor committees, this association has become an influence of great power for good. Its officers have interested themselves particularly during the past year in removing the temptations of messenger boys, and have been instrumental in the passage of laws in New York, Maryland, and Ohio, restricting the employment of boys for night service. A similar law failed by a narrow margin in Georgia.

Improved messenger laws were but one of the objects of the activity of the association, however, and it is undoubtedly true that not a bill was introduced in any legislature during the year tending to the improvement of the conditions surrounding child labor to which the national child-labor committee did not render material aid.

Agriculture has also been prominent in legislative deliberations during 1910. New York, Virginia, and Mississippi made provisions for extensive systems of high schools, and Massachusetts instituted an investigation with the same end in view. Louisiana made agriculture a required study in all schools, and Maryland authorized the county school commissioners to do so in their respective counties. Maryland also authorized the establishment of county industrial schools for colored youth, in which agriculture will be taught, and placed the same subject in the course of all county high schools as an alternative with commerical studies.

High schools were the subject of important and favorable legislation in Georgia, Louisiana, Maryland, and Ohio, the enactments in Georgia and Maryland being particularly significant.

The favor accorded to the consolidation of rural schools continues, and Mississippi, Ohio, Rhode Island, South Carolina, and Virginia placed new laws upon the statute books encouraging such action.

A further tendency to smaller school boards for city districts has been shown in the reorganization of the boards of Louisville, Ky.; Newton, Mass, and certain New York cities. The new law for Louisville is along the line of recent ideas in city organization, involving a separation of pedagogical from business affairs, placing the former in charge of the superintendent and the latter in the hands of a director. Including school employees in the classified civil service is an innovation in Ohio which will attract a full share of attention.

Public playgrounds are upon a better basis in Massachusetts, Virginia, and New York in consequence of recent laws. Special com-

missions to administer them are contemplated in the first two States, in both of which the new laws are drawn with special reference to cities, while in New York the provision is intended to apply to less populous districts.

New York has made a beginning in pensioning teachers at state expense, being the third State to do so. The present provisions relate to teachers in state institutions only, and not to teachers in the public schools generally, as in Rhode Island and Maryland, but the action is significant nevertheless.[a] Important amendments to retirement laws are reported from Massachusetts (relating to Boston), Ohio, and Virginia, all of them inuring to the substantial benefit of the retiring teacher.

In relation to supervision, the new laws of New York are of the first importance. The enlarged powers of the state commissioner of education and the increased number of local superintendents will, it is expected, add much to the efficiency of the state organization.

The constant extension of the observance of "Columbus Day," October 12, as a legal holiday is an interesting fact in recent legislation. Four additional States have ordained its observance, not simply as a day for commemorative exercises in the schools, but as a public holiday for the people of the entire State, involving the closing of banks, public offices, etc.

SUMMARY OF LEGISLATION BY STATES.

GEORGIA.

In Georgia an amendment to the state constitution has been submitted to popular vote by the general assembly which marks one of the most important steps since the establishment of the public-school system of that State, namely, the elimination of the provision restricting county taxation to elementary schools. The effect of this provision has been that while the cities might maintain high schools, the counties could not, and the rural districts were wholly without the benefits of public secondary education. The unusual spectacle was presented of a State maintaining elementary schools and a university, but without a connecting link between them. With the ratification of the proposed amendment, however, this State will, like the rest, offer to its sons continuous instruction of all grades—or at least there will be no legal obstacle to the establishment of schools of all grades.[b]

[a] The Rhode Island law covers teachers in the public schools or in such other schools as are supported wholly or in part by state appropriations and are entirely managed and controlled by the State. In Maryland any person who has taught in any of the public or normal schools of the State is eligible, under specified conditions, to a pension at state expense. The essential provisions of the New York law are set forth on page 205 of this chapter.

[b] The amendment has been ratified.

Another important constitutional amendment was proposed in the legislature and was vigorously pressed, but it failed by a narrow margin to secure the required two-thirds vote. This related to compulsory education. The fact that a majority of the members of the legislature voted in favor of such a measure is in itself an indication of a marked change in the public sentiment of the State.

ILLINOIS.

Only two laws relating to education were passed at the special session of 1910, one providing that the annual library tax in cities of over 1,500 inhabitants shall not be included in the limit of taxation fixed by law, and the other granting a tract of land 950 by 2,000 feet, now under the waters of Lake Michigan, to the Field Museum of Natural History.

KENTUCKY.

In Kentucky the report of the commission constituted two years ago to revise and codify the school laws failed of adoption, but a number of noteworthy laws were enacted. The compulsory education acts relating to cities were strengthened, and the period of required attendance was extended so as to cover children between 14 and 16 years of age who have not received an employment certificate under the child-labor laws. The last-named laws were also amended to include employment of children between 14 and 16 in business offices, telegraph offices, hotels, etc., and the work of issuing employment certificates was placed in the hands of school officers.

The most extensive change in school organization which was effected by this legislature related to the system of text-book selection. The state text-book commission was abolished and a commission was constituted in each county to select the books to be used in their respective counties and to handle the details of contracts, distribution, and the like in pursuance of the law. The new system, however, is not wholly a local system, for the books must be selected from lists authorized by the state board of education, and effective supervision by the state superintendent is apparently provided.

The Kentucky library commission, also created by the last legislature, should have a beneficent influence in the State. It is charged with the duty of assisting and advising school and public libraries, and may operate traveling libraries, conduct courses of library instruction, and hold librarians' institutes.

A new law relating to the board of education of the city of Louisville was passed, involving a radical change in the constitution of that body and bringing it in line with recent tendencies in city school organization. The number of members is reduced from sixteen to five, all being elected from the city at large instead of from the several wards. The superintendent is to have control, under direction of

the board, of matters relating to instruction, nominates teachers and supervisors, recommends text-books, and the like. A business director is charged with the care of the property of the board and has supervision of the material side of its work. The finances, records, etc., are handled by a secretary and treasurer.

The line of demarcation between the schools for the two races is drawn more sharply by the provision of a visitor for the colored schools of each subdistrict. Colored voters only may vote for this officer, and his duties in relation to the schools for negroes are identical with those of the subdistrict trustee in relation to the schools for white children.

LOUISIANA.

The most important legislation in Louisiana during the last year was, like that in Georgia, related to the state constitution, and its importance in emancipating the school authorities from the control of general officers and in supplying the former with a uniform and reliable income can not be overestimated. The police juries, so called, of the several parishes are the officers who had charge of the funds and upon whom the local boards of education were obliged to depend. After the ratification of one of the two proposed constitutional amendments, however, these juries must annually levy a tax of at least 3 mills on the dollar and turn over the proceeds to the proper parish school boards. If the other amendment is adopted, school districts will be upon a plane of equality with municipal corporations, drainage districts, and the like in all matters relating to the issuance of bonds and the levying of special taxes, within fixed limits, and school officers will be entirely independent in their financial affairs.[a]

Louisiana, too, has altered her system of text-book selection and has constituted a state text-book committee to relieve the state board of education of the duty of examining books. Contracts now cover six years instead of four, and strict uniformity throughout the State is required, whereas concessions to local demands were permitted under the previous law.

Monthly teachers' institutes in every parish are required by a new law, having been held formerly at the option of the parish superintendent.

The study of agriculture, which had already found a place in the course prescribed by the state board of education, is now required by law in all elementary and secondary schools.

MARYLAND.

The most significant action of the general assembly of 1910 in respect to education was the passage of the new high-school law. Previously the establishment of high schools was left largely to the

[a] Both these amendments have been ratified.

initiative of the districts and the local administration of such district high schools was in the hands of boards of high-school commissioners. Now, however, the county board of school commissioners may establish high schools whenever they consider it advisable to do so, subject to the approval of the state board of education. All schools so established and all public high schools now in operation will be under the direct control of the county school commissioners.

High schools are classified in two groups, those of the first including schools with an enrollment of not less than 80 pupils, employing at least four regular teachers, of which the principal shall receive a salary of $1,200 a year or more and each assistant shall receive $500 a year or more; such schools must maintain a four-year course of study, with manual-training and domestic-science courses, and also a commercial or an agricultural course. To be classed in the second group a high school must have not less than 35 pupils enrolled and not less than two regular teachers, who shall receive salaries of not less than $1,000 and $500 for the principal and assistants, respectively; such schools must offer a three-year course of instruction, with provision for a manual training or an agricultural or a commercial course. Special teachers of manual training, etc., may not be included in the regular teachers mentioned above. The courses of study are prescribed by the state board of education, and regular inspection by the state superintendent or his assistants is provided. State aid is granted, based on the cost of instruction, the maximum allowed to any school being fixed at $2,500 per annum. Upon the demand of the county school commissioners, a separate county tax for high schools shall be levied.

Colored industrial schools.—The school commissioners of each county are empowered to establish a school for colored youth, in which instruction shall be given daily in domestic science and industrial arts. A state subsidy of $1,500 per annum is granted to each of such schools, about one-half that amount to be used to employ a colored school supervisor, whose duty it shall be to cause instruction of an industrial character to be given daily in every colored school of the county. Inspection by the state superintendent or his assistants is contemplated.

Normal schools.—A commission was constituted to investigate and make preparations for a change in the location of the State Normal School, now in Baltimore. The State Colored Normal School has been removed from Baltimore to Bowie.

Teachers' salaries.—A law enacted in 1904 fixed the minimum salary of white teachers at $300 per school year. To this was added in 1910 the provision that a white teacher who holds a second-grade certificate and has taught eight years or more, or who holds a first-grade certificate and has taught three years shall receive not less than $350

annually; a holder of a first-grade certificate who has taught five years shall receive not less than $400, which shall be increased to not less than $450 after three additional years of service.

Libraries.—Comprehensive library legislation was also a feature of the work of the session of 1910. The Maryland plan of government emphasizes the county organization in all things; consequently, the new library system differs from that usually seen in library organization in that the control, and as a rule the initiative, is in the hands of county rather than local officers.

Any board of county commissioners may establish a free public library and reading room at the county seat, with branches at such places throughout the county as may be desirable. They may levy an annual tax for the purpose not exceeding 5 cents on each $100 of taxable property.

When requested to do so by the majority of voters in any election district, the board of county commissioners shall establish and control a public library in the said district, and may levy therefor a tax of 7 cents on each $100.

The legislative authority of any municipality may likewise establish and maintain a public library and reading room and may levy a tax therefor not to exceed 7 cents on each $100.

Each library established under this act shall be controlled and administered by a board of nine directors, appointed by the county commissioners or legislative authority by which the said library is established.

The state public library commission may expend not over $100 for books for any library established under the foregoing provisions.

MASSACHUSETTS.

The general court of Massachusetts at its session of 1910 enacted many laws relating to education, and although none of its acts appear to be of the first importance, several of them are worthy of more than passing attention.

The child-labor laws were amended by the following provisions: First, a penalty is fixed for forging birth certificates for fraudulent use in securing school and employment certificates; second, every child between 14 and 16 applying for an employment certificate is examined by a school physician, and the certificate is refused if the child is not physically able to do the work he or she intends to do; third, a penalty is provided for permitting a minor to violate the regulations of any town relative to the trade of bootblacking or the sale of certain merchandise; fourth, the employment of minors under 18 is forbidden in any trade or occupation which the state board of health determines to be dangerous, extending a prohibition relating to the manufacture of acids only. A "resolve" was adopted request-

ing the Congress of the United States to enact national and uniform laws regulating the employment of children.

In behalf of the conservation of the public health, an appropriation was made for the formation of small traveling "school tuberculosis exhibits" for the purposes of instruction in hygiene and the prevention of tuberculosis; the board of health was authorized to prohibit the the use of common drinking cups in public places; previous laws relating to public playgrounds were amended, more clearly defining the purposes of such playgrounds and methods of controlling and conducting the same.

"Thrift" was added to the list of subjects required to be taught in public schools, and the conditions under which pupils may be excused from military drill were so amended as to restrict the granting of such excuses.

The teachers' pension law relating to the city of Boston was amended, removing the former limitation by which the maximum pension was fixed at $180 per annum, and stipulating that no pension after thirty years' service shall be less than $312 nor more than $600. This money is derived from public taxation, and is not dependent upon or connected with the voluntary association of the teachers of the city which has as its object the payment of annuities to retired teachers.

In relation to instruction in agriculture, Massachusetts is proceeding in her characteristic way in preparing for a uniform system of schools throughout the Commonwealth, the first step to be taken being an investigation by the state board of education. The report of that body, with its recommendations, is directed to be made to the next general court. A similar report is required upon the desirability of establishing a farm school in the city of Worcester. The appropriations for the Massachusetts Agricultural College for 1910 include provision for winter courses, summer school, correspondence courses, conferences on rural progress, and education trains, $15,000 being set aside for such purposes.

The establishment of Jackson College for Women and the incorporation of the trustees of Massachusetts College are worthy of attention. The former institution will occupy a relation to Tufts College which is similar to the relation of Radcliffe College to Harvard University and of Barnard College to Columbia University.

Massachusetts College proposes to adopt methods of higher education which are unique. It is not to be a residential institution of the ordinary type. It is proposed to utilize the physical equipment and, to a large extent, the teaching force of local educational institutions, particularly public schools and normal schools, thus carrying higher education with personal instruction at low cost to every considerable community in the State. The law permits the institution to grant

degrees, stipulating that a committee of five persons, prominently identified with higher education but not connected with Massachusetts College, shall approve the requirements for admission and the number and quality of the courses required for degrees, and shall by examination or otherwise determine the fitness of all candidates for degrees in accordance with current college standards. This committee must be approved annually by the state board of education. The trustees named in the act are Edmund D. Barbour, George H. Martin, William Orr, Paul H. Hanus, Thomas A. Jaggar, jr., Stratton D. Brooks, and Courtenay Crocker.

MISSISSIPPI.

The most striking feature of the educational legislation in Mississippi during the last session is the prominence given to agriculture. No less than six bills upon this subject became laws, namely, to authorize the establishment of two agricultural high schools in each county; to appropriate $30,000 in aid of such schools; to transfer the property of agricultural high schools organized under the act of 1908, which had been declared unconstitutional, to schools organized under the above-mentioned act; to authorize the trustees of the Mississippi Agricultural and Mechanical College to establish a permanent branch agricultural experiment station in the eastern part of the State; to authorize the said trustees to establish a similar experiment station in the southwest part of the State; to authorize the board of supervisors of any county to establish a county agricultural experiment station.

The establishment of the Mississippi Normal College was provided for, the studies of which shall be confined strictly to those necessary for the professional training of teachers. Free tuition is offered only to those students who shall agree in writing to teach not less than three years in the public schools of the State, two years of which shall be in the rural schools of the county in which the student resides. The location of the college is not fixed by law, but the trustees are authorized to locate it in the community which offers the best inducements. Other laws authorize counties and municipalities to issue bonds to enable them to bid for the location of the college.

The plan of centralizing the control of higher institutions which has been adopted in several other States has been put in operation in Mississippi, a law to that effect having been approved April 14, 1910. A single board of seven trustees will in future administer the affairs of the University of Mississippi, the Mississippi Agricultural and Mechanical College, the Industrial Institute and College, and the Alcorn Agricultural and Mechanical College. One trustee shall

be a practical farmer, one a practicing lawyer, and one a practical builder or architect or factory man.

Mississippi follows the example of those States which are striving to give the advantages of graded schools to children in the more sparsely settled districts by authorizing school trustees to provide means of transportation to consolidated schools. When two or three schools are consolidated an amount equal to the salary of one teacher may be expended from the school fund for transportation, and when four schools are consolidated the expense for transportation shall not exceed the salaries of two teachers.

NEW JERSEY.

The educational legislation of New Jersey during 1910 was all of a supplementary or amendatory character—useful, and in some cases even apparently essential, but not of unusual significance in any instance.

Cities may hereafter issue bonds to fund their floating indebtedness incurred for the maintenance of schools, and members of city boards of education, when appointed by the mayor, may be chosen without regard to their place of residence. Minor changes were made in the laws relating to bonds and special taxes in school districts.

An appropriation of $10,000 annually was made to further the study, treatment, and prevention of tuberculosis. The state board of health is authorized to use that sum in the publication and distribution of literature, the maintenance of a "state tuberculosis exhibit," and the employment of special tuberculosis inspectors. Three bills were passed which related to institutions for defective persons, one providing that admissions shall be authorized only by the commissioner of charities and corrections, another providing for the parole of inmates, and the third repealed the last restriction as to the age of persons admitted.

Three new laws have as their purpose the better conduct of the financial affairs of religious associations, educational corporations, and the like. Under certain conditions they may sell lands or property devised to them for specific purposes and use the proceeds for other purposes.

The juvenile courts and the treatment of dependent and delinquent children were also the subjects of legislation, and the transfer of all complaints against juvenile defendants to the juvenile courts is now required in counties in which a house of detention has been established, whereas the former law provided merely that "it shall be lawful" to so transfer such cases. Overnight commitments and other detentions of juvenile defendants shall be in the house of

detention, when such is available, and not in any police station or county jail. Where the number of commitments of delinquent children is not sufficient in any county to justify the maintenance of a house of detention, the proper officers of that county may contract with an incorporated institution elsewhere in the State to care for its committed delinquents, and may buy land and erect buildings near the said institution to accommodate such children. Juvenile courts may commit delinquent children to the guardianship of the state board of children's guardians, ordering the parents of such children, if the circumstances justify such order, to pay to the board an amount sufficient for their maintenance and clothing.

The factory laws were amended so as to prohibit the employment of any minor under 16 more than ten hours a day or fifty-five hours a week; between July 4, 1910, and July 4, 1911, no minor under 15 shall be employed between 6 p. m. and 6 a. m.; after July 4, 1911, no minor under 16 shall be so employed. It is understood that this law has especial reference to the glass factories of the State in which night work has been common.

NEW YORK.

The year 1910 has been distinguished in New York for the number of important measures adopted. The education law was revised, and while none of the changes made were extensive a great many important differences appear, especially in relation to the powers of the commissioner of education, all of them tending to increase the dignity and power of that officer. He is no longer required to act as secretary to the board of regents, a position which implies a certain degree of subordination; on the contrary, he is empowered equally with the chancellor of the university to call at any time a special meeting of the regents and to fix the time and place therefor; his supervision is extended over colleges, technical, and professional schools, as well as over all other institutions of the university; his authority over the school systems of cities is emphasized; he is authorized in his discretion to suspend the laws relating to the qualifications of teachers and to authorize the employment and payment of teachers who do not possess the prescribed qualifications; he is directed to prescribe the courses of study of state normal schools; the education of Indians is placed more directly under his control; of his own motion he may institute proceedings, render decisions, and make and enforce orders in relation to any official act of any school officer, authority, or meeting, such proceedings to be final and conclusive and not subject to question or review in any place or court whatever.

These powers were all conferred in the revision of 1910, and are additional to the large powers which he already possessed.

Board of regents.—The authority of the regents was also strengthened by the same act, and they were specifically given legislative powers concerning the educational system of the State. This appears to be, however, largely a difference of form, for they were previously permitted to make rules and regulations and to enforce them, and it is not likely that their "enactments" will differ greatly from their "rules" except in phraseology. A provision in the new law forbidding the incorporation of educational and like institutions under any general law other than that governing the regents is an important one, inasmuch as it closes a breach in the wall through which unworthy or ill-equipped institutions or corporations might have entered the educational field.

Agriculture.—In relation to instruction in agriculture effective provision is made in the new code. Cities and union free schools may establish high schools of agriculture, mechanic arts, and home making, and the State will aid such institutions by contributing $500 per annum for the first teacher, and $200 per annum for each additional teacher. The State itself had already established three well-equipped secondary schools of this character, and the revised law authorizes them to offer courses for teachers in agriculture, mechanic arts, and home making, and to issue to graduates of such courses licenses to teach those subjects in the common schools of the State.

District superintendent.—The new code became a law April 22, 1910, but its enactment did not by any means put an end to educational legislation during the session, which extended for several weeks after that date.

By far the most important of the later acts was that which abolished the office of school commissioner throughout the State and created instead the office of district superintendent of schools. By the terms of this act the territory of the State outside of cities and villages of more than 5,000 inhabitants which employ superintendents is to be divided into 207 supervisory districts, from one to eight being assigned to each county. The division between the counties appears to be arbitrary but with some reference to population and area. The method of selecting the superintendent of each of these districts is unique: Two school "directors" are chosen at a general election for each town and the directors of the several towns composing a supervisory district elect the superintendent for that district. The directors perform no other function in connection with the schools, and since their term of office is five years and that of the superintendent is the same, it follows that, except in the event

of a vacancy, each director is called upon to act officially but once during his incumbency of the office. This arrangement is designed to remove the selection of district superintendents as far as possible from political control, and is supposed to be analogous to the plan in operation in cities in which boards of education elect the superintendents. The essential difference is, however, that the city boards bear practically the entire responsibility for the schools, are presumably in constant touch with their operations, and may be supposed to know from personal experience the requirements of the position which they are called upon to fill; on the other hand, the "directors" provided by this law form to all intents a body foreign to the school system and without responsibility in it except to cast a vote once in five years. The qualifications demanded of a district superintendent are such, however, that it would not be possible to go far wrong with any method of selection, for he must possess or be entitled to receive a certificate authorizing him to teach in any of the public schools of the State and must pass an examination prescribed by the commissioner of education on the supervision of courses of study in agriculture and teaching the same.

The State will pay to each district superintendent a salary of $1,200 per annum, with an allowance of $300 a year for official expenses. Towns composing a supervisory district may increase the salary of the superintendent by taxation.

The powers of the superintendents are somewhat greater than were those of the school commissioners, and the restrictions relating to extraneous business and the provisions for rigid supervision by the commissioner of education are such that nothing seems to have been omitted that can be placed in a law to insure earnest and effective service.

This law marks a notable advance in rural school supervision, and is expected to add largely to the efficiency of New York's machinery for educational administration.

With this increased number of superintendents, New York becomes one of the foremost States in the Union as regards general provision for the supervision of schools.[a]

[a] The majority of the States have county superintendents. West Virginia has 29 superintendents of magisterial districts in addition to the county superintendents. Ohio has legal provision for district or township superintendents, but only 114 out of 1,327 townships employed such officers in 1909. The system of supervision in the other New England States is similar to that of Massachusetts inasmuch as each superintendent acts for a single town (or township) or for a union of two or more towns. Professional supervision is required by state law in Rhode Island, Maine, and Vermont as in Massachusetts, but it has not yet been possible for all towns of Vermont or of Maine to comply with the law; 40 per cent of the enrollment in Maine is in schools not under expert supervision. All the New England States contribute to the salaries of superintendents. Nevada has abolished the office of county superintendent (of which there were 15) and 5 deputy state superintendents have been constituted in their stead; their salaries ($2,000 each) and traveling expenses are paid by the State. Virginia has also abolished the county superintendency and now has "division superintendents" paid in part by the State and in part by the several localities; the "divisions" embrace usually a county, never less, but sometimes more than one; superintendents of cities also are "division superintendents."

The following comparison of New York and Massachusetts is of interest:

State.	Land area.	Number of counties.	Number of teachers.	Superintendents and assistants.	Average territory of each superintendent.	Average number of teachers to each superintendent.
	Sq. miles.				*Sq. miles.*	
Massachusetts	8,040	14	15,093	189	42.5	80
New York	47,620	61	41,231	[a] 331	143.9	125

[a] The number of superintendents in New York is composed thus: District superintendents, 207; city superintendents, 48; superintendents in villages having more than 5,000 inhabitants, 37; assistant superintendents, 39; total, 331.

Retirement of teachers.—A number of laws were enacted establishing retirement funds in certain localities, which funds are to be derived in part from deductions from teachers' salaries and in part from appropriations of public funds; and an amendment was made to the education law providing for the retirement of teachers in state institutions. It provides:

Every person who, for a period of ten years immediately preceding, has been employed by the State as a teacher in any college, school, or institution maintained and supported by the State and who shall have been engaged in teaching in some college, university, school, academy, or institution, or in the public schools of this State or elsewhere during a period aggregating thirty years, and has reached the age of seventy years must, at his request, or may on the order of the commissioner of education, be retired from such employment. * * * Every person who shall be retired under the provisions of this article shall be entitled to receive from the State one-half the salary which such person was receiving at the date of such retirement, not to exceed, however, in the case of a supervising official or principal, one thousand dollars, and in the case of a teacher, seven hundred and fifty dollars. In no case shall the payment to any person retired hereunder be less than the sum of three hundred dollars.

This law was intended primarily for the benefit of teachers in the state normal schools, but was drafted so as to include teachers in all state institutions. Indeed, it might be easily possible to construe it to cover public school teachers as well, and but very slight changes would be required to place New York with Maryland and Rhode Island among the States which pension teachers wholly at state expense.

Date of school-district meetings.—A measure of considerable value in administration was that which changed the date of the annual meeting of each school district from the first Tuesday in August to the first Tuesday in May. Districts may now vote appropriations for repairs and improvements in time for the work to be done during the summer vacation, a decidedly more advantageous arrangement than the former one.

OHIO.

The seventy-eighth general assembly of the State of Ohio has made a record for the extent and value of its services for education. The actual enactment of laws began with the adoption of the new

General Code, for only a single minor bill other than appropriation bills had passed before that time.

The labors of the codifying commission had been continuous for over three years, and were completed with the adoption of their report and the enactment of the new code on February 15, 1910. This code in itself did not, presumably, contain new legislation, and like other similar revisions was simply a more orderly arrangement of the laws in force. But its adoption was followed immediately by extensive amendments to the substance of the laws; not less than 638 sections were amended or repealed within three months. The legislators were plainly in a mental state which was favorable to changes, and it was but natural that those interested in school legislation should be able to secure the passage of measures that had been sought in vain for years, and to bring about a long series of desirable amendments for the improvement of the system.

New normal schools.—Just as the session was about to close, a bill was passed creating two additional normal schools, one in northeastern Ohio and one in northwestern Ohio. A commission was constituted to select locations for the schools and to secure options for the purchase of land if necessary. This commission will complete its duties by making a report to the governor. As soon as the general assembly makes appropriation for the purchase of such sites and the erection of the necessary buildings the governor will appoint a board of five trustees for each school. The trustees in turn will select the presidents, and the work of building and organization will proceed. In planning the buildings, ample provision must be made for a well-equipped department for the preparation of teachers in the subject of agriculture.

Compulsory education.—The sections of the new code relating to school attendance and employment certificates were amended and greatly strengthened, and certain features were introduced which will undoubtedly commend themselves to framers of similar laws in other States.

The time of required attendance of children between 8 and 14 years of age was increased from 24 to 28 weeks, and the simple requirement that children between 14 and 16 years of age should be able to read and write the English language in order to secure employment certificates was so amended that such certificates may now be issued only to children who have passed a satisfactory fifth-grade test in reading, spelling, writing, English, grammar, geography, and arithmetic. Children residing in other States who desire to work in Ohio must undergo the same tests. Employment certificates, or permits, are not to be made general, but in each case with reference to a particular employer, who must first agree in writing to employ the child legally, and to return the certificate to the proper

officer when the child leaves his employment, stating the reasons therefor. If application is made for an employment certificate for a child who is undeveloped, or who appears to be not in sound health, such certificate may not be issued without a certificate from the board of health showing that the child is able to do the intended work.

All children between 14 and 16 years of age who are not legally employed are required to attend school the full time; and such children who have not completed the eighth elementary grade may be required to continue their schooling in part-time schools until they are 16 years of age.

Hereafter truant officers will, in effect, act as employment agents for children, for they are required to keep a list of children between 14 and 16 years of age who desire employment and are entitled to certificates, and employers desiring help shall have free access to such lists. Truant officers shall cooperate with the department of workshops and factories in enforcing the child-labor laws.

When a child in school has reached his twelfth year and has not completed the fourth-grade work, principals and teachers may cause such child to devote his entire time to the studies required for an employment certificate, with such manual training as may be practicable.

Business affairs of boards of education.—A number of provisions were added to the laws governing school boards which will tend to more conservative business management. No obligation for the payment of money may be incurred unless the secretary of the board or the auditor, as the case may be, shall certify that money is available in the proper fund to meet the expense. The manner of making payments from school funds and the proceedings of boards of education in relation to the same, have been more clearly prescribed; bonds of city school districts have been better safeguarded, and deposits of school funds in banks have been better regulated.

Civil service rules for school employees.—A radical change has been made in the manner of selecting employees of boards of education of cities, and now, with the exception of teachers, a few officers specifically enumerated, and unskilled laborers temporarily employed, all appointments are made after competitive public examination, conducted by the local civil service commissioners. Janitors, engineers, truant officers (excepting the chief), clerks, and the like are all included in the classified service, and the "merit system" is extended to cover them.

Teachers' certificates and pensions.—Important changes are made in the certification of teachers, especially in relation to graduates of approved normal schools and higher institutions. The requirements for professional certificates were also amended. The pension law

was changed in three important particulars, all in favor of the teacher, namely, reducing the time which an applicant for a pension must have taught in the district in which he applies for a pension, increasing the rate of the pension from $10 to $12.50 per annum for each year of service, and increasing the maximum from $300 to $450 a year.

Consolidation of schools and transportation of pupils.—The question of centralization may be submitted to the voters either at a general election or at a special election called for the purpose. The question of providing transportation in special districts and in village districts is left wholly to the discretion of the respective boards of education. In no event shall any board of education be required to furnish transportation to children living within a mile of the schoolhouse, but no discrimination shall be made between different portions of a district or between pupils under similar conditions.

High schools.—The Boxwell-Patterson laws have been amended to require boards of education which maintain third grade high schools (with two-year courses) to pay the tuition of graduates of such schools in other high schools for two additional years; and boards maintaining second grade high schools (with three-year courses) shall pay the tuition of their graduates in other high schools for one additional year. Pupils living more than 4 miles from the high school which they are entitled to attend may attend a nearer high school if such there be, the board of education paying for their tuition or else providing transportation to their own school.

The evident effect of this law will be to cause many of the second and third grade high schools to develop into schools of the first grade, offering standard four-year courses, for it is plain that boards will frequently, if not usually, find it to their advantage to retain their pupils in their own schools rather than to pay tuition elsewhere.

There is a saving clause in the new law which relieves boards of education of the payment of tuition as provided, when a local tax levy of 12 mills does not produce any more money than is necessary for the support of the schools.

Libraries.—Township districts, as well as city, village, and special districts may now levy taxes for the support of public libraries. The powers of public library boards in relation to the purchase, condemnation, and sale of lands is increased, and the limit of taxation is raised from 1 to 1½ mills.

Agriculture.—In authorizing the establishment of agricultural experiment stations by the counties, in favoring the extension work of the Ohio State University, and in providing for training of teachers of agriculture and domestic science in the two new normal schools, the legislature of 1910 aligned Ohio with other progressive States that are taking effective steps in forwarding education in agriculture.

Increased appropriations.—The amount appropriated for schools was increased from $2,330,000 to $2,470,000, to be distributed at the rate of $2 (instead of $1.85, as in 1909) per capita of school population. The appropriation in aid of weak districts was $50,000, an increase of $5,000 over the previous year.

Welfare of children.—Boys under 18 years of age may not be employed in messenger service between 9 p. m. and 6 a. m. Children of persons confined in a workhouse must be maintained by the county from which the parent was sentenced. The penalty of kidnaping a child under 12 years of age for the purpose of extortion was increased to life imprisonment. A committee was appointed to investigate the conditions at the Girls' Industrial Home with a view to the better classification of the inmates and the separation of the more vicious and depraved from the younger and more innocent girls.

PORTO RICO.

The legislative assembly of Porto Rico enacted but few laws relating to education, and those were of scarcely more than local importance. The appropriation of $20,000 for the development of the University of Porto Rico and the provision for fifteen days' leave of absence with pay for teachers in cases of necessity are worthy of mention.

RHODE ISLAND.

Of one hundred and fourteen new laws passed at the January session of 1910, only nine are of interest to students of education, and only three in addition to the general appropriation bill relate directly to schools, namely, (1) authorizing the commissioner of public schools to appoint an assistant commissioner; (2) appropriating $100 annually to each graded school for every ungraded school which has been consolidated with it, the said amount to be used for the support of the school or for the transportation of pupils to it; and (3) appropriating to the state normal school all moneys received by the said school for tuition.

The "factory inspection" law was amended by omitting a clause which allowed mercantile establishments to employ children under 16 after 8 p. m. on Saturdays and on the four days preceding Christmas. The "age and employment certificate" prescribed now contains a clause to the effect that the child named is able to read at sight and write legibly sentences in the English language. The authority of factory inspectors is enlarged and their number is increased by two.

The abandonment, neglect, or maltreatment of any child under 17 is made a misdemeanor, punishable by fine or imprisonment, or both. The guilty person shall forfeit any right he may have had to the custody of such child.

SOUTH CAROLINA.

A revision of the school law of the State is contemplated in the joint resolution providing a commission for the purpose, consisting of the state superintendent of education, the inspector of high schools, the president of one of the state institutions for higher education, one person familiar with common school systems, and one person learned in the law. The governor will name the members not specifically designated by their titles.

The policy inaugurated in the previous year of making a direct appropriation in aid of weak districts to enable them to extend their school terms proved to be successful as a stimulus to school development, and the legislature of 1910 increased the amount appropriated for the purpose from $20,000 to $60,000 annually. The motive for such legislation may be found in the fact that in 1909 the average duration of the schools for white children in country districts was only 23.36 weeks, and for colored children only 13.5 weeks. The law provides that not over $100 shall be allotted to any one school in a year, and no school maintained more than one hundred days from regular funds, and no school district which does not levy a special tax of at least 2 mills shall receive aid from this fund.

Another special appropriation of importance was that of $20,000 to aid in the construction of school buildings. Of this, the state board of education is authorized to contribute $50 to every $100 raised for the same purpose locally, but no school may receive more than $300. In case of consolidation of two or more schools, $50 additional may be granted, and in the division of the fund consolidated schools shall be given preference.

The favor in which the idea of consolidation is held is shown not only in the above provision, but also in the clause in the act relating to county aid for new buildings, in which a similar bonus of $50 is given to consolidated schools.

The 3-mill state tax regularly levied in obedience to section 6, Article II, of the constitution supplies the greater part of the school revenue of the State, and though special district taxes are authorized, only about one-third of the 1,833 districts of the State levied such taxes in 1909. Four mills was previously the maximum allowed for this tax, and the proceeds were often insufficient. This limit was raised, therefore, to 8 mills by the legislature of 1910.

VIRGINIA.

Agricultural high schools.—Virginia in common with other Southern States is moving earnestly in the matter of agricultural education. In 1908 a clause was placed in the general appropriation bill setting aside a sum not to exceed $20,000 for the establishment of departments of

agriculture, domestic economy, and manual training in at least one high school in each congressional district of the State. The legislature of 1910 pursued the subject still further and passed an act appropriating $30,000 a year for such high schools, with an additional sum of $25,000 to be used for providing buildings and equipment.

The terms of this law in relation to studies, methods, and equipment are of interest. Not less than 5 acres of land shall be provided for each school for purposes of demonstration in agricultural science, and as far as practicable the cultivation of the land shall be done by the students themselves. Suitable buildings shall be provided and equipped as workshops for manual training and such forms of shop work as are applicable to rural life. Female students shall be instructed in the domestic arts and sciences, and may take also the agricultural course if they so desire. The usual academic instruction shall be given, but at least one-fourth the school time of students shall be devoted to agriculture, domestic arts and sciences, and manual training.

The agricultural high schools established under this act may be used as centers for directing the demonstration farm work and other extension work throughout the several congressional districts, and the sum of $10,000 was appropriated in furtherance of such work.

Coordination of extension work in agriculture.—On the next day after the passage of the above law, another act was adopted with the purpose of systematizing and coordinating all the educational work of the State in relation to agriculture outside the established institutions.

A united agricultural board was constituted, consisting of 11 members, namely, the governor, the state superintendent of public instruction, the commissioner of agriculture, 6 members representing the several agricultural boards, institutions, and experiment stations of the State, and 2 officers of the United States Department of Agriculture.

The following assignment of work is prescribed, with the stipulation that the board may, in its discretion, adopt other methods and agencies and may reassign any of the work described: To the Virginia College of Agriculture and Polytechnic Institute, adult demonstration work, movable schools and like agencies, $5,000 annually being appropriated for such work; to the Virginia Agricultural Experiment Station, the establishment and direction of local or district experiment stations, for which $5,000 annually is appropriated; to the state board of education, experimental and demonstration work in public schools, and for this purpose the said board of education is directed to set apart $5,000 annually from school funds; to the commissioner and state board of agriculture, the direction and management of farmers' institutes, for which $5,000 is annually appropriated. In addition to these provisions the board of supervisors of the several counties are authorized

to appropriate from county funds, for experimental and demonstration work, not over $20 for each 1,000 inhabitants.

Retirement of school teachers.—A bill to provide a general retirement fund for the public-school teachers of the State became a law March 14, 1908. It proved to be defective, principally in regard to its method of collecting and bringing into the state treasury the amounts deducted from teachers' salaries. A new bill was accordingly drafted and passed March 14, 1910, and contains as its novel feature a provision directing the state board of education to deduct for the retirement fund from the annual apportionment of state moneys to each county, city, and town, an amount equal to 1 per cent of the total amount of teachers' salaries of the said county, city, or town during the previous year. Differences between the amounts actually so deducted and the amounts that would have been deducted if the salaries of the proper year had been the basis, shall be adjusted at the next apportionment. The pension paid will be equal to one-half the average salary of the pensioner during his last five years of service, the maximum being $500 for those whose salaries had been over $1,000, and $400 for those who had received less than $1,000. From the first year's pension there shall be deducted, for the permanent endowment of the pension fund, an amount equal to 30 per cent of the pensioner's average annual salary for the last five years, less the amounts he has contributed to the pension fund. Any teacher who is incapacitated after twenty years' service, and any teacher who desires to retire after having served thirty years and has reached the age of 50 if a woman, or 58 if a man, shall be retired. The State contributes $5,000 annually to the fund.

Welfare of children.—Solicitude for the welfare of children has marked the legislation of well-nigh all the States in the last few years, and Virginia is no exception to the rule. Her contribution during 1910 to the aggregate of law upon the subject consists of the following:

1. An act making it a misdemeanor for parents or guardians to neglect or refuse to support their children under 14 years of age, or to subject children under 17 to vicious or immoral influences, to encourage any child to commit a misdemeanor, or for any person to send a child under 17 to any house of prostitution or to any saloon, gambling place, pool room, or bucket shop, knowing them to be such. The last-named provision affects particularly the messenger and telegraph companies.

2. An act providing that vicious or neglected children in the custody of institutions may not be "placed out" as apprentices in violation of any law against child labor.

3. An act providing for the detention or confinement of minors under 17 years of age for certain offenses. Such a minor charged for the first time with any felony except rape, or with any petty crime or

misdemeanor, or any child under 17 who is vicious, persistently truant, incorrigible, destitute, or neglected, may be committed to the care and custody of any suitable society or institution during the period of his or her minority. Such juvenile offenders shall not be deemed criminals or treated as such. Except in aggravated cases no such child shall be committed to a jail, workhouse, police station, or penitentiary. Children committed under this act may be released by the court under the care of a probation officer. All hearings or trials of children described in this act shall be in private.

Public playgrounds.—Any city or town of more than 10,000 inhabitants may provide and maintain at least one public playground for each race, and at least one additional palyground for each race for every additional 20,000 of its population.

The acceptance of this act, the amounts to be appropriated, and the like shall depend upon the action of the common council of each city, and if playgrounds are established they shall be under the control of a board of playground commissioners to be appointed by the mayor. Money may be raised by special taxation or by the sale of bonds for the purchase, equipment, and maintenance of such playgrounds.

Consolidation of schools.—Few States have failed to favor by legislative action the consolidation of small rural schools, and the advantages of such consolidation are universally admitted. In the general appropriation bill approved May 16, 1910, the Virginia legislature permits the state board of education to use $25,000 for the encouragement and maintenance of rural graded schools of two, three, and four rooms, the amount allotted to any one school to be limited to $200.

Educational commission.—The commission constituted in 1908 to devise a stable method for the maintenance, management, and expansion of educational institutions was continued, and was directed to report its recommendations to the general assembly at its next session.

CATALOGUE OF EDUCATIONAL LAWS.

1. EDUCATIONAL COMMISSIONS.

South Carolina.—Provides for a commission to revise the school law (No. 585). (See also page 210.)

Virginia.—Continues the commission constituted in 1908 (chap. 221). (See also paragraph above.)

2. STATE BOARDS OF EDUCATION.

New York.—Legislative power granted to regents (chap. 140, sec. 46). Examinations safeguarded (chap. 140, sec. 67). (See also page 203.)

3. STATE COMMISSIONER OF EDUCATION.

Massachusetts.—Allowance for traveling expenses to be fixed by annual appropriations (chap. 282).

New York.—Extension of powers and duties (chap. 140). (See also page 202.)

Rhode Island.—May appoint assistant commissioner (chap. 567).

4. COUNTY SCHOOL BOARDS.

Louisiana.—Proposed constitutional amendment including school districts with corporations empowered to levy special taxes and issue bonds (act No. 197). Act in effect if said amendment is ratified, effectuating the same (act No. 256). (See also page 196.)

Maryland.—Authorizes county school commissioners to appoint grade supervisors (chap. 147).

South Carolina.—Time for which members of certain county boards may be paid for examining teachers (No. 397).

5. COUNTY SCHOOL SUPERINTENDENTS.

Georgia.—Authorizes county boards of education to fill vacancies (August 15, 1910).

Louisiana.—Parish school boards shall elect superintendents in July, 1912 (act No. 117).

South Carolina.—Fixing term of superintendents of certain counties (acts Nos. 363, 364, 365, 366, 367, 369).

Virginia.—Minimum salary of division superintendent from state funds to be $200 (chap. 98).

6. DISTRICT SUPERINTENDENTS.

New York.—Abolishes office of school commissioner and establishes that of district superintendent (chap. 607). (See also page 203.)

7. SCHOOL DISTRICTS IN TWO OR MORE COUNTIES.

Georgia.—Manner of forming such districts (August 15, 1910).

South Carolina.—Dissolution accomplished in same manner as formation (No. 358).

8. CONSOLIDATION OF SCHOOLS AND TRANSPORTATION OF PUPILS.

Massachusetts.—Pupils of industrial schools shall be carried at half rate to and from school (chap. 567).

Mississippi.—When two or more schools are consolidated, transportation of pupils may be provided (chap. 124). (See also page 200.)

Ohio.—In township districts the question of centralization may be submitted to the electors at either a general or a special election (S. B. No. 182). Transportation of pupils in special districts (H. B. No. 264); same provisions for village districts (H. B. No. 482). (See also page 208.)

Rhode Island.—Allots $100 to any graded school for every ungraded school consolidated with it (chap. 545).

South Carolina.—Additional sum of $50 given to aid in construction of buildings for consolidated schools (chap. 430). Bonus of $50 from county funds for same purpose to consolidated schools (chap. 311).

Virginia.—Appropriation of $25,000 to encourage rural graded schools of two, three, and four rooms (chap. 282).

9. LOCAL SCHOOL BOARDS; OFFICERS; SCHOOL MEETINGS.

Kentucky.—Board of education of Louisville reorganized (chap. 2). (See also page 195.)

Massachusetts.—Number of members of school committee of Newton reduced to eight (chap. 232).

New Jersey.—Members of boards appointed by mayor may be chosen from city at large (chap. 218).

New York.—Date of annual school meeting; duties of district school boards (chap. 442). Interest in contracts forbidden (chap. 140). Powers and duties of the board of education of Elmira (chap. 464). Election of school trustees of Lockport (chap. 466). Board of education of Greater New York empowered to dispose of personal property (chap. 456); employees may be granted annual vacation of two weeks or more

(chap. 679). Reorganization of board of education of Poughkeepsie (chap. 632). Reorganization of board of education of Watertown (chap. 500). The city of Buffalo may contract with the University of Buffalo to provide free higher education for the inhabitants of the city (chap. 33). Defining the school districts and the powers thereof, and the duties of school officers in the city of Lackawanna (chap. 491). Manner of holding school elections; duties of board of education in the city of Johnstown (chap. 660). Organization of the department of education in the city of New Rochelle (chap. 559).

Ohio.—Merit system extended to employees of city school districts (S. B. No. 30). Transaction of certain business by boards of education (H. B. No. 64). Bonds and duties of treasurers (S. B. No. 81). Meetings and officers (H B. No. 337). Restriction on expenditures (H. B. No. 127). (See also page 207.)

Porto Rico.—Duties of treasurers of municipal school boards (No. 15). Bonds of treasurers of school boards (No. 53).

Virginia.—District boards may sell or exchange property (chap. 243); clerks shall receive $3 for each teacher employed (chap. 331).

10. SCHOOL LANDS; FUNDS.

Louisiana.—Receipts from leases, etc., of sixteenth section lands to be credited to current school fund of parish (act No. 54). School boards of parishes empowered bring suits to recover damages for trespass on sixteenth section lands (act No. 158).

New York.—Receipts from the sale of common lands of Hempstead (chap. 36). Appropriation of certain land to the city of Oswego (chap. 617). Appropriating certain lands to the city of Rochester (chap. 417). Amends provisions relating to loans of moneys belonging to the United States deposit fund (chap. 201).

Ohio.—Deposit of school funds upon competitive bidding (S. B. No. 124).

11. TAXATION; APPROPRIATIONS.

Georgia.—Authorizes certain municipalities to levy special taxes (August 13, 1910).

Louisiana.—Proposed constitutional amendment requiring annual 3-mill tax in parishes (act No. 257). (See also p. 196.)

Maryland.—Rate of school tax raised from 16 to 16⅛ cents per $100.

Mississippi.—Annual tax petitions not to be required (chap. 218). Property in separate districts to be separately assessed (chap. 217).

New Jersey.—Change in procedure in levying special-district taxes (chap. 242).

New York.—Assessment of a body of land lying in two or more districts (chap. 140). Payment of unpaid taxes from county treasury (chap. 284). Charter of North Tonawanda amended in relation to school taxes (chap. 43). Special tax elections in Rensselaer (chap. 597).

Ohio.—State appropriation increased (H. B. No. 5). Appropriation for weak districts increased (H. B. No. 561). (See also p. 209.)

South Carolina.—Appropriation for weak districts increased (chap. 431). Limit of special tax in school districts (No. 398). (See also p. 210.)

Virginia.—Change in method of taxing certain electric corporations (chap. 58).

12. BONDS AND INDEBTEDNESS.

New Jersey.—School bonds may be coupon or registered, and may be sold without advertisement to the trustees for the support of public schools (chap. 214). Cities may issue bonds to fund their floating indebtedness (chap. 296). Validates certain proceedings for issuing bonds (chap. 4).

New York.—Conditions under which municipal corporations may contract a funded debt (chap. 677).

Ohio.—Safeguards city school district bonds (S. B. No. 183).

Virginia.—Time of redemption of school-district bonds (chap. 184).

13. GIFTS AND TRUST FUNDS.

New York.—Care of Adam Haverling fund, town of Bath (chap. 592).

Virginia.—Authority to receive gifts, devises, and bequests specifically given to cities (chap. 329).

14. SCHOOLHOUSES.

South Carolina.—Appropriation of $20,000 to aid construction of schoolhouses (chap. 430). Additional bonus from county funds to aid consolidated schools (chap. 311). State flag must be displayed over all schoolhouses (chap. 406).

15. PUBLIC PLAYGROUNDS.

Massachusetts.—Amends provisions relating to conduct and administration (chap. 508).

New York.—Boards of education of union free-school districts shall purchase lands for recreation grounds when designated by district meeting (chap. 140).

Virginia.—Authorizes establishment and maintenance by cities (chap. 264). (See also p. 213.)

16. TEXT-BOOKS.

Kentucky.—County text-book commissions established, superseding state commission (chap. 13). (See also p. 195.)

Louisiana.—State committee to select books (act No. 39). (See also p. 196.)

Mississippi.—Designation of book depositories and county agencies (chap. 219).

17. TEACHERS' QUALIFICATIONS AND CERTIFICATES.

Louisiana.—Graduates of certain institutions exempt from examinations in subjects studied (act No. 55).

Maryland.—Each county superintendent shall prepare annually a list of all teachers with a classification of their certificates (chap. 420).

New York.—Commissioner of education may legalize employment of teacher not legally qualified. Increased training required of teachers in cities (chap. 140). (See also p. 202.)

Ohio.—Certificates to graduates of normal schools and colleges (H. B. No. 47). Amends provisions relating to professional certificates (H. B. No. 423).

Porto Rico.—Conditions of renewal (No. 48).

18. TEACHERS' SALARIES.

Georgia.—County boards may borrow money to pay salaries (July 15, 1910).

Maryland.—Prescribes minimum salaries of experienced teachers (chap. 420). (See also p. 197.)

New York.—District trustees may not issue warrants for salaries unless funds are available (chap. 140).

Porto Rico.—Teacher's salary may continue during fifteen days of necessary absence (No. 48).

19. TEACHERS' PENSIONS; RETIREMENT FUNDS.

Massachusetts.—Amendments to pension law relating to Boston (chap. 617). (See also p. 199.)

New York.—Retirement for teachers in state institutions (chap. 441). Amendment to law relating to Albany (chap. 451). Retirement funds established for Greene County (chap. 444); Nassau County (chap. 407); Saratoga County (chap. 191). (See also p. 205.)

Ohio.—Amendments relating to conditions and rates of pension (H. B. No. 478). (See also p. 207.)

Virginia.—Amendments to general law (chap. 97). (See also p. 212.)

20. TEACHERS' INSTITUTES.

Louisiana.—Reorganization of state board of institute managers (act No. 223). Monthly parish institutes required (act No. 119).

21. SCHOOL CENSUS.

Virginia.—In districts in more than one county (chap. 138). In districts of which boundaries have been changed (chap. 131).

22. CONTINGENT OR INCIDENTAL FEE.

Louisiana.—Authorizes annual incidental fee of 50 cents per pupil (act No. 272).

South Carolina.—Fees authorized as follows: Springfield district, Orangeburg County, $2 per annum (No. 439); district No. 9, Clarendon County, $1 per month (No. 445); Brunson high school, district No. 1, Hampton County, $5 per annum (No. 448); Millers district and Gapway district, Marion County, $2 per year (No. 476).

23. COMPULSORY SCHOOL ATTENDANCE.

Kentucky.—Extends act to cover certain children between 14 and 16 years of age; truant officers; immediate compliance upon notification (chap. 80).

New York.—Cooperation of commissioner of labor (chap. 514). Law largely rewritten, with minor changes (chap. 140).

Ohio.—Revises the compulsory education law generally (H. B. No. 452). (See also p. 206.)

24. CHILD LABOR.

Kentucky.—Provisions of law relating to children between 14 and 16 extended to stores, business offices, telegraph offices, hotels, etc. Employment certificates to be issued by school officers (chap. 85).

Maryland.—Prohibits employment of children under 14 as messengers for day service, and under 16 for night service. Forbids sending any minor to receive or deliver a message to any house of ill repute.

Massachusetts.—Penalty for forging birth certificates (chap. 249). Medical inspection of working children (chap. 257); forbids employment of minors in dangerous occupations (chap. 404). Violation of regulations relating to bootblacking and sale of certain merchandise (chap. 419). Requests Congress to enact uniform national laws (Resolves, p. 672).

New Jersey.—Forbids night work by children in factories (chap. 277).

New York.—Specific designation of officers to issue employment certificates (chap. 140). Prohibits employment of children under 16 on certain machines in paper box factories (chap. 107). No person under 21 shall be employed in cities of the first or second class as messenger for a telegraph or messenger company between 10 p. m. and 5 a. m. (chap. 342). Prohibits employment of children under 16 in bowling alleys, in the distribution of articles, or as messenger, usher, etc., in places of amusement between 7 p. m. and 8 a. m. (chap. 387).

Ohio.—Forbids employment of boys under 18 in messenger service between 9 p. m. and 6 a. m. (S. B. No. 179).

Rhode Island.—Children not allowed to work at night, as formerly, on Saturdays and during Christmas season; modifications in employment certificates; increased power of factory inspectors (chap. 533). Additional inspectors provided (chap. 576).

Virginia.—Prohibits sending children under 17 years of age to saloons, houses of prostitution, etc. (chap. 347).

25. WELFARE OF CHILDREN; DEPENDENTS AND DELINQUENTS.

Kentucky.—Punishment of persons responsible for rendering a child dependent or delinquent (chap. 76). Provisions for probation officers (chap. 77).

Massachusetts.—Regulating the admission of a child without an adult to places of amusement (chap. 532). Incorporating the Forsyth Dental Infirmary, a benevolent institution for the oral treatment of children (chap. 294).

Mississippi.—Prohibiting minors from entering pool and billiard rooms (chap. 136).

New Jersey.—Juvenile offenders may be committed to the guardianship of the state board of children's guardians (chap. 13). Authorizes certain counties to contract with institutions for the care of dependents and delinquents (chap. 99). Complaints against juvenile defendants must be transferred to the juvenile court in a county maintaining a house of detention; such defendants shall not be committed to a jail or police station in such county (chap. 182). (See also page 201.)

New York.—State charities law revised generally (chap. 449). General municipal law amended in relation to trusts for aiding and instructing children (chap. 163). Constitution of the board of managers of the disciplinary training school of the borough of Brooklyn (chap. 194). Charter of the De Veaux College for Orphans and Destitute Children amended (chap. 498). Construction of a spur railroad track, highways, buildings, etc., for the New York Training School for Boys, and appropriating $119,000 therefor (chap. 526). Prohibits admission of a child under 16 to any public pool or billiard room unless accompanied by parent or guardian (chap. 383). Excepts theatrical performances and motion picture exhibitions given for the benefit of churches or schools from the provisions of the law prohibiting attendance at such amusements of children under 16 unless accompanied by parent or guardian (chap. 475). Charter of the city of New Rochelle provides for strict separation of trials of juvenile offenders from trials of criminal cases (chap. 559). Procedure relating to delinquent or neglected children in Monroe County (chaps. 611 and 612). Procedure in children's courts in the city of New York; separation provided, and taking a child to a police station prohibited (chap. 659). Procedure relating to juvenile offenders in Syracuse; separate court and a special place of detention provided (chap. 676). Punishment of parents, guardians, or other persons for contributing to the delinquency and offenses of children (chap. 699).

Ohio.—Increased penalty for kidnaping (H. B. No. 26). Maintenance of children of persons sentenced to a workhouse (S. B. No. 90). Committee appointed to investigate the conditions at the Girls' Industrial Home (H. Joint Res. No. 20).

Rhode Island.—Penalty for abandoning, maltreating, or exposing to crime any child under 17 years of age (chap. 550). Expenses and court costs attending complaints by any agent of the Society for the Prevention of Cruelty to Children to be paid by the State (chap. 551).

South Carolina.—Prohibits minors from frequenting billiard or pool rooms (No. 404). Amends conditions of commitment to Industrial School for Boys (No. 411).

Virginia.—Restricts "placing out" of children committed to custodial institutions (chap. 157). Compensation to Virginia Home and Industrial School for Girls (chap. 165). Public school for Negro Reformatory Association (chap. 206). Detention or confinement of vicious, incorrigible, or neglected children (chap. 289). Penalty for failing to support, neglecting, or exposing to crime a child under 14, and for sending a child under 17 to an improper place (chap. 347). (See also p. 212.)

26. SEPARATION OF THE RACES.

Kentucky.—School visitors elected by negro voters for schools for negroes (chap. 114).

Virginia.—Every person having one-sixteenth or more of colored blood shall be deemed a colored person (chap. 357).

27. SCHOOL YEAR; LENGTH OF SESSION.

Louisiana.—School year to end June 30 instead of December 31 (act No. 53).

South Carolina.—Appropriation of $60,000 to increase average length of term (No. 431).

Virginia.—School year to end June 30 instead of July 31 (chap. 338).

28. HOLIDAYS.

Kentucky.—Columbus Day, October 12, to be a legal holiday (chap. 9).

Massachusetts.—Columbus Day, October 12, to be a legal holiday (chap. 473).

Mississippi.—The birthday of Gen. Robert E. Lee, January 19, to be a legal holiday (chap. 171).

Ohio.—Makes the twelfth day of October, known as Columbus Day, a legal holiday (H. B. No. 23).

Rhode Island.—Columbus Day, October 12, to be a public holiday (chap. 528).

29. BRANCHES OF STUDY.

Louisiana.—Instruction in the principles of agriculture or horticulture and home and farm economy required in all elementary and secondary schools (act No. 306).

Maryland.—County school commissioners may provide instruction in domestic science, agriculture, and manual training in any school (chap. 386).

Massachusetts.—Restriction upon certificates excusing pupils from military drill (chap. 201). Instruction in "thrift" made compulsory (chap. 524).

Mississippi.—Separate school districts may introduce music, drawing, and manual training in grammar grades (chap. 125).

Porto Rico.—Establishes a class in mechanical drawing in the Ponce High School (No. 26).

30. HYGIENE; TUBERCULOSIS.

Massachusetts.—The state board of health may prohibit the use of common drinking cups in public places (chap. 428). Appropriates $1,000 for the formation of a small traveling exhibit for instruction in public schools relating to hygiene and prevention of tuberculosis (chap. 65).

Mississippi.—Provides for the preparation and distribution of placards to be hung in school rooms setting forth the effects of alcohol, and means for the prevention and cure of tuberculosis (chap. 123).

New Jersey.—Appropriates $10,000 annually for the study and prevention of tuberculosis, including the distribution of literature and the maintenance of a traveling exhibit (chap. 12).

New York.—Authorizes school boards to provide medical inspection of all pupils (chap. 602). Appropriates $10,000 for traveling exhibits of tuberculosis for the education of the public, and for lectures, distribution of literature, etc. (chap. 513).

Ohio.—City boards of education may establish special schools for tuberculous children and provide transportation (S. B. No. 44).

31. HIGH SCHOOLS; SECONDARY SCHOOLS.

Georgia.—Proposes constitutional amendment authorizing counties to levy taxes for high schools (August 4, 1910). (See also p. 194.)

Kentucky.—Trustees for county academies and seminaries (chap. 49).

Louisiana.—Parish school boards may establish high schools without securing sanction of state board of education (act No. 272).

Maryland.—General provisions for county high schools (chap. 386). (See also p. 196.)

New Jersey.—A district school board may pay for tuition in Farnum Preparatory School for any child who has completed the course of study offered by the district (chap. 61).

New York.—Secondary schools separately defined as institutions of the university (chap. 140). Amends charter of Utica Female Academy (chap. 82).

Ohio.—Tuition of graduates of short-course schools (H. B. No. 218). Entrance examinations in village districts (H. B. No. 219). (See also page 208.)

South Carolina.—Boards of trustees in certain union districts (No. 399).

32. INDUSTRIAL SCHOOLS.

Kentucky.—Consent of the voters of the precinct necessary to the establishment of an industrial school (chap. 10).

Maryland.—Authorizes county school commissioners to establish colored industrial schools; state aid (chap. 210). (See also p. 197.)

Virginia.—The town of Manassas may pay an annuity to the founders of an industrial school (chap. 218).

33. SCHOOLS AND COLLEGES OF AGRICULTURE.

Louisiana.—Requires the principles of agriculture or horticulture and home and farm economy to be taught in all elementary and secondary schools (act No. 306).

Maryland.—Instruction in agriculture authorized in any school (chap. 386).

Massachusetts.—The board of education is directed to investigate the establishment of a system of agricultural schools (Resolves, chap. 133), and also the desirability of a farm school in the city of Worcester (Resolves, chap. 108). Increase in appropriations to Massachusetts Agricultural College, $10,000 for general instruction; $20,000 for maintenance; $7,500 for short courses (chap. 627). Character and distribution of reports of same college (chap. 429). Report on action necessary to make same college a state institution in the strict sense (chap. 157).

Mississippi.—Authorizes the establishment of two agricultural high schools in each county (chap. 122). Appropriates $30,000 to aid the same (chap. 45). Disposition of property of certain agricultural high schools (chap. 126). Establishment of branch agricultural experiment station in eastern part of the State (chap. 128). Establishment of a branch experiment station in the southwest part of the State (chap. 127). Authorizes establishment of county experiment stations (chap. 129).

New Jersey.—Appropriation of $25,000 for chemistry building for State Agricultural College (chap. 24).

New York.—Authorizes cities and union free school districts to establish high schools of agriculture, mechanic arts, and home making; state aid. The three state agricultural high schools are authorized to train teachers (chap. 140). Appropriations for the State School of Agriculture at Morrisville: Maintenance, $14,000; repairs, equipment, etc., $11,000; buildings and equipment, $25,650; laboratories, shops, etc., $8,625 (chap. 195). Amendments to law concerning the administration of the State School of Agriculture at St. Lawrence University (chap. 443). Providing for the development of the State College of Agriculture at Cornell University and authorizing the expenditure of $357,000 for buildings therefor (chap. 530).

Ohio.—Provides for further extension work in agriculture and domestic science by Ohio State University (S. B. No. 114). Authorizes the establishment of county experiment farms (H. B. No. 198).

South Carolina.—Provides two additional beneficiary scholarships (total 167) at Clemson College (No. 345).

Virginia.—Authorizes the establishment in each congressional district of high schools of agriculture, domestic arts and sciences, and manual training (chap. 253). Authorizes counties to appropriate money for said high schools (chap. 208). Constitutes a united agricultural board to coordinate extension work (chap. 351). (See also page 210.)

34. STATE UNIVERSITIES; PUBLIC HIGHER EDUCATION.

Kentucky.—Accepts for the State University the benefits of the Carnegie Foundation (S. Res. No. 3).

Maryland.—Appropriates $4,500 annually to Washington College for tuition, board, etc., of certain male students (chap. 542).

Mississippi.—Authorizes the University of Mississippi, Agricultural and Mechanical College, and Industrial Institute and College to receive retiring allowances from the

Carnegie Foundation (chap. 377). Constitutes one board of trustees for the three institutions named and Alcorn Agricultural and Mechanical College (chap. 114). (See also p. 200.)

New York.—The city of Buffalo may contract with the University of Buffalo to provide higher education for the inhabitants of the city (chap. 33).

Ohio.—Amends provisions relating to the irreducible trust fund of the Ohio University (H. B. No. 157). Powers of directors of municipal universities (S. B. No. 210).

Porto Rico.—Membership and powers of the trustees of the University of Porto Rico (No. 5). Provides for the development of the University of Porto Rico, and appropriates $20,000 therefor (No. 40).

Virginia.—Accepts the benefits of the Carnegie Foundation for the University of Virginia (chap. 19). Accepts the provisions of a certain deed of trust made by the General Alumni Association of the University of Virginia for the said university (chap. 273).

35. NORMAL SCHOOLS, ETC.

Maryland.—Commission to prepare for removal of State Normal School. State Colored Normal School removed to Bowie.

Mississippi.—Establishes the Mississippi Normal College (chap. 119). Authorizes municipalities (chap. 120) and counties (chap. 121) to issue bonds for the purpose of securing the location of the said normal college. (See also p. 200.)

New Jersey.—Certain receipts of the State Normal School to be used for the school (chap. 58).

New York.—Teachers' training courses in cities extended from thirty-eight weeks to two years. The commissioner of education shall prescribe the courses of study for state normal schools. Number of Indians in state normal schools to be determined by legislative appropriations (chap. 140). Authorizes expenditure of $400,000 for new buildings for Buffalo State Normal School (chap. 520). Increases amount authorized to be spent for the Oswego Normal School to $340,000 (chap. 517). Retirement fund for teachers (chap. 451).

Ohio.—Provides for the establishment of two additional normal schools (H. B. No. 44). (See also p. 206.)

Rhode Island.—Receipts of the State Normal School from tuition fees to be used for the school (chap. 566).

36. PROFESSIONS; PROFESSIONAL SCHOOLS.

Mississippi.—Permits graduates of the pharmaceutical department of the University of Mississippi to practice pharmacy without further examination (chap. 165).

New York.—Increases number of members of the state board of dental examiners (chap. 137). Withdraws authority of medical societies to collect one dollar annually from each physician (chap. 196). Repeals section 6 of an act to incorporate medical societies, which authorized medical colleges to elect delegates to the state medical society (chap. 198). Members of state board of pharmacy appointed by regents (chap. 422). Law authorizing towns, cities, and villages to establish hospitals includes authorization to maintain training schools for nurses (chap. 558).

37. SCHOOLS FOR DEFECTIVES.

Kentucky.—Provides for the employment of a teacher for the deaf blind in the Kentucky School for the Deaf. The schools for the white and the colored deaf shall be operated as separate institutions, but under the same superintendent (chap. 99).

Mississippi.—Authorizes the institution for the blind to give to graduates the tools of their respective trades (chap. 131).

New Jersey.—Age limitation removed in relation to admission of defectives to state institutions (chap. 126). Applications for admission to such institutions shall be made

to the commissioner of charities and corrections (chap. 208). Male inmates of such institutions may be paroled (chap. 212).

New York.—Amendment in relation to the powers of the trustees of the State School for the Blind (chap. 53). Tuition and maintenance of deaf-mute children (chap. 322).

Ohio.—Compensation of officers and employees of the State School for the Blind (S. B. No. 32). Compensation of teachers of school for the deaf (H. B. No. 241).

South Carolina.—The state institution for the deaf and dumb may provide for the higher education of graduates (chap. 468).

38. EDUCATIONAL CORPORATIONS.

Illinois.—Grants certain submerged lands to Field Museum (S. B. No. 26).

Louisiana.—Authorizes St. Mary's Dominican Academy to confer degrees (act No. 22).

Massachusetts.—Authorizes Mount Holyoke College to hold additional property (chap. 102). Incorporates Massachusetts College (chap. 113). Amends charter of Episcopal Theological School (chap. 120). Increases membership and property limits of American Academy of Arts and Sciences (chap. 129). Authorizes the trustees of Tufts College to maintain a college for women (chaps. 5, 133, and 632). Incorporates the Society for the Preservation of New England Antiquities (chap. 336). (See also p. 199.)

New Jersey.—Religious and educational corporations may sell trust lands under certain conditions (chaps. 92 and 268). Corporations for historical and library purposes may take and hold lands and funds in trust (chap. 119).

New York.—Regents may classify institutions outside the State according to New York standards. Incorporation forbidden under general laws other than that governing regents (chap. 140). Amends charter of Albany Medical College (chap. 197). Incorporates the Economic and General Foundation (chap. 426). Amends the charter of St. Lawrence University and Theological Seminary (chap. 39); provides for a separate board of trustees for said theological school (chap. 40). Amends provisions relating to Staten Island Association of Arts and Sciences (chap. 208). Incorporates the Xavier Alumni Sodality (chap. 406).

South Carolina.—Name of Due West Female College changed to Woman's College of Due West (No. 563). Name of South Carolina Military Academy changed to The Citadel, the Military College of South Carolina (No. 352).

39. LIBRARIES.

Illinois.—Authorizing cities, incorporated towns and townships to maintain free public libraries (S. B. No. 6).

Kentucky.—Creation of state library commission (chap. 27).

Maryland.—Authorizes county commissioners and municipalities to establish and maintain free public libraries; amends laws relating to state public library commission (chap. 505). (See also p. 198.)

Massachusetts.—Appointment of agent by the board of free public library commissioners (chap. 396).

New York.—Charter of Mount Vernon amended in relation to free public library (chap. 49). Amendment to act incorporating Brooklyn Public Library, in relation to appointment and classification of members (chap. 272). Translation of Dutch records in state library (chap. 177).

Ohio.—Permits township districts (equally with city, village, and special districts) to levy taxes for public libraries (S. B. No. 41). Office for state organizer (H. B. No. 122). Legislative reference and information department in the Ohio state library (H. B. No. 384). Powers of library boards; tax levy (H. B. No. 402).

Virginia.—Benefits of act for establishment of school libraries extended to cities (chap. 317).

CHAPTER III.

INDUSTRIAL EDUCATION IN THE UNITED STATES.

CONTENTS.—Introduction.—General review.—Report of the committee on industrial education of the National Association of Manufacturers.—Action by the National Society for the Promotion of Industrial Education.—Report of special committee on industrial education appointed by the American Federation of Labor.—National Education Association: Conference before the national council.—State laws relative to industrial education.—Vocational education in New York.—Industrial schools in the United States.

INTRODUCTION.

The main purpose of the present chapter is to present a fairly complete view of the existing provision of schools which may be said to pertain, in a measure at least, to that form of training now widely discussed under the title "vocational education." The distinction between liberal and vocational education and their points of approach are indicated in the following citation from a recent discussion[a] of the subject by Commissioner Snedden. Doctor Snedden says:

> Liberal and vocational education are not identical, and have only certain elements in common; they aim in essentially different directions, and their valid aims can be realized only by making allowance for this difference. On the other hand, some of the studies which contribute to liberal education may be so handled as to give a basis, or approach, or means of choice to subsequent vocational education. For many persons, a vital vocational education, resting on concrete foundations and making due allowance for expansion into the related fields of science, art, history, economics, and civics, may become an exceedingly effective means of liberalizing the minds of several types of boys and girls, and especially those least capable of abstract thinking or social idealism.

In the work cited above Doctor Snedden notices the great confusion of terminology, and also in pedagogic opinions, which precludes a satisfactory classification of the schools offering vocational training, a difficulty that has been fully recognized in the classification attempted in this chapter. With respect to the conditions that make the subject one of importance at the present time, Doctor Snedden says:

> The demand for vocational education under school conditions is a widespread one, and is rooted in the social and economic changes of the age. Rightly organized, vocational education will prove a profitable investment for society. The pedagogy

[a] The Problem of Vocational Education, by David S. Snedden, Ph. D., Commissioner of Education for Massachusetts.

of this education will differ widely from that evolved for liberal education, and especially in respect to making practice, or participation in productive work, a fundamental element. Vocational education must be so conducted as to contribute to the making of the citizen, as well as the worker. In the course of the development of a progressive social economy we may expect it to be made obligatory upon every individual to acquire a certain amount of vocational education, just as the present tendency of legislation is to prevent any one from remaining illiterate. Vocational education is not in conflict with liberal education, but is a supplemental form, and may be expected to reinforce it.

GENERAL REVIEW.

The establishment of the Manual Training School of Washington University, St. Louis, in 1880, gave great momentum to the movement for manual training in this country, which has been steadily gaining ground ever since that event. In 1909 more than half the cities of the United States of 4,000 population and upward reported manual training in their schools. Such training first found a place in the curricula of the high schools, but soon began to push its way down into the elementary grades. But this earlier training was not vocational in aim; it was rather regarded as a part of an academic education. It was cultural. In recent years the emphasis has been changing from the academic and cultural to the vocational aim. So marked has been this change that industrial education, vocational training, and even trade training have become almost synonymous terms in current discussions. This new emphasis, which differentiates the ordinary manual training from vocational training for the trades and semitechnical pursuits, has its roots in the recognized need of improved industrial efficiency in American industries.

The widespread interest in the subject is indicated by the fact that it commands the support of all the great national organizations pertaining to education or vitally interested in its effects,[a] as well as of numerous local clubs and societies in different sections of the country.

The consensus of opinion on the part of the larger associations here referred to, as to the need of provision for industrial education, is shown in the following citations from the reports of recent meetings:

REPORT OF THE COMMITTEE ON INDUSTRIAL EDUCATION OF THE NATIONAL ASSOCIATION OF MANUFACTURERS.

The National Association of Manufacturers held its fifteenth annual convention at New York City in May, 1910, on which occasion its committee on industrial education (Anthony Ittner, chairman) sub-

[a] The National Education Association, the National Society for the Promotion of Industrial Education, the National Society for the Promotion of Engineering Education, the National League for Industrial Education, the Southern Industrial Education Association, the General Federation of Women's Clubs, the American Federation of Labor, the American Foundrymen's Association, the American Association of Manufacturers, the National Metal Trades Association, the National Association of Builders' Exchanges, the American Institute of Electrical Engineers, the American Society of Mechanical Engineers, the National Association of Home Economics, the International Typographical Union, the Young Men's Christian Association, and the Young Women's Christian Association.

mitted a report prepared by a member of the committee, Mr. Milton P. Higgins, which report was duly adopted. After reviewing the recent marked progress in industrial education, which it was affirmed had been greatly promoted by the National Association of Manufacturers, the report, having in mind certain objections that have been raised to what was understood to be the position of the association on this subject, proceeded to define more fully than heretofore the attitude of the committee on the general subject, as follows:

Your committee believes that some of the objections to industrial education, so called, have been reasonable and that if industrial and trade education is put upon a proper and sound and high basis all intelligent thought, including that of rightly organized labor, will approve, simply because such industrial education will advance every interest involved in the life of the workingman and even in a better life of the organization itself. * * * We educators and all who advocate a new education for the good of the skilled workman * * * intend to take boys at 14 years of age and give them four years of training corresponding to the high school period—half skilled work and half suitable schooling.

We propose to take any boy who wants to be a superior skilled workman and give him this thorough training in skill and schooling.

We propose to make the boy a skilled workman, superior to his father in efficiency and shop experience, and we propose also to give him, during the time he is learning a trade, more and better schooling than his father was able to get and consequently the boy can go directly from the trade school to a good wage-earning position of any shop simply upon his own merit.

With respect to trade schools the committee continued:

A trade school can not be too practical. The more practical, productive, and commercial, the more possible is mechanical efficiency as well as mental discipline and general culture.

The time has arrived when all discussion regarding the importance of industrial education should give place to the establishment of schools and other methods of securing such industrial training. The question is not, Shall we have industrial education in America? but, What kind shall it be? There has come to be general agreement now that industrial education for the mechanic means trade education.

First. What kind of trade schools should we establish to the end that we may meet the more and more exacting demands for higher mechanical skill and industrial mental discipline? And shall the trade school be productive or consist of worthless exercises on material to be thrown away when completed? * * *

But this is not our only problem in trade education. Some of the others are as follows:

Second. What shall we do to vitalize and enrich the training of apprentices in shops of all kinds as they now exist throughout the country?

Third. Besides the half-time regular course for pupils, already considered above, what supplementary training shall the trade school provide for those apprentices and workmen who are *already* in the shops and factories?

(a) Evening schools may be established, both for schooling in all common branches and for special skill and shop practice in various branches of mechanical trades.

(b) Half-day schooling each week may be provided for apprentices and men from the various shops where the proprietor is willing to allow wages to continue while the apprentice devotes the half day per week in school.

(c) Part-time schools may be provided where a double set of apprentices is employed, making a *half-time* system; or a *one-third-time* system where three sets of apprentices are employed, so that each apprentice have one-half or one-third of his time devoted to schooling.

In all these extension schools, whether one-half day per week or part-time plan with two or more sets of apprentices, the wages earned would admit of supplying industrial education to many who could not afford to take the regular trade-school course without earning wages meanwhile. All who are able to take the full course would, however, command higher wages at the end of the course.

In regard to the double aim which somewhat complicates the general problem as related to the industrial education of girls, the report says:

The aim in the industrial education of girls must be a *double aim*, viz, preparation for the girl's occupation for immediate self-support and her preparation for home life in all its departments.

These two aims must be kept in proper balance. Any system of industrial education for girls will be inadequate that does not provide for *both aims*.

After an extended presentation of both aims, the opinion of the committee was summarized as follows:

Your committee therefore conceives that the desirable consideration in regard to girls is the promotion of independent industrial schools as planned that the duplex needs may be secured, and that special effort should be made to *advance* the *science* and the *skill in cooking and housekeeping*.

First. By the establishment of day industrial schools for girls whose main need is to prepare for industrial wage-earning pursuits. During this preparation, for a trade, however, considerable domestic training is a necessary part of the course.

Second. Courses for girls who wish to take as a vocation complete and thorough training in any or all branches of domestic science, housekeeping, and management of the home in all its branches.

Third. And possibly *part-time* schools for girls who are already engaged in wage-earning pursuits in the less skilled occupations.

Fourth. *Evening* classes for women who are employed in the trades who wish to advance themselves; and also for trade workers who wish to prepare for teaching in industrial schools.

Fifth. *Evening* classes for women and girls who wish to become better housekeepers.

All the departments above mentioned can be organized naturally along the same lines as the boys' school, i. e., about the same relation of skilled work and of schooling, and therefore about the same sort of rooms for each, except the department for "complete home training." This department should be independent of all other vocational departments, and be very complete, thorough, and hence attractive. The number of pupils in this department might be smaller than the other trade classes—say not over thirty pupils for the first class—because this is to demonstrate the most important and most promising field in industrial education.

A supplemental report on the cooperative system of industrial education was presented by a member of the committee, Mr. De Brul, who dealt with the progress of the cooperative course as "planned by Prof. Herman Schneider, dean of the engineering college of the University of Cincinnati," and with the plans for the establishment of a college of commerce on the cooperative plan. The latest devel-

opment of the cooperative principle, as carried out in Cincinnati, is illustrated by what the report called "the continuation school." Experiments in this direction were begun by two manufacturing companies which started an apprentice school under the direction of a young man who had himself been a machinist, Mr. J. H. Renshaw. In view of the success of the school, "a committee of the Cincinnati Metal Trades Association called upon the school board and asked that a continuation school be started to which all the machine-shop apprentices could be sent. The plan was laid out by Mr. Renshaw and the school was turned over to the school board." It is proposed, according to the report, to establish a girls' continuation school during the present year.

It was moved and carried that both the report of the committee and the supplemental report should take the usual course.

ACTION BY THE NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

The drift of opinion discernible in the various papers presented at the third annual meeting of the National Society for the Promotion of Industrial Education (Milwaukee, December 2–4, 1909) was emphasized in the closing address of Dr. L. D. Harvey, superintendent of schools, Menomonie, Wis., who had been asked to close the discussion. Doctor Harvey said in part:

I have only two or three points which I want to bring to your attention. One is that the discussions during this meeting have indicated that the trade school, as we have been considering it, is not the intermediate industrial school; secondly, that the trade school as it exists to-day—not the intermediate industrial school—has not yet given evidence of its adequateness to meet the need of the day in the way of industrial education. For instance, the splendidly equipped trade school in this city, with its magnificent work—and I believe no better is to be found anywhere in the country—in a city of 350,000, has only 66 pupils in attendance for the full time during the day, and about the same number for part time in evening classes, at an annual per capita cost of $300 to $350 for instructional purposes. We must not forget that the trade school here is new, but the remarkable thing is that the boys in the city of Milwaukee are not flocking to it in large numbers. I believe the same condition obtains in many other trade schools. That is what I meant when I said that the trade school as it exists to-day, in its most fully developed form, superb in its equipment, splendid in its teaching force, magnificent in its output, is not meeting the great need in industrial education. I want to call your attention to the fact that the trade school which does not take these pupils until the age of 16 is not at all filling the great gap that exists in our educational system. There is need that something be done for the boys from 14 to 16 years of age who have dropped out of school. I think the reason for so small an attendance upon the trade school here thus far is that so many of these boys have dropped out of school two or three years before the trade school will take them, and it does not draw them back again. I take it that this discussion of the question of intermediate industrial schools was provided for in this programme for the purpose of trying to find out what is being done and what it is possible to do to keep hold of these boys and to keep them in school longer.

* * * I want to call your attention to the fact that if we are going to have even the beginnings of industrial education, we must reach those that the trade school never reaches, and in other ways than the trade school attempts to reach them. In the beginning it will not be the aim to make finished workmen, but it will be the aim to direct the mental activities of the pupils; to interest them in things industrial; to teach them to think in terms of things and terms of processes of construction, and in the interpretation of plans and drawings, and thus make them better fitted to take up the work of a specific trade and advance to industrial efficiency than they would be but for this.

* * * I take it that it is not simply a question in your proposed intermediate industrial school of getting the defectives, getting the delinquents, getting the fellows who already exhibit signs of moral deterioration; it is worth while to get the fellows that have some good stuff in them, it is worth while to get them to see what there is in the field of industrial effort, and it is worth while, therefore, to put into our public school system as it exists to-day those things in the way of intermediate work—beginning work, if you please—toward industrial efficiency as a part of the public school system. I believe when we do that we shall find that there will not be so large an exodus of these boys and girls before the completion of the elementary school course nor at the end of the course as we now have. * * * I am not one of those people who, when discussing industrial education, shy at the word manual training, because I have been fortunate enough to see some manual training schools that do many of these things I have here advocated. I know it is possible to so organize a course of manual training through the sixth, seventh, and eighth grades as to make very decided progress toward industrial efficiency in a number of directions. This is not theory at all, gentlemen. If you will come up to our little town you can see this work in progress and can determine its effectiveness in holding pupils in the schools, in awakening a new interest in them and in the real development of insight into industrial processes and of ability in performing them.

The best thought in manual training to-day is that it is possible to put into the elementary course much work in the training of the hand that has not been offered until the high school is reached; that it is possible to introduce excellent instructional work not generally attempted, work that will be a direct beginning in acquiring a trade or vocation. * * * Organize your manual training work in the public schools in such a way as to meet this end ultimately, but make the beginning, and make it intelligently; do it, as far as you go, along the lines of industrial efficiency, and out of it will come something of value in industrial education.

* * * I am sorry that in the discussions of this association we do not give more space and more time to that question, which seems to me so fundamental, the training of the girls. It is a question that is as big industrially as the other question is; it is a question that is larger socially; it is larger in a variety of ways; it is worth while to consider it. * * * And so it seems to me that for the great mass of the smaller cities of this country, if we are going to have anything in the way of intermediate industrial education, it must come in as a part of the existing school system; it will not mean in many cases separate schools even, but it will furnish material which will be added to our present course of study.[a]

REPORT OF SPECIAL COMMITTEE ON INDUSTRIAL EDUCATION APPOINTED BY THE AMERICAN FEDERATION OF LABOR.

The American Federation of Labor at its twenty-ninth annual convention held in Denver, November 9–21, 1908, appointed a special committee "to investigate the methods and means of indus-

[a] See Bulletin No. 10, Proceedings, Third Annual Meeting, Milwaukee, Wis., National Society for the Promotion of Industrial Education.

trial education in this country and abroad with instructions to report its conclusions and recommendations at the next annual meeting of the federation." Accordingly a preliminary report of this committee was presented at the thirtieth annual meeting which convened in Toronto, Canada, in November, 1909. In view of the importance and vast extent of the field of investigation, the report submitted has a purely tentative character. The position reached by the committee in regard to the importance of the subject is expressed in the following conclusions:

It is believed that the future welfare of America largely depends on the industrial training of our workers and in *protecting* them.

The inquiries of the committee seem to indicate that if the American workman is to maintain the high standard of efficiency, the boys and girls of the country must have an opportunity to acquire educated hands and brains, such as may enable them to earn a living in a *self-selected* vocation and acquire an intelligent understanding of the duties of good citizenship.

No better investment can be made by taxpayers than to give every youth an opportunity to secure such an education. Such an opportunity is not now within the reach of the great majority of the children of the wage-workers. The present system is inadequate and unsatisfactory. Only a small fraction of the children who enter the lower grades continue through the grades until they complete the high school course. The reasons which seem to be the prime cause for withdrawal are first, a lack of interest on the part of the pupils; and secondly, on the part of the parents, and a dissatisfaction that the schools do not offer instruction of a more practical character. The pupils become tired of the work they have in hand and see nothing more inviting in the grades ahead. They are conscious of powers, passions, and tastes which the school does not recognize. They long to grasp things with their own hands and test the strength of materials and the magnitude of forces.

Owing to past methods and influences, false views and absurd notions possess the minds of too many of our youths, which cause them to shun work at the trades and to seek the office or store as much more genteel and fitting. This silly notion has been shaken by the healthy influence of unions, and will be entirely eradicated if industrial training becomes a part of our school system, and in consequence of this system of training the youth will advance greatly in general intelligence, as well as in technical skill and in mental and moral worth, he will be a better citizen and a better man, and will be more valuable to society and to the country.

The recommendations of the committee pertain first to *Supplemental Technical Education,* under which head they recommend:

The continuance of progressive development of supplemental trade education, as inaugurated by trade unions, and call special attention to the work undertaken by the International Typographical Union in the establishment of a school for the higher education of its members. * * * And the committee further recommend that all trade unions which have not adopted a system of technical education give the matter the consideration it so richly deserves; and we further believe that the present undertakings of the unions call for the most enthusiastic admiration, and are entitled to the most cordial and loyal support.

Second, under the head of *Technical Industrial Education* the committee—

Favor the establishment of schools in connection with the public school system, at which pupils between the ages of 14 and 16 may be taught the principles of the trades,

not necessarily in separate buildings, but in separate schools adapted to this particular education, and by competent and trained teachers.

The course of instruction in such a school should be English, mathematics, physics, chemistry, elementary mechanics, and drawing. The shop instruction for particular trades, and for each trade represented, the drawing, mathematics, mechanics, physical and biological science applicable to the trade, the history of that trade, and a sound system of economics, including and emphasizing the philosophy of collective bargaining. This will serve to prepare the pupil for more advanced subjects, and in addition, to disclose his capacity for a specific vocation.

In order to keep such schools in close touch with the trades there should be local advisory boards, including representatives of the industries, employers, and organized labor.

The committee recommends that any technical education of the workers in trade and industry being a public necessity, it should not be a private but a public function, conducted by the public and the expense involved at public cost.

We recommend the continuance of the life of the committee and final report to the 1910 convention.

This report which was signed by John Mitchell, chairman, and by the other members of the special committee, was referred to the committee on education, which, after brief deliberation, reported at the same meeting as follows:

First. We have carefully examined the report of the special committee appointed by authority of the Denver convention on industrial education. We heartily indorse the action of this committee and fully concur in all the recommendations contained in the report, and congratulate the committee on the clear and concise manner in which they have covered the many matters that enter into a question of so much importance to the working people and the public in general as the question of industrial education is at this time.

We especially recommend that this committee be continued, as suggested in the report, to make a final report to the 1910 convention. We also recommend legislation along the lines indicated in the report.

We also deem it advisable, on account of the great importance of the question, that delegates, in reporting to their constituents the work of this convention, make special mention of this matter, and that the secretary of the American Federation of Labor be instructed to have a sufficient number of copies of this report printed to be distributed among the organizations affiliated with the American Federation of Labor, upon application.

The report of this committee on education was adopted by the Federation as presented.[a]

NATIONAL EDUCATION ASSOCIATION—CONFERENCE BEFORE THE NATIONAL COUNCIL.

Differences of opinion as to the form of industrial education which is most needed at the present time are reflected in the foregoing citations. Undoubtedly provision answering to varied conditions and demands will be forthcoming, but to prevent waste in the time of students, in teaching force, and finances, it is essential that the prevailing opinions on the subject should be thoroughly canvassed. In this way alone will their points of agreement, and of difference, and

[a] Industrial Education, published by American Federation of Labor, 1910.

their relation to existing schools be clearly understood by the authorities who have charge of public agencies of education. In view of the importance of free interchange of opinions on the subject, a conference on industrial and vocational schools was held at a session of the National Council of Education, July 6, 1910, on the occasion of the annual meeting of the National Education Association, Boston, July 2–8, 1910. Through the efforts of Dr. Joseph Swain, president of the council, leading representatives of the forces which are to shape public opinion in the matter—manufacturers, labor unions, and teachers—unfolded their views in regard to industrial and vocational education in a series of addresses which were followed by free discussion. It was not expected that this conference would formulate any definite plans of action, but it illustrates the essential preliminary to wise legislation and effective procedure.

STATE LAWS RELATIVE TO INDUSTRIAL EDUCATION.

In seven States—Massachusetts, Connecticut, New York, New Jersey, Maryland, Michigan, and Wisconsin—recent laws have been enacted relating to vocational training for the industries. In some other States existing laws have been construed to permit provision for such training as a department of the public school system. The more important laws relating to industrial education have been collated and are presented here in a body.

Under authority of a resolution of the legislature, the governor of Massachusetts in 1905 appointed a commission on industrial education. After some months of investigation this commission made its report, which followed a comprehensive presentation of the problems of industrial training with the recommendation that a second commission be appointed for the purposes specified in the second section of the law given below. In accordance with this recommendation a law was enacted in January, 1906, creating such a commission and defining its powers and duties. This law, under which seventeen independent industrial schools were approved prior to January 1, 1910, follows:

SECTION 1. The governor, by and with the consent of the council shall appoint a commission of five persons to be known as the commission on industrial education, to serve for the term of three years, and to receive such compensation as the governor and council shall approve. The said commission on its organization shall appoint a secretary to be its executive officer, who shall not be a member of the commission, and who shall receive such salary as shall be approved by the governor and council, and the commission may employ supervisors, experts in industrial and technical education, and such clerical and other service as may be found necessary. The necessary expenses of the commission, including clerk hire, traveling expenses, stationery, and all other incidental expenses, shall be paid out of the treasury of the Commonwealth, as may be provided by law, but shall not exceed the sum of eight thousand dollars for the remainder of the present fiscal year.

SECTION 2. The commission on industrial education shall be charged with the duty of extending the investigation of methods of industrial training and of local needs and it shall advise and aid in the introduction of industrial education in the independent schools, as hereinafter provided; and it shall provide for lectures on the importance of industrial education and kindred subjects, and visit and report upon all special schools in which such education is carried on. It may initiate and superintend the establishment and maintenance of industrial schools for boys and girls in various centers of the Commonwealth, with the cooperation and consent of the municipality involved or the municipalities constituent of any district to be formed by the union of towns and cities, as hereinafter provided. The commission shall have all necessary powers in the conduct and maintenance of industrial schools, and money appropriated by the State and municipality for their maintenance shall be expended under its direction.

SECTION 3. All cities and towns may provide independent industrial schools for instruction in the principles of agriculture and the domestic and mechanic arts, but attendance upon such schools of children under fourteen years of age shall not take the place of attendance upon public schools as required by law. In addition to these industrial schools cities and towns may provide for evening courses for persons already employed in trades, and they may also provide, in the industrial schools and evening schools herein authorized, for the instruction in part-time classes of children between the ages of fourteen and eighteen years who may be employed during the remainder of the day, to the end that instruction in the principles and the practice of the arts may go on together: *Provided*, That the independent schools authorized in this section shall be approved as to location, courses and methods of instruction by the commission on industrial education.

SECTION 4. Two or more cities or towns may unite as a district for the maintenance of the industrial schools provided for in the preceding section, but no such district shall be created without the approval of the commission on industrial education.

SECTION 5. Whenever any city or town or any district, as provided in the preceding section, shall appropriate money for the establishment and equipment and maintenance of independent schools for industrial training, the Commonwealth, in order to aid in the maintenance of such schools, shall pay annually from the treasury to such cities, towns, or districts, a sum proportionate to the amount raised by local taxation and expended for the support of schools for each thousand dollars of valuation, as follows: Cities and towns expending more than five dollars for each thousand of valuation for the support of public schools to be reimbursed by the Commonwealth to the amount of one-half, those raising and expending between four and five dollars per thousand to the amount of one-third, and those raising and expending less than four dollars per thousand to the amount of one-fifth, of the cost of maintaining industrial schools: *Provided*, That no payment to any city or town shall be made except by special appropriation by the legislature.

SECTION 6. The commission on industrial education shall make a report annually to the legislature relative to the condition and progress of industrial education during the year, stating what industrial schools have been established and the appropriations necessary for their maintenance, in accordance with the preceding section, and making such recommendations as the commission on industrial education may deem advisable; and especially shall the commission consider and report at an early day upon the advisability of establishing one or more technical schools or industrial colleges, providing for a three or four years' course for extended training in the working principles of the larger industries of the Commonwealth.

SECTION 7. The trustees of the Massachusetts Agricultural College are hereby authorized to establish a normal department for the purpose of giving instruction in the elements of agriculture to persons desiring to teach such elements in the public schools, as provided in sections three and four: *Provided*, That the cost of such depart-

ment shall not exceed the sum of five thousand dollars in any one year, and that at least fifteen candidates present themselves for such instruction.

SECTION 8. Section ten of chapter forty-two of the revised laws, and all acts and parts of acts inconsistent with this act, are hereby repealed. (Approved June 21, 1906.)

In 1908 the term of the commission created by the foregoing act was extended to five years and its powers and duties were enlarged, as indicated in the following:

The commission shall have all necessary powers in the conduct and maintenance of independent industrial schools, and money appropriated by the Commonwealth or by municipalities for their maintenance shall be expended under its direction or with its approval. Any city or town may also establish independent industrial schools in charge of a board of trustees which shall have authority to provide and maintain such schools. Such schools, if approved by the commission on industrial education as to location, courses and methods of instruction, shall receive reimbursement as provided in section four of said chapter five hundred and five.

Any resident of Massachusetts may, with the approval of the commission on industrial education, attend an independent industrial school, as provided for in this act, located in any city or town other than that in which he resides, provided there is no such school supported in whole or in part by the city or town in which he resides, upon payment by the city or town of his residence of such tuition fee as may be fixed by said commission; and the Commonwealth shall repay to any city or town one-half of all such payments. If any city or town neglects or refuses to pay for such tuition, it shall be liable therefor, in an action of contract, to the legally constituted authorities of the school which the pupil attended under the approval of said commission.

In 1909 section 5 of the law of 1906 was amended to read as follows:

Upon certification by the board of education to the auditor of the Commonwealth that a city, town, or district either by moneys raised by local taxation or by moneys donated or contributed, has maintained an independent industrial school, the Commonwealth, in order to aid in the maintenance of such schools, shall pay annually from the treasury to such cities, towns, or districts, a sum equal to one-half the sum raised by local taxation for this purpose: *Provided*, That no payment to any city or town shall be made except by special appropriation by the legislature.

By another act passed in 1909 the commission on industrial education was consolidated with the state board of education and its powers were transferred to the new board thus constituted. Sections 1 and 2 of this act follow:

The board of education shall consist of nine persons, three of whom shall annually in April be appointed by the governor, with the advice and consent of the council, for terms of three years, except as hereinafter provided. The members of the board shall serve without compensation. During the month of June in the current year the governor shall so appoint all of said nine members of the board, whose terms of office shall begin on the first day of July, nineteen hundred and nine, three for terms ending May first, nineteen hundred and eleven, three for terms ending May first, nineteen hundred and twelve, and three for terms ending May first, nineteen hundred and thirteen. Four of the present members of the board of education, and one of the members of the commission on industrial education shall be appointed members of the board of education provided for by this act.

The board of education shall exercise all the powers and be subject to all the duties now conferred or imposed by law upon the present board of education, or upon the

commission on industrial education by chapter five hundred and five of the acts of the year nineteen hundred and six and by chapter five hundred and seventy-two of the acts of the year nineteen hundred and eight, and acts in amendment thereof and in addition thereto, except as may otherwise be provided herein.

The Wisconsin law, under authority of which the city of Milwaukee took control of the Milwaukee School of Trades, was enacted in 1907. This law follows:

SECTION 926—22. Any city in the State of Wisconsin or any school district having within its limits a city desiring to establish, conduct and maintain a school or schools for the purpose of giving practical instruction in the useful trades to persons having attained the age of sixteen years, as a part of the public school system of such city, is empowered to do so by complying with the provisions of sections 926—23 to 926—30, inclusive, statutes of 1898.

926—23. Such trade school or schools shall be under the supervision and control of the school boards of the respective cities or school districts in which they may be located.

926—24. The school board of every such city or school district is given full power and authority to establish, take over and maintain a trade school or schools, equip the same with proper machinery and tools, employ a competent instructor or instructors, and give practical instruction in one or more of the common trades. Such a trade school shall not be maintained, however, unless there be an average enrollment of at least thirty scholars.

926—25. Whenever any school board shall have established or taken over an established trade school, such school board may prepare the courses of study, employ instructors, purchase all machinery, tools and supplies, purchase or lease suitable grounds or buildings for the use of such school and exercise the same authority over such school which it now has over the schools under its charge.

926—26. Whenever any school board shall have established or taken over an already established trade school or schools it may appoint an advisory committee, to be known as the committee on trade schools, consisting of five citizens, not members of the school board, each of whom is experienced in one or more of the trades to be taught in the school or schools, to assist in the administration of the trade school or schools located in that city, which committee shall be appointed by the president of such school board with the approval of a majority of the board. Such committee shall have authority, subject to the approval and ratification of the school board, to prepare courses of study, employ or dismiss instructors, purchase machinery, tools and supplies, and purchase or rent suitable grounds or buildings for the use of such trade schools. When any such committee on trade schools is appointed two of its original members shall be appointed for the term of one year, another two for the term of two years, and the fifth member for a term of three years, and thereafter, each member of said committee shall be appointed for the term of two years. In case of any vacancy during the term of any member of said committee, said school board shall fill such vacancy by appointment for such unexpired term.

926—27. Students attending any such trade school may be required to pay for all material consumed by them in their work in such school at cost prices or in lieu thereof the school board may establish a fixed sum to be paid by each student in each course, which sum shall be sufficient to cover, as nearly as may be, the cost of the material to be consumed in such course; any manufactured articles made in such school may be disposed of at the discretion of the school board, and the proceeds shall be paid into the trade school fund.

926—28. Whenever any such school board shall have decided to establish a trade school or schools, or to take over one already established, under the provisions of this

act, a tax, not exceeding one half of one mill on the total assessed valuation of such city shall be levied, upon the requisition of the school board, as other school taxes are levied in such city; the fund derived from such taxation shall be known as the trade school fund, shall be used in establishing and maintaining a trade school or trade schools in such city, shall not be diverted or used for any other purpose whatsoever, and may be disposed of and disbursed by the school board of such city in the same manner and pursuant to the same regulations governing the disposition and disbursement of regular school funds by such boards.

926—29. Any school board desiring to avail itself of the provisions of this act, may before the trade school fund herein provided for becomes available, establish, take over, equip and maintain a trade school or schools out of the regular school funds which may be at the disposal of such school board, provided, however, that all moneys used for these purposes out of the regular school funds shall be refunded within three years from the trade school fund.

926—30. 1. When the school board of any city of the second, third or fourth class, or the school board of any school district having within its limits such a city, shall determine to establish, take over, conduct or maintain such trade school, it shall publish notice of its intention so to do with a copy of the resolution or order expressing such determination once each week for four successive weeks in a newspaper published in said school district and shall take no further steps in said matter until the expiration of thirty days from the date of the first publication.

2. If within such thirty days there shall be filed with the clerk of such city a petition signed by a number of electors of the school district equal to twenty per centum of the number of votes cast in said city at the last municipal election praying that the question of the establishment, taking over, conduct and maintenance of such trade school shall be submitted to the vote of the electors of such school district, the city clerk shall at the earliest opportunity lay such petition before the common council. The common council shall thereupon at its next regular meeting by resolution or ordinance direct the city clerk to call a special election for the purpose of submitting such question to the electors of such city and school district.

3. Such election shall be noticed and conducted and canvassed in accordance with the provisions of section 943, statutes of 1898. All electors within the territory constituting such school district qualified to vote at any election pertaining to school district matters shall be entitled to vote.

4. If any of said school districts shall be beyond the limits of such city, the city clerk shall immediately upon the passage of the resolution or ordinance by the city council ordering such election, transmit a copy thereof to the clerk of the town or towns of which such territory is constituted. The clerk or clerks of said towns shall thereupon cause a notice of such election to be given and such election to be held and canvassed as provided in section 943.

5. If a majority of the ballots cast in such school district shall be in favor of the establishment, taking over, conducting and maintenance of such trade school, then such board shall proceed as heretofore provided to establish, take over, conduct and maintain such trade school. But if a majority shall vote against such proposition to establish, take over, conduct and maintain a trade school, the board shall take no further steps towards such end.

6. If no petition to submit such proposition to establish, take over or maintain a trade school to the vote of the electors shall be filed with the city clerk within thirty days after the first publication of the notice of the determination of the school board to take such action, then such school board may proceed as hereinbefore provided without submitting such proposition to the electors of the district. (Chap. 122, May 22, 1907.)

The industrial and trade school act passed by the New York state legislature, May 18, 1908, provided for the establishment of industrial and trade schools as follows:

820. *General industrial and trade schools may be established.*—1. The board of education of any city, and in a city not having a board of education the officer having the management and supervision of the public school system, may establish, acquire, conduct and maintain as a part of the public school system of such city general industrial schools open to pupils who have completed the elementary school course or who have attained the age of fourteen years, and trade schools open to pupils who have attained the age of sixteen years and have completed either the elementary school course or a course in the above mentioned general industrial school or who have met such other requirements as the local school authorities may have prescribed.

2. The board of education of any union free school district shall also establish, acquire, and maintain such school for like purposes whenever such schools shall be authorized by a district meeting.

821. *Appointment of an advisory board.*—1. The board of education in a city and the officer having the management and supervision of the public school system in a city not having a board of education shall appoint an advisory board of five members representing the local trades and industries. In the first instance two of such members shall be appointed for a term of one year and three of such members shall be appointed for a term of two years. Thereafter as the terms of such members shall expire the vacancies caused thereby shall be filled for a full term of two years. Any other vacancy occurring on such board shall be filled by the appointing power named in this section for the remainder of the unexpired term.

2. It shall be the duty of such advisory board to counsel with and advise the board of education or the officer having the management and supervision of the public school system in a city not having a board of education in relation to the powers and duties vested in such board or officer by section eight hundred twenty-two of this chapter.

822. *Authority of the board of education over such schools.*—The board of education in a city and the officer having the management and supervision of the public school system in a city not having a board of education and the board of education in a union free school district which authorizes the establishment of a general industrial or a trade school is vested with the same power and authority over the management, supervision, and control of such school and the teachers or instructors employed therein as such board or officer now has over the schools and teachers under their charge. Such boards of education or such officer shall also have full power and authority—

1. To employ competent teachers or instructors.

2. To provide proper courses of study.

3. To purchase or acquire sites and grounds and to purchase, acquire, lease, or construct, and to repair suitable shops or buildings, and to properly equip the same.

4. To purchase necessary machinery, tools, apparatus, and supplies.

823. *State aid for general industrial and trade schools.*—The commissioner of education in the annual apportionment of the state school moneys shall apportion therefrom to each city and union free school district the sum of five hundred dollars for each independently organized general industrial or trade school maintained therein for forty weeks during the school year and employing one teacher whose work is devoted exclusively to such school, and having an enrollment of at least twenty-five pupils and maintaining a course of study approved by him. He shall also make an additional apportionment to each city and union free school district of two hundred dollars for each additional teacher employed exclusively in such schools for forty weeks during the school year. All such moneys apportioned by the commissioner of education

shall be used exclusively for the support and maintenance of such schools in the city or district to which such moneys are apportioned. But the commissioner of education may in his discretion apportion to a district or city maintaining such schools or employing such teachers for a shorter time than forty weeks an amount pro rata to the time such schools are maintained or such teachers are employed. This section shall not be construed to entitle manual training high schools or other secondary schools maintaining manual training departments to an apportionment of funds herein provided for.

824. *Annual estimate by board of education and appropriations by municipal and school districts.*—1. The board of education of each city or the officer having the management and supervision of the public school system in a city not having a board of education shall file with the common council of such city within thirty days after the commencement of the fiscal year of such city a written itemized estimate of the expenditures necessary for the maintenance of its general industrial and trade schools and the estimated amount which the city will receive from the state school moneys applicable to the support of such schools. The common council shall give a public hearing to such persons as wish to be heard in reference thereto. The common council shall adopt such estimate and after deducting therefrom the amount of state moneys applicable to the support of such schools shall include the balance in the annual tax budget of such city. Such amount shall be levied, assessed, and raised by tax upon the real and personal property liable to taxation in the city at the time and in the manner that other taxes for school purposes are raised. The common council shall have power by a two-thirds vote to reduce or reject any item included in such estimate.

The board of education in a union free school district which maintains a general industrial or trade school shall include in its estimate of anticipated expenses pursuant to the provisions of sections two hundred forty-two and two hundred and forty-seven of this chapter the amount that will be required to maintain such schools after applying toward the maintenance thereof the amount apportioned therefor by the commisssioner of education. Such amount shall thereafter be levied, assessed, and raised by tax upon the taxable property of the district at the time and in the manner that other taxes for school purposes are raised in such district.

By the following enactment of 1909, Connecticut authorized the state board of education to establish two trade schools:

SEC. 1. The state board of education is hereby authorized and directed to establish in each of the two towns in the State which may seem to said board best adapted for the purpose, a free public day and evening school, for instruction in the arts and practices of trades, and said board may make regulations covering the admittance of scholars, but no person shall be admitted to schools established under the provisions of this act under fourteen years of age; provided, however, that, during vacations, said board may admit children under fourteen years of age.

SEC. 2. The state board of education shall expend the funds provided for the support of trade schools, appoint and remove their teachers, make rules for their management, and shall file semiannually with the comptroller, to be audited by him, a statement of expenses on account of such schools, and shall annually make to the governor a report of the condition of such schools and the doings of said board in connection therewith. Said board may enter into arrangements with manufacturing and mechanical establishments in which pupils of such trade schools may have opportunity to obtain half-time practice, and may also enter into and make arrangements with schools already established for instruction in trades approved by said board under the provisions of this act.

SEC. 3. When such schools are established under the provisions of this act, the state board of education may construct buildings, or hire, temporarily, rooms in which such schools shall be housed, and said board shall be authorized to expend

not more than fifty thousand dollars, annually, for the purpose of erecting buildings and maintaining such schools.

SEC. 4. Any town in which a trade school is established under the provisions of this act may contribute any sum properly voted therefor to the enlargement of such school, and for the improvement of its efficiency.

SEC. 5. Chapter 250 of the public acts of 1907 is hereby repealed. (Chap. 85, June 23, 1909.)

By authority of a joint resolution of the senate and general assembly of New Jersey, approved April 14, 1908, the governor of the State appointed a commission "to inquire into and report to the next legislature upon the subject of promoting industrial and technical education." The commission made its report in 1909.

By act of the legislature in 1908 the governor of Maryland was authorized to appoint a commission "to make inquiry and report to the legislature at its next session, by bill or otherwise, respecting the subject of industrial education." This commission made its report in 1910.

In 1909, by authority of an act of the legislature, the governor of Michigan appointed a commission "to make a careful study of the conditions of elementary, industrial, and agricultural education in the State of Michigan" and to present a report with recommendations before January 1, 1911.

VOCATIONAL EDUCATION IN NEW YORK.

In accordance with the provisions of the industrial and trade school act, a division of trade schools was organized in the state department of education in 1908, with Mr. Arthur D. Dean as chief. The report of this division shows that eleven schools of the new type have already been organized, located as follows: In the cities of Albany, Buffalo, Freeville, Hudson, Lancaster, New York, Rochester (two schools), Schenectady, and Yonkers (two schools). These schools are not intended to parallel the work of the high school or to supplant the manual-training courses in any of the regular schools, but are organized for the purpose of giving specific vocational training.[a]

In view of the progress already accomplished in New York State in respect to practical provision for various types of industrial schools under the administration of the department of public education, somewhat extended citations are here given from the report referred to:

The trades schools will differ from the manual-training courses in the secondary schools in the following particulars:

1. Pupils enter the trades schools with a definite purpose of preparing for industrial careers.

2. The trades school absolutely abandons all college preparatory work.

3. There is almost no instruction in pure mathematics or pure science, but instead a fair amount of time is given to such applied mathematics and applied science as is

[a] See Sixth Annual Report, New York State Education Department, pp. 517–541.

closely related to the trade selected by the pupil; in fact, all the instruction, whether in classroom, shop, or laboratory, is designed so as to be directly usable.

4. The trades schools will necessarily take on varying forms in different localities.

5. They will not be parallel to our existing high schools in that they will not necessarily draw pupils who have completed the eight grades of the elementary schools.

6. They will make more or less direct connection with the intermediate industrial schools previously outlined.

7. Those students in the trade schools who have had preliminary industrial training in the vocational schools will be allowed to take highly specialized courses with their instruction concentrating upon the development of skill and knowledge of direct practical bearing.

Further quotation from the report is here made for the purpose of showing the need of improved vocational training in New York State:

In this State there are over 50,000 people employed in printing and allied trades. There are five cities that should have a school for printers and lithographers. We may look for at least three textile schools for the 75,000 people who are engaged in the textile industry. The State should contain at least one shoe trade or technical school to fit workers for an industry that employs about 17,000 workers. Through private enterprise New York has a school for the workers on ready-made clothing. There are 130,000 people employed in this industry and one school is entirely inadequate and does not touch the problem in Rochester at all. The electrical machinery apparatus and supply industries require the services of 16,000 workers. A school of lower grade than an electrical engineering school would be of much benefit to such people. At least three such schools are needed in the State. There are 55,000 men and boys employed in the foundry and machine shops of the State. There are at least eighteen cities in the State that have sufficient iron-working industries and workers to warrant machine trades schools. There are two large paper manufacturing centers within the State employing 12,000 workers. A high standard of manufacture, excellence of workmanship, and personal ambition of workers in the State can not always be maintained without attention to the special educational needs of these workers. There are 15,000 people employed in car shops and railroad repair shops. Men's furnishing goods and shirt industries have over 26,000 workers, furniture making 16,000, planing mills 15,000, etc. A man's work is worthy of being dignified by special education fitting him for it. The quicker we realize it the better for the interests of the State.

In addition to the specific trade training mentioned above, the new vocational schools offer intermediate industrial courses which do not assume to give complete trade training, but which are designed to meet the needs of pupils from 13 to 16 years of age who have lost interest in the more academic courses of the regular schools.

INDUSTRIAL SCHOOLS IN THE UNITED STATES.

Industrial education in the United States is still in a formative state. Moreover, a wide variance of opinion prevails as to what is practicable in industrial training and even as to the meanings of terms used in current discussions of this type of education. Because of these conditions any attempt to list and classify industrial schools in the country at the present time must necessarily be tentative. Accordingly the lists presented here are arranged more with a view to showing the character and extent of training for industrial vocations than to

giving a complete directory of industrial schools with satisfactory classification. Such classification as is attempted is based on data furnished by the schools themselves.

The field dealt with in this chapter is that department of education which pertains to vocations in the industries. The courses of instruction in domestic art and domestic science usually look toward homemaking and are not strictly vocational in aim. In a few of the larger cities, however, dressmaking and millinery are studied with a view to a vocation in the industries.

In general, there may be said to be three types or grades of industrial training: (1) Complete trade training, in which the effort is made to graduate finished mechanics or skilled workers capable of doing journeymen's work and earning journeymen's wages. (2) Intermediate, or preapprentice, trade training, in which it is sought to shorten the period of apprenticeship or to give skill and intelligence preparatory to an industrial occupation. (3) Industrial improvement or supplementary instruction for those already engaged in industrial pursuits. It will be seen that some schools offer all three of these types, some offer two of them, and others offer only one.

In the lists which follow four groups are shown: General industrial schools, or institutions having industrial departments; schools for the colored race which give trade training; Indian industrial schools; and technical high schools. These schools are not as a rule purely trade schools. On the contrary, many of them were organized primarily for another purpose than trade training, but have added this feature. This is particularly true of the colleges in the South for the colored people and of the technical high schools.

The general list of industrial schools (Group A) shows the source of support and the kind of instruction offered by each institution, in so far as its character and aims could be ascertained. In all, 142 institutions are included in this group. It appears that the number of trade schools proper is small, the greater number of those in the list offering only intermediate or supplementary training. It is significant that a larger percentage of private and privately endowed schools than of those maintained at public expense attempt to graduate finished skilled workers.

The schools for the colored race are put in a separate group (Group B) for the reason that trade instruction for the colored people is given in institutions of a distinctly different type from those of Group A. Most of these schools are primarily academic and cultural in aim, and it has not been possible to classify the trade training offered by them as it is classified in Group A. Some of them, however, in their industrial departments graduate efficient workmen.

The list of Indian schools (Group C) was prepared for the Bureau of Education by the Office of Indian Affairs. For the most part,

the schools included are nonreservation boarding schools, and offer instruction of a more advanced grade than that of the reservation schools, but generally the effort is not made to graduate finished skilled workers.

The list of high schools (Group D) pertains to the class of institutions usually called "technical high schools." These schools as a rule are designed to prepare either for entrance into the higher technical colleges or for a semitechnical vocation in the industries. Some offer specific trade training and give supplementary instruction (usually by evening classes) to those already engaged in industrial pursuits. In the schools comprised in Group D the vocational aim is more or less prominent, whatever the type or grade of the instruction given.

In a complete directory of the industrial schools of the country a fifth group should be added to those given here, namely, the state-supported schools for the deaf and blind and the state reform schools for juvenile offenders. With few exceptions all the schools referred to make provision for some form of industrial training, but satisfactory classification is here well-nigh impossible. Reform schools rarely keep an offender long enough to teach him a trade. On the contrary, in schools for the deaf some very efficient skilled workers are developed. Lists of the several classes of schools referred to as forming a fifth group may be found in the second volume of the Annual Report of the Commissioner of Education.

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GROUP A.—*Schools in the United States which offer training for specific vocations in the industries.*[a]

Location.	Name of institution.	Source of support.	Training given in—	Character or grade of training.		
				Offers complete trade training in lieu of older apprenticeship system.	Offers intermediate, or preapprentice, trade training.	Offers industrial improvement courses to workers already engaged in industrial pursuits.
ALABAMA.						
Camp Hill	Southern Industrial Institute		Agriculture, elementary forestry, carpentry, brickmaking, cooking, sewing, laundering.		Yes	
CALIFORNIA.						
Pasadena	Throop Polytechnic Institute Academy		Mechanical drawing, woodwork, pattern making, forging, machine-shop practice.		Yes	
San Francisco	The California School of Mechanical Arts	Private endowment	Pattern making, forging, molding, machine-shop practice, machine drawing, dressmaking, millinery.	Yes	Yes	Yes.
Do	Cogswell Polytechnic College	Endowment	Machine drawing, electrical design, architectural drawing, pattern making, machine-shop practice.		Yes	
Do	McDowell Dress-cutting and Dressmaking School.	Tuition fees	Dress cutting, dressmaking, designing.	Yes		Yes.
Do	Wilmerding School of Industrial Arts for Boys.	Private endowment	Carpentry, cabinetmaking, plumbing, bricklaying, house wiring, architectural drawing.	Yes		
San Luis Obispo	California Polytechnic School	State	Agriculture, mechanical drawing, carpentry, forging, machine-shop work.			
CONNECTICUT.						
Bridgeport	(b)	State				
Do	Y. M. C. A. School	Tuition fees	Supplementary instruction in plumbing, woodworking, machinist trade, tool making.	No	Yes	Yes.
Hartford	Hillyer Institute of Y. M. C. A.	Tuition fees and endowment.	Intermediate training in automobiling, electricity, and plumbing; supplementary instruction in a variety of trades.	No	Yes	Yes.
New Britain	State Trade School [c]	State	Machinist trade, tool making, die making, carpentry, pattern making.			
Stamford	Apprenticeship School, Yale & Towne Manufacturing Co.		Tool making, machinist trade, metal pattern making, plating, blacksmithing.	Yes		No.

DISTRICT OF COLUMBIA.						
Takoma Park	The Bliss Electrical School	Tuition fees	A one-year course in electricity			
GEORGIA.						
Atlanta	Georgia School of Technology, textile department.	State	Textiles			
Columbus	Secondary Industrial School	City	Woodwork, mechanic arts, textiles		Yes	No.
IDAHO.						
Weiser	The Idaho Industrial Institute	Tuition fees and gifts	Blacksmithing, carpentry, woodworking	No	Yes	
ILLINOIS.						
Chicago	Armour Institute of Technology	Private endowment	Evening industrial improvement courses in the academy.		Yes	Yes.
Do	Association Institute (Y. M. C. A.)	Donations and tuition fees.	Supplementary instruction for vocations		Yes	Yes.
Do	Coyne National Trade Schools	Tuition fees	Plumbing, electricity, bricklaying	Yes		Yes.
Do	Inland Printer Technical School	do	Linotype operation			
Do	International Harvester Company, Apprentice School.		School within the factory for apprentices			
Do	Lewis Institute	Endowment and tuition fees.	Cooperative courses in the mechanic arts			
Do	The McDowell Dress-cutting and Dressmaking School.	Tuition fees	Dress-cutting and dressmaking	Yes		
Do	School for Apprentices of the Lakeside Press		Composition, presswork, engraving, bookbinding.	Yes		Yes.
Do	Technical College of the Zymotechnic Institute.	Tuition fees	Brewing, bottling, malting, engineering			
Do	Wahl-Henius Institute of Fermentology	do	Course designed to fit journeymen to become brew masters.			Yes.
Peoria	Bradley Polytechnic Institute, horological department.	Endowment and tuition fees.	Watchmaking, jewelry engraving, and optics	Yes		Yes.
INDIANA.						
Indianapolis	National Trade Schools	Tuition fees	Higher instruction in presswork and topography.	No	Yes	Yes.
Do	Y. M. C. A. Institute	do	Supplementary training for various trades		Yes	Yes.
South Bend	Apprentice School of the Studebaker Bros. Manufacturing Co.		Supplementary instruction for apprentices in the factory.			
KANSAS.						
Topeka	Santa Fe Railway System Apprentice Schools.		Machinist trade, boiler making, blacksmithing, brass finishing, cabinetmaking, painting, pattern making, cognate academic instruction.	Yes		No.

[a] Not including schools from which no reports or printed matter were received.
[b] In process of organization under the trade-school law of 1909.
[c] Organized under the trade-school law of 1909.

GROUP A.—*Schools in the United States which offer training for specific vocations in the industries*—Continued.

Location.	Name of institution.	Source of support.	Training given in—	Character or grade of training.		
				Offers complete trade training in lieu of older apprenticeship system.	Offers intermediate, or preapprentice, trade training.	Offers industrial improvement courses to workers already engaged in industrial pursuits.
LOUISIANA.						
New Orleans	Isadore Newman Manual Training School	Endowment and tuition fees.	Pattern making, cabinetmaking, furniture construction, applied design.	.....	Yes	
Ruston	Louisiana Industrial Institute	State	Printing, carpentry, pattern making, molding, electricity, machine-shop practice, drawing.	No	Yes	No.
MARYLAND.						
Baltimore	Maryland Institute for the Promotion of the Mechanic Arts.	State and city	Applied art, machinist trade, carpentry	No	Yes	Yes.
MASSACHUSETTS.						
Beverly	The Beverly Industrial School [a]	State and city	Machine-shop work, gas engines, industrial drawing, architectural drawing, shop mathematics, engineering mathematics.	.....	Yes	
Boston	The Boston Industrial School [a]	do	Interior decoration, building and estimating, machine-shop work, boiler engineering, tool and jig making, ship drafting, architectural drawing, machine drawing, industrial mathematics.	.....	Yes	
Do	Boston Trade School for Girls [a]	do	Dressmaking, millinery, factory-made clothing, straw-hat making.	.....	Yes	
Do	Boys' Institute of Industry		Carpentry, printing, cobbling, wood carving	.....	Yes	
Do	Central Evening Industrial School	State and city	Boiler engineering, blacksmithing, tool and jig making, pattern making, applied drawing.	.....	Yes	
Do	Eric Pape School of Art	Endowment and fees	Drawing, painting, illustrating, decorative design.	Yes	Yes	Yes.
Do	Farm and Trades School	Donations	"Rudiments of trades"	.....	Yes	
Do	Franklin Union	Endowment	Industrial improvement courses for men	No	No	Yes.
Do	Hebrew Industrial School	Endowment and subscriptions.	Millinery, dressmaking, men's clothing, straw weaving.	.....	Yes	

Do	Lowell Institute for Industrial Foremen	Massachusetts Institute of Technology.	Supplementary courses in applied science			Yes.
Do	Massachusetts Charitable Mechanic Association Trade School.	Endowment and fees.	Electricity, masonry, carpentry, plumbing, sheet-metal work, drawing, pattern drafting for apprentices learning trades in shops.		Yes	For carpenters.
Do	McDowell Dressmaking and Millinery School.	Tuition fees	Ladies' garment drafting, designing, dressmaking, millinery.	Yes	Yes	Yes.
Do	North End Union	do	Plumbing and printing		Yes	
Do	State Steam Engineering School	do	Steam engineering	Yes		Yes.
Do	Wells Memorial Institute	Fees	Lectures and industrial improvement courses for working men and women.			Yes.
Do	Women's Educational and Industrial Union.	Donations	Handwork, millinery, salesmanship			
Brockton	The Brockton Industrial School [a]	State and city	Mechanical drawing, engineering, dressmaking, millinery.		Yes	
Cambridge	The Cambridge Industrial School [a]	do	Machine-shop work, wood turning, pattern making, forging, drawing, shop mathematics, dressmaking, millinery.		Yes	
Chicopee	The Chicopee Industrial School [a]	do	Machine-shop work, pattern making, woodworking, cabinetwork, industrial drawing.		Yes	
Fall River	Bradford Durfee Textile School		Textiles			
Fitchburg	Fitchb urg High School	City	Cooperative courses in conjunction with machine-shop work.	Yes		
Lawrence	The Lawrence Industrial School [a]	State and city	Mechanical arts, textile arts, trades for girls		Yes	
Lowell	Lowell Textile School		Textiles			
Lynn	General Electric Company Apprentice School.		School within the factory for apprentices	Yes		
Montague	The Montague Industrial School [a]	State and city	Agriculture, carpentry, mechanical work		Yes	
Natick	The Natick Industrial School [a]	do	Dressmaking, domestic science			
New Bedford	The New Bedford Industrial School [a]	do	Metal working, woodworking, industrial drawing, applied science.		Yes	
Do	New Bedford Textile School		Textiles			
Newton	The Newton Industrial School [a]	State and city	Woodwork, drawing, machine work, industrial geography.		Yes	
Northampton	Smith's Agricultural School and Northampton School of Technology [a].	do	Agriculture, mechanical arts		Yes	
Pittsfield	The Pittsfield Industrial School [a]	do	Carpentry, mechanical drawing, shop mathematics.		Yes	
Springfield	Evening School of Trades	City	Pattern making, tool making, mechanical drawing, machine design, electricity, plumbing.		Yes	Yes.
Taunton	The Taunton Industrial School [a]	State and city	Modeling, dressmaking			
Walpole	The Walpole Industrial School [a]	do	Mechanical drawing, architectural drawing		Yes	
Worcester	Worcester School of Trades [a]	do	Machinist trade, pattern making, cabinetmaking.	Yes		Yes.
MICHIGAN.						
Detroit	Detroit Technical Institute of the Y. M. C. A.	Tuition fees.	Plumbing, watch making, engraving, sign writing.	Yes	Yes	Yes.
MINNESOTA.						
Mankato	Woodcock's Private Practical Watch Making and Optical School.	Tuition fees	Watchmaking and optics	Yes		

[a] Approved under the industrial-school law of 1906.

GROUP A.—*Schools in the United States which offer training for specific vocations in the industries*—Continued.

Location.	Name of institution.	Source of support.	Training given in—	Character or grade of training.		
				Offers complete trade training in lieu of older apprenticeship system.	Offers intermediate, or preapprentice, trade training.	Offers industrial improvement courses to workers already engaged in industrial pursuits.
MISSISSIPPI.						
Agricultural College	Mississippi Agricultural and Mechanical College.	State	Textiles			
MISSOURI.						
St. Louis	Academy of Architecture and Industrial Science.	Tuition fees	Individual instruction. Architectural and mechanical drafting.			Yes.
Do	David Rankin, Jr., School of Mechanical Trades.	Endowment and tuition fees.	Carpentry, pattern making, painting, plumbing, bricklaying, steam engineering, drafting, applied mathematics, applied science.	Yes		Yes.
Do	Ralph Sellew Institute of the St. Louis Y. M. C. A.	do	Supplementary instruction in a variety of vocations.	No	Yes	Yes.
Do	St. Louis Watchmaking School	Tuition fees	Watchmaking, jewelry engraving, optics	Yes		
Do	Women's Training School, Y. W. C. A.	do	Dressmaking, millinery, nursing the sick, teaching domestic science.			
NEBRASKA.						
Omaha	Omaha Watch Repairing, Engraving, and Optical Institute.	Tuition fees	Watch repairing, engraving, optics	Yes		Yes.
NEW JERSEY.						
Camden	Y. M. C. A. School	Tuition fees	Supplementary instruction for the trades		Yes	Yes.
Hoboken	Hoboken Evening School	City	Evening industrial improvement courses	No	Yes	Yes.
Newark	Newark Technical School	State and city	Plumbing, machinery, molding, electroplating, electric wiring, decorative design.	No	Yes	Yes.
Paterson	Paterson Silk Textile School	Tuition fees and contributions.	Silk textiles	Yes		Yes.
Trenton	School of Industrial Arts	State and city	Applied arts, mathematics, and chemistry			Yes.
NEW YORK.						
Albany	Albany Vocational School [a]	State and city				
Brooklyn	Pratt Institute, trades department	Endowment and tuition fees.	Machine work, carpentry, tinsmithing, pattern making, dressmaking, millinery.	Yes	Yes	Yes.

Buffalo	(a)	State and city				
Freeville	(a)	do				
Hudson	The Hudson Industrial School a	do				
Lancaster	(a)	do				
Long Island City	Evening High and Trades School	City	Machine shop work, joinery, blacksmithing, drawing, dressmaking, millinery.			Yes.
New York	(a)	State and city				
Do	General Society of Mechanics and Tradesmen.		Supplementary instruction for a variety of trades.	No	Yes	Yes.
Do	Hebrew Technical Institute	Contributions	Electricity, pattern making, instrument making, machine work, mechanical drawing, wood carving	No	Yes	Yes.
Do	Hebrew Technical School for Girls		Dressmaking, millinery, commercial studies.			
Do	Manhattan Trade School for Girls	Contributions	Dressmaking, millinery, lamp-shade work, novelty work, power machine operating.		Yes	
Do	Mitchell School of Garment Cutting	Tuition fees	Garment cutting, designing	Yes		
Do	McDowell Dress-Cutting and Dressmaking School.	do	Designing, dress-cutting, dressmaking, ladies' tailoring.	Yes		Yes.
Do	National Brewers' Academy	do	Brewing and distilling	Yes	Yes	Yes.
Do	New York School of Applied Design for Women.	Endowment and tuition fees.	Designing wall papers, silks, book covers, "black and white" work for reproduction.			
Do	New York School of Industrial Art	Tuition fees	Architectural drawing and design, interior decorating, mural painting, textile design, stained glass, illustrating dress-cutting, dressmaking.			
Do	New York Trade School	Endowment and tuition fees.	Blacksmithing, bricklaying, carpentry, cornice and skylight work, sheet-metal work, pattern drafting, sign painting, house painting, decorating, plumbing, plastering, pattern making, printing, electricity, steam fitting.		Yes	Yes.
Do	Evening Trade School of St. George's Church.	Donations	Plumbing, sheet-metal work, carpentry, drawing, electricity.		Yes	
Do	Stuyvesant Evening Trade School	City	Carpentry and joinery, cabinet making, pattern making, blacksmithing, plumbing, machine-shop practice, electrica. and steam engineering, drawing, applied mathematics, applied science.		Yes	
Do	Technical School for Carriage Draftsmen and Mechanics.	Tuition fees	Carriage drafting	Yes		Yes.
Do	Webb's Academy and Home for Shipbuilders.	Endowment	Designing vessels, engines, boilers, etc			
Do	Y. W. C. A. School	Donations and tuition fees.	Dressmaking, millinery, designing	Yes	Yes	Yes.
Rochester	Athenæum and Mechanics Institute	do	Supplementary instruction for a variety of trades.		Yes	Yes.
Do	Rochester Factory School a	State and city				
Do	Rochester Vocational School a	do				
Schenectady	Schenectady Industrial School a	do				
Yonkers	Saunders School of Trades a	do		No	Yes	Yes.

a Organized under the trade-school law of 1908.

GROUP A.—*Schools in the United States which offer training for specific vocations in the industries*—Continued.

Location.	Name of institution.	Source of support.	Training given in—	Character or grade of training.		
				Offers complete trade training in lieu of older apprenticeship system.	Offers intermediate, or preapprentice, trade training.	Offers industrial improvement courses to workers already engaged in industrial pursuits.
NORTH CAROLINA.						
Brevard	Brevard Institute	Endowment and tuition fees.	Agriculture, carpentry, printing, dressmaking, millinery.	No	Yes	No.
West Raleigh	North Carolina College of Agricultural and Mechanical Arts, textile department.	State	Textiles			
OHIO.						
Cincinnati	Continuation School	City	Cooperative courses in conjunction with work in factories.			
Do	Ohio Mechanics' Institute	Endowment and tuition fees.	Carpentry, cabinet making, pattern making, machine work, lithographic design, sign painting, china decorating, architectural and mechanical drafting.	Yes	Yes	Yes.
Do	Y. M. C. A. School	Tuition fees	Supplementary instruction		Yes	Yes.
Cleveland	do	Endowment and tuition fees.	Dressmaking and millinery	Yes		
Columbus	Columbus Trades School	City	Mechanical drawing, constructive drawing, carpentry, pattern making, printing.		Yes	
OREGON.						
Portland	Portland School of Trades	City	Carpentry, cabinet making, machinery, pattern making, electrical construction, plumbing and gas fitting, drawing.	Yes	Yes	
PENNSYLVANIA.						
East Pittsburg	Casino Technical Night School	Donations and tuition fees.	Supplementary instruction for the trades		Yes	Yes.
Lancaster	Ezra F. Bowman Technical School	Tuition fees	Watch making and repairing, jewelry engraving.	Yes		Yes.
Philadelphia	Central Association Institute of the Y. M. C. A.	Endowment and tuition fees.	Supplementary instruction for the trades		Yes	Yes.
Do	Drexel Institute, trades department	do	Machine construction	Yes		Yes.
Do	Franklin Institute	do	Mechanical drawing, machine design, and naval architecture.	No	Yes	Yes.
Do	Girard College for Orphans	Endowment	Electricity, mechanical drawing, iron working, wood working, blacksmithing, molding, and plumbing.			

Do	Hebrew Education Society	do	Plumbing, power operating, cigar making, men's garment cutting, millinery, dressmaking, drawing.	Yes	No	No.
Do	McDowell Dress-Cutting and Dressmaking School.	Tuition fees	Designing, dress-cutting, dressmaking, ladies' tailoring.	Yes		Yes.
Do	Philadelphia College of Horology	do	Watchmaking, engraving, optics	Yes		Yes.
Do	Philadelphia Textile School	do	All branches of the textile industry			
Do	Philadelphia Trades School	City	Bricklaying, carpentry, electricity, painting, pattern making, plastering, plumbing, printing, sheet-metal work, forging.	No	Yes	Yes.
Do	School of Industrial Art of Pennsylvania Museum.	State, city, and tuition fees.	Applied art			
Do	Spring Garden Institute	Tuition fees	Mechanical drawing, architectural drawing, designing, electricity, machine-shop practice.			
Do	Temple University	Donations and tuition fees.	Drawing, sheet-metal work, dressmaking, millinery, supplementary instruction in chemistry, designing, and structural engineering.	No	Yes	Yes.
Pittsburg	Carnegie Technical Institute, School of Applied Industries.	Endowment and tuition fees.	Machine work, pattern making, blacksmithing and forging, molding and foundry work, plumbing, heating and ventilating, sheet-metal work, bricklaying, house painting, sign painting, electric wiring.	Yes	Yes	Yes.
Williamson School	Williamson Free School of Mechanical Trades	Endowment	Bricklaying, carpentry, steam and electrical engineering, machinists, pattern making.	Yes	No	No.
RHODE ISLAND.						
Providence	Rhode Island School of Design	Tuition fees	Industrial drawing		Yes	Yes.
TENNESSEE.						
McMinnville	Southern School of Photography	Tuition fees	All branches of photography	Yes		Yes.
VIRGINIA.						
Miller School	Miller Manual Labor School	Endowment	Carpentry, foundry work, machine-shop, practice drawing.		Yes	
Richmond	Virginia Mechanics Institute	City	Industrial improvement instruction to young men over 15 years of age.	No	Yes	Yes.
WISCONSIN.						
Menomonie	Stout Institute	Benefactions and tuition fees.	Bricklaying, plumbing	Yes	No	No.
Milwaukee	Industrial Chemical Institute of Milwaukee	Tuition fees	Courses designed to develop brew masters, malt masters, superintendents of bottling plants, and foremen.			
Do	Milwaukee School of Trades	City	Pattern making, machinist, trade tool making, carpentry and woodworking, plumbing and gas fitting.	No	Yes	
Platteville	Wisconsin State Mining Trade School	State	Mining	Yes	Yes	

GROUP B.—*Schools for the colored race in the United States which offer training for specific vocations in the industries.*

Location.	Name of institution.	Source of support.	Training given in—
ALABAMA.			
Corona	Corona Industrial Institute		Agriculture, carpentry, mining, blacksmithing, wheelwrighting.
Normal	Agricultural and Mechanical College for Negroes.	State and federal governments.	Agriculture, carpentry, machine-shop work, blacksmithing, shoemaking, wheelwrighting, bricklaying, printing, tailoring, painting, steam and electrical engineering.
Snow Hill	Snow Hill Normal and Industrial Institute		Agriculture, blacksmithing, carpentry, wheelwrighting, painting, brickmaking, bricklaying, printing, sawmilling.
Tuskegee	Tuskegee Normal and Industrial Institute	Endowment	Architectural drawing, blacksmithing, brickmaking, bricklaying, carpentry, woodwork, electrical engineering, foundry work, harness making, landscape gardening, machinist, painting, plumbing, printing, sawmilling, shoemaking, steam engineering, tailoring, tinsmithing, wheelwrighting, road building.
ARKANSAS.			
Little Rock	Arkansas Baptist College	Donations and tuition fees.	Printing, carpentry, cabinetmaking, painting.
Pine Bluff	Branch Normal College	State and federal governments.	Carpentry, machine-shop work, blacksmithing.
DELAWARE.			
Clayton	St. Joseph's Industrial School for Colored Boys.	Donations	Carpentry, painting, printing, engineering, shoemaking, tailoring.
Dover	State College for Colored Students	State and federal governments.	Carpentry, machine-shop work, blacksmithing, printing.
FLORIDA.			
Tallahassee	Florida Agricultural and Mechanical College for Negroes.	do	Carpentry, wheelwrighting, painting, blacksmithing, tailoring, printing, shoemaking, bricklaying.
GEORGIA.			
Athens	Knox Institute and Industrial School		Printing, carpentry, basketry.
Atlanta	Atlanta Baptist College		Carpentry, painting, printing.
Do.	Morris Brown College	Donations and tuition fees.	Printing and tailoring.
Savannah	Georgia State Industrial College	State and federal governments.	Agriculture, brick masonry, carpentry, shoemaking, painting, tailoring, wheelwrighting, blacksmithing, plastering.
KENTUCKY.			
Cane Springs	Eckstein Norton Institute	Donations and tuition fees.	Agriculture, printing, shoemaking, painting, carpentry, barbering.
Frankfort	Kentucky Normal and Industrial Institute for Colored Persons.	State and federal governments.	Agriculture, carpentry, printing.
LOUISIANA.			
Baldwin	Gilbert Academy and Industrial College		Carpentry and printing.
New Orleans	Straight University	Donations and tuition fees.	Carpentry, blacksmithing, machine-shop work, printing, electricity, plumbing, tinning, mechanical drawing.
Do.	Southern University	State and federal governments.	Agriculture, carpentry, painting, printing.

MARYLAND.			
Princess Anne	Princess Anne Academy	State and federal governments.	Agriculture, carpentry, blacksmithing, wheelwrighting, painting, printing.
MISSISSIPPI.			
Alcorn	Alcorn Agricultural and Mechanical College	State and federal governments.	Agriculture, carpentry, blacksmithing, shoemaking, wheelwrighting, brick laying, painting, harness making.
Okolona	Okolona Industrial College	Endowment and tuition fees.	Carpentry, painting, bricklaying, blacksmithing, electrical engineering, and steam engineering.
Tougaloo	Tougaloo University		Carpentry, bricklaying, blacksmithing, mechanical drawing.
MISSOURI.			
Jefferson City	Lincoln Institute	State and federal governments.	Agriculture, carpentry, machine-shop work.
Sedalia	George R. Smith College	Donations and tuition fees.	Agriculture, carpentry, blacksmithing, printing, machine-shop work.
NEW JERSEY.			
Bordentown	Manual Training and Industrial School for Colored Youth.	State	Agriculture and carpentry.
NORTH CAROLINA.			
Charlotte	Biddle University	Donations and tuition fees.	Carpentry, printing, cobbling, brick masonry, plastering, tailoring.
Greensboro	Agricultural and Mechanical College for the Colored Race.	State and federal governments.	Agriculture, carpentry, machine-shop work, blacksmithing, bricklaying, plastering.
Raleigh	St. Augustine's School	Donations and tuition fees.	Printing, carpentry, masonry.
Do	Shaw University	Endowment	Carpentry, blacksmithing, bricklaying, plastering, painting, cabinetmaking, upholstering, mechanical drawing.
Winston-Salem	Slater Industrial and State Normal School	State	Agriculture, carpentry, painting.
OKLAHOMA.			
Langston	Colored Agricultural and Normal University	State and federal governments.	Agriculture, carpentry, blacksmithing, machine-shop work.
SOUTH CAROLINA.			
Aiken	Schofield Normal and Industrial Institute		Printing, carpentry, harness making, blacksmithing, wheelwrighting, cobbling.
Charleston	Avery Normal Institute	Donations and tuition fees.	Woodwork, bench and machine work, printing.
Columbia	Benedict College		Carpentry, printing, painting, shoemaking.
Greenville	Sterling Industrial College	Endowment and tuition fees.	Agriculture, carpentry, brick masonry.
Mayesville	Mayesville Educational and Industrial Institute.		Carpentry, blacksmithing, masonry, tailoring.
Orangeburg	Claflin University	Donations and tuition fees.	Carpentry, cabinetmaking, wheelwrighting, tailoring, printing, blacksmithing, brick masonry.
Do	Colored Normal, Industrial, Agricultural, and Mechanical College.	State and federal governments.	Carpentry, woodwork, blacksmithing, wheelwrighting, steam fitting, plumbing, tinning, bricklaying, stone setting, plastering, painting, harness making, shoemaking, electrical engineering.

GROUP B.—*Schools for the colored race in the United States which offer training for specific vocations in the industries*—Continued.

Location.	Name of institution.	Source of support.	Training given in—
TENNESSEE.			
Knoxville	Knoxville College	State and federal governments.	Carpentry, blacksmithing, wheelwrighting, printing, plumbing, electrical engineering.
Morristown	Morristown Normal and Industrial College		Carpentry, blacksmithing, machine-shop work, plumbing, printing, upholstering, foundry work.
Nashville	Tennessee Industrial School	State and tuition fees.	Drawing, baking, barbering, broom making, blacksmithing, cabinetmaking, carpentry, electricity, machinist trade, painting, printing, shoemaking, tailoring.
Do	Walden University	Endowment and tuition fees.	Printing, carpentry, painting.
TEXAS.			
Austin	Tillotson College	Donations and tuition fees.	Agriculture, carpentry, forging, printing, mechanical drawing.
Marshall	Bishop College	do	Carpentry, printing, blacksmithing, painting, bricklaying, plastering, shoemaking.
Do	Wiley University	do	Carpentry, blacksmithing, cabinetmaking, printing, electrical and steam engineering.
Prairie View	Prairie View State Normal and Industrial College.	State and federal governments.	Agriculture, carpentry, machine-shop work, blacksmithing, shoemaking, wheelwrighting, tailoring.
VIRGINIA.			
Cambria	Christiansburg Industrial Institute	Donations and tuition fees.	Agriculture, carpentry, blacksmithing, printing, cobbling.
Hampton	Hampton Normal and Agricultural Institute	Endowment	Agriculture, carpentry, machine-shop work, blacksmithing, shoemaking, wheelwrighting, painting, printing, harness making, tailoring, plastering, upholstering, steam fitting, and plumbing.
Lawrenceville	St. Paul Normal and Industrial School	Donations and tuition fees.	Agriculture, carpentry, bricklaying, shoemaking, harness making, blacksmithing, wheelwrighting, tinning, cabinetmaking, printing.
Manassas	Manassas Industrial School	do	Blacksmithing, carpentry, cobbling, wheelwrighting.
Richmond	Virginia Union University	Endowment and tuition fees.	Carpentry, blacksmithing, molding, machine-shop practice, mechanical drawing.
WEST VIRGINIA.			
Harpers Ferry	Storer College		Carpentry, blacksmithing.
Institute	West Virginia Colored Institute	State and federal governments.	Agriculture, carpentry, blacksmithing, wheelwrighting, printing, bricklaying, plastering, painting.

GROUP C.—*Indian schools in the United States in which trades are taught.*

Schools where systematic instruction is given in the following trades: Carpentering, blacksmithing, masonry, painting, steam engineering, shoe making, harness making, tailoring, wagon making, baking, printing, farming, gardening, and dairying: Carlisle, Pa.; Chilocco, Okla.; Haskell Institute, Lawrence, Kans.; Phoenix, Ariz.; Salem, Oreg.

Schools where systematic instruction is given in the following trades: Carpentering, blacksmithing, painting, shoemaking, harness making, tailoring, wagon making, baking, farming, gardening, and dairying: Albuquerque, N. Mex.; Carson, Nev.; Flandreau, S. Dak.; Genoa, Nebr.; Pipestone, Minn.; Santa Fe, N. Mex.; Sherman Institute, Riverside, Cal.; Tomah, Wis.

Schools where some training is given in a few of the trades and industries: Bismarck, N. Dak.; Fort Bidwell, Cal.; Grand Junction, Colo.; Mount Pleasant, Mich.; Pierre, S. Dak.; Rapid City, S. Dak.; Wahpeton, N. Dak.; Wittenberg, Wis.

GROUP D.—*Public high schools in the United States in which instruction with a vocational aim is offered.*

Polytechnic High School, Los Angeles, Cal.; Humboldt Evening High School, San Francisco, Cal.; Polytechnic High School, San Francisco, Cal.; Manual and Industrial School, New London, Conn.; McKinley Manual Training School, Washington, D. C.; Technological High School, Atlanta, Ga.; Secondary Industrial School, Columbus, Ga.; Albert G. Lane Technical High School, Chicago, Ill.; Richard T. Crane Technical High School, Chicago, Ill.; Manual Training High School, Indianapolis, Ind.; Baltimore Polytechnic Institute, Baltimore, Md.; High School of Practical Arts, Boston, Mass.; Mechanic Arts High School, Boston, Mass.; Rindge Manual Training School, Cambridge, Mass.; B. M. C. Durfee High School, Fall River, Mass.; Fitchburg High School, Fitchburg, Mass.; New Bedford High School, New Bedford, Mass.; Technical High School, Springfield, Mass.; Hackley Manual Training School, Muskegon, Mich.; Mechanic Arts High School, St. Paul, Minn.; Technical High School, Buffalo, N. Y.; Stuyvesant High School, New York, N. Y.; Technical High School, Syracuse, N. Y.; Technical High School, Cleveland, Ohio; Technical High School, Harrisburg, Pa.; Technical High School, Scranton, Pa.; Townsend Industrial School, Newport, R. I.; Technical High School, Providence, R. I.

CHAPTER IV.

AGRICULTURAL EDUCATION.

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INCREASING DEMAND FOR EDUCATION IN AGRICULTURE.

The increasing demand for education in agriculture is simply one feature of the general movement for the uplift of rural life and development of rural industries that is now going on in this country. During the year the teaching of agriculture in the public schools, including the place it should occupy in the course of study and the methods by which it may be made most fruitful of results, has been a prominent subject of consideration at teachers' conventions, farmers' institutes, and in professional journals and the public press. Twelve formal addresses on different phases of agricultural education were given at the annual meeting of the National Education Association, held in Boston, July 5–8, 1910. The department of rural and agricultural education, after devoting two days to the subject, met in joint session with the department of science and the department of secondary education and devoted one day to the topic, "The practical aspects of science with reference to the introduction of material from agriculture." The national committee on agricultural education presented a programme requiring a half-day session, and the teachers of agriculture held a half-day session in conference with discussions on problems vital to them. At the annual conference for education in the South, held in April, 1910, at Little Rock, Ark., four of the sixteen addresses given in the general sessions were on agricultural education, and, in addition, a special conference on the subject, with six addresses, was held. It is worthy of note that the discussions at the

teachers' conventions and in the professional journals are no longer on the question, "Should agriculture be taught in the public schools?" but are on questions related to the teaching of the subject.

PROVISION FOR TRAINING TEACHERS OF AGRICULTURE FOR THE PUBLIC SCHOOLS.

The agricultural colleges have taken up the work of preparing teachers of agriculture for the public schools, and have been particularly active in systemizing their facilities for such instruction. Departments of agricultural education, variously named as department of agricultural education, department of agricultural pedagogy, department of industrial education, or department of rural education, have been recently established in many of the land-grant colleges of the United States. Most of these departments were established in 1908 or 1909 following the act of Congress of March 4, 1907, appropriating additional funds for the support of the land-grant colleges and providing, "That said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and mechanic arts."

The list of States having land-grant colleges, from which such departments have been reported, is as follows:

State.	Year.	Head of department.
Alabama	1909	L. W. Duncan.
Arkansas	1909	J. M. Borders.
California	1909	E. B. Babcock.
Idaho	1909	E. E. Elliot.
Illinois	1905	D. O. Barto (secondary education).
	1909	F. L. Charles (elementary education).
Indiana	1908	G. L. Roberts.
Louisiana	1909	V. L. Roy.
Massachusetts	1907	W. R. Hart.
Michigan	1908	W. H. French.
Minnesota	.....	D. D. Mayne.
Mississippi	1904	D. C. Hull.
Missouri	1909	F. B. Mumford (agricultural education).
		R. H. Emberson (rural education).
Nebraska	1909	A. E. Davisson.
North Dakota	1908	A. D. Weeks.
Oklahoma	1909	T. M. Jeffords.
Oregon	1909	E. D. Resslar.
Pennsylvania	1910	T. I. Mairs.
Tennessee	1908	
Wisconsin	1909	K. L. Hatch.

In addition to the above institutions the land-grant colleges in Delaware, Florida, Georgia, Iowa, Maine, New Mexico, New York, North Carolina, Rhode Island, Vermont, and Washington offer special courses in agriculture for students intending to teach. Michigan Agricultural College announces the adoption of a one-year professional course for agricultural teachers, open to graduates of the state normal schools in the life-certificate courses and to graduates of reputable colleges who have had two or more years' experience in teaching. Thirty-one of the agricultural and mechanical colleges con-

ducted summer schools during the past summer, giving agricultural instruction primarily for teachers. A list of these, with the dates of opening and closing the schools, follows:

University of Arkansas	June 13–July 23.
University of California	June 20–July 30.
Connecticut Agricultural College	July 5–July 29.
Georgia State College of Agriculture	June 28–July 30.
University of Illinois	June 21–August 20.
Kansas State Agricultural College	June 14–July 26.
Kentucky State University	June 6–August 12.
Louisiana State University	June 6–August 5.
University of Maine	June 28–August 6.
Massachusetts Agricultural College	July 11–August 12.
Michigan Agricultural College	June 29–July 5.
University of Minnesota	June 20–July 29.
Mississippi Agricultural and Mechanical College	12-week and 6-week courses.
University of Missouri	June 10–August 12.
University of Nebraska	June 20–August 6.
North Carolina College of Agriculture and Mechanic Arts	May 16–May 28.
Ohio State University	June 20–August 12.
Oklahoma Agricultural and Mechanical College	June 13–July 23.
Oregon State Agricultural College	June 20–August 6.
Pennsylvania State College	June 20–August 6.
Rhode Island State College	July 5–August 2.
South Dakota Agricultural College	June 22–July 13.
University of Tennessee	June 21–July 29.
Agricultural and Mechanical College of Texas	June 20–July 29.
Agricultural College of Utah	June 6–July 16.
University of Vermont	June–July, 6 weeks.
Hampton Normal and Agricultural Institute	June 14–July 12.
State College of Washington	June 20–July 29.
West Virginia University	June 20–July 30.
University of Wisconsin	June 27–August 6.
University of Wyoming	June 21–July 30.

In response to the demand for teachers qualified to give instruction in agriculture, in both elementary and secondary schools, the normal schools of the country are equipping themselves for the work. About 160 normal schools are now giving regular courses in agriculture, and several announce special courses for teachers who wish to engage permanently in work in rural schools; for example, Lewiston (Idaho) State Normal School announces for the coming year a course of training for teachers of rural schools, including rural sociology, dealing largely with the relation of the rural school to the community; rural-school management; rural arts; and rural sciences, including agriculture, school gardening, and nature study. This school has established also a department of extension work for rural schools. This department will aid in planning school buildings where new schools are to be erected or old ones remodeled; in furnishing advice regarding equipment; in supplying lecturers for teachers' institutes;

in directing work in elementary agriculture, school gardening, and domestic arts, and in supplying teachers.

The Maryland state board of education has selected a farm of 178 acres near Bowie, on the Pennsylvania Railroad between Baltimore and Washington, as a site for a new state normal school for negroes. Instruction will be given in mechanic arts, trades, agriculture, and domestic sciences. George H. C. Williams has been appointed principal.

The North Adams (Massachusetts) State Normal School now offers a three-year course in school and home gardening and nature study, and a four-year course in agriculture and horticulture to prepare teachers for public-school work, both in the grades and high school. The first course may be completed by graduates of the state normal schools by one year's additional work and the second course by two years' work. The courses have been arranged and are conducted in cooperation with the Massachusetts Agricultural College, which furnishes a supervisor who gives a portion of his time to the normal school, a second portion to the promotion of elementary agriculture in the schools of the county, and the remainder to the college.

The last session of the Ohio legislature provided for the establishment of two additional state normal schools, one to be located in the northeast section of the State, the other in the northwest. Agriculture must be included in the curricula of both schools.

The three state normal schools of Texas, in accordance with an act of the last legislature, will establish courses in agriculture. The Sam Houston Normal Institute, at Huntsville, has employed a special teacher of agriculture, and erected a new building containing lecture rooms and laboratories for agricultural instruction.

In addition to the regular courses of instruction in agriculture, many normal schools announce short courses in the subject, specially adapted to the teachers of rural schools. As a rule, these courses are maintained during the summer, but in several instances similar courses are arranged for the winter months, having special reference to the interests of young people from farming districts, who may purpose becoming teachers.

TEACHING OF AGRICULTURE IN SECONDARY SCHOOLS.

The movement for establishing agricultural schools of secondary grade is making progress, as is indicated by the following particulars relating to recent legislative measures or practical experiments directed to that purpose:

In accordance with an act passed by the legislature of Arkansas in 1909, the State was divided into four districts for the location of four agricultural schools. The act provided that the governor should appoint the boards of managers in each district, under whose advice

the locations of the schools have been determined as follows: First district, at Jonesboro; second district, at Russellville; third district, at Magnolia; and fourth district, at Monticello.

A department of agriculture was established in the Stockton (Cal.) High School at the opening of the school year in September, 1910. It is proposed to make this department of the greatest possible service, both in the teaching of agriculture to boys and to those who expect to become teachers in the county schools, and in giving demonstrations and conducting experiments for farmers of the county. The plan includes a four-year course in agriculture, dealing particularly with the agricultural problems of San Joaquin County; a two-year course to meet the needs of the actual farmer; an agricultural course open to students preparing to become teachers; short courses for farmers and others interested in agriculture; and a four-year course in household arts for girls. The director of the department will also supervise the nature study, elementary agriculture, and school gardening in the elementary schools, but will not devote more than one-third of his time to teaching. A part of his time will be given to a study at first hand of the agricultural problems throughout the farm area tributary to Stockton. A portion of the high-school site of 10 acres is to be used for experimental agriculture. During the past year the Stockton High School had an enrollment of 450 students.

The special state appropriation to departments of agriculture in Louisiana high schools amounts to about $1,200 for each school. In order to secure this appropriation, the schools must meet the following requirements, issued by the state department of education:

1. The school must have a demonstration farm of as much as 5 acres, in one body, and an option on an additional 5 acres which may be secured in the event it should be needed.

2. The demonstration farm must have around it a fence that is proof against rabbits, chickens, and stock.

3. There must be a barn with as many as five stalls for horses and cattle, a weevil-proof grain bin containing as much as 1,500 cubic feet, a fertilizer room, a hayloft, and a tool room. (Plans of suitable barns will be furnished upon application.)

4. Apparatus for teaching the sciences.

(*a*) If the agricultural department is in a state approved high school, there must be $100 worth of apparatus selected especially for the teaching of agriculture, and in addition to this the school must have the apparatus required of all approved high schools.

(*b*) If the school is not an approved high school, it must have as much as $100 worth of apparatus for agricultural teaching. Should there be classes in the school through the ninth grade, there must be as much as $76 worth of additional apparatus; if there are classes in the tenth grade, there must be as much as $150 worth of apparatus in addition to the two amounts named above.

5. (*a*) Tools: The school must have as much as $40 worth of tools. (*b*) Implements: The school must own as much as $140 worth of farm implements. (List of apparatus, tools, and implements may be secured upon application.) (*c*) The school must own a horse or mule. (*d*) The school must have an appropriation of $250, which may be used as the local authorities think best in promoting the work in agriculture.

6. The school must employ a teacher of agriculture satisfactory to the department of education. He must be a graduate of an agricultural college, and he should have had some practical experience in farming. He must not be the principal of the school. He must be employed for twelve months of the year, and he must not be required to teach any class in the school outside of the department of agriculture, with the exception that he may be permitted to do all of the work in botany and zoology if these subjects are given an agricultural turn.

The Massachusetts state board of education was authorized by act of the legislature, session of 1910, to investigate and report on the needs and possibilities of agricultural education in that State and the practicability of establishing a farm school in Worcester, Mass., the report to be made to the legislature not later than the second Wednesday in January, 1911. Mr. Rufus W. Stimson, director of the Smith's Agricultural School at Northampton, an institution of secondary grade, has been employed to make the investigation and to prepare the report. The executive officers of the state board, Dr. David Snedden, commissioner of education, and Charles A. Prosser, deputy commissioner in charge of industrial education, together with Mr. Stimson, have already issued a pamphlet, containing preliminary questions as a basis of discussion, which has been sent to a large number of educators, farmers, and business men of the State, inviting criticism of statements contained therein and suggestions. A printed report will be made by the state board of education to the state legislature, containing such recommendations as may be adopted by the board.

The Smith's Agricultural School and Northampton School of Technology, referred to above, was opened at Northampton, Mass., in the fall of 1908. The school is supported in part by the proceeds of a fund amounting to $310,660.39 bequeathed to Northampton by Mr. Oliver Smith. The legislature has been petitioned by the trustees of the school to provide annual state aid equal in amount to the income annually received under the Oliver Smith will, it being provided that the amount paid by the State in any one year shall not exceed $12,000.

At the 1910 session of the Mississippi legislature an act was passed authorizing the school board of each county in the State to establish not more than two agricultural high schools, one for white youths exclusively, and the other for colored youths. These schools are to give instruction in high-school branches, theoretical and practical agriculture, and domestic science. The schools are to be built, equipped, and supported by a county tax; the tax levy for agricultural high-school purposes in any one year shall not exceed two mills. If 20 per cent of the qualified voters of a county file with the clerk of the county board of supervisors, within twenty days after a levy has been made, a petition asking that the tax for the support of one or both agricultural high schools be not levied, then the question

shall be submitted to an election of the qualified electors of the county within thirty days after the next meeting of the board of supervisors after the filing of the petition, at which election the electors may vote for or against the tax. A majority vote shall determine whether the tax shall be collected or not.

The schools are to be governed by a board of trustees, five in number, two of whom are to be elected by the board of supervisors, two by the county school board, and the county school superintendent shall constitute the fifth member. No school shall be recognized by the state board of education until it has 20 acres of land.

The Mississippi legislature in 1908 authorized the establishment of one agricultural school in each county. This law was declared unconstitutional by the supreme court, as no provision was made for colored youths. A school established under its authority is now recognized by the act of 1910 as one of the two schools which may be established. The legislature appropriated $1,000 each to the Chickasaw and the Jasper County agricultural high schools, established in 1909.

The board of education of Colebrook, N. H., voted to establish in the high school an agricultural curriculum and a domestic-science or home-economics curriculum, and to employ special teachers trained in these subjects for each course. The school is called the Colebrook Academy and is supported partly by a fund in the hands of a board of trustees, but chiefly by the town of Colebrook, and is under the direction of the board of education of the town. At its recent annual school meeting the town voted a bond issue of $30,000 for a new building.

The state legislature of Oklahoma in May, 1908, provided for the establishment of six secondary agricultural schools. These schools have now been located: The Connors State School of Agriculture at Warner, Muskogee County; the Murray State School of Agriculture at Tishomingo, Johnston County; the Haskell State School of Agriculture at Broken Arrow, Tulsa County; the Panhandle Agricultural Institute at Goodwell, Texas County; the Fifth District State School of Agriculture at Helena, Alfalfa County; and the Cameron State School of Agriculture at Lawton, Comanche County. The location, operation, and equipment of the schools are under the supervision of the state commission of agriculture and industrial education, consisting of the state superintendent of public instruction, the president of the state board of agriculture, and the president of the Oklahoma Agricultural and Mechanical College.

An agricultural and industrial department has been established at the Lyndon Institute, Lyndon Center, Vt., opening in September, 1910. It is proposed to give training in practical and scientific agriculture. The course will cover two years of nine months each and will be open to residents of the State eligible for admission to any

approved high school. The theoretical work will be done at the institute and the practical work at the school farm. The expenses for the school year for boarding pupils will be about $160, which may be paid in one of two ways: By the cash-payment system or by the work-payment system. Students electing to pay their expenses by the latter system will be required to remain at the institute during the summer vacation and work on the school farm, for which they will be paid at the rate of $25 per month. During the school year they will be paid 15 cents an hour for their labor. The establishment of the school has been made possible through a gift of Theodore N. Vail, president of the American Telegraph and Telephone Company. In addition to the school farm, Mr. Vail's 5,000-acre farm at Lyndon, with its modern buildings, equipment, and thoroughbred stock, is available for demonstration purposes. Mr. Arthur R. Merrill, B. S., a graduate of the New Hampshire College of Agriculture and Mechanic Arts, has been appointed director of the school and will have four assistants associated with him in the agricultural department.

By act of the Virginia legislature, approved March 16, 1910, the state board of education will select one public high school in each congressional district in which shall be established courses in agriculture, the domestic arts and sciences, and manual training, in addition to the academic courses already prescribed. At least one-fourth of the school time shall be devoted to these subjects. Five acres of land must be obtained for field work in teaching agriculture. The State has provided for an annual appropriation of $30,000 for the benefit of these schools, and an additional sum of $25,000, available in March, 1911, for providing buildings and equipment. This act amends one passed in 1908 providing for instruction in agriculture in high schools, under the provisions of which agricultural courses were established in ten schools, each receiving $2,000 state aid. A new feature of the act of 1910 is a provision authorizing the use of the agricultural high schools as centers for directing demonstration farm work and other extension work throughout the district, such work to be conducted under such rules and regulations as the state board of education and the president of the Virginia College of Agriculture and Polytechnic Institute may prescribe. An annual appropriation of $10,000, available in March, 1911, is made for the work.

MOVEMENT FOR SECURING FEDERAL AID.

Efforts are still being made to secure federal aid for instruction in agriculture of high-school grade. Hon. Charles R. Davis, who introduced the bill in the Sixtieth Congress commonly called the "Davis bill," providing for federal funds for agricultural instruction, has since recast the measure, and the revised bill in its latest form

was introduced in the House of Representatives on February 10,1910. It is designated as "H. R. 20374," and is entitled "A bill to cooperate with the States in encouraging instruction in agriculture, the trades and industries, and home economics in secondary schools; in preparing teachers for those vocational subjects in state normal schools, and to appropriate money therefor and to regulate its expenditure."

The original bill provided for an appropriation "for the maintenance of instruction in agriculture and home economics in agricultural schools of secondary grade, and instruction in mechanic arts and in home economics in city schools of secondary grade, a sum of money equal to not more than 10 cents per capita of the population of each State and Territory and the District of Columbia; * * * for the maintenance of normal instruction in agriculture, home economics, and mechanic arts in state and territorial normal schools, * * * an additional sum of money equal to not more than 1 cent per capita; * * * for the maintenance of branch agricultural experiment stations on the farms of the secondary agricultural schools appropriated for in this act, a sum equal to one-fourth of the sum allotted to it under this act for secondary agricultural schools. * * *"

The new bill provides for "state district agricultural schools" and also "for instruction in the trades and industries, and home economics and agriculture, in public schools of secondary grade." It provides for a general appropriation for such instruction instead of a per capita appropriation as provided in the original bill, and it apportions the amounts to be used for the district agricultural schools, the public schools, the normal schools, and the experiment stations. This portion of the bill reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That commencing with the fiscal year beginning July first, nineteen hundred and thirteen, there shall be appropriated, out of any money in the Treasury not otherwise appropriated, to be paid as hereinafter provided to the respective States and Territories and to the District of Columbia, for the maintenance of instruction in agriculture and home economics in state district agricultural schools of secondary grade, as herein provided, the sum of four million dollars annually; for the maintenance of branch agricultural experiment stations to be located at said agricultural secondary schools, to be administered as parts of the respective state experiment stations now established or which may hereafter be established in the respective States and Territories, in accordance with the act of Congress approved March second, eighteen hundred and eighty-seven, the sum of one million dollars annually; for the maintenance of instruction in the trades and industries, and home economics and agriculture, in public schools of secondary grade, the sum of five million dollars annually; and that commencing with the fiscal year beginning July first, nineteen hundred and ten, there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, for the maintenance of instruction in agriculture, in trades, in industries, and in home economics in state and territorial normal schools, the sum of one million dollars annually.

SEC. 2. That the funds appropriated under this act for education in public secondary schools and in state normal schools shall be allotted to the States and Territories and

the District of Columbia in proportion to their population as shall be determined by the census of nineteen hundred and ten, and that the funds for the district agricultural high schools and branch experiment stations shall be apportioned to the respective States and Territories in proportion to the persons engaged in agricultural pursuits as shall be shown by the census of nineteen hundred and ten: *Provided*, That in each State and Territory with less than three hundred thousand inhabitants there is hereby appropriated for normal-school instruction the additional sum of three thousand dollars, and that to each State and Territory with less than one hundred thousand people engaged in agricultural pursuits there is hereby appropriated for district agricultural high schools the additional sum of five thousand dollars annually, and for branch experiment station work the additional sum of two thousand five hundred dollars annually.

SEC. 3. That each State and Territory in order to secure the benefits of this act shall accept its provisions and shall divide the State or Territory into districts, providing in each district for one secondary agricultural school and a branch experiment station, the total number of such districts in a given State or Territory to be not less than one for each fifteen counties nor more than one for each five counties and fraction of five counties; and shall enact laws providing for the allotment of the funds herein appropriated to the respective schools to which it may choose to allot funds under the provisions of this act, and shall provide for the administration of the use of the respective funds herein appropriated: *Provided*, That in States where separate schools are maintained for the colored race the allotment of money for the encouragement of instruction in the aforesaid vocations shall be divided in each State in proportion to the population of the two races, respectively, and whether the districts for agricultural secondary schools for the two races are conterminous or not conterminous their total number shall be determined by the number of districts permissible under the provisions of this act: *Provided*, That in case the legislature of any State or Territory has not been in session to comply with the terms of this act, the governor, acting for the State or Territory, may accept the provisions of this act in its relation to state normal schools pending the convening of the legislature.

By the provisions of the new bill the money would be paid—

by the Secretary of the Treasury, upon the requisition of the Secretary of the Interior, out of the Treasury of the United States, to the treasurer or other officer duly appointed by the governing boards or departments of the schools and experiment stations designated by state law to receive the same: *Provided*, That in any State there shall be not more than one state board or department thus designated for the agricultural secondary schools and branch experiment stations, not more than one state board or department for the state normal schools, and not more than one state board or department for public secondary schools.

The administration of this act is provided for as follows:

SEC. 8. That it shall be the duty of each institution receiving funds under this act annually, on or before the first day of February, to make to the governor of the State or Territory, or to the Commissioners of the District of Columbia, in which it is located, a full and detailed report of its operations, including a statement of all receipts and expenditures, a copy of which shall be sent to the Secretary of the Interior, a copy to the Secretary of Agriculture, and a copy to the Secretary of Commerce and Labor; and on or before the first day of September in each year to make to the Secretary of the Interior, on blanks provided by him for that purpose, a statement of receipts and expenditures of money under this act during the preceding fiscal year.

SEC. 9. That on or before the first day of July in each year after this act becomes operative, the Secretary of the Interior, under cooperation with the Secretary of Agriculture and with the Secretary of Commerce and Labor, shall certify to the Secretary of the Treasury as to each State and Territory and the District of Columbia,

whether it has complied with the provisions of this act and is entitled to receive its share of the allotments herein provided for schools and experiment stations under this act, and the amounts which it is entitled to receive. If the Secretary of the Interior shall withhold a certificate from any State, Territory, or the District of Columbia, for the whole or any part of its allotment, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separately in the Treasury as a special fund until the close of the next Congress, in order that the State, Territory, or the District of Columbia may, if it shall so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury, and the Secretary of the Interior, in cooperation with the Secretary of Agriculture and the Secretary of Commerce and Labor, is hereby charged with the proper administration of this law.

SEC. 10. That the Secretary of the Interior, in cooperation with the Secretary of Agriculture and the Secretary of Commerce and Labor, shall annually ascertain whether the schools receiving the benefits of this act are using the funds granted to them in accordance with the terms of this act, and make a report thereon to Congress; and he shall also make an annual report to Congress on the receipts and expenditures, and on the work of the institutions to which allotments are made under this act, and also whether the appropriation of any State, Territory, or the District of Columbia has been withheld, and if so, the reasons therefor.

SEC. 11. That there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of twenty thousand dollars annually, to be expended under the direction of the Secretary of the Interior, in paying the necessary expenses of administering this act, in cooperation with the Secretary of Agriculture, the Secretary of Commerce and Labor, and the respective States, in paying the expenses of cooperating with the respective departments and States in developing the courses of study provided for in this act, and in paying the expenses of preparing the reports provided for in this act.

SEC. 12. That there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of twenty thousand dollars annually, to be expended under the direction of the Secretary of Agriculture, acting in cooperation with the Secretary of the Interior and the respective States, in paying the necessary expenses of the administration of this act with reference to instruction and investigations in agriculture and home economics, as provided for in this act; and the Secretary of Agriculture is hereby authorized to give the schools and branch experiment stations designated in this act such advice and assistance as will best aid them in carrying out the provisions of this act in relation to instruction and research in agriculture and home economics.

SEC. 13. That there is hereby appropriated, out of any money in the Treasury not otherwise appropriated, the sum of twenty thousand dollars, annually, to be expended under the Secretary of Commerce and Labor, acting in cooperation with the Secretary of the Interior and the respective States, in paying the necessary expenses of the administration of this act with reference to instruction in the industries and trades, as provided for in this act; and the Secretary of Commerce and Labor is hereby authorized to give the schools designated in this act such advice and assistance as will best aid them in carrying out the provisions of this act in relation to instruction in the industries and trades.

INCREASING SCOPE OF THE LAND-GRANT COLLEGES.

Extension work.

The movement for agricultural education in this country received its initial impulse from the establishment of land-grant colleges under the congressional act of July 2, 1862, and naturally under the

increasing demand for this particular form of education these original centers of the work are extending their activities. In particular, should be noted the various forms of extension work for which provision is being made under the auspices of the colleges, and the establishment by them of post-graduate courses with the sanction of a special diploma.

The extension work of the agricultural colleges was placed on a solid basis by the action of the Association of American Agricultural Colleges and Experiment Stations, taken at the twenty-third annual conference which was held at Portland, Oreg., in August, 1909. On that occasion the association, by an amendment to the constitution, created a third section, the section on extension work, and placed it on equal footing with the two sections previously existing.

The committee on extension work again recommended that there be organized in each land-grant college a thoroughly equipped department for extension work conducted according to the following plan:

(1) That every land-grant college appoint a director of extension work who shall give all his time to this line of endeavor.

(2) That sufficient salary be paid to secure a man who is well equipped for the place, and that he be given substantial funds at the outset.

(3) That, whenever possible, he be given assistants, either one or more men who can give all of their time to extension work and act as "field agents," or have at his disposal the partial time of men who are connected with the college or station staff.

(4) That the first work to be done should be that of organizing those methods of extension work which are already in vogue at the college. Nearly all the colleges have large correspondence with farmers, send out publications which are in the nature of monographs on practical subjects, give lectures before granges and other local organizations, and hold demonstrations. We would advise that all of this work be unified and put, so far as the administration is concerned, into the hands of the director of extension work. It may be desirable temporarily to have even the short winter and summer courses offered by the institution placed under the same management, although, strictly speaking, these enterprises are not extension work. It is exceedingly important that men assigned chiefly to extension teaching, while immediately responsible to the director of that work, shall also have equally close connections with those teaching departments of the institution in which their special subject naturally lies.

(5) We would then go so far as to suggest that those activities of the experiment station which are not primarily connected with research or experimentation, but which are really designed to give popular dissemination to general agricultural information, and which so burden the time and energy of most of our station workers, should as rapidly as possible be given over to the general direction of the director of extension work.

(6) Finally, and most important of all, we would urge upon the director of extension work and the administration of the institution the prime necessity of getting into the public mind a thorough understanding of what extension work is. It is not a scheme to advertise the college. It is not a plan to trap students for the college, or even to get boys and girls interested in agricultural schools and colleges generally. It is fundamentally a means of teaching the people out of school about agriculture and country life in all its phases. It is an educational proposition. Its aim should be to reach every farmer and his family.

And further, in order to provide more liberally for extension work in rural communities, the committee recommended a national appropriation for the following purposes:

(1) Appropriate $10,000 a year from the National Treasury to each State and Territory, for extension work in agriculture and rural life.

(2) Provide that at any time, after two years have elapsed from the date any State or Territory has accepted this appropriation and has actually organized extension work in connection with its land-grant college, there shall be available from the National Treasury, in addition to the amount named above, an amount of money, for each State and Territory, for the same purpose, equal to the amount appropriated by the legislature of the State or Territory for this purpose; provided that the additional appropriation to any State or Territory shall not exceed an amount equal to 1 cent per capita of the total population of that State or Territory as shown by the last United States census.

(3) This appropriation should be given specifically to the land-grant colleges and only to them.

(4) Require each college to organize a "department" or "division" or "school" of extension work, i. e., to organize the work as a definite part of the institution.

(5) Confine the work for the present to agriculture, domestic science, and other phases of rural life.

(6) Define extension work broadly and yet closely. Define agriculture and rural life so as to include instruction and aid in any phase of this field—in subjects technical and scientific, concerning business management, home making, sanitation; and economic, social, and moral subjects. Indicate that extension work is for adults and youth and children, and for people in towns and cities as well as in the open country.

These provisions are practically embodied in the Dolliver bill reported to the Senate June 22, 1910.

The American Association of Farmers' Institute Workers, which held its fourteenth annual meeting at Portland, Oreg., also during the month of August, 1909, adopted the report of its committee on movable schools of agriculture, and indorsed this work as one "that will at a minimum cost carry to a great number of people a systematic, thorough, and definite knowledge concerning the different branches of agriculture."

The importance of the agricultural colleges as coordinating and directive centers for the various grades of agricultural education which are developing in the several States, is emphasized by the act of the Virginia legislature, approved March 17, 1910. This act provides for a united agricultural board coordinating the agricultural institutions and agencies for the betterment of agricultural, experimental, and demonstration work, and to advance generally the agricultural interests of the State.

The board is composed of the governor, the state superintendent of public instruction, the commissioner of agriculture, two members of the state board of agriculture, the president of the Virginia College of Agriculture and Polytechnic Institute, the director of the Virginia Agricultural Experiment Station, and one member of the board of visitors of those institutions, supervisor of the district experiment

stations, general director of demonstration work of United States Department of Agriculture, and the Virginia director of demonstration work of the United States Department of Agriculture.

Under such rules and regulations as it may prescribe, the board will assign to the Virginia College of Agriculture and Polytechnic Institute the adult demonstration work and movable schools and other like agencies when established; to the Virginia Agricultural Experiment Station the establishment and direction of the local or district experiment stations; to the state board of education the experimental and demonstrative work in connection with the public schools of the State; and to the commissioner and state board of agriculture the direction and management of the farmers' institutes. To carry out the provisions of the act, the state board of education is directed to appropriate $5,000 annually after March 1, 1910, and $15,000 will be paid out of the state treasury.

Georgia State College of Agriculture has now $14,000 a year available for the department of extension work. Five men give their entire time to this service, which is organized under the charge of J. E. Hite, M. S., director of agricultural extension. Fourteen movable schools of agriculture were held in April and May, 1910, with an average attendance of ninety. These schools were of three days' duration, but in the future will be six days each.

The regents of the University of Idaho have made provision for three field men to devote their entire time during the spring, summer, and autumn months to work among the farmers, fruit growers, and dairymen of the State. These men will conduct neighborhood meetings, farmers' institutes, and short courses in practical agriculture, and will give advice and conduct demonstrations in their various lines of work. One of these field men will be an expert in horticulture and entomology, the second will be an expert dairyman, and the third will be an expert soil and crop man and irrigationist. Another work to be established during the coming winter (1910–11) is the movable school of agriculture. The plan provides for a two-weeks' course to be given in different localities of the State by eight or ten of the most expert and practical men on the various subjects of interest to farmers. In order to secure a movable school of agriculture in any locality it will be necessary for at least 150 farmers to sign a petition asking for a school and pledge their attendance thereat, together with the payment of a $2 fee to aid in covering expenses of the course and to provide a suitable hall or building with heat and light.

Under the auspices of the agricultural extension department of the University of Illinois a conference on the teaching of agriculture in the common schools of the State was held at the university March 24–26, 1910. Educators from different parts of the State and from other

States, representatives of railroads, farmers' institute officials, members of the legislature, and others interested in agricultural education were in attendance. The need of a course of study in agriculture for the elementary schools of the State was discussed at length by different members in the conference, and upon motion a committee was appointed to outline a course for the elementary schools. The value of model rural school equipments in agriculture, domestic science, and hygiene and public health was discussed, and it was decided that such equipments should be assembled at the university. An equipment in manual training has been provided.

The following resolution was adopted by the conference:

That this conference appoint a committee of three to enter into communication with the Illinois Farmers' Institute, through its committee on agricultural education in the public schools, to bring to its attention the urgent necessity of furnishing to the teachers of the elementary schools of the State all possible aid in the organization and adaptation of agricultural materials suitable to the purposes of these schools, and, further, to request that they take such action as they deem necessary to secure at the next session of the legislature ample funds to equip the University of Illinois, through its college of agriculture and school of education, to carry on the following most essential lines of work:

(1) Research in the organization and method of nature study and agriculture in the elementary schools.

(2) The training of specialists within this field.

(3) The publication of abundant literature for the use of the public schools.

(4) The maintenance of a correspondence bureau to meet the rapidly growing demands from the teachers and elementary school interests of the State.

(5) The establishment and maintenance of a bureau for the preparation and distribution of equipment and materials essential to instruction in this subject.

(6) The employment of thoroughly competent demonstration teachers who shall be sent out into the State to assist in the introduction of this study in the elementary schools.

(7) Such other means of advancing this study as may later appear to be desirable.

It was voted that a second meeting be held next year in connection with the agricultural short course at the University of Illinois, and the following standing committee was appointed to continue the organization and work of the conference: Chairman, U. J. Hoffman, assistant state superintendent of schools, Springfield, Ill.; Anna L. Barbre, county superintendent of schools, Taylorville; Charles H. Watts, county superintendent of schools, Champaign; Hon. J. B. Burrows, Decatur; Mrs. Scott Durand, Lake Bluff; Alice Jean Patterson, State Normal University, Normal; Prof. W. C. Bagley, University of Illinois; Prof. Fred L. Charles, University of Illinois.

Mr. Edwin Lee Holton has been elected to the position of professor of industrial education for the extension department of the Kansas State Agricultural College. Professor Holton will have charge of the introduction of agriculture, shop work, and home economics into rural, graded, and high schools of the State, and will also have charge

of the corn contests, the boys' corn clubs, and new correspondence courses relating to these subjects.

The Massachusetts Agricultural College gave a two weeks' course in rural sociology and general rural problems to country ministers at the summer school held at the college for the third time in 1910. The Michigan Agricultural College held a one week's school for ministers the past summer.

Minnesota University has appointed E. C. Huntington chief editor of publications in the agricultural-extension and home-education courses. In addition to editing and presenting in popular form the various publications of the college, it is planned to devise an elementary course in agriculture and a correspondence course and to arrange for short lectures and demonstrations. The university has established twelve demonstration farms of 80 acres each and plans to establish 7 more.

The college of agriculture of the University of Missouri conducted a night school at Kansas City during the past winter. The school was held at the Central High School hall, and the course consisted of lectures, one each, by the heads of the departments in the college of agriculture. The college furnished the lecturers for a similar school held in the Young Men's Christian Association building at St. Louis, by the Frisco Railroad.

Oklahoma Agricultural and Mechanical College has established, by direction of the state legislature, a chair of agriculture for schools. T. M. Jeffords occupies the chair. His duties are "to direct and advise in all matters relating to the teaching of agriculture and allied subjects in the common schools * * *. He shall visit schools, the teachers' institutes, the summer normal schools, and the state normal schools, advise with the teachers and officers concerned * * *. He shall prepare, print, and distribute such leaflets and other literature as may be helpful to teachers."

Ohio State University, at Columbus, has increased its extension work to include movable schools of agriculture to be known as "agricultural extension schoools." Thirty-four such schools were held during the past year, each one week in duration. They were attended by nearly five thousand persons.

The board of trustees of Clemson Agricultural College, S. C., at their meeting in September, 1909, voted to establish a division of extension work and farmers' institutes; the men of the division to do no teaching in the college, but to devote their whole time to helping the farmers and others of the State. As constituted, the force of the division consists of a superintendent, an assistant in dairy husbandry, an assistant in rural school agriculture, and an assistant in animal husbandry. To this number will be added an assistant in drainage engineering. The men of this division work in two ways:

First, they form the basis of a permanent institute corps to hold institutes at such times as the farmers of the State are at leisure to attend. Second, each one of these men selects a few farmers in different parts of the State, interested in his special line of work, who are visited regularly and to whom he gives expert advice. An accurate account of all operations and results is kept and will be published in bulletin form for the benefit of other farmers. The assistant in rural school agriculture will encourage the teaching of this subject in the rural schools. To this end he will select a few schools, and visit them regularly, and instruct classes. He will also meet the teachers in their various organizations and instruct them in teaching agriculture. A correspondence course in agriculture, designed primarily for the benefit of rural-school teachers, is also to be established. This will be followed later by a number of short courses to be given at the college. Once a year during the summer a state institute or farmers' congress, to last three or four days, will be held at the college.

GRADUATE COURSES OF INSTRUCTION IN AGRICULTURE.

The fourth session of the graduate school of agriculture, under the auspices of the Association of American Agricultural Colleges and Experiment Stations, was held at the Iowa State College, Ames, Iowa, July 4–29, 1910. The programme offered advanced courses in plant physiology and pathology, agronomy, horticulture, animal husbandry, rural economics, dairying, poultry, and rural engineering, given by a faculty of fifty-three men selected from the specialists in the agricultural colleges, experiment stations, and department of agriculture, together with specialists from Harvard University, University of Pennsylvania, Carnegie Institution at Washington, D. C., Ontario Agricultural College, the Royal Imperial Agricultural College of Vienna, and the University of Edinburgh, Scotland. The principal subject discussed in the evening sessions and the Saturday conferences was extension work. Considerable interest was manifested in this work. The school is in the immediate charge of a committee on graduate study of the association. The first session of the school was held at Ohio State University in 1902, the second at the University of Illinois in 1906, and the third at Cornell University in 1908. Dr. A. C. True, director of the Office of Experiment Stations, United States Department of Agriculture, is dean of the school.

In response to a prevalent demand, graduate courses of instruction have been established in many of the agricultural and mechanical colleges. Forty-three of these institutions are now offering advanced courses in this subject leading to the master's degree in

science, ten to the degree of doctor of philosophy or doctor of science. The University of Nebraska has a five-year course in forestry leading to the degree of master of forestry. The Audubon sugar school of the Louisiana State University offers a five-year collegiate course in the sugar industry, of which the last two years constitute a professional course, open to graduate students of any institution who may be prepared to take, advantageously, the work offered.

MOVEMENTS IN OTHER COLLEGES AND UNIVERSITIES.

A noticeable feature of this general movement is the endeavor on the part of colleges and universities other than those endowed by the congressional land grant, to make provision for instruction in agriculture.

Columbia University, New York, has for some time manifested an interest in this subject by giving credit for work in agriculture done at Cornell University to candidates for the teacher's diploma. The lecture on an agricultural subject, given before the university by Prof. G. T. Powers, January 19 of the present year, opened a series of lectures on economic agriculture by various specialists. These lectures are related to plans, which are already under consideration by the department of applied science, for the organization of some form of school or department of agriculture in connection with the university. It is reported that several important donations have already been received for this work.

The trustees and administrators of Syracuse University, Syracuse, N. Y., have decided to establish definite courses in agriculture and forestry as a preliminary step with the purpose in view of organizing soon a college of agriculture. Provision is made for utilizing the present facilities of the university in offering students, beginning in September, 1910, the opportunity of electing courses leading to specialization in agriculture and forestry. Temporarily, the organization will be under the direction of Prof. W. L. Bray, of the botany department.

Miami University, at Oxford, Ohio, has established a department of agricultural education intended especially for teachers, and during the past summer maintained a short course in the subject for the benefit of teachers, as did also Baylor University at Waco, Tex., and the University of Texas.

At Bryn Mawr College, Bryn Mawr, Pa., an agricultural conference was held April 16 last, to consider the opportunities open to women for earning a livelihood in general farming, truck gardening, stock raising, poultry raising, fruit-tree nurseries, hothouse floriculture, bee keeping, and landscape gardening.

AUXILIARY AGENCIES FOR THE ADVANCEMENT OF AGRICULTURAL EDUCATION.

The survey of the present movement respecting agricultural education as a means of the general uplift of rural life in this country would be incomplete without reference to many efforts in this direction apart from legislative measures and the work of organized institutions, but, nevertheless, of great importance as promoters of public sentiment and support for the movement.

The scope and force of these efforts are illustrated by the following statements:

A conference of agricultural educators and rural social workers was held at the Massachusetts Agricultural College, August 9–12, 1910. The purpose of the meeting was to bring together for cooperation such organizations as undertake some of the various phases of social work in rural communities. The programme included addresses and discussions on the work of the following agencies: Rural playgrounds, the rural library, the rural church, the rural school, the agricultural high school, the country Young Men's Christian Association, and the grange. Representatives of all of these organizations were present and, in addition to the general sessions of the conference, sectional meetings were held by the various organizations. At the meeting of the Rural Ministers' Association a definite plan of social work was formulated for the coming year, to be reported upon at the next conference. At the meeting of the rural teachers a permanent association of teachers of elementary agriculture was formed, having for its object the encouragement of the organization of boys and girls' agricultural clubs and the introduction of agriculture and school gardening into the elementary schools. This is the third conference held under the auspices of the Massachusetts Agricultural College. The following extract from resolutions adopted by the ministers is an indication of the attitude toward country life which it is believed the rural church must take:

> The country church should promote or inspire: The improvement of schools and their consolidation wherever possible; all movements looking toward better farming; public recreation through playgrounds; public health and better living conditions; cooperation with grange and other community organizations for plans of progress; an Old Home Week to promote active connection with old and former members.

By the will of Mrs. Harriet Faunce, who died in April, 1909, an estate consisting of a farm of 60 acres on which are located two houses, a barn, and greenhouse, and a fund of $20,000, was placed in the hands of four trustees to be used for the benefit of the farmers of Sandwich, Mass., and for the encouragement of agriculture on the Cape Cod peninsula. The trustees, acting under the advice of the Massachusetts Agricultural College, have decided to use the property as a demonstration farm. Albert W. Doolittle has been selected as

superintendent, and an advisory council has been appointed from the faculty of the Massachusetts Agricultural College. The superintendent plans to demonstrate the possibilities in poultry, vegetable, and fruit farming on Cape Cod. In addition to managing the farm, he will visit neighboring farms when requested, to give expert advice upon farm problems. The farm will cooperate with the town schools. A course of agriculture has been introduced this year into the public high school of Sandwich, and the farm will cooperate with the school, the boys taking the course will be given practical work, in connection with their school work, on the Faunce farm. It is also planned to give regular employment to a few boys who desire practical farm work under expert supervision.

The Michigan Society for the Promotion of Agricultural Education in the Public Schools was organized January 22, 1910. The purpose of the society is to discuss methods of teaching agriculture in the public schools, especially in the high schools, and to advance the cause of school agriculture. Two meetings were held during the year 1909–10. The officers of the association are as follows: President, R. G. Carr, North Adams; vice-president, R. G. Hoopingarner, Otsego; treasurer, B. H. Roberts, Hudson; secretary, C. L. Nash, Lawton.

The Nebraska department of public instruction has issued a general outline of plans (1910) for the home experiment department of the Nebraska Boys and Girls Club. By way of explanation it says that the "plan is to provide some definite work for a number of young people in each county in which they are to receive instruction and on which they are to report progress each month." The work is to be done in cooperation with the county superintendent of schools and will be put upon an educational basis. The members will be divided into two classes, those from 16 to 21 years and those under 16 years. The home work outlined for boys includes an acre corn test, an ear to row test, and tests in husking and judging corn; also an acre potatoes contest, and size of seed piece test. In domestic science the work planned includes cookery, butter making, sewing, and sweet-pea culture. Each person becoming a member of the club is expected to carry out fully the directions furnished by the department and to make reports at stated intervals. There will be contests for the individual counties and a final state contest.

During the month of April, 1910, a charter was granted by the State of Tennessee to the "Folk School and Rural Life Society." The purpose of this organization, as specified in the charter, is "the establishment and maintenance of schools for the education and instruction of men and women of 18 years of age and over in the elementary principles of the arts and sciences necessary to good citizenship and to industrial, economic, and social efficiency and the

practical application of them to rural life in the Southern States." The charter members of the board are as follows: Prof. P. P. Claxton, University of Tennessee; S. A. Mynders, superintendent of schools, Knoxville; Fred B. Frazier, elementary school inspector for Tennessee; R. L. Jones, state superintendent of public instruction of Tennessee; and John R. Neal, Spring City, member of the upper house of the legislature.

A communication from Professor Claxton, dated May 26, 1910, says: "We have organized a board of trustees and will probably extend this into a larger society for the purpose of establishing and maintaining one or more schools in Tennessee and other Southern States organized somewhat on the plan of the folk high schools of the Scandinavian countries."

The office of state supervisor of elementary rural schools is maintained jointly by the Peabody education fund and the southern education board and has been created in the following States: Virginia, West Virginia, North Carolina, South Carolina, Georgia, Mississippi, Louisiana, and Tennessee. The purpose of the office is to aid in the development of a state system of elementary rural schools in the Southern States. The position is filled by the state board of education, upon recommendation of the superintendent of public instruction. Mr. R. H. Powell, jr., formerly editor of School and Home, Atlanta, Ga., during the spring (1910) was elected to the position for the State of Georgia; Principal William K. Tate, Memminger High School, Charleston, S. C., was elected for South Carolina; Fred B. Frazier, county superintendent of public schools, Rhea County, Tenn., was elected for Tennessee; and Principal L. J. Hanifan, Charleston High School, West Virginia, was elected to the position July 1, 1910, for West Virginia.

Railroads through the agricultural sections of the United States have adopted various methods for encouraging agriculture and of introducing improved agricultural methods along their lines. A recent policy adopted by the St. Louis and San Francisco, the Atchison, Topeka, and Santa Fe, and the Wabash railroads in the State of Missouri is of wide significance in respect to the direct benefits that may accrue to agricultural production. These roads now offer a number of scholarships for the short winter course of agriculture at the University of Missouri.

An "announcement" from the St. Louis and San Francisco Railroad states that the corporation offers forty-five agricultural scholarships of $100 each for the winter of 1910–11, one scholarship for each of the forty-five counties of the State of Missouri through which the road extends. "They will be awarded to the man or boy 16 years of age or over who grows and exhibits the best ten ears of corn in his county this year." A county corn show will be held in each of

the counties during the month of October, when the corn will be judged and the award made by experts from the school of agriculture.

A circular issued by the Wabash Railroad states that this corporation will award one scholarship of $50 for each of the eighteen counties of the State of Missouri through which the road extends. At the end of the short winter course of agriculture at the university the dean will nominate a student from each of the eighteen counties "who, having creditably taken the full seven weeks' course, makes the best progress, and that student will be mailed a check for $50 by the Wabash Railroad Company."

A communication from the University of Missouri dated May 24, 1910, states that the Atchison, Topeka and Santa Fe Railroad now offers eighteen agricultural scholarships of $50 each for the winter term of agriculture at the university.

The Pennsylvania Railroad has purchased a run-down farm of 50 acres at Bacon, Del., which it will renovate as a demonstration farm. H. S. Lippincott, a graduate of the college of agriculture of Cornell University, has been appointed superintendent. The New York Central and Hudson River Railroad will operate three large farms in different sections of the State of New York. The farms will be run as demonstration farms, using no methods that are not available to neighboring farmers. The Delaware, Lackawanna and Western Railroad has similar plans. Announcement is made that the Great Northern Railway will institute a series of farm experiments in conjunction with various development and commercial clubs in the towns along its line.

Many of the agricultural colleges in cooperation with the railroads of their States have equipped and sent out "better farming" special trains. Maryland Agricultural College has purchased a car and had it fitted as a permanent part of its equipment. Massachusetts Agricultural College, in addition to a special train sent out over the steam roads, equipped a "better farming" special of trolley cars which covered 200 miles of trolley roads and reached points not easily accessible by the steam roads. In Wisconsin, Principal F. R. Crane, of the Dunn County School of Agriculture, with Prof. R. A. Moore and H. L. Webster, of the college of agriculture of the University of Wisconsin, have substituted an automobile for the usual "better farming" train. During the last week in August, 1910, the automobile with a corps of lecturers traveled about Dunn County holding farmers' meetings.

STATUS OF INSTRUCTION IN AGRICULTURE IN THE COMMON SCHOOLS OF CERTAIN STATES.

Alabama.—Required by law to be regularly taught in all schools with the use of a text-book; required for teachers' certificates. There are nine state agricultural high schools, one in each congressional district, and five county schools receiving state aid.

Arkansas.—Required by law to be regularly taught in all schools with the use of a text-book; required for a teacher's certificate. Four state agricultural high schools, one in each congressional district.

California.—A required subject. May be taught orally in connection with nature study. Not required for teacher's certificate.

Florida.—Must be thoroughly taught as a regular subject in all schools; required for teacher's certificate.

Georgia.—Must be regularly and thoroughly taught; required for a teacher's certificate. Eleven state agricultural high schools, one in each congressional district.

Idaho.—Authorized in rural high schools. Has been added to the state course of study and a number of schools have a special period in their daily programmes for it.

Illinois.—"Through normal schools and teachers' institutes instruction in agriculture is offered to teachers. A book of agriculture has been adopted for the state teachers' reading circle, and is read by the rural school teachers throughout the State. Perhaps the best, most systematic, and effective effort to establish courses and instruction in agriculture has been made in the high schools. It is a matter of great satisfaction to see how these courses have been installed, how they are being offered by competent teachers, and how young men and women are eagerly seeking instruction in the classes." (Twenty-seventh Biennial Report, Superintendent of Public Instruction, 1908, p. 90.)

Indiana.—A regular course of agriculture has been adopted for the high schools of Hendricks County and is taught in the majority of the schools. Agriculture is taught in three high schools in Hamilton County.

Kansas.—The introduction of elementary agriculture and domestic science into our schools is proceeding at a very encouraging rate. Regular courses in both subjects are maintained in certain of our county high schools and in a few of the city high schools. Elementary agriculture, because of the activity of a few of our county superintendents, has found an important place in the rural schools of those counties. (Sixteenth Biennial Report, State Superintendent Public Instruction, 1909, p. 21.)

Kentucky.—Authorized in county high schools.

Louisiana.—Instruction in the principles of agriculture or horticulture and home and farm economy is required in all public elementary and secondary schools. Eight high schools are receiving state aid.

Maine.—Natural sciences in their relation to agriculture required in all free high schools. Forest commissioner is required by law to encourage instruction in elementary forestry in schools, academies, and colleges. Academies offering instruction in agriculture receive state aid.

Maryland.—May be required by state board of education. Authorized in county high schools. Is in state course of study. In sixth year under nature study and seventh year under elementary science. There are two county high schools.

Massachusetts.—Cities and towns may establish independent agricultural schools and may receive state aid; two in operation. A commission has been constituted to investigate the need of agricultural instruction.

Michigan.—Specifically authorized in rural high schools. County agricultural high schools authorized in 1907; state aid provided; one established. Another high school offers a full course in agriculture. The pupils in about 1,000 rural schools receive instruction in agriculture.

Minnesota.—Fifty consolidated rural schools were authorized in 1905; 10 acres for instruction in farming required; state aid. Counties authorized (in 1905) to establish agricultural high schools; state aid. Any properly equipped high, graded, or consolidated school may maintain an agricultural department; State will contribute two-thirds of the cost, not exceeding $2,500. Ten high schools are receiving state aid.

Mississippi.—A required subject; required for teachers' certificates. County agricultural high schools authorized; two established. Five high schools teaching agriculture receive state aid.

Missouri.—A required subject in state course of study. Required for teachers' certificates. Taught to some extent in ninety counties; regularly in fifty; pursued by 1,996 high-school students in 1909.

Nebraska.—Required in county high schools; required for teachers' certificates. The deputy state superintendent of public instruction devotes his entire time to the promotion of agricultural education and industrial training. Twenty thousand boys and girls in the State are pursuing studies related to those subjects. (Twentieth Biennial Report, State Superintendent of Public Instruction, 1908, p. xv.)

New Hampshire.—Courses in agriculture are offered by Pinkerton Academy, Colebrook Academy, Walpole High School, Coe's Northwood Academy, Gilmanton Academy, and at Sanborn. A four-year course in agriculture is presented in the state school report, as well as the curricula of the academies mentioned. (Report Superintendent of Public Instruction, New Hampshire, 1908, pp. 248, 276, 294, 298.)

New York.—There are three state schools of agriculture of secondary grade, at Alfred University, at St. Lawrence University, and the State School of Agriculture at Morrisville. Any city or any union free school district may establish a high school of agriculture, mechanic arts, and home making; state aid. To be eligible to the office of district superintendent, candidates must pass an examination on the supervision of courses in agriculture and teaching the same.

North Carolina.—A required subject for all schools; required for teacher's certificate.

Ohio.—Instruction optional with local boards.

Oklahoma.—Required to be taught thoroughly in all public schools; required for teachers' certificates; normal schools and agricultural college required to cooperate. Six state schools of agriculture have been established.

Oregon.—"The text-book commission adopted for use in the public schools of Oregon a text-book for elementary agriculture. On account of the lack of training on the part of the teachers for the teaching of this subject, it was thought best to use it as a reading exercise." (Eighteenth Biennial Report, State Superintendent of Public Instruction, 1909, p. ix.)

Tennessee.—Must be thoroughly taught in all schools; text-book required; required for teacher's certificate.

Texas.—Required in all rural schools; at option of local boards in towns and cities. Agricultural departments authorized in high schools; state aid.

Virginia.—Optional with local school boards; an alternative subject in examinations for teachers' certificates. Agricultural high schools authorized for each congressional district; state aid; ten in operation in 1909. A supervisor of rural elementary schools is employed. "He is aiding the superintendents and trustees to arouse the people to the necessity of better school buildings, and to the importance of introducing vocational education to go hand in hand with cultural education." (Report Superintendent of Public Instruction, 1909, p. 27.)

Washington.—"The Teachers' Manual for the Elementary Schools" contains one year (eighth grade) courses in agriculture, horticulture, and forestry.

West Virginia.—A required study in free schools; required for teachers' certificates.

Wisconsin.—A required study in all schools; required for teachers' certificates. County agricultural high schools authorized; state aid; five in operation in 1908. There is a "rural school inspector" for the State, whose duty it is to "visit and inspect the rural schools of each county * * * and by public lectures, conferences, and meetings endeavor to arouse an intelligent interest in industrial and agricultural education, as well as in the routine work of the elementary rural school." (Laws of 1905, chapter 499.)

CHAPTER V.

EDUCATION IN PORTO RICO.

The Report of the Commissioner of Education for 1909 presented a review of education in Porto Rico covering the decade 1899–1908.[a] The vigor with which the work of public education has been carried on since the island came under the control of the United States is indicated by a comparison of the statistics for successive years. From the school census taken on the 1st day of March, for each of the three years 1907 to 1909, it appears that during that period the number of pupils in the secondary schools increased 87 per cent, in the common schools 60 per cent, and in the special schools 40 per cent, or an average increase for all the public schools of 59 per cent.

The following statements relative to the scholastic year ending September, 1909, are from the report of Hon. E. G. Dexter, commissioner of education for Porto Rico.

Public Schools.

Summary of statistics for the school year 1908–9.

Number of pupils actually enrolled in all schools, including special schools:	
White—	
Males	45,298
Females	33,208
Total	78,506
Colored—	
Males	15,060
Females	11,559
Total	26,609
White and colored—	
Males	60,358
Females	44,767
Total	105,125
Total number of different pupils actually enrolled in the special schools (night, kindergarten, high, normal)	7,932
Total number of different pupils actually enrolled in the common schools	97,193
Reenrollments or duplicates	12,945

[a] Annual Report, 1909, Volume I, Chapter 6.

Average daily attendance during the year for the whole island:	
Common schools	71,057
Special schools	3,465
Total	74,522
Average number of days each school was actually conducted:	
Common schools	165
Special schools	145
Number of buildings in use for schools during the year (town, 233; rural, 765)	998
Estimated value of all insular school buildings[a]	$665,612.53
Rental value of other buildings	$73,904.36
Number of pupils enrolled in public high schools	345
Number of pupils enrolled in normal school	205
Total number of different teachers employed in the common schools at the end of the year:	
White—	
Males	694
Females	689
Total	1,383
Colored—	
Males	91
Females	97
Total	188
White and colored—	
Males	785
Females	786
Total	1,571
Total number of different teachers employed in the special schools at the end of the year, omitting duplicates	37
Total number of different teachers employed in all schools at end of year	1,608
Monthly salary of teachers, as fixed by law during the year 1908–9, has been as follows:	
Preparatory teachers	$20.00
Rural teachers	$35.00
Graded teachers	$60.00
English graded teachers	$65.00
Principal teachers, teachers of English, and special work teachers	$75.00
To all of which amounts were added allowances for house rent, as follows:	
Rural teachers, not less than $3 nor more than	$8.00
Graded teachers, not less than $7 nor more than	$15.00
English graded and principal teachers, not less than $10 nor more than	$15.00

[a] Including entire expenditure made by the insular government under direction of the department of education in connection with the acquisition of property and with the erection of school buildings since the establishment of civil government.

Total expenditures for school purposes, 1908–9:	
By insular government	[a] $848,817.11
By local government	$437,485.98
Total	$1,286,303.09

The system of education to which the above statistics pertain is regulated by the organic act for Porto Rico, the Foraker Act, which was passed by the Congress of the United States April 12, 1900, and went into effect May 1 of the same year. The act provides (section 25)—

> That the commissioner of education shall superintend public instruction throughout Porto Rico, and all disbursements on account thereof must be approved by him, and he shall perform such other duties as may be prescribed by law, and make such reports through the governor as may be required by the Commissioner of Education of the United States, which shall annually be transmitted to Congress.

The commissioner of education, who is appointed for a term of four years by the President of the United States, has entire control of public education, including the power of appointing all subordinates in the department, with the exception of certain classes of teachers to be presently named. The commissioner of education is assisted by an assistant commissioner, a secretary, three general superintendents of schools, and thirty-five supervising principals each assigned to a particular district of the island. There is also a chief of the division of property and accounts and a chief of the division of school-board accounts.

For local administration the island is divided into 66 units, known as municipalities. Within each of these divisions a school board is elected, which is charged with the care and maintenance of school property and, subject to the approval of the commissioner of education, with the appointment of teachers, the general management of the schools, and the application of the school funds.

In accordance with the provisions of the organic act an endeavor has been made to classify the schools with special reference to local conditions. The classes are as follows:

First. Preparatory schools, intended to provide "elementary instruction at a less expense than that of the rural and graded schools, and as a means for the training of teachers for the rural schools. The curriculum is in all instances that of the first grade."

Second. Rural schools, which form the most numerous group within the island, and were originally restricted to the first three grades, or years, of the school course; recently a fourth year has been added to a large number of these schools.

Third. Graded schools. "These are all situated within the larger centers of population—perhaps 100 such centers in all. The schools are carefully graded on a basis no less advanced than that of the better school systems in the United States. The system extends through the full 8 grades in 28 towns in the island and through 7 grades in 43."

[a] Does not include cost of new buildings, etc.

Following the school classification, the teachers of the island are—

First. Preparatory teachers (limited by law to 100 in number). These are required to be unmarried persons of less than 22 years, who teach ungraded rural schools and are at the same time under instruction by some person specially appointed by the commissioner as instructor of preparatory teachers. These teachers receive a salary of $20 per month, without allowance for house rent.

Second. Rural teachers. These are in charge of ungraded schools in the rural districts, and receive a salary of $35 per month, with an allowance for house rent of from $3 to $8 monthly.

Third. Graded teachers. This class is divided as follows: Graded teachers teaching in Spanish and English graded schools. All are employed in the graded-school system of the various municipalities. Those teaching in Spanish receive a salary of $60, with an allowance for house rent of from $7 to $15 monthly. English graded teachers receive in salary $5 per month more.

The following additional classes of teachers are appointed directly by the commissioner of education:

First. Teachers of English. These are nearly all Americans, serving either as special teachers of English in the school system of the smaller municipalities or as grade teachers giving instruction in English. The salary is $75 per month, without allowance for house rent.

Second. Special teachers, such as teachers of music, art, manual training, domestic science, agriculture, and kindergarten teachers. The salary is the same as for teachers of English.

Third. High-school teachers. Teachers of this class are at present only in 8 municipalities of the island. They receive salaries varying from $675 to $1,500 per annum.

The control of the central administration over the whole work is facilitated by the division of the island into 35 districts, each under one of the supervising principals already mentioned. These districts are constituted as follows:

First. Municipalities having more than 100 schools.
Second. Municipalities having between 50 and 99 schools.
Third. Municipalities, or groups of municipalities, containing less than 50 schools.

The importance of art and industrial training has been recognized by the appointment of special teachers of music and drawing in the larger school systems, and by plans for the introduction of cooking and sewing for the girls and wood and iron work for the boys in the larger municipalities. The disposition of the Porto Rican government to encourage talent is indicated by the establishment of—

a system of scholarships by means of which a bright pupil in the rural schools may be carried entirely at government expense until graduation from the best colleges and universities in the United States. By a law recently passed the school boards may devote an amount of money, not to exceed 5 per cent of their annual budget, to provide scholarships for the pupils in the graded schools of the municipality. Under such scholarships the pupil may complete the eighth grade. There are then open to him scholarships (100) at a monthly value of $12 each in the high schools of the island, or, if his inclination leads him in another direction, scholarships (75) at an annual value of $200 in the normal department or (40) in the agricultural department of the University of Porto Rico. Having completed the four years' high-school course, or the four years' normal course, there are available 39 scholarships at a value

of $500 each for colleges and universities of the United States. There are, moreover, 20 scholarships of an annual value of $250 each for such institutions as Tuskegee and Hampton. These are open to students of the higher grades of the graded schools.

The judicious manner in which the entire work has been developed is indicated by the fact that—

There are but three fully organized high schools with four-year courses at present in the island. These are situated at San Juan, Ponce, and Mayaguez, and in each there is a commercial department in addition to the regular classical and scientific courses. They have courses equivalent to the moderately well-equipped high schools of the United States, and their graduates may enter nearly 50 American colleges or universities on certificate. In addition there has been organized during the present year the first-year high-school course in three other municipalities of the island.

The general plan of classification carefully worked out for this island system has made it possible to maintain a fairly high standard of elementary education in the more compact communities; to meet the crude conditions of the rural communities; and to provide for central supervision while, at the same time, the capacity for local school control is encouraged. As carried into effect, it furnishes an index to the actual advancement of the children of Porto Rico in the different classes of schools. For instance, it appears that the enrollment in graded schools, which in 1907 was 22,870 pupils, reached a total in 1909 of 32,547, being an increase of 42 per cent; the enrollment in rural and preparatory schools during the same time increased from 28,934 to 50,107, or 73 per cent.

The classification of pupils, by grades, was as follows:

Percentage of pupils enrolled in each grade the 1st of March.

Grade.	Graded schools.			Rural schools.		
	1907.	1908.	1909.	1907.	1908.	1909.
Eighth	1.3	1.7	1.9	(a)	(a)	(a)
Seventh	2.2	2.5	2.7	(a)	(a)	(a)
Sixth	3.6	3.7	4.7	(a)	(a)	(a)
Fifth	6.1	6.9	7.6	(a)	(a)	(a)
Fourth	11.4	11.2	11.7	.....	.....	0.5
Third	17.5	18.4	15.9	9.8	9.0	8.8
Second	25.5	25.4	24.6	22.3	21.9	20.5
First	32.4	30.2	30.9	67.9	69.1	70.2
	100.0	100.0	100.0	100.0	100.0	100.0

a No pupils above fourth grade in rural schools

Even more significant than the above statistics are the figures showing the progress in instruction in the English language. In 1906–7 there were 202 schools in the island taught wholly in English. In 1909 this number had increased to 442, being 28 per cent of all the elementary schools. The number taught partly in English increased during the same time from 187 to 247. There remained in the last year 717 schools taught wholly in Spanish, but in 163 of these English was taken as a special subject.

The analysis of enrollment, on the basis of grade, assists materially in the development of the school curriculum. For example, the progress of pupils in the rural schools, in which at first only the most elementary work was attempted, has already led to the formulation by the department of a six-year course for rural schools, closely articulated with that of the graded schools.

Among recent measures adopted for the general improvement of the public schools are: Flexible promotion, which requires that the course of study be outlined by terms, half-terms, and quarters; the introduction of a school savings bank system; and the establishment of school libraries and of public school playgrounds. The school savings banks, introduced in 1909, have had remarkable success. They were reported in 265 schools, with 6,937 depositors, and a total deposit of $6,763.

Interest in public school playgrounds was specially stimulated by the visit and personal efforts of Dr. Henry S. Curtis, former secretary of the Playground Association of America. As a result of the interest thus awakened, whereas at the beginning of the school year 1908–9 there was but one playground in the island, by the end of 1909 27 towns had made special provision and in 39 other towns definite steps had been taken for such provision of playgrounds.

As a result of special efforts made during the year the library facilities of the island have been greatly increased. On this subject the commissioner says:

> There were at the opening of the school year libraries in 10 towns. In several of these, books were not in use or were only for teachers' reference. In addition 16 towns had libraries open to the public, but the books had been chosen mainly for older readers, and little if any attempt had been made to provide books of especial interest to children. Libraries in rural schools were unknown.
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> * * * * * * *
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> Other than school libraries, there are now 20 libraries in 18 towns, containing a total of 28,675 volumes with a reported cost of $8,314 for maintenance. The largest of these is the Insular Library, located in San Juan, originally established by the department and now maintained by the insular government. It contains 8,650 books and costs $4,480 annually for maintenance.
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> Through the courtesy of periodicals in the United States, attention was called to this need of the schools of the island, while the steamship companies offered to transport free of charge all books donated for the purpose. This met with a response of over 4,000 books and magazines. Mr. A. F. Estabrook, of Boston, again showed his interest by a liberal cash contribution.
>
> It was felt that the most urgent need for these libraries was in the rural schools, especially in the mountain barrios, where, because of the difficulties of travel, children seldom go beyond their neighborhood, and have no access to books other than the elementary text-books used in the schools. Boxes, holding about 50 books each and of a size suitable for transportation on horseback over the rough trails, were sent out the latter part of the year and were well received. It is my intention to have these boxes of books transferred from school to school until all have access to them. Of course, the majority of the books are in English, which necessarily limits their usefulness at present, but with the increase in English instruction this limitation will

disappear and the library will rather become an incentive to the study of English. The educational value of pictures was recognized by including available illustrated magazines. At present there are 57 rural libraries, containing 2,891 volumes, in operation.

Supervising principals were urged to encourage the establishment or extension of libraries in the graded schools of their respective districts. The interest aroused on the part of both pupils and patrons has been gratifying. Books have been sent by the department and donated by individuals, with the result that 24 libraries, containing 6,147 books, and at a cost of $441 for maintenance, are now in operation in graded schools. These are open daily from two to seven hours and have a reported attendance of from 500 to 600. In most cases these libraries are located in the school building, under the charge of a teacher as librarian, and furnish convenient meeting places for evening study, better lighted and equipped than the majority of homes. Already results are seen in improved school work, while no comment is necessary as to the value of this means of keeping children off the streets at night.

To sum up, there are, altogether, in the island 100 libraries with a total of 37,713 books to which the public has access; and of these, 81 with 9,038 books are in either graded or rural schools.

TEACHERS' MEETINGS AND INSTITUTES.

Throughout the year the importance of general teachers' meetings has been recognized by the department, and in each of the 35 districts of the island such assemblies have been conducted by the supervising principals. Whenever possible some one of the general superintendents or other member of the department has been present and taken part in the discussions.

The importance of such meetings can hardly be overestimated. In many instances the teachers have had little or no opportunity for special pedagogical preparation before entering the profession, and the inspiration gained through such discussions shows plainly in their work the precise character of the meetings. Their frequency has been left largely to the supervising principals of the various districts.

The celebration of school holidays recognized by law has become an interesting feature of the educational work, as is indicated by the following accounts of such celebrations by the supervising principals of the districts, which were quoted by the commissioner:

Corozal district.—"Arbor Day and Thanksgiving Day were celebrated together, as is the custom, by appropriate exercises held partly in front of the school buildings (graded) and partly in the plazas of the several towns of the districts. The exercises consisted of speaking and singing in both English and Spanish. Several trees and shrubs were planted. The significance of Thanksgiving Day, both historically and morally, was not left in the background, as is often the case when the two holidays are celebrated together.

"On the 24th of December the significance of Christmas was explained to the pupils, and in the afternoon several of the teachers distributed gifts to their pupils.

"Lincoln's Birthday was celebrated with great enthusiasm throughout the district. The great statesman has a warm place in the hearts of these people and they are not backward in showing it. The commissioner's address, written especially for this occasion, was read in all schools, and the booklet on Lincoln sent out by the department was used to good advantage in furnishing valuable material for the exercises. Different phases of the emancipator's life were discussed in original papers in both languages by several of the older pupils of the graded schools. The exercises were favorably received by good-sized audiences of parents and friends of the pupils.

"Washington's Birthday was appropriately observed in all schools. A great deal of attention was paid to the musical part of the programme. Illustrated acrostics and famous quotations of the 'Father of his country' served to vary the usual order of exercises.

"Memorial Day was celebrated by a union field day and picnic of the graded schools of the three towns in the districts. Several rural schools attended and representatives of many others were present. The exercises were held on grounds very suitably located, being very centrally located among the towns. The people in general were very much interested in the affair and attended in large numbers. Most of the pupils were taken to the grounds in ox carts generously furnished by friends of the schools. The programme, a copy of which was sent to the commissioner, consisted of the salute to the flag, literary and musical contests in the two languages, and athletic events. Representatives from the three towns were matched against each other, Corozal gaining the greatest number of points. The board of judges consisted of the presidents of the three school boards, several teachers, and prominent people of the district."

Adjuntas district.—"Thanksgiving and Arbor Day, Lincoln's Centenary, Washington's Birthday, and Memorial Day were generally observed in the schools of this district during the present school year.

"For the observance and proper celebration of the above-mentioned school holidays, circular letters from this office were issued to the teachers; these circulars give a brief outline of the nature of the exercises to be held and the points which should be emphasized.

"Judging from the programmes of the exercises held in the rural schools, as well as from personal knowledge of those carried out in the graded schools during the celebration of these school holidays, revealing interest on the part of teachers and parents and real enthusiasm on the part of pupils, we feel warranted to say that these school festivals are yearly gaining a firmer grasp upon the popular feeling.

"Although it is our belief that too extensive and protracted preparations for school festivals are at best to be discountenanced as directly interfering with the regular school work, yet at the same time we must acknowledge that the school fiesta is nowadays one effective means through which a majority of the parents and a large part of the general public are brought into actual contact with the work of our schools. And if it is also true that through this agency an active propaganda can be made in favor of the schools and their work it is no less certain that there is the lurking danger of parents and others overestimating the ability of a teacher who successfully plans and organizes a school fiesta whose spectacular features appeal to the popular mind in such a way that the people of the community are misled into the belief that the teacher is deeply interested in his work, whereas in reality outside of the organization of such school fiestas his ability as a teacher and the interest in all other features of school work are nil, and vice versa. Many an able teacher, who is at heart interested in his work and is daily trying to do his best, is not rightly appreciated by most of the people in the community because of his refusal to prepare theatricals or exercises partaking of a popular nature, but who rather insists on the instructive features of the exercises to be held for the celebration of school festivals.

"Thanksgiving and Arbor Day were celebrated in the graded schools with a select programme. A delegation of pupils from each grade undertook to care for the tree they planted during the school year. As a feature of the Thanksgiving celebration, most of the pupils brought contributions in the way of money or groceries to be distributed among the poor. The music for the occasion was supplied by the school board. In the rural schools the exercises were of a simpler nature and were largely allusive to the origin and the significance of the occasion celebrated.

"Washington's Birthday was another occasion for an extensive programme in all the schools of the district. Teachers and pupils are more enthusiastic over the cele-

bration of this school holiday than perhaps any other. The result was that the day was very fittingly observed.

"At these celebrations at the graded schools the mayor of the municipality and the president of the school board addressed the teachers and pupils. As a rule, a larger contingent of parents attend our school fiestas at the graded schools than we are able to accommodate with seats. Owing to the reduced limits of the room used for an assembly hall and the growing enrollment of pupils each year, the celebration of a school festival in Adjuntas is fast becoming a physical impossibility. Our hopes are, however, based at the present time upon the construction in the near future of another graded school building, wherein arrangements may be made to have an assembly hall of such capacity as would accommodate the greater part of the older pupils at school festivals.

"The exercises at the celebration of a school fiesta are generally a part of the regular work of the schools. Memory work is used to much advantage, and in the higher grades compositions written by pupils on historical characters fitting to the occasion are brought into combination with the regular every-day school work. Thus the school fiesta should be more or less a demonstration of the actual work done by pupils in school and not in any way a pretense or brilliant appearance put forth by the child to cover up a multitude of things which he ought to learn in school."

University of Porto Rico.

The University of Porto Rico was established by an act of the insular legislature approved March 12, 1903, as an organization for the gradual development of facilities for higher education in Porto Rico. This law vested the government of the new institution in a corporation known as the "Board of trustees of the University of Porto Rico," of which the governor of Porto Rico is the honorary president, and the commissioner of education is president ex officio. It provided the board with an income from the insular revenues and authorized the solicitation of federal and private aid. It established a normal department by transferring the Insular Normal School with its grounds, buildings, and equipment, and current appropriation from the department of education to the board of trustees of the university. It provided the basis of an agricultural and mechanical department by transferring to the board of trustees a farm of 100 acres in Rio Piedras, previously purchased by the commissioner of education at a cost of $9,700 out of the general school extension fund, a fund constituted from customs on Porto Rican importations collected before 1901 and refunded by the Federal Government on the institution of free trade. And it authorized the institution of the following additional departments, in the order given, as soon as the necessary funds should be available: A department of the natural sciences and engineering, a department of liberal arts, a department of medicine, a department of law, a department of pharmacy, a department of architecture, and a university hospital.

The normal department was organized on July 1, 1903. A department of agriculture was established in October, 1904. No other departments have been actually attempted on account of the lack of funds, since the hope of the founders that private donations would be forthcoming has never been realized, and their hope of federal aid was not realized until May, 1908, when an allotment under the Morrill Act was received which can not, however, be used for the erection of buildings.

NORMAL DEPARTMENT.

The normal department is situated on a tract of 23 acres lying along the military road at a distance of 7 miles from the capital and just outside the village of Rio Piedras. Its location is ideal, as the elevation and the breeze from the northeast render it easily the best location near San Juan for school purposes. It offers to graduates of

the eighth grade a two and a four year course in normal training. At the end of the two-year course the students receive an elementary certificate which can be exchanged for a rural or graded certificate, according to the age of the holder. On the completion of the four-year course a diploma is given, which entitles the holder to the principal's certificate when he has satisfied the necessary requirements of the law in regard to age and experience. A special course of one year to graduates of high schools is also offered.

* * * * * * *

FREE SCHOLARSHIPS.

The qualifications of scholarship students are set forth in the following law, passed and approved March 12, 1908:

"Seventy-five young men and young women, seventy of whom shall be, in so far as possible, ten from each electoral district, of not less than sixteen nor more than twenty years of age, of good health, honest and intelligent, and who otherwise would be unable to continue their education beyond the common schools, shall be awarded by the committee hereinafter established scholarships in recognition of diligence and excellence in the work of the common schools, each of the value of one hundred and eighty dollars, payable in nine equal monthly installments of twenty dollars for each school month, for the purpose of studying in the normal department of the University of Porto Rico, with the end in view of obtaining the diploma of this school.

"Candidates for scholarships shall have successfully and creditably passed the examination conducted by the department of education for the eighth-grade diploma of the public schools; if awarded scholarships they shall enter the first-year class of the normal department, and before entering they shall be required to promise in writing that when their studies are completed they will devote themselves to teaching in the public schools of Porto Rico, beginning as soon as they shall be able to secure positions as teachers and continuing for a period of at least three years.

"When all or part of said scholarship students shall have passed the necessary examinations and obtained the elementary certificate of the normal department, the commissioner of education may select not more than forty young men and women to continue their studies through the advanced course: *Provided*, That the commissioner of education may, at his discretion, include among the said forty students not more than fifteen young men and women who hold a diploma showing a completion of the four years' course in a high school of Porto Rico during the year immediately preceding the election."

In accordance with the provisions of this act 75 persons have been chosen as scholarship holders for the coming year.

The following table shows the enrollment by classes since the founding of the university, and the number of instructors employed:

Year.	Number of pupils enrolled.					Number of instructors.	
	Fourth year.	Third year.	Second year.	First year.	Total.	Normal.	Practice school.
1903-4	.....	13	29	60	102	10	7
1904-5	5	21	48	34	108	10	7
1905-6	13	26	30	62	131	8	7
1906-7	12	8	46	68	134	8	7
1907-8	8	14	69	68	159	8	7
1908-9	19	6	75	106	206	11	9

For the year 1909–10 fifteen teachers have been appointed in the normal and nine in the practice school.

Nearly all the work has been carried on in English during the past year, and for the coming year it is planned to have all the work done in English, with the exception of the classes in Spanish language and literature. An attempt will also be made to encourage the speaking of English in the boarding houses, in order that a knowledge of conversational English may be developed.

* * * * * * *

SUMMER SESSION.

In order to fill a long-felt want in educational matters in Porto Rico, the board of trustees of the university decided to conduct a summer session of eight weeks in the normal buildings, and under the direction of the regular normal faculty. Such an opportunity for two months' study under excellent instructors was an unprecedented thing in the history of the island, and the teachers were not backward in taking advantage of the opportunities presented. Special courses were offered in music, domestic science, manual training, English, Spanish, physics, geometry, geography, physiology, nature study, arithmetic, algebra, pedagogy, and psychology.

In addition to the above-named courses, opportunity was also given to those teachers who were planning to take the examination for the English graded license to spend one period each day teaching in English, under the observation of a skilled critic teacher. Observation classes were also a special feature of the summer's work, and from the teachers in the department of education two American and two Porto Rican teachers were chosen who conducted classes in all the subjects taught in the graded schools, with the idea of giving the summer students some new ideas in the way of discipline, conduct of classes, personal work of the teacher, etc.

The advance enrollment far exceeded our expectations, but before the end of the first week the enrollment reached its highest point—367 persons. Practically every town on the island was represented. The total enrollment was distributed among the different classes of teachers as follows:

Holders of principal's certificate	7
Holders of English graded license	53
Holders of graded license	127
Holders of rural license	152
Holders of preparatory license	8
Special students	20
Total	367

* * * * * * *

A course in manual training was given during the summer session, and the work was very enthusiastically taken up by about twenty teachers. The reception that both manual training and domestic science have met in the normal department since their introduction is very auspicious for the future success of the industrial training.

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THE DEPARTMENT OF AGRICULTURE.

Great progress has been made during the year 1908–9 in the organization and development of this department.

The title to a 40-acre tract of land adjoining the United States experiment station at Mayaguez has been perfected, and the plans for a building to cost $30,000 completed. Ground will be broken for this building within a short time. After its completion the work of the department can be carried on in two different parts of the island, varying materially in climatic conditions and character of the soil. In this way the agricultural needs of the whole island can be better served.

As dean of the agricultural department the services of J. William Hart have been secured. Dean Hart received his professional training in the higher agricultural institutions of Canada, was later a member of the faculty of the University of Illinois, and still more recently at the head of important agricultural interests in Brazil under that Government. Dean Hart comes to us fully trained for his important work and with extended experience in the problems of tropical agriculture.

For the coming year agricultural instruction will be given only at Rio Piedras. Here a new dairy building has been completed at a cost of $6,000.

Forty scholarships in the department have been established by the trustees and full courses of instruction organized.

The university farm consists of a tract of land measuring 95.21 acres on the outskirts of the village of Rio Piedras.

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The total university property and equipment is valued as follows:

Sites and grounds	$32,294.00
Buildings	59,832.90
Roads, fences, and ditches	835.48
Library books and equipment	2,887.70
Furniture and fixtures	4,055.00
Laboratory equipment and apparatus	2,744.16
Machinery and tools	779.55
Wagons and harness	314.09
Live stock	6,675.67
Trees	841.10
	111,259.65

Our total expenses for the year were $95,974.47.

CHAPTER VI.

EDUCATION IN THE PHILIPPINES.

The following information with reference to public instruction in the Philippines is derived from official reports issued by the insular department of public instruction.[a] They bring the record of the schools to June 30, 1909.

The past scholastic year was marked by the retirement of Doctor Barrows, who for six years had filled the office of director of education, and upon whom had fallen in great measure the difficult task of organizing the work and adapting the system and methods characteristic of our own country to the entirely different conditions existing in the Philippine Islands.

The progress in the establishment of schools and in school attendance is indicated by the following statistical summaries:

TABLE 1.—*Schools in operation and under the supervision of the bureau of education during the period from 1903 to 1909, inclusive.*

School year.	Primary.	Intermediate.	Secondary.	Total.
1903	[a] 2,000	.....	.....	2,000
1903–4	2,233	17	35	2,285
1904–5	2,727	102	35	2,864
1905–6	[b] 3,108	119	36	3,263
1906–7	3,435	216	36	3,687
1907–8	3,701	193	38	3,932
1908–9	4,194	193	37	4,424

[a] Estimated. [b] Excluding Moro Province (58).

The arts and trades, normal, domestic science, agricultural, and other special insular schools are included under the intermediate or secondary heading.

TABLE 2.—*Comparative statistics of primary schools for the successive years 1903–1909, inclusive.*

Year.	Public schools (primary).	Filipino teachers.	Monthly attendance (March).
1903	[b] 2,000	3,000	[b] 150,000
1904	2,233	3,854	227,000
1905	2,727	4,036	311,843
1906	3,166	4,719	375,534
1907	3,435	6,141	335,106
1908	3,701	6,620	359,738
1909	4,194	7,949	[c] 437,735

[a] Report of Hon. Newton W. Gilbert, Secretary of Public Instruction, Manila. Ninth annual report of Dr. David P. Barrows, Director of Education, Manila.

[b] Estimated.

[c] February.

TABLE 3.—*Distribution of pupils in the different classes of schools, 1908–9.*

Schools.		Average monthly enrollment.	Average monthly attendance.	Percentage of attendance.
Class.	Number.			
Primary	4,194	388,873	306,308	77
Intermediate	193	14,728	13,327	90
Secondary	37	1,877	1,780	95
Grand total	4,424	405,478	321,415	79

According to Doctor Barrows the year under review, judged from nearly every standpoint, was the most successful since the organization of the bureau of education. As regards primary education he says:

This recent progress brings us measurably closer than ever before to a complete system of primary public schools. As is generally understood, the first and earliest duty imposed upon the bureau of education was the organization of such a school system, adequate to give elementary schooling to the entire Christian population; and in recent years the success of school work has been measured by its approximation to this standard. The plan for the realization of this purpose was outlined in 1904 at the division superintendents' convention of that year, and was published in the courses of study prescribed by the director of education. This primary instruction was made as short as was believed to be consistent with practical results to the children. At first it was only three years, but in 1907 it was extended to four years.

The problem of comprehensive primary instruction may be discussed about as follows: In 1903 the Christian population was found by census to number 6,987,686 souls. It is now estimated to be about 7,500,000. The "school population" in the United States and elsewhere is commonly reckoned to include all children and youths between the ages of 5 and 18. Using the same percentages in the Philippines that have been determined for the United States, there should be about 2,100,000 of the population between these years of age. It must be borne in mind, however, in talking about school population, that probably in no country, and certainly not here in the Philippines, is it aimed to keep under constant instruction this entire fraction of the population.

In the United States the common or grammar school course covers eight years, but the average child actually completes only a little over one-half of it. Here in the Philippines our primary course is only four years in length, but the aim is to have all children complete all of it. If, as we calculate, there are 2,100,000 children and youths between the ages of 5 and 18, our primary course being only four years, or one-third of this period of twelve years, the realization of our object only requires the regular attendance of one-third of these children, or about 700,000.

The total enrollment in the public schools of all grades—570,502—was equivalent to 7.5 per cent of the population. Naturally the vast majority of these pupils, namely, 549,607 (334,205 boys, 215,402 girls), were in the primary grade.

From a detailed study of each district, recently made by the respective division superintendents, Doctor Barrows concludes that to meet the entire needs of the population there should be 6,000 primary schools and 12,000 teachers. "That such a system could rapidly be created," he says, "if sufficient resources were provided,

I have not the slightest doubt. The rapid growth of our school system in the nine years since the organization of the bureau of education is a demonstration of what has been done even with fluctuating and inadequate resources and without the aid of compulsory attendance."

As regards the length of school year and school attendance he continues:

The Filipino child who attends school regularly gets considerably more schooling in the course of a year than in some other countries. In the United States the average length of the school year is about one hundred and fifty-two days; in the Philippines the school year is forty weeks, or a total of two hundred actual days of school. Of these forty weeks, however, it is customary to take four and sometimes more in each province for a teachers' institute, during which primary schools are closed, but not intermediate and high schools. The school year opens about the middle of June and terminates about the end of March.

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"School attendance" is calculated on the basis of monthly enrollment. There was an average of 85 per cent for the Archipelago. Manila led with 97 per cent; Nueva Vizcaya had 90; Union, Tayabas, and Tarlac, 89. In eight divisions the attendance was below 80 per cent; Bataan, Pampanga, and Bulacan, 79; Ilocos Norte, Pangasinan, and Isabela, 76; Cavite, 75; and Sorsogon, 68. In the intermediate and high schools attendance is excellent, seldom falling below 90 per cent anywhere. The numbers in the higher grades of the primary course were a little higher than formerly, but not nearly what they should be. Taking the figures for February, there were in Grade I, 280,816 children attending; Grade II, 87,686; Grade III, 35,438; Grade IV, 17,795. These figures can be compared with those of March, 1908, when there were in Grade I, 233,020; Grade II, 81,604; Grade III, 30,899; Grade IV, 14,215. The large enrollment in Grade I and the rapid diminution in the succeeding grades show two things: First, that a considerable proportion of the children fail to pass the examinations for promotion, supposedly due in large part to their irregular attendance; and second, that a very large number do not continue in school for more than one or two years.

The importance of a compulsory school-attendance law is recognized, but, in the judgment of the Philippine Commission, the time has not come when such a law could be enforced.

INTERMEDIATE SCHOOLS.

At the end of the school year there were 193 schools giving intermediate instruction. In them were enrolled 18,502 pupils, of whom 14,495 were boys and 4,007 girls. These intermediate schools are somewhat unevenly distributed. There are no less than 18 in the Province of Iloilo; 11 in Occidental Negros; 9 in Bulacan, and 9 in Laguna; 8 each in Nueva Ecija and Batangas; 7 each in Tarlac, Pangasinan, Ilocos Sur, and Cebu. * * * With the increase in number of young people fit to take intermediate instruction, the demand for the establishment of intermediate schools becomes more and more insistent. There are at the present time 685 municipalities in the Philippines, and the time will probably come when every one of these towns will want an intermediate school. * * * Intermediate schools, however, are much more expensive to conduct than primary schools; a considerable proportion of the teachers must still be Americans, while the shop, agricultural, and housekeeping instruction call for special teachers and special equipment. An intermediate school also requires its own grounds and building or buildings, the con-

struction of which it is difficult to finance. For all of these reasons the development of the intermediate school system must be slow unless some source of maintenance for them is provided.

The instruction in intermediate schools has now been specialized so as to give pupils the opportunity of a training in shop work, farming, domestic science, in preparation for teaching or for business. When the intermediate school course was first developed, it was aimed to give it a distinct and practical character, and it was provided that the boy and girl should receive instruction not only in common branches, but in elementary science and in such subjects as agriculture, tool work, mechanical drawing, and housekeeping. But the effort to include all of these subjects in the intermediate training of every pupil resulted in overloading the course and in giving an insufficient training in the branches pursued. Hereafter the pupil who has completed the primary course and gained the fundamental knowledge of reading, writing, and ciphering will be allowed to choose what his further studies shall be and to what they shall lead.

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The intermediate courses now provided by this bureau are the following: The general course, the course for teaching, the course in farming, the course in tool work, the course in housekeeping and household arts, the course for business.

Each of these courses occupies three years; certain studies—reading, English grammar and composition, arithmetic, and geography—run through them all. In the course in farming three hours daily are spent in gardening and plant nurseries, field work on staple Philippine crops, and the care and use of farm animals. In the course in tool work three hours a day are given to shop practice. In the course in housekeeping and household arts, three hours a day are given to loom weaving, spinning, dyeing and embroidery, cutting and fitting of garments, housekeeping, plain cooking, physiology and hygiene, nursing, the care of infants, sick diet, and infant diet. In the course for business, in addition to the grammar-school subjects, are taught handwriting and plain lettering, spelling and dictation, typewriting, bookkeeping, business correspondence, and commercial geography.

The course in teaching is designed to produce primary school teachers. For many years normal school and high school graduates who choose teaching will be needed in intermediate schools, where they take the place of American teachers. * * * This course provides two years' instruction in music and drawing, a year of advanced instruction in native arts and industries which are taught to pupils in the primary schools, a year of agriculture and gardening or of housekeeping, physiology and hygiene, a year of Philippine history and government; and in the third year, two periods daily in school management and in practice teaching.

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The prescribed courses of study were more nearly realized last year than before. Uniform examinations are given under identical conditions to all pupils throughout the islands. These examinations help to keep the work in all divisions up to a chosen standard. In nearly all divisions, the primary school work in native arts and industries is well established. This work includes mat weaving, hat braiding, basket construction, and similar exercises founded upon arts indigenous to the country.

In the intermediate courses the agricultural work, shop work, mechanical drawing, and domestic science are given in the intermediate departments of nearly all the provincial high schools. Twenty-one of these high schools have excellent shop equipment, including explosion engines and machine tools; 20 of them have constructed permanent shop buildings; 8 have buildings for domestic science instruction. The teaching of agriculture has been less satisfactory than that of shop work. The reason is mainly the unsatisfactory state of scientific agriculture in the Philippines at the present time. Few experiments in agricultural improvement made since the American occupation have been successful. In nine cases out of ten the surest method of

securing a crop with the least economic expenditure and the least chance of loss is the mode of husbandry practiced by the native. Instruction in agriculture is given nevertheless at school farms and intermediate and high schools. The life and growth of plants is taught in the first year of the intermediate school, and is followed by a course in elementary zoology which prepares the way for agricultural entomology and agriculture. Aside from school gardening and the cultivation of kitchen vegetables, of which there is a great deal, agricultural teaching aims at making a few specific points; the inclosing of agricultural land; permanent improvements to the soil; irrigation; fertilizing; and the better application of animal power. It is not sought to introduce new agricultural products except vegetables, study being confined to the present staples.

By school gardens much good has been accomplished in improving and diversifying the diet of the common people. In some provinces a comprehensive plan has been carried out and every primary school plants and cultivates garden beds. As a result, the native markets, which six or seven years ago had nothing of the kind to offer, are now full of vegetables.

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SECONDARY INSTRUCTION.

Secondary courses were given last year in 37 schools to 1,802 students, of whom 310 were young women. The instruction at present is given almost entirely by American teachers; the classes are small and the expense correspondingly large. The justification of secondary instruction and of the expenditures it occasions is the imperative demand for this people of trained and disciplined leaders and thoroughly prepared professional men.

THE TEACHING FORCE.

The number of teachers and supervisors employed in the schools was 8,774, of whom 6,204 were men and 2,570 women. The American teachers numbered 825, namely, 570 men and 255 women. Doctor Barrows calls attention to the fact that the annual salaries of American teachers have been increased the last year. The present schedule rates range from 2,000 to 4,000 pesos ($1,000 to $2,000). Regret is expressed that owing to the anticipated reduction of the appropriation for the coming year, very few teachers were offered appointment in the United States, and accordingly at the opening of the present school year the force is more reduced in number than it has been at any time since its original organization in 1901. As a consequence of this loss, it has been impossible for the department to meet the requests from provincial governors and other high officials for American teachers, even where their services were regarded as indispensable.

The force of Filipino insular teachers has increased in number and improved in character.

The regular training of Filipino teachers still continues to be an important feature of school work. Daily teachers' classes are not as common as they were formerly, but the vacation institutes were held last year in all but three divisions. Besides these established methods for the instruction of teachers, the Philippine Normal School conducts a correspondence division for teachers of secondary attainments. The

spring vacation—April and May—has come to be a time of special effort for teachers' instruction. During the last vacation both the Philippine Normal School and the Philippine School of Arts and Trades had vacation sessions. Besides courses in academic subjects, technical courses were given in hand and loom weaving, hat making, gardening and elementary agriculture, cooking, sewing, woodworking, blacksmithing, wheelwrighting, mechanical drawing, loom construction, town and rural improvement, and other subjects in which Filipino teachers are seeking preparation. These courses were attended by 1,007 teachers and students, 33 provinces being represented. The young women's dormitory of the normal school provided living accommodations for 199 of the women.

The teachers' camp and vacation assembly were held at Baguio again this year in April and May. The camp was even better conducted than the year before and the attendance somewhat larger. During the four weeks of the assembly session 266 people were accommodated, representing 36 school divisions. Six daily lecture courses in the fields of literature, politics, science, and Spanish were given, besides a series of open lectures through the session.

The average salary of regular municipal teachers (i. e., Filipino teachers paid by municipalities) was ₱18.15 ($9.07) a month, being ₱17.99 for men and ₱18.47 for women, and for temporary teachers it was a little less and no vacation pay. Teachers' salaries vary greatly in different divisions of the islands, being highest in the city of Manila, where regular teachers receive an average of ₱66.63 ($33.31). After Manila the highest salaries are paid in Albay, Bulacan, Camarines, Batangas, Laguna, Palawan, Pangasinan, Pampanga, Surigao, Tayabas, and Rizal, where they receive over ₱20 ($10). The lowest average salary is paid in Ilocos Norte, ₱9.73 ($4.86). It is very low also in Oriental Negros, ₱10.55; Union, ₱10.77; Bohol, ₱11.59; and Zambales, ₱11.95. Such salaries do not represent living wages for the teachers. They are less than they were formerly. In 1904 the average salary of municipal teachers was ₱20.76 ($10.38) for men and ₱20.99 ($10.49) for women.

INSULAR RECEIPTS AND EXPENDITURES FOR EDUCATION.

The current appropriation for the bureau of education amounted to 3,300,000 pesos; the balance from previous appropriation to cover outstanding obligations, 65,716.83 pesos; and subsequent refunds from the appropriation for the previous year made by the governor-general to the sum of 226,243.07 pesos, making a total of 3,591,959.90 pesos, or $1,795,979.95.

The total expenditure for school purposes during the fiscal year 1908–9 was 5,747,997 pesos, equivalent to $2,873,998.50.

The expenditure was met as follows:

Fund.	Amount.	
	Pesos.	United States equivalent.
Insular	3,847,158	$1,923,579.00
Provincial	228,691	114,345.50
Municipal	1,672,148	836,074.00
Total	5,747,997	2,873,998.50

ENGLISH LANGUAGE.

With regard to instruction in language, the opinion is expressed, both by Doctor Barrows and the secretary of public instruction, Hon. Newton W. Gilbert, that the rapid spread of English is of the utmost importance to the future prosperity of the islands. On this point the secretary says:

The instruction in the public schools from the time of their inauguration until the present has been altogether in the English language. In the opinion of this department this is as it should be, for we can not expect the people of these islands to make great and lasting progress until they possess and use a common language, irrespective of what that language is. We have for nearly ten years been teaching the boys and girls of the Philippines to speak and write English, and they are now beginning to enter the different avenues of Filipino life more or less prepared to take up their duties and burdens as citizens. Often, however, they find themselves handicapped by the fact that the language which they have learned is not everywhere in general use, either in business or official circles. A young man educated in our public schools is much disheartened, and to a considerable extent incapacitated, if, when he attempts to utilize his training, he finds himself called upon to transact his daily business in the Spanish language. Municipalities throughout the islands still retain Spanish as their official language, although in most of them there are ten persons who speak English to one who speaks Spanish. It is believed that the government should promptly take measures to establish English as the official language wherever possible. The recent postponement until January 1, 1913, of the time when English is to become the official language of the courts is a serious blow, not only to the public-school system but to the Filipinos' very proper desire for nationality. Aside from the fact that English is the only language which the people of the islands may in time hope to possess in common, it is becoming more and more the universal language in which the business of the world is conducted; and as opportunities for the development of the material resources of the islands increase, we would greatly stimulate them by making the language of the Philippine Islands that which is so generally used by the business world.

Secretary Gilbert was appointed chief of the department March 1, 1909; consequently, as he explains, the greater part of the work above reviewed was accomplished under his predecessor. His report, however, indicates, on the whole, the purpose to continue the policies already adopted.

The following citations from the secretary's report indicate the outlook with respect to salient features of the general system:

PHILIPPINE NORMAL SCHOOL.

This important branch of our school work has been developed and improved throughout the past year, and to-day there are more students in attendance at the normal school than there have ever been before. The work of this institution has year by year been extended until now it provides not only a normal-school education, but also a number of special courses, which it was thought should be given somewhere and for which no other school offered facilities. Insensibly, and apparently of necessity, the energies of the institution have been spread over various fields of education, perhaps somewhat to the detriment of the purposes which its organizers had in mind. It is believed that the necessity for doing a large part of this work at the normal school has

ended, and that as opportunities for carrying it on elsewhere are given the work of that school may again step by step be restricted to the definite purposes for which the institution was created.

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The normal school is attended by hundreds of earnest youths, both boys and girls. All provinces of the islands are represented among its students. It has been of vast benefit to the schools everywhere, and by training teachers in larger numbers it is believed that its benefits may be even more greatly felt in the future. As stated above, the policy of the department is to develop the school along strictly normal lines, and to offer, if possible, larger salaries to those who have completed its course than are given to teachers who have not acquired training of this character.

FILIPINO STUDENTS IN THE UNITED STATES.

From the general appropriations made for the bureau of education from year to year there have been maintained in various educational institutions in the United States a considerable number of Filipino students. This seemed absolutely necessary a few years ago, but as conditions here have changed the need thereof has become less and less. We are able now to give training in many branches and courses which heretofore could be secured only by going outside of the Philippine Islands; and as the various colleges of the university are organized and developed, the necessity of sending our students away to be educated will disappear entirely. Even now it is believed that a better education in tropical medicine can be secured in the Philippine Medical School than can be acquired by Filipino students in the United States. Owing to the decreased appropriations for school purposes and the urgent need of economy, if we are to continue the work already begun, it is believed that, in general, money appropriated for educational purposes can be better spent in the islands than in maintaining students abroad. A thousand pesos here will accomplish more and benefit a larger number of people than a thousand pesos spent in the United States. Therefore, it is believed best at least to restrict to the minimum, if not altogether to discontinue, the appointment of additional students to the United States.

NONCHRISTIAN TRIBES.

A special effort is being made to develop school work among the so-called non-Christians of the provinces of Nueva Vizcaya, Agusan, and the Mountain Province. Larger appropriations for this purpose have been made by the commission than heretofore, and courses devised which in many respects are a modification of the courses given in other parts of the islands, and which, it is believed, are better suited to the needs of these primitive people. In many localities the inhabitants are displaying the keenest interest in the work, and the results so far obtained are most encouraging, and seem to promise greater returns than have yet attended our efforts.

THE UNIVERSITY OF THE PHILIPPINES.

During the latter part of the fiscal year the matter of establishing some of the colleges provided for the University of the Philippines—an institution authorized by the first Philippine legislature at its special session—was taken up. The appropriation made for this purpose was most meager, but a beginning has none the less been made.

The Philippine Medical School, established by a special act some years ago, was, by the provisions of the "university act," to become the school of medicine of the university whenever two other schools were equipped and in operation. The report of the dean of the Philippine Medical School speaks for itself. It shows the high standards which have been set for that institution and the excellent work which it has done.

The board of regents of the University of the Philippines established an agricultural college and a school of fine arts, both of which are now in operation, and has provided for a college of veterinary science, which will be opened as soon as buildings for its use can be constructed.

The college of agriculture has been located near Los Baños. The bureau of education had already secured options upon lands in the province of La Laguna, some 3 miles from that municipality, to be used for an agricultural school. These options were turned over to the board of regents; the land has been bought and the registration of the title is now being sought through the court of land registration; pending the securing of which it is not possible under the law to erect permanent buildings. Plans have been prepared, however, and as soon as the title is registered bids will be secured for the construction of these buildings. Meanwhile a temporary building has been erected in which classes are being conducted and a school maintained. Some 50 students have been admitted and are showing much interest in their work, seeming to understand that the future of this country depends very largely upon agricultural development.

The school of fine arts was temporarily established in the city of Manila in a house rented for that purpose on Calle San Sebastian, Quiapo. An exceedingly great amount of interest was taken in this school and hundreds of the Filipino youth applied for admission. By gradually eliminating the inept the number of students has been considerably reduced, so that the faculty, which consists of 7 professors, is now able to handle the students in a fairly satisfactory manner.

For a veterinary college land has been secured in connection with the Pandacan quarantine station, and here is being constructed an animal hospital and schoolrooms and laboratories for the study of veterinary science. As soon as these buildings are completed classes will be opened.

It is hoped that the legislature will provide for the opening in the near future of a college of liberal arts and a college of engineering as a part of the university, under the control of the board of regents.

This body has taken a very active and earnest interest in the establishment and operation of these various schools, with the successful inauguration of which will, as has before been stated, pass the necessity of sending students to the United States to obtain a college education at the expense of the government.

LEGISLATION.

The Philippine legislature which met in session February 1, 1909, and adjourned May 20 following, passed the current appropriation bill carrying the sum of ₱3,275,000 ($1,637,500) for the bureau of education and of ₱160,000 ($80,000) for the Philippine Medical School.

The following additional acts pertaining to education were also passed:

Act No. 1907, an assembly bill, made an appropriation of ₱2,000 from insular funds to assist the municipality of Imus, in the province of Cavite, in the construction of a building for an intermediate school.

Act No. 1910, a commission bill, amended certain sections of the "opium act." This act, as amended, provides, among other things, a special fund from which payment of the salaries of Filipino insular teachers may be made and with which municipalities may be assisted in the construction of schoolhouses.

Act No. 1914, a commission bill, amended act No. 1801, known as the "Gabaldon Act," by reducing the guaranteed attendance at schools established thereunder from

60 to 40 pupils, and by providing in the matter of the buildings "that the drawing up of the plans and specifications and the execution of the work shall be carried out in accordance with rules and regulations which shall be prescribed by the secretary of public instruction."

Act No. 1924, an assembly bill, extended the teachers' scholarships created by act No. 1807 to the inhabitants of the Christian municipalities and townships of Mindoro and Palawan and the subprovince of Abra.

Act No. 1913, an assembly bill, provided for the establishment of classes for training in nursing and appropriated the sum of ₱20,000 to carry its provisions into effect. This was a continuation of work previously authorized.

Act No. 1935, a commission bill, placed under the executive control of the Philippine library board all libraries belonging to any branch of the insular government. The consolidated libraries are known as "The Philippines Library." The board is composed of the secretary of public instruction, the secretary of the interior, the secretary of finance and justice, and two other members who are appointed annually by the governor-general.

Act No. 1938, an assembly bill, provided for the appointment of scholarships in the Philippine Normal School, and for this purpose the sum of ₱30,000 was authorized and expended from the funds heretofore accumulated under the "opium act."

Act No. 1954, a commission bill, provided for the issuance of government bonds to the amount of $1,500,000 to obtain funds for certain public works and permanent improvements. There were included among the permanent improvements appropriations of ₱189,000 for normal-school buildings in the city of Manila and of ₱100,000 for the assistance of municipal governments in the construction of buildings for central schools.

CHAPTER VII.

THE PRUSSIAN SYSTEM OF VOCATIONAL SCHOOLS FROM 1884 TO 1909.

Contents.—Historical review of the system.—List of secondary vocational schools.—Organization and rules.

The third report of the Royal Prussian State Industrial Office (Verwaltungsbericht des Königlich Preussischen Landesgewerbeamts, 1909)[a] traces the development of the present system of vocational schools (der gewerblichen und kunstgewerblichen Fachschulen) during the 25 years for which the ministry of trade and commerce has been responsible for its administration. The report, which comprises 436 pages besides numerous statistical folders, is introduced by an historical review (48 pp.), and this is followed by detailed accounts, statistical and textual, of the various classes of schools which make up the system considered.

The present chapter comprises Part I, the substance of the introduction, including the general historical survey, which has been translated, and the summarized discussion of the detailed exhibits, which maintains also the historical character. The latter portion has been treated somewhat more freely, as seemed necessary to make clear to the American reader conditions unlike those prevailing in this country.

Part II comprises a table of secondary vocational schools in Prussia.

Part III presents details of the classes of trade schools specified, drawn from the elaborate accounts appended to the historical review already considered, with additional particulars derived from a report emanating from the same office (Gewerbliche Fachschulen in Preussen, ihre Einrichtung und örtliche Verteilung, herausgegeben vom Königl. Landesgewerbeamt).[b]

PART I.—REPORT OF THE PRUSSIAN STATE INDUSTRIAL OFFICE.

TRANSFER OF THE SYSTEM.

In the two years, from October 1, 1907, to October 1, 1909, which this report covers, there occurred a significant memorial day for the administration of commerce and industry. September 3, 1909, was

[a] Berlin, Carl Heymanns Verlag, 1910. [b] Ibid., 1909.

just 25 years from the day His Majesty the Emperor and King Wilhelm I gave the order to transfer all the affairs of industrial education to the minister of commerce. This order of September 3, 1884 (see Gesetz-Samlung, 1885, p. 93), reads:

Upon report of the entire ministry of state,[a] dated August 31 of this year, I approve of the transfer of all vocational industrial schools, so-called trade schools, and schools of industrial art and design, and other institutions for the promotion of industrial art, including the administration of the porcelain manufactory, and the system of continuation schools, to the department of the minister of commerce and industry. This order is to be made known through the channel of the collection of laws.[b] I intrust its execution to the minister of commerce and industry and the minister of worship, education, and medical affairs.

This transfer took place April 1, 1885.

The cause and the procedure of the transfer of the industrial educational system to the department of the minister of commerce are not without interest. In 1883 the chief master of the Berlin wood-turning guild entered complaint that he had not succeeded in obtaining a state subsidy for the continued maintenance of the guild-school, and he finally sent his complaint to the imperial chancellor, Prince Bismarck, who was at the time also minister of commerce in Prussia, and who on more than one occasion had shown a warm interest in the trades and their organization. Prince Bismarck utilized this occasion to enter into negotiations with the minister of worship and education concerning a transfer of the industrial educational system. The negotiations finally led to a report submitted to the entire cabinet, whose deliberations culminated in the royal order cited.

In the appropriation bills of the year 1885–86 the transfer of the funds relating to industrial schools was made from the funds for the general school system to that of the ministry of commerce and industry. To the House of Deputies [the lower house of the Prussian legislature], together with the budget, a memorial was submitted which pointed out the fact that the secondary system of industrial schools of Prussia, including the institutions of industrial art and schools of design, despite the progress they had made in recent years, could not be compared with like systems of other German States and of foreign countries; in order to raise the system [of vocational educational institutions] to a higher level of efficiency, much more support and careful promotion would be required in the future than it had received in the past.

The following is a portion of the memorial:

The importance of the promotion and financial support of the industrial system left to each individual State has increased to a higher degree during recent years than formerly, owing to the course the development of the national economic life has taken; and the increased demands made upon this branch of the royal administration have

[a] The entire cabinet is meant.

[b] "Gesetz-Samlung," an official publication containing new laws, royal and ministerial orders.

shown that the latter stands in intimate relation to the lower and secondary industrial system of instruction as well as to the promotion of industrial art, and that it can not satisfactorily perform its duty so long as these institutions belong to the administration of another department. In such questions as that of the steps to take for the economic uplift of certain parts of the State through the awakening of new, or the development of existing, branches of industry, as that of the improvement of the condition of small trades in competition with large factory production, or that of the maintenance or promotion of the competitive capacity of native industries against encroaching foreign industries, the establishment and management of industrial vocational schools play so decisive a rôle that the ministry of commerce and industry finds itself constantly hindered in its activity so long as it is denied the power of initiative and of authoritative influence upon the system of schools, which in the nature of the case should be its prime sources of assistance. On the other hand, questions such as for what branches of industry, to what extent, and at what places should monotechnical schools be established; what purposes they should keep in view, and others, can be solved with certainty and for longer periods of time, and in due relation to the entire interests of the State, only by the authorities created for the purpose of promoting the national industry, which authorities should also have the required means of acquainting themselves with the conditions of industrial development and of gaining a comprehensive view of its local needs, and at the same time should be able to keep in touch with all the various related agencies, such as chambers of commerce, guilds, and other industrial corporations, from which cooperation in the solution of such questions is to be expected.

With this the programme for the further development of the new branch of service of the ministry of commerce and industry was defined clearly and without the least ambiguity, namely: Promotion of industrial continuation and vocational schools in the service of the interests of commerce, industry, and handicraft, and the fostering of such a system of instruction as an inseparable part of the national economic policy.

The development of the past 25 years has made it more and more evident that the system of secondary technical instruction can flourish in accord with this programme only if the ministry of commerce and industry seeks and maintains intimate connection with those agencies which are engaged in manufacture and other industrial pursuits, for which it is bound to provide skilled laborers; if the ever-changing needs of commerce, trades, and factories find careful consideration, and if it is remembered that industrial failure is threatened when the schools, instead of serving industry, merely serve their own purposes.

Another service of great importance the system can render under the management of the ministry of commerce and industry, namely, that of opening up possibilities of earning a livelihood to young people who are striving to rise from modest economic to better conditions; of aiding the process of the rejuvenation of our nation and thereby wiping out class distinctions. At the close of a period of 25 years, in which, more than ever before, class distinctions and class hatred have been catchwords in public discussion, it may be allowed to point to the fact that, thanks to the influence of our secondary sys-

tem of technical instruction—slowly and almost imperceptibly—a leveling upward to better conditions of life has taken place; that numerous persons, quite poor, and equipped with only the simplest elementary education, have been enabled, through our schools of mechanical engineering, schools for the building trades, and other vocational schools, to acquire, though often at great sacrifices, technical knowledge and accomplishments, which have opened sources of income hitherto closed to them or secured them higher wages, so that not infrequently they themselves have been enabled to rise to the "class" of contractors.

The peculiarity of our system of secondary technical schools and of the elementary industrial continuation schools is found in this, that their aim is to make the matter of instruction immediately applicable to industrial life. This is the essential difference between them and the schools belonging to the ministry of worship and education. Despite this essential distinction it should not be forgotten that the industrial continuation and vocational schools build upon the foundations laid by the general system of schools, that the boundaries of the two administrations are contiguous throughout, that the teachers of the two systems are interchanged, and that through this action very close relations are established.

The ministry of commerce and industry has been enabled, under the most favorable conditions, to extend the work so well begun by its predecessor. The past 25 years represent a period of rapid development in national commerce and industry, and, together with the need for the development of secondary technical instruction and continuation schools, the means placed at the disposal of State and communities for that purpose have increased most satisfactorily.

STATISTICAL SURVEY.

The memorial quoted above contained a list of schools to be transferred to the ministry of commerce, which list embraced 56 secondary vocational schools, aside from the then existing elementary continuation schools. Of these 56 schools only 34 had received state subsidies, and from the accounts of the annual appropriations it is seen that in 1885 there were provided half a million marks (or about $120,000) for subsidies; part of this sum, however, was used for elementary continuation schools.

A comparison with the subsidized schools now in existence shows the enormous degree to which the opportunities for industrial education have increased. (See list of subsidized schools on p. 324). But not only in the purely vocational schools, the number of students of which increased from about 8,000 in 1885 to 44,000 in 1908, is an advance noticeable, but particularly gratifying progress is shown in the continuation school system. In 1884 there were 664 elementary

continuation schools with about 58,400 students, while at present (in 1909) there are 1,719 industrial and 381 commercial, or a total of 2,100 continuation schools with 360,000 students. The total number of young people and wage-earning laborers enjoying the benefits of vocational instruction has increased even more, if we include the journeymen and masters attending the trade-master courses, which only began in 1900 as a regular institution.

The regular expenditure of the state for the whole industrial system of instruction increased from 1881 to 1884 only a little more than 200,000 marks ($47,600), and the appropriations for 1885 amounted to 569,000 marks ($135,422). As under the new administration the schools increased in number, the appropriation increased by 300,000 marks ($71,400) in one year, and after four years the increase amounted to 1,158,000 marks ($275,604), so that the whole budget showed an expenditure of 1,727,000 marks ($411,026). During the following five years another increase in the State's subsidy of 560,000 marks ($133,280) is recorded, so that in 1895 the sum of 2,287,000 marks ($544,306) was applicable.

During the last decade, the expenditures for the purposes indicated have grown so remarkably that for the elementary continuation schools alone the sum is needed that in 1896 was appropriated for all purposes of technical education. At present the appropriations amount to 11,000,000 marks ($2,618,000). Including the sums spent for navigation schools, for technical schools of steamship engineering, for the labor intelligence bureau of the Silesian embroidery schools, and all expenses defrayed from the deficiency fund, there is provided by the State for the year 1910 a total of 13,000,000 marks ($3,094,000).

To these state subsidies [it must be emphasized that these sums are merely subsidies, and that even much larger sums are expended by provincial grants, communities, corporations, guilds, and private firms for the maintenance of a technical or vocational school system] should be added the incidental expenses for books and work material, which during the period of 1881–1884 amounted to only 39,000 marks ($9,282), but since then rose, during periods of five years, namely, 1890, 1895, 1900, and 1905, as follows: 224,600 marks ($53,455), 128,550 marks ($30,595), 612,700 marks ($145,823), and 260,000 marks ($61,880). For this purpose alone the administration spent 4,530,000 marks ($1,108,140) during the 25 years from 1885 to 1909.

As was stated before, the state government is not the only contributor to the support of this system of schools that provides recruits for the industrial army. The communities also have increased their quota. While in 1885 the cities paid for the schools about 100,000 marks ($23,800), which the State subsidized with 300,000 marks

($71,400), six years later the cities paid 500,000 marks ($119,000), and in 1896 as much as 750,000 marks ($178,500). At present the cities alone spend for industrial art and trade schools 1,300,000 marks ($309,400), for schools for the building trades 370,000 marks ($88,060), and for schools for metal workers 260,000 marks ($62,480). In this connection it should be noted also that the communities offer gratuitously all their school buildings for continuation schools (evening and secular Sunday schools); also that, aided by corporations, they erect the buildings for secondary vocational schools—with very few exceptions—and keep them in repair. These special school buildings represent a large capital, for in recent years such sums as 300,000 marks ($71,400), 400,000 marks ($95,200), 600,000 marks ($142,800), 800,000 marks ($190,400), and in a few cases as much as 1,000,000 marks ($238,000) have been expended by a single city for the erection of industrial vocational schools. Up to the year 1884 such local expenditures ranged only from 50,000 marks ($11,900) to 80,000 marks ($19,040); in a few cases to 150,000 marks ($35,700) and 200,000 marks ($47,600).

ADMINISTRATION.

In computing the expenditures of the separate vocational schools there are still other items to be added not mentioned in the foregoing statements, namely, the costs of administration at the Central Office in Berlin and at the seats of the separate provincial governments. Here again the difference between the sums expended previous to 1885 and since that date is very large. Previous to the transfer of the system of vocational schools from the ministry of education to that of commerce and industry there were at the Central Office only 1 ministerial councilor (division chief) and 3 clerks engaged in managing the affairs; their salaries, together with the incidental expenses of the office, amounted to 32,215 marks ($7,668). From these modest beginnings have come into existence a government bureau with a commissioner (director) and 4 ministerial councilors and the administrative office of technical or vocational schools with 6 ministerial councilors, presided over by the commissioner (director) of the educational bureau of the ministry of commerce and industry. This part of the ministry, with its provincial branches, has now 19 governmental and industrial councilors, who watch over and direct the affairs and the inner workings of the system, and attend to the appointment and promotion of teachers. The annual appropriation bill of 1910 contains the itemized expenses of this governmental machinery, which amount to a total of 433,910 marks ($103,270).

It was natural that shortly after the transfer spoken of—at a time when everything in this extensive field of action was still in flux and fermentation, and the new administration had yet to define

the principles according to which itself and its subordinate authorities should proceed, since practical tests alone could prove whether what was planned in the office would fit the actual conditions—there should have been a strong tendency toward centralization. Only after the aims and methods of the various institutions had been defined in accordance with the views of expert industrial leaders, after the principles and course of preparation of teachers had been declared, and the participation of the communities and other corporations in the administration of the schools had been clearly defined, and industrial councilors acting as expert advisers for each provincial government had been appointed, could the centralization be relaxed and the many inconveniences be removed which were at the beginning sorely felt in consequence of the inevitable, strong centralization of the administration.

The administration of commerce and industry, faithful to the programme it had prepared beforehand, was determined to take no steps without securing the advice of authoritative experts from trades, factories, and business firms in directing the local administration of the schools. First a commission for vocational schools was appointed, whose special object it was to collect such advice. This commission, however, was not homogeneous and too large for the purpose intended; consequently it met but seldom. It has since been replaced by a number of advisory industrial councilors, who periodically meet and offer suggestions to the Central Office and to the minister concerning the exigencies arising in the various labor centers. As a result of these deliberations misunderstandings and uncertain orders have been prevented and the Central Administration has received many valuable suggestions.

It is especially important that the local boards and trustees of the various schools should have members, as their articles of incorporation prescribe, who are expert industrialists representing the trades and occupations which the respective schools are to serve, so that the schools may duly consider the needs of practical life in their courses of study and methods of teaching.

To increase the number of agents of the ministerial administration at the seat of provincial governments, and to affiliate with them expert assistance, are pressing needs of the near future.

However satisfactory the development during the last 25 years may appear, much remains to be done. An urgent necessity seems to be the further improvement of the continuation schools. The 410,000 pupils of such evening and secular Sunday schools in Prussia (including about 50,000 pupils in rural or agricultural schools) represent in a course of three years about 140,000 new pupils a year. Yet the 6,400,000 pupils of the elementary and advanced rural and city schools of the State have an army of recruits of 800,000 pupils a

year. This proves that only 18 per cent of all young folks of the ages for continuation schools (between the 14th and 17th years of age) are attending such schools. Another fact deserves attention, namely, that the 300 graduates of mechanical engineering and machine building in the technological universities this year will find only 875 graduates of the secondary or middle machine-building schools to assist them, while experience shows that at least ten times that number of young men, technically prepared in middle schools, can be utilized in the labor market of the nation. The total number of male youth in elementary and advanced elementary schools in eight yearly courses, viz, 3,200,000, if compared with the total number of students in secondary vocational schools in two yearly courses, viz, 40,000, and which in the eight yearly courses would at least be 160,000, shows plainly how necessary is the further development and extension of the vocational school system.

CONTINUATION SCHOOLS.

Equally important with the increase in the number of technical schools and the augmentation of their funds for the success of the whole system is the improvement in the equipment and inner organization of the continuation schools. The Central Administration has been very active in this direction. For continuation schools the order of the minister of worship and education of January 14, 1884, remained authoritative after the transfer took place in 1885. It decreed that by far the greatest number of continuation schools are to be regarded as repetition schools, in which all the branches of the elementary schools should be treated and extended if possible; intimate connection with the urgent demands of practical life was not attempted. Attendance at such schools was mostly voluntary, and accordingly very irregular; a well-planned course [laid out in years and terms] was generally wanting. The older, far-reaching ministerial demand of 1874, namely, that the continuation schools should, as a rule, be open at least for 16 hours a week, was found impracticable. Therefore the order of January 14, 1884, reduced the number of hours per week to 4 or 6 and limited the chief branches of instruction to mother tongue, arithmetic, and drawing.

Upon this basis rules and regulations, dated July 5, 1897, for laying out local courses of study and prescribing the method of instruction, were framed for the two branches of study—mother tongue and arithmetic. These rules demanded that the matter of instruction should preferably be chosen from practical pursuits and civil life; it should serve the living and vocational interests of the students, take into consideration the local industrial conditions and promote religious feeling and love of country. The merit of such courses of study may be found in the fact that they confined themselves to that which

was possible; that is, set up standards which could be applied to smaller [ungraded] schools. The continuation school [so far as it is not purely vocational] is one of four grades; the number of hours per per week is 6—2 for German, 2 for arithmetic, geometry, and bookkeeping, and 2 for drawing. Minute regulations concerning methods of teaching German and arithmetic were designedly omitted, but further development was encouraged and left to voluntary initiative.

This development took place, especially when the schools with voluntary attendance were gradually replaced by schools with compulsory attendance, in consequence of paragraph 120 of the new industrial law (Gewerbe-Ordnung). That change resulted in regular attendance and made it possible to carry into effect well-planned courses of study. Also better hours were appointed for the evening schools in many localities upon the urgent solicitation of the minister. The minister of commerce used the full weight of his authority in favor of schools with compulsory attendance, and stated officially that he would subsidize new continuation schools only if the communities should decree compulsory attendance. Thus he succeeded in inducing the large cities, one after another, to introduce a system of compulsory schools. In 1900 Magdeburg gave the example; Frankfurt on the Main followed; then the Rhenish-Westphalian factory towns; and, lastly, in 1905, Berlin adopted the plan. In the spring of 1910 Essen will be the only large city lacking industrial continuation schools with compulsory attendance.

The extension of the continuation school system of large cities makes it necessary to appoint expert supervisors, principals, and teachers, and to provide for separate school buildings. The continuation school system is developing into a system independent of the general school system. This is shown by the subjects of instruction. The large number of students enables the authorities to segregate them according to vocations or occupations. Vocational drawing lessons can be introduced; instruction in the mother tongue may take the form of compositions on vocations and lessons in civics, touching intimately the actual relations of trades and occupations. Commercial continuation schools also develop, frequently with the cooperation of chambers of commerce and business associations, into technical schools of a lower grade, which place in the center of instruction business correspondence, commercial arithmetic, and geography, as well as business practice. New problems arise from the fact that unskilled laborers are drawn into the sphere of school influence. The subjects of study for such persons are chosen, above all, from labor and transportation conditions of the home province, with lessons in hygiene and decorous deportment, as well as information concerning civic duties and economic welfare. The subject-matter in schools of smaller communities that can not segregate

their students according to occupations is similarly arranged; but all pay attention to local conditions and the special needs of the prominent trades of the towns.

The former courses of study have become antiquated through this development. Hence new courses have been prepared and will be officially ordered for adoption in the course of the year 1910. As a result of careful consideration, new principles for the subject of drawing were approved by an order of January 28, 1907. These principles aim at a purely vocational evolution of that important branch. Drawing in the continuation school has, during the last decades, dropped the former customary esthetic object and has become sketching and drafting as a practical aid to the various vocations. While formerly drawing of geometrical bodies and mathematical measuring were the centers of that branch of study, and later, drawing of ornaments received more attention and time, while vocational drawing (so-called working-drawings) did not come in before the second half of the course, now, according to the new principles adopted, working-drawings and sketches are the basis of the whole instruction in drawing.

At present the continuation school is the most important educational institution for young apprentices and wage-earners. It alone can fill the gap between the elementary school age and service in the army and exercise an educational influence over the young during the time of adolescence. Hence it seems called upon not only to act directly through instruction, but also to furnish the foundation for other institutions for the training of the young; it has become a necessity in large cities.

The great importance of the continuation school (evening school) for the entire education of the people of Prussia makes it appear most desirable to create a legal foundation for this system, such as most of the south and central German States have. A continuation school law, which makes it a duty of Prussian cities of 10,000 inhabitants to establish and maintain such a system of schools, is in preparation.

VOCATIONAL SCHOOLS FOR GIRLS.

The industrial schools for girls formerly presented a very mixed appearance. Their course of instruction was not laid out according to plan, but was fitted to the various purposes of the pupils. Nor was a distinct aim prescribed; consequently, neither in regard to the branches of study nor to the hours of study per week, nor to the duration of the course, were any definite rules in force. Gradually some of the schools, supported and directed by efficient societies, abandoned this free and easy mode of procedure and adopted a more pedagogic organization and management. The results accomplished

in such schools led to the adoption of regular courses of study in three state institutions, to wit, in Posen, Rheydt, and Potsdam, to which lately has been added the school at Thorn. The entire matter of instruction was divided into separate and ascending courses, and the length of each fitted to the difficulties of the separate branches. If a student wished to be admitted to the middle or higher grades, it was necessary for her to prove that she was in possession of sufficient knowledge and skill of the matters taught in the lower grades. This provision secured a more uniform preparation of the classes and the accomplishment of more uniform results of the prescribed courses.

The organization of the girls' vocational schools is planned as follows: Young women who wish to become familiar with the duties of housewives must enter the department of domestic science. Here they are taught, according to a fixed plan, cooking, washing, ironing, various work required in a household, and the supplementary arts of economy, including the keeping of books for household expenses; also, simple handiwork, such as sewing, patching, darning, mending, and machine sewing; lastly, they are taught hygiene, nursing of children and invalids. After the completion of this course the student may acquire more thorough improvement in the main branches in separately arranged postgraduate courses. To these special courses other students, not having had the benefit of the general courses outlined above, are not admitted unless they can prove, to the satisfaction of the authorities, that they possess the knowledge and skill required to pursue the advanced special courses. Thus, for instance, no student is admitted to the course in making underclothes if she lacks the accomplishment of plain sewing, and no one is admitted to the course of tailoring who lacks skill in machine sewing. Almost all middle and advanced institutions for girls' vocational education have adapted themselves to this organization. The practical results have contributed much to the gratifying development of these institutions.

The foregoing is applicable, so far, only to the purely vocational schools—that is, those in which the students have instruction in day time for a considerable number of hours per week. These practices have not as yet been adopted in elementary continuation or evening schools for girls, though they are primarily intended for those who become wage-earners at an early age. Here much of the work is still subject to the individual wishes of the people, who otherwise would simply not allow their daughters to attend. It is astonishing that among the working population there is such a strong disinclination to regulations and systematic instruction. Continuation schools which have an approved organization and management, are not usually attended by wage-earning girls, but by the daughters of parents belonging to other social classes; yet the former need instruction in

the various household arts more than any others. In this regard no change can be expected unless the attendance at these schools is made compulsory. That such compulsion would be beneficial is fully proved by the commercial continuation schools, the aim of which is preparation for business and office work, and which instruct according to fixed courses of study.

SCHOOLS OF INDUSTRIAL ARTS AND TRADES.

The number of secondary schools devoted to industrial arts and trades in 1884, at the time of the transfer already noted to the ministry of commerce, was 19. Of these, a few have been abandoned. The list for 1909 contains 41 such institutions, which illustrates the extensive growth of industrial art and trade instruction during the last 25 years. Still more remarkable is the change that has taken place in the internal organization and management of the schools. Of these institutions it may be said that they are a new creation during these 25 years, for nothing like them existed before. The time previous to 1884 was marked by industrial drawing schools—that is, institutions in which a trade worker learned the drafting more or less necessary in his particular trade. Side by side with these drawing schools there were in existence a few vocational schools fitted for certain manufactories and designed for the special purpose of promoting certain local industries. Real industrial art schools, schools of design with vocational lessons in daytime, were not anywhere in existence in Germany.

At about the middle of the eighth decade a new type of trade and industrial art school began to take shape in Prussia, and at the close of the century the present form of such schools developed rapidly. This effective change had its origin in the evening schools devoted to trade drawing, which schools, feeling the pulse of the time, took on a more and more vocational character. Certain occupations required a change from evening classes to day schools for more advanced workers. It also became necessary to consider the wishes of those who meant to devote some years to their vocational improvement as designers, model draftsmen, pattern-makers, etc. The fusion of purely trade education, such as is offered in evening drawing schools and vocational classes of trade schools, with the more artistic instruction offered in day classes in schools of design, is a characteristic feature of development in Germany. This fusion insures a natural selection of more talented students, and makes it possible for the buildings and means of instruction of one institution to serve both purposes.

The change in artistic taste which began about 1895, and was recognized not only in Germany, but more or less in all European countries, has affected the instruction in trade schools and industrial

art schools. The change was marked by the partial abandonment of the study of conventionalized historic ornament and its replacement by thorough nature study, which latter is to-day the basis of the entire instruction in ornamentation. From that comes recognition of the necessity of supplementing the work on the drawing-board by work in materials, in order to arrive at more purposeful and realistic forms. This recognition has led to the establishment of school workshops (the need of which had been urged by Gottfried Semper in his first programme of industrial art education as early as 1851, and the establishment of which had repeatedly been called for in memorials by commissions of experts). The workshops have become, since then, an integral part of all Prussian industrial art and trade schools. They have extended and deepened their courses of study by adding the training of the hand; above all, they have exercised a perceptible influence upon the erection of new school-buildings, for in the old ones a combination of drafting rooms and workshops could not always be arranged.

In large cities in which the continuation schools may be easily divided into many departments it has been observed that after the drawing lessons have become vocational in their form and subject-matter, the elementary continuation schools take over a part of the work intended for the evening classes of trade schools. This is plain from the decrease in the attendance of such evening trade classes. Hence arises the need of new plans of organization for the future; in fact, the whole field of industrial art and trade schools is still in a process of evolution and hence a final regulation of the system is as yet impossible.

SCHOOLS FOR THE BUILDING TRADES.

When the administration of secondary schools for the building trades was transferred to the ministry of commerce there were only 7 institutions of this kind in existence in Prussia, and every year a large number of young workers engaged in the building trades were denied admission. The first object of the administration was therefore to increase the number of schools and to extend those already established. The state subsidies for the support of existing schools were therefore increased; more advantageous conditions than heretofore were offered to cities intending to establish new schools for the building trades; and finally, when these inducements were not sufficient to obviate the difficulties, the state authorities gradually took into their hands the schools already existing and induced communal governments to join hands with the State in the erection of new schools. The results were an increase in the number of schools to 24, the organization of courses of ten grades, and an increase of students from 1,000 in 1885 to 9,000 in 1908. The

number of students who had to be denied admittance was thus reduced to a minimum. This vigorous development of the system was made possible by increasing the State's quota for its support from 88,000 marks ($19,040) to 1,500,000 marks ($357,000), or an increase from 85 marks ($20.23) per capita of the students in 1885 to 166 marks ($39.51) in 1908. The cities increased their quota to even larger amounts, and in recent years the largest cities of the Kingdom have defrayed one-half of all the expenses, or all expenses not covered by tuition fees and state subsidies.

The inner organization and management kept step with the increase in the number of schools and their departments. A somewhat uniform organization of this kind of schools had already, at the date of transfer in 1884, been secured by the establishment of four ascending grades, through a governmental order of examination which dated from 1882. Still the courses of study of the separate schools showed essential deviations, so that transfer from one institution to an advanced grade of another school was extremely difficult, if not impossible. Therefore, in 1898, a normal or uniform course of study was prescribed, although only in outlines, for all the schools for the building trades; and to secure results as uniform as possible, considering the often greatly differing standard of preparation of the students, uniform conditions of admission were officially prescribed.

Together with the issuing of a normal course of study, a measure was taken which for the development of this school system has proved of great importance. It was this: The surface improvement branches (Tiefbaufächer) had hitherto found no attention, though many graduates were already engaged in hydraulic works and railroad building service, in city surface improvements, and in road, bridge, and tunnel building. It was therefore determined that the schools for the building trades in Posen and Münster should open such courses for students who had already passed through two years' practical study of architecture. The students should devote the remaining two years to the essential branches of surface improvement (hydraulic works, road building, bridge and railroad building). How far this new arrangement met the existing needs is seen from the large number of applications for admission to the classes offering that kind of instruction. Year after year it became necessary to arrange new courses, so that at present all schools for the building trades, except the one in Eckernförde,[a] have such departments. The increase in the number of students from 30 in 1900 to about 1,500 in 1908 proves that many students, previous to the opening of such departments, had to be satisfied with an altogether insufficient preparation for their future calling.

[a] In the province of Schleswig-Holstein the school at Rendsburg teaches only the branches of surface improvement, while that at Eckernförde only the branches of architecture.

The ministerial order which changed the courses of study of schools for the building trades affected also the prescribed examinations. The order of 1882, which was changed provisionally at first but definitely in 1902, reduced the number of days for written examinations from 18 to 8, and gave daily classwork a decided influence upon the examination marks.

Although in consequence of the new order of examinations an extension of the time for instruction was secured, immediately after the adoption of the normal course of study the opinion was expressed that not even the most talented students could do full justice to the amount of subject-matter prescribed and that the vast requirements would demand too much home work. These complaints resulted in a thorough investigation and in the preparation of a new course by the Central Industrial Office, which prescribed a term of five semesters. After this course had been submitted to, and discussed by, expert teachers and men of affairs especially interested in the schools for builders, it was finally adopted in the fall of 1908. In the deliberations concerning the best organization of this kind of instruction, not only the duration of the course, but also the extent of the subject-matter of instruction, received attention, especially the relation between esthetic and constructive instruction and its methods, and consequently a thorough reorganization of the entire work of the schools for the building trades took place. In consideration of the fact that the technical men who construct by far the greatest number of buildings in cities and in the country had come from the schools for builders, much weight was given to the esthetic education of the students. The order in which the subject-matter of instruction was arranged resulted in the possibility of benefiting also those students whose capacity and means precluded graduation from the completed course or whose future vocation would not require them to go through the entire course of five winters. Such students are enabled now to take up the application of their architectural knowledge and skill after two or three winters and without having fully completed their departmental course.

The fact that architectural instruction (Hochbau) may be discontinued after three winter sessions makes it possible in the two upper grades to pay particular attention to surface building and improvements (Tiefbau), and to make the course in that department more thorough. In order to utilize these schools for the building trades for ever widening circles it will be of importance, if possible, to open Sunday and evening classes in all the existing schools.

SCHOOLS FOR METAL WORKERS.

In a similar manner, and no less successfully, the schools for the metal industries have developed during the past 25 years. In this field the Central Industrial Office met with two problems, when the transfer of vocational schools took place: How to separate the technical classes of high schools having realistic tendencies (so-called Realschulen) and change them to independent institutions, and how to increase the number of schools for metal workers to meet the needs of the metal industries. The first task was completed when the secondary machine builders' school in Aachen was established in 1902. The increase in the number of institutions of that kind was gradual during the last decade of the nineteenth and the first decade of the twentieth century, so that at present there are 23 metal workers' schools (21 of them independent), with 115 classes, while in 1884 there existed only 10 such institutions, with 24 classes.

In accord with the wishes of the local boards of trustees of the separate institutions representing local manufacturing interests, it has always been recognized that the aims of these schools, which are intended for the lower or middle class of workers, should not be placed too high; especially all approach to the polytechnical universities should be avoided; they should remain monotechnical in scope. This principle was not only kept in view in the regulations issued in 1901, but is constantly adhered to in the deliberations concerning a still later reorganization now going on.

In the establishment of monotechnical schools for metal industries, the Central Office has insisted upon the principle that such schools should be opened only in locations having adequate factories, and that in provinces lacking metal industries no such schools were necessary. Experience has proved that the establishment of such schools is always an outcome of a flourishing industry, such as cutlery, locksmithing, or machine building. Such a school, then, is opened to prepare the required skilled laborers in large numbers, but it never calls into life a new industry, nor preserves the life of a dying industry.

In accordance with the varying needs of different industries, the vocational schools for metal workers have developed a variety of forms. Thus, at present, there are, besides the machine builders' schools, one secondary school for the building of ships and ships' engines, two smelting schools, three schools for the cutlery and other small metal industries, one school for the bronze industry, one coppersmiths' school, and one school for electrical mechanicians. The establishment of a school for electrical installation is now under consideration.

The Central Industrial Office has paid much attention to the social object of the schools for the metal industries. For that reason it interests itself particularly in machine builders' schools requiring

for the admission of students, besides a practical shop experience of several years, only an elementary education, and its interest is directed also to evening and Sunday schools and special courses affiliated with machine builders' schools.

Through these machine builders' schools [schools of mechanical engineering, as some may be called] it is intended to improve young men who must earn the money for tuition fees by the work of their hands in shops and factories. This is also in the interest of the factories, for experience shows that the graduates of these schools become most useful workers. Factory owners who, for a time, showed little sympathy for these schools are much more friendly to them now that conviction of their usefulness spreads. The evening and Sunday classes, as well as the special limited courses, are intended chiefly for young metal workers who can not afford to spend many hours in day schools. They are of use not only to those who attend them, but also to the industry in general, since they increase the number of skilled laborers. That is the reason why the evening and Sunday classes and special limited courses have increased their attendance so largely in recent years. In future, these considerations will be decisive in the further growth of the system of schools for metal workers.

SCHOOLS FOR THE TEXTILE INDUSTRY.

Instruction in textile schools was conducted for a long time differently from that offered in other vocational schools. It consisted chiefly of free lectures and exercises, and the teachers rarely determined by examinations whether their lessons were successful or not. The teachers imitated university professors, but for such methods the students were too immature. For that reason, during the last decade of the past century new courses of study and rules were formulated, which guaranteed earnest and diligent study and work on the part of the students. Graduation examinations were prescribed also, in which it was necessary for teachers and students to prove that the prescribed objects in view had been reached. Hand in hand with this change went the establishment of separate courses for workmen, foremen, and superintendents and factory owners. For the practical education of workmen shops for weavers were established; for foremen, secondary technical textile schools; and for superintendents and factory owners, higher schools, which taught all the branches of the textile industry. Naturally, the latter courses were opened also to foremen, and even to ordinary laborers, if they were capable of following them. A separation of vocations further led to the inauguration of courses for model draftsmen, merchants, etc.

Experience finally proved indisputably that it was not possible to teach all the branches and bearings of the vastly extensive textile

industry in a single school. Neither was it possible to obtain teachers who possessed the knowledge of every textile branch, nor could a school be conducted successfully if it attempted to cover such a vast amount of work. Hence special schools were established for the cotton, wool, linen, and silk industries. These schools did not confine themselves, however, to teaching weaving, but each undertook to teach also spinning, dyeing, finishing, lace making, ribbon weaving, machine knitting, and finally all the numerous bearings of its branch. In consequence of this policy it is to-day possible in Prussia to have represented every branch of the textile industry in schools, to equip the latter with good shops, machines, and raw materials, and to provide thorough, expert teachers for the staff.

COURSES FOR TRADE MASTERS.

The range of influence of the Central Industrial Office has only lately been extended by the realization of a plan to supplement the vocational education of the young people devoted to industry by opening opportunities for older workmen, as well as independent shop and factory owners, to fill gaps in their vocational preparation, to familiarize them with new technical inventions, and to keep step with the ever occurring changes in their trades.

These attempts at arranging trade-master courses, the necessity or desirability of which was readily recognized by the Central Industrial Office, became more necessary soon after the passing of the so-called labor law (Gewerbe-Ordnung) of 1897; and, with the willing cooperation of the legislative bodies, the first institution devoted to trade-master courses was opened in Hanover in 1900. A powerful impulse in that direction was given by the adoption of a resolution in the House of Deputies, on June 4, 1902, proposed by Deputy Trimborn.

In the course of the following year other similar institutions were opened in several provinces, most of them having their own rooms and shops. Their number at present is nine, including one which is to be opened this year.

These courses aim at the technical and commercial improvement of laborers and shop masters who have been actively occupied in their branches of industry for years; they are not confined to masters alone, however, but they also admit dependent laborers, so-called trade journeymen, who are preparing themselves for higher or independent positions. The instruction consists of connected lecture courses and exercises extending over a number of weeks, according to a plan which affords a variety of shopwork and technical drafting, theoretical and practical lessons. Attendance at these courses is made possible to laborers who lose their wages for absenting themselves from their occupations by the payment of small subsidies from the state treasury.

In order to give tradesmen who are not in a position to interrupt their wage-earning occupations an opportunity to acquire knowledge of bookkeeping and the making of estimates of cost for work in their own branches, there have been arranged so-called brief master courses, often in connection with the above-mentioned courses, which may be attended conveniently after work hours, in the afternoon or in the evening. The chambers of commerce in many cities have instituted such brief courses with the aid of the State. Frequently such highly practical brief master courses are affiliated with vocational schools supported by the State or by societies; especially is this done if the courses are of a technical character, the real practical nature of which is promoted much by the teachers, collections, and shops of the technical institutions that offer these courses.

In order that so-called small shop or factory owners might have opportunities to inform themselves of improvements in technical aids, tools, power, and working machines, and to familiarize themselves with modern labor and methods of production, there have been arranged for such purposes, in some localities, temporary and permanent exhibitions in which machines are in running order, and where raw materials and half-finished productions are shown. In some places these exhibitions are installed in rented quarters; in others permanent exposition buildings or halls have been erected. At present, three such permanent exhibitions are in existence, two of them having their own halls. These institutions also have been supported financially by the Central Industrial Office. They were called into life, as a rule, through the initiative of city, provincial, and county governments.

For the eight full courses for trade masters there was provided in the annual appropriations of 1900–1908 a total of 767,698 marks ($182,712). For the short courses for trade masters, usually arranged by local chambers of commerce, a total of 40,790 marks ($9,868) were spent by the State alone from 1903 to 1908, and for trade master courses connected with technical schools the sum of 32,261 marks ($7,678) was spent by the State during the period from 1904 to 1908. The Central Office aided the local exhibition halls with the sum of 142,246 marks ($33,855) during the period from 1903 to 1908.

The institutions named were not the only ones aided by the Central Industrial Office. This office extended its activity (besides the promotion of small shop and factory labor) over the system of examinations for journeymen and apprentices and exhibitions of the work of such laborers. During the period 1903 to 1908 such exhibitions required an expenditure of 20,844 marks ($4,961), and for tradesmens' and industrial exhibitions, during the same period, the sum of 53,970 marks ($12,848) was expended by the State.

The total expenditure of the ministry of commerce and industry for industrial education and promotion of labor, especially in the interests of the middle classes, rose from 965,951 marks ($229,896) in 1885 to 13.118,525 marks ($3,122,189) in 1910, as has been stated before.

TEACHERS OF VOCATIONAL SCHOOLS.

One of the most important and at the same time most difficult tasks of the Central Industrial Office in aiding the development of the state system of vocational industrial instruction was to procure suitable teachers. But it was evident that the means must first be provided to induce persons to accept teachers' positions who were not only theoretically schooled, but were also familiar with the practical side of industrial life. Such persons were rare, and hence the authorities had to see to it that all such teachers were adequately prepared; to that end they established fixed standards for that preparation as well as for the internal management of the schools.

With the exception of a few principals of municipal drawing and industrial schools, of technical schools for weavers, and the principal of the state school for the building trades at Nienburg, there were, in 1885, only a few teachers of the last-named institution appointed for life with a claim upon a pension. Their average salary amounted to only 3,150 marks ($750); that of the other teachers in schools for the building trades was 2,810 marks ($669). In other monotechnical schools the pay of teachers was even lower. It was considered a great step forward when the average salary of teachers of schools for builders (for teachers of this kind of schools was the salary first regulated) was increased to 3,150 marks ($750), and that of the principals to 5,000 marks ($1,190). To-day not only the principals (now termed directors) and teachers of the schools wholly supported by the State, but all the teachers of city vocational schools are appointed for life at better salaries and with a claim upon a pension for themselves as well as for their widows and orphans. Teachers of vocational schools, supported wholly by the State, having university education, receive also either a dwelling or adequate cash compensation for rent in absence of a suitable dwelling, and a salary which begins with 3,000 marks ($715) and is increased within 21 years to 7,200 marks ($1,715). The same maximum is reached by principals after 9 years, having begun with 5,400 marks ($1,285); these principals receive also a communal supplementary pay of 600 marks ($133), which sum is included when the pension claim is computed.

The teachers of the monotechnical schools for metal workers who have not a complete university education and the teachers of state industrial art schools begin with a salary of 3,000 marks ($715) and rise to 6,000 marks ($1,430) in 18 years. In vocational institutions

supported chiefly by cities or corporations and which are only subsidized by the State, the salaries are being increased in a similar manner, especially the salaries of teachers in trade schools and schools of design, who up to this year received 2,700 to 4,800 marks ($643 to $1,042), are placed on the same scale of 3,000 to 6,000 marks ($715 to $1,430).

It is important for the standing of teachers of vocational schools and for the uplift of the teaching profession that, in consequence of a royal order of January 27, 1898, the relations of titles and rank have been regulated like those of similar officers of the State; naturally the order dealt, first, with the principals and teachers of state institutions. The principals of such schools received the official title "Director" with the rank of councillors of the fifth class, and the prospect of promotion to the fourth class, upon motion of the minister. Teachers with full university preparation received the title "Head teacher" (Oberlehrer) with the rank of councillors of the fifth class. This order also provides that one-third of the total number of such teachers may receive the title of "Professor." After 12 years of service they may be proposed for the fourth class of councillors.

By royal order of January 27, 1906, the titles and rank of the principals and teachers of trade schools and industrial art schools subsidized by the State, and those of the higher technical schools for the textile branches, were similarly regulated. According to that order the title of professor may be conferred on such teachers without the presupposition of full university preparation. It was further decreed that henceforth one-half of the number of head teachers of the schools for the building and machine building trades may be promoted to the rank of professor.

The difficulty of giving the various classes of vocational teachers pedagogic training has been only partly overcome. The training of the younger class of vocational teachers, namely, for girls' industrial schools, has progressed furthest according to strict rules. The steadily increasing importance of the system of girls' industrial schools, and the very rapid development of continuation and secondary vocational schools for young ladies, caused the lack of opportunities for carefully planned preparation of women for the teaching profession to be felt more than in other institutions; hence, an order was issued on January 23, 1907, according to which a normal department should be established in connection with all schools of domestic science and art subsidized by the State; the order, likewise, regulated the course of study of such departments.

In schools for the building trades and for machine building (mechanical engineering schools) no special arrangements for the prepa-

ration of the teaching personnel have so far been made. Neither the establishment of normal departments for the professional preparation of such teachers, nor a system of examinations by which proof of the required knowledge and accomplishments could be given, has been possible. The expense was not the only deterring cause. It did not seem advisable to create institutions for a limited demand; for, after once the average number of teachers had been reached, the building trades and mechanical engineering, suffering first in times of industrial depression, might not for years require the teachers prepared for these branches, for whose professional education it was necessary to expend time and money.

This does not, however, imply utter neglect of the professional training of young teachers in these two classes of schools. Of any teachers to be newly appointed, it is required that they possess a higher education (either obtained in a university or in a polytechnic institute); especially, that they have adequate experience in industrial practice. For the further professional education of such teachers means have been appropriated and opportunities opened (1) by stipends for study-trips to other cities, (2) by grants of annual leaves, with pay, for the same purpose, and (3) by permission to engage in private occupations. Further, it is proposed to utilize the summer semesters more than hitherto for the professional preparation of young teachers; similar plans have been laid for teachers of mechanical engineering and machine building.

In schools of industrial art and in trade schools, the need of further education for the teachers has become most strongly felt. Here the teachers, to be successful, must preserve an aptitude for new accomplishments and keep in touch with artistic life. For that, however, opportunities are often lacking in small cities. Such teachers need to become familiar with new fields of activity in industrial art and design for which their work in school does not give them the required time. In order to meet this need a number of courses of instruction for teachers in different fields of industrial art were arranged during the last few years; thus, for instance, by Architect Riemerschmidt in Munich, who dealt with designs of furniture and interior architecture; in flat ornamentation at the industrial art and trade school in Magdeburg; in lettering at the school of design in Düsseldorf under Professor Behrens; in mural painting and decorating for teachers of technical classes under direction of Professor Mohrbutter in Charlottenburg; and finally a course in mural decoration under Professor Hammel in Hanover; also the courses in plant designs in 1901 and 1902, and those in 1909, conducted by Professor Meurér in Rome, Italy, and in Berlin, which were attended by 50 Prussian teachers and directors, may be classed among the efforts toward improvement of teachers of industrial art schools.

This improvement of teachers was promoted further by stipends granted by State and communities to schools of that kind for teachers' journeys of study. Similar journeys were encouraged by stipends for the improvement of teachers of the textile branches.

TEACHERS OF CONTINUATION SCHOOLS.

For no other schools, however, is the professional preparation of teachers so urgent and of such importance as for the continuation schools. In these [evening and Sunday] schools, owing to lack of teachers, the instruction in drawing was necessarily intrusted in small towns to teachers of the people's (or elementary) schools, who were seldom sufficiently prepared for general instruction in that branch, much less even for technical drawing. In the continuation schools, therefore, the instruction was successful only when the teachers were specially prepared to give drawing lessons, both free-hand and technical, at least to a limited extent. When the continuation school system was transferred to the ministry of commerce and industry, one of its first steps was to advance the preparation of teachers of these schools. During the period 1886 to 1894, professional drawing courses were arranged in Berlin, Düsseldorf, and Hanover, for which the sum of 18,000 marks ($4,284) was set aside annually, and by which 400 teachers were benefited. But in consequence of the steadily growing number of continuation schools, it became necessary to increase these courses; finally, other courses for commercial instruction, for language and arithmetic, were added, so that in 1905 the sum needed for these purposes amounted annually to 130,000 marks ($30,940), and at present the sum spent is 200,000 marks ($47,600). The number of teachers employed in continuation schools rose to 11,517 in 1904, of whom 549 were employed in day schools and necessarily severed their connection with the elementary schools. The necessity of doing something to prepare teachers, both for evening and day continuation schools, increases in urgency, and to obtain the required personnel, not only teachers of elementary schools who have a normal-school training and need only additional technical knowledge of vocations and their many ramifications, but also skilled workmen in a variety of industries, are employed, who require professional school practice to handle classes and to teach according to pedagogic principles.

Therefore, to decide upon the best course in this respect, and to procure teachers for other vocational and secondary schools as well; furthermore, to attend to the ever increasing opportunities for pedagogical and technical education of young people intending to devote themselves entirely to industrial education, and to promote all other institutions tending to the support and improvement of the indus-

tries of the nation are objects which the Central Office of Industrial Education must keep in view in the future.

[NOTE OF THE TRANSLATOR.—The following list of vocational schools contains a few institutions which have ceased to exist; they are included to give a full view of the development of the system. The biennial report from which the list is copied (or rather translated) fails to mention separately the navigation schools, which fall also under the administration of the minister of commerce and industry, but are called into existence and are chiefly supported by the large over-sea transportation companies of Bremen, Hamburg, and Lübeck.]

PART II.—LIST OF SECONDARY VOCATIONAL SCHOOLS IN PRUSSIA.

Secondary vocational schools in Prussia.

City.	Province.	Date of foundation.	Character of school.	Amount of state subsidy in 1909.	Length of course.[a]	Lowest age of admission.[b]
				Marks.	*Semesters.*	*Yrs.*
Hanau	Hesse-Nassau	1772	Royal Drawing Academy	89,055	6	14
Königsberg	East Prussia	1790	Royal Art and Industrial School	39,692	6	14
Magdeburg	Saxony	1793	Royal Art and Trade School	(c)		
Do	do	1801	Industrial Drawing School	(c)		
Danzig	West Prussia	1804	Royal Art and Trade School	(d)		
Nienburg	Hanover	1853	School for the Building Trades	70,285	5	16
Mülheim	Rhineland	1854	School of Weaving	(d)		
Crefeld	do	1855	School for the Textile Industries	87,664	6	16
Einbeck	Hanover	1861	School of Weaving	(d)		
Höxter	Westphalia	1864	Royal School for the Building Trades.	67,948	5	16
Eckernförde	Schleswig-Holstein.	1868	do	62,464	5	16
Idstein	Hesse-Nassau	1869	do	56,066	5	16
Cassel	do	1869	Industrial Art School and School of Design.	38,137	6	14
Spremberg	Brandenburg	1869	School for the Textile Industries	10,478	4	16
Halle	Saxony	1870	Trade School	33,055	6	14
Cologne	Rhineland	1870	Industrial Drawing School	(e)		
Rheydt	do	1870	Royal Commercial and Industrial School for Girls.	16,875	(f)	14–16
Stettin	Pomerania	1874	Commercial and Industrial School for Girls.	3,000	(f)	14–16
Elbing	West Prussia	1874	do	450	(f)	14–16
Elberfeld	Rhineland	1875	Industrial Drawing School	(g)		
Heinsberg	do	1876	Basket and Furniture Braiding School.	5,000	1	16
Deutsch Krone	West Prussia	1877	Royal School for the Building Trades.	66,619	5	16
Breslau	Silesia	1878	do	63,951	5	16
Höhr	Hesse-Nassau	1879	School of the Ceramic Arts	29,972	4	14
Frankfurt	do	1879	School of Industrial Arts and Design.	24,000	6	16

[a] Though the term "Semester" means half a year, it is in these schools generally meant for winter; hence a school of four semesters is really one of four winters, or more than four half years, many of these schools not being open during the summer. However, the practical work in shops and factories in summer only deepens the theoretical winter work.

[b] The age of admission is not always stated, but no student can be admitted who has not passed through the eight grades of the people's school, hence is 14 years old. Schools requiring apprentice work admit students at 16.

[c] Has changed its name. See School of Industrial Arts and Trades, city of Magdeburg.

[d] Has ceased to exist.

[e] See School of Industrial Arts and Trades, city of Cologne.

[f] Differs in departments; see text.

[g] See School of Industrial Arts and Trades, city of Elberfeld.

Secondary vocational schools in Prussia—Continued.

City.	Province.	Date of foundation.	Character of school.	Amount of state subsidy in 1909.	Length of course.	Lowest age of admission.
				Marks.	*Semesters.*	*Yrs.*
Iserlohn	Westphalia	1879	Royal School for the Bronze Industry.	38,925	6	17
Alten-Essen	Rhineland	1879	Industrial and Commercial School for Girls.	1,700	(a)	14–16
Berlin	Brandenburg	1880	First City Trade School	26,000	6	14
Remscheidt	Rhineland	1880	Royal School for the Cutlery and other Steel Trades.	28,270	2–6	14
Grävenwiesbach	Silesia	1882	Basket and Furniture Braiding School.	2,700	2	16
Bochum	Westphalia	1882	School of Iron Smelting	(b)	.....	.....
Berlin	Brandenburg	1883	School for the Building Trades	35,562	5	16
Düsseldorf	Rhineland	1883	School of Industrial Arts and Design.	51,500	6	14
Sorau	Brandenburg	1886	School for the Textile Industries	77,150	6	16
Berlin	do	1866	Schools of Domestic Science, Industry and Commerce for Young Ladies. (Lette Verein.)	10,000	(a)	15–16
Do	do	1872	Home for Daughters of Higher Classes.	3,000	(a)	14
Halle	Saxony	1879	City Commercial and Industrial School for Girls.	9,945	(a)	15–16
Posen	Posen	1881	Royal Commercial and Industrial School for Girls.	59,118	(a)	14–16
Berlin	Brandenburg	1883	School for the Textile Industries	37,990	6	16
Aachen	Rhineland	1883	do	48,862	6	16
Do	do	1886	School of Industrial Art and Design.	39,772	6	14
Do	do	1886	Industrial Day School	28,857	4	16
Magdeburg	Saxony	1887	School of Industrial Arts and Trades.	71,849	6	14
Lennep	Rhineland	1887	School of Woman's Handiwork	240	4	16
Nowawes	Brandenburg	1888	School of Weaving	(c)	.....	.....
Wiesbaden	Hesse-Nassau	1888	School of Industrial Arts and Domestic Science for Girls.	1,400	(a)	14–16
Rummelsburg	Pomerania	1889	Apprentice School for Weavers	(c)	.....	.....
Frankfurt	Hesse-Nassau	1889	City School of Domestic Science for Girls.	800	(a)	14–16
Buxtehude	Hanover	1890	Royal School for the Building Trades.	65,428	5	16
Magdeburg	Saxony	1890	do	61,571	5	16
Hanover	Hanover	1890	School of Industrial Arts and Trades.	80,298	6	14
Falkenburg	Pomerania	1890	School of Weaving	(c)	.....	.....
Forst	Brandenburg	1890	School for the Textile Industries	18,564	6	16
Sommerfeld	do	1890	do	7,750	6	16
Finsterwalde	do	1890	School of Weaving	(c)	.....	.....
Dortmund	Westphalia	1890	Royal School of Machine Building	125,179	4	14
Cologne-Nippes	Rhineland	1890	School of Domestic Science	275	4	16
Cottbus	Brandenburg	1883	School for the Textile Industries	27,939	6	16
Graudenz	West Prussia	1883	School of Industrial Arts and Domestic Science for Girls.	1,500	(a)	14–16
Posen	Posen	1891	Royal School for the Building Trades.	81,527	5	16
Magdeburg	Saxony	1891	Royal School of Machine Building	51,402	4	14
Duisburg	Rhineland	1892	Royal School of Machine Building and Smelting.	126,961	5	14
Königsberg	East Prussia	1893	Royal School for the Building Trades.	71,551	5	16
Görlitz	Silesia	1894	do	81,106	5	16
Cologne	Rhineland	1878	do	52,800	5	16
Do	do	1895	Royal School of Machine Building	62,860	4	14
Do	do	1895	School of Industrial Arts and Trades.	30,000	6	14
Bunzlau	Silesia	1897	Royal School of Ceramic Arts	35,694	4	14
Hanover	Hanover	1879	School of Industrial Arts and Domestic Science for Girls.	10,000	(a)	14–16
Danzig	West Prussia	1880	Commercial School for Young Ladies.	3,000	4	16
Görlitz	Silesia	1891	School of Industrial Arts and Domestic Science for Girls.	3,000	(a)	14–16
Laubau	do	1894	School of Ornamental Brick Making.	6,000	2	14
Marienburg	West Prussia	1894	School of Industrial Arts and Domestic Science for Girls.	1,050	(a)	14–16

[a] Differs in departments; see text.
[b] See Royal School of Machine Building and Smelting, city of Duisburg; changed location and name.
[c] Has ceased to exist.

Secondary vocational schools in Prussia—Continued.

City.	Province.	Date of foundation.	Character of school.	Amount of state subsidy in 1909.	Length of course.	Lowest age of admission.
				Marks.	*Semesters.*	*Yrs.*
Posen	Posen	1894	Industrial School for Deaf-mute Girls.	2,000	4	14
Cassel	Hesse-Nassau	1896	Royal School for the Building Trades.	69,908	5	16
Barmen	Rhineland	1896	School of Industrial Arts and Trades.	54,140	6	14
Charlottenburg	Brandenburg	1896	do	50,000	6	14
Quedlinburg	Saxony	1896	School of Industrial Arts and Design.	550	6	14
Hagen	Westphalia	1896	Royal School of Machine Building.	77,180	4	14
Gleiwitz	Silesia	1896	Royal School of Machine Building and Smelting.	84,146	5	14
Elbing	West Prussia	1896	Higher Continuation School for Girls.	500	(a)	16
Hohensalza	Posen	1896	Industrial and Commercial School.	3,500	6	14
Düsseldorf	Rhineland	1896	City Commercial School for Girls.	1,000	4	16
Barmen-Elberfeld.	do	1897	Royal School for the Building Trades.	63,660	5	16
Elberfeld	do	1897	School of Industrial Arts and Trades.	48,102	6	14
Breslau	Silesia	1897	Royal School of Machine Building.	70,085	4	14
Habelschwerdt	do	1897	School of Embroidery	6,244	3	16
Lewin	do	1897	do	3,720	3	16
Mittelwalde	do	1897	do	4,680	3	16
Neurode	do	1897	do	7,392	3	16
Reinerz	do	1897	do	4,494	3	16
Wünschelburg	do	1897	do	3,470	3	16
Schomberg	do	1897	do	5,000	3	16
Wiesbaden	Hesse-Nassau	1897	Industrial Society of Nassau; 4 Schools for Girls.	6,120	8	14–16
Frankfurt	Brandenburg	1898	Royal School for the Building Trades.	70,421	5	16
Münster	Westphalia	1898	do	71,057	5	16
Erfurt	Saxony	1898	School of Industrial Arts and Trades.	36,015	6	14
Elberfeld	Rhineland	1898	Royal School of Machine Building.	68,096	4	14
Altona	Schleswig-Holstein.	1898	do	48,780	4	14
Görlitz	Silesia	1898	do	51,756	4	14
Mühlhausen	Saxony	1898	School for the Textile Industries	11,454	4	16
Kattowitz	Silesia	1899	Royal School for the Building Trades.	66,414	5	16
Stettin	Pomerania	1899	do	75,036	5	16
Ronsdorf	Rhineland	1899	School for the Textile Industries	9,260	4	16
Aachen	do	1900	Royal School for the Building Trades.	74,396	5	16
Hildesheim	Hanover	1900	do	78,230	5	16
Rehburg	do	1900	Technical School of Architecture.	1,500	4	16
Altona	Schleswig-Holstein.	1900	School of Industrial Arts and Trades.	45,000	6	14
Essen	Rhineland	1900	Industrial School	(b)		
Stettin	Pomerania	1900	Royal School of Machine Building.	43,292	4	14
Barmen	Rhineland	1900	School for the Textile Industries	45,823	4	16
Langenbielau	Silesia	1900	do	15,454	4	16
Einbeck	Hanover	1900	Royal School of Machine Building.	(b)		
Siegen	Westphalia	1900	Royal School for Iron and Steel Industries.	18,000	4	16
München-Gladbach.	Rhineland	1901	School for the Textile Industries	26,220	4	16
Breslau	Silesia	1866	Woman's Society; 3 Schools for Girls.	3,000	(a)	14–16
Münster	Westphalia	1876	School of Industrial Arts and Trades.	2,500	4	14
Berlin-Marienfelde.	Brandenburg	1881	Domestic Science School (Continuation School).	1,000	(a c)	14–16
Potsdam	do	1888	Royal Commercial and Industrial School for Girls.	39,144	4	14–16
Freiberg	Saxony	1889	School for the Tanning Trade	5,000	3	16

a Differs in departments; see text.

b Has ceased to exist.

c Wherever the words "Continuation School" are used in this list, they are applied to an advanced kind and properly classed among the secondary vocational schools. See Domestic Science School (continuation school), city of Berlin-Marienfelde; Continuation School for Girls, cities of Husum, Crefeld, Lyck, Gummersbach, Wetter, and Suhl.

Secondary vocational schools in Prussia—Continued.

City.	Province.	Date of foundation.	Character of school.	Amount of state subsidy in 1909.	Length of course.	Lowest age of admission.
				Marks.	*Semesters.*	*Yrs.*
Königsberg	East Prussia	1888	School of Domestic Arts for Girls	250	(a)	14–16
Do	do	1900	School of Domestic Science and Industry for Girls.	250	(a)	14–16
Do	do	1890	Continuation School of Domestic Science for Girls.	500	(a)	14–16
Hanover	Hanover	1890	School of Domestic Arts for Girls	500	(a)	14–16
Cologne-Ehrenfeld	Rhineland	1890	do	500	(a)	14–16
Düsseldorf	do	1891	School of Embroidery and Design.	800	3	16
Schwiebus	Brandenburg	1894	School for the Bookbinding Trade.	150	3	16
Lennep	Rhineland	1894	School of Domestic Science and Cooking.	400	(a)	14–16
Düsseldorf	do	1895	School for the Bookbinding Trade.	400	3	16
Liegnitz	Silesia	1897	School of Domestic Science	400	(a)	14–16
Dortmund	Westphalia	1898	Industrial School for Young Ladies.	300	(a)	16
Husum	Schleswig-Holstein.	1899	Continuation School for Girls	750	4	16
Crefeld	Rhineland	1899	do	1,000	4	16
Flensburg	Schleswig-Holstein.	1900	School of Industrial Arts and Design.	14,000	6	14
Posen	Posen	1900	Royal School of Machine Building.	52,791	4	14
Cologne	Rhineland	1900	Commercial College for Girls	1,500	4	16
Wetzlar	do	1900	Ambulatory School of Domestic Arts.	500	4	16
Danzig-Langfuhr	West Prussia	1900	School of Industrial and Domestic Arts.	10,600	(a)	14–16
Tilsit	East Prussia	1900	Industrial Continuation Schools for Girls.	1,200	4	16
Erfurt	Saxony	1901	Royal School for the Building Trades.	73,218	5	16
Danzig	West Prussia	1901	Commercial and Industrial School.	80,000	4	14–16
Elbing	do	1901	Industrial School	45,000	6	14
Gnesen	Posen	1901	Commercial and Industrial School.	48,853	4	14–16
Ziegenhals	Silesia	1901	School for the Glove Trade	6,000	2	16
Hildesheim	Hanover	1901	Trade School	21,000	6	14
Memel	East Prussia	1901	School of Domestic Arts	400	4	16
Nordhausen	Saxony	1901	Commercial and Industrial School for Girls.	800	(a)	14–16
Warmbrunn	Silesia	1902	School of Wood Carving and Design.	14,500	3	16
Aachen	Rhineland	1902	Royal School of Machine Building.	48,382	6	14
Schmalkalden	Hesse-Nassau	1902	Royal School of Iron and Steel Trades.	27,785	4	14
Göttingen	Hanover	1902	School of Domestic Science and Cooking.	3,300	(a)	14–16
Kiel	Schleswig-Holstein.	1903	Royal Shipbuilding and Machine Building School.	68,231	4	16
Breslau	Silesia	1903	Trade School	30,000	6	14
Hersfeld	Hesse-Nassau	1903	School of Domestic Science and Cooking.		(a)	14–16
Eschwege	do	1903	School of Domestic Science	500	4	16
Schmalkalden	do	1903	do	400	4	16
Lyck	East Prussia	1903	Continuation School for Girls	150	6	14
Luckenwalde	Brandenburg	1903	Dressmaking School	1,000	4	14
Crefeld	Rhineland	1904	School of Industrial Arts and Trades.	25,000	6	14
Dortmund	Westphalia	1904	Trade School	25,000	6	14
Solingen	Rhineland	1904	School for the Cutlery and Small Ironware Trades.	19,479	4	14
Haynau	Silesia	1904	School for the Glove Trade	3,920	3	15
Wermelskirchen	Rhineland	1904	School for the Shoe and Boot Making Trade.	10,000	4	16
Trier (Treves)	do	1904	School of Industrial Arts and Trades.	24,285	6	14
Berlin	Brandenburg	1904	School for the Bookbinding Trade.	5,000	3	16
Falkenburg	Pomerania	1904	School of Industrial Arts and Domestic Science.	14,700	(a)	14–16
Zeitz	Saxony	1904	Continuation School for Girls	1,200	(a)	14
Briesen	West Prussia	1904	School of Domestic Science	4,100	(a)	14
Einbeck	Hanover	1904	School of Industrial Arts and Domestic Science.	11,000	(a)	14–16
Halberstadt	Saxony	1905	School for the Glove Trade	7,400	3	15
Eupen	Rhineland	1905	School of Industry and Commerce.	5,000	6	14

a Differs in departments; see text.

Secondary vocational schools in Prussia—Continued.

City.	Province.	Date of foundation.	Character of school.	Amount of state subsidy in 1909.	Length of course.	Lowest age of admission.
				Marks.	*Semesters.*	*Yrs.*
Kolmar	Pomerania	1905	School of Domestic Science	3,843	4	16
Gummersbach	Rhineland	1900	Continuation School for Girls	300	4	14
Erfurt	Saxony	1904	Continuation School of Domestic Science.	2,500	4	14
Hagen	Westphalia	1904	School of Domestic Science	500	4	16
Rendsburg	Schleswig-Holstein.	1905	School of Architecture (Tiefbau)	30,227	5	16
Beuthen	Silesia	1905	Vocational Classes of Industrial Continuation School.	2,000	4	14
Kattowitz	do	1905	do	2,526	4	14
Kiel	Schleswig-Holstein.	1905	Trade School	30,000	6	14
Mayen	Rhineland	1905	Commercial School for Girls	166	4	16
Thorn	West Prussia	1906	Royal School of Industrial Arts	52,800	6	14
Göttingen	Hanover	1906	School for Mechanicians	8,143	6	14
Nienburg	do	1906	Industrial and Commercial School for Girls.	6,000	4	14–16
Oppeln	Silesia	1906	Commercial School for Girls	1,500	4	16
Königshütte	do	1906	do	2,000	4	16
Beuthen	do	1906	do	2,243	4	16
Kulm	West Prussia	1906	School of Domestic Science	700	4	14
Gleiwitz	Silesia	1906	Commercial School for Girls	1,500	4	16
Spandau	Brandenburg	1906	School for Domestic Science and Cooking.	3,400	(a)	14–16
Bielefeld	Westphalia	1907	Trade School	17,435	4	14
Graudenz	West Prussia	1907	School of Machine Building	25,746	4	14
Berlin	Brandenburg	1907	School of Soap Making	4,000	3	15
Mittelwalde	do	1907	School of Industrial Arts	1,375	6	14
Habelschwerdt	Silesia	1907	do	1,585	6	14
Apenrade	Schleswig-Holstein.	1907	Courses in Domestic Science	2,500	(a)	16
Neisse	Silesia	1907	Commercial School for Girls	1,875	4	14
Wetter	Hesse-Nassau	1907	Continuation School of Domestic Science.	875	4	14
Frankfurt	do	1908	Royal School for the Building Trades.	49,160	5	16
Essen	Rhineland	1908	do	56,080	5	16
Do	do	1908	School of Machine Building	25,246	4	14
Nauen	Brandenburg	1908	School of Domestic Science	300	4	16
Suhl	Saxony	1908	Continuation School for Girls	200	4	14
Oberlahnstein	Rhineland	1908	Cooking School	500	4	16
Dortmund	Westphalia	1908	Continuation Courses of Domestic Science.	3,000	4	14
Schneidemühl	Posen	1909	School of Industrial and Domestic Arts.	6,500	(a)	14–16
Düsseldorf	Rhineland	1909	Trade School	13,267	6	14
Stettin	Pomerania	1909	School of Industrial Arts	1,250	6	14
Nordhausen	Saxony	1909	School of Domestic Science	500	4	16

[a] Differs in departments; see text.

NOTE.—The *navigation schools*, 35 in number, are omitted from the list of the Central Office; also the full, as well as the brief, *courses for trade masters* and shop or factory owners. See text, p. 318. The *schools of mining*, 53 in number, are also omitted, as not belonging to this department. The *commercial schools for boys*, 381 in number, are all classed among the continuation schools unless they are of a high order, and are then classed among the colleges.

Secondary vocational schools in Germany.[a]

States of Germany.	Schools for the building trades.	Schools for machine building trades.	Schools for miners and smelters.	Schools for metal workers.	Schools for the textile industries.	Schools for the wood industries.	Schools of the ceramic arts.	Schools of industrial arts.	Trade schools.	Schools for locksmiths and blacksmiths.	Navigation schools and ship machine building.	Schools of river navigation.	Other technical schools.	Total. Public.	Total. Private.
Prussia	24	9	53	5	36	7	3	21	17	47	35	37	3	290	7
Bavaria	10	4	.....	.....	2	7	2	2	16	7	.....	1	11	56	6
Saxony	10	4	2	3	56	1	.....	3	3	.....	.....	7	23	93	19
Wurttemberg	.....	.....	.....	1	5	.....	.....	1	.....	.....	.....	.....	.....	7	.....
Baden	1	.....	.....	1	.....	7	.....	2	.....	5	.....	3	1	20	.....
Hesse	3	2	.....	.....	1	.....	.....	4	.....	.....	.....	2	2	11	3
Mecklenburg-Schwerin	2	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....	4	1
Mecklenburg-Strelitz	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	1
Saxe-Weimar	2	1	.....	.....	1	1	1	1	.....	.....	.....	.....	.....	6	1
Oldenburg	2	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....	3	1
Brunswick	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Saxe-Meiningen	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2	.....
Saxe-Attenburg	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Saxe-Coburg-Gotha	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	3	.....
Anhalt	1	1	1	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	4	1
Schwarzburg-Sondershausen	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Schwarzburg-Rudolstadt	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Waldeck	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reuss junior line	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Reuss senior line	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Schaumburg-Lippe	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Lippe-Detmold	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Lübeck	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
Bremen	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Hamburg	1	.....	.....	.....	.....	1	.....	1	1	.....	.....	.....	.....	4	.....
Alsace-Lorraine	.....	.....	2	.....	1	.....	.....	1	.....	.....	.....	.....	1	5	.....
Total	63	26	58	10	104	24	6	37	37	61	40	52	43	515	46

[a] After K. Knabe, Das deutsche Unterrichtswesen der Gegenwart. Though this table is some years old, it affords a view of the great variety of schools in existence.

PART III.—ORGANIZATION OF VOCATIONAL SCHOOLS IN PRUSSIA.

I. Schools for the Building Trades.

(*a*) object and organization.

The schools for the building trades are throughout vocational, intended to prepare (1) laborers for the building trades who aim to become independent contractors, as masons, carpenters, stone masons; such schools offer opportunities for the acquisition of theoretical knowledge and accomplishments in drafting and designing and necessary requisites for the independent practice of the trades; (2) to prepare for architecture and work of surface improvement (Tiefbau), bureau draftsmen and designers, as well as building foremen; (3) to prepare for provincial, county, and communal administrations, officers employed in governmental, military, railroad, and city building or surface improvement.

In these schools the foundation is laid for official careers, such as those of architectural secretaries, inspectors, and superintendents for the erection of waterworks, railroad contractors, and construction engineers, building inspectors, secretaries of military works in the war department, and technical secretaries in the navy department. The communal administrations also as a rule require for inspectors and contractors for their technical building and surface improvement an education such as these schools for the building trades furnish.

These schools are all state schools except the one in Berlin, which is chiefly supported by the city government. All are under the authority of the ministry of commerce and industry.

The schools for the building trades are divided into architectural schools and schools for surface improvement, and are of five grades. In Görlitz (Silesia) special arrangements have been made for the technical preparation of stonecutters. The three lower grades offer instruction in both architecture and surface improvement, while in the two highest grades the two branches are separated. For students whose education is insufficient for admission, preparatory classes may be opened.

The courses of study are arranged for semesters and are carried out in winter and summer; hence the course, if taken without interruption, may require only 2½ years, but few students are able to pass through the entire course in that time. The students are advised not to interrupt their attendance by more than half a year and to attend the two highest grades without any interruption.

(*b*) REQUIREMENTS OF ADMISSION.

The following admission requirements are prescribed: (1) The completion of the sixteenth year of life; (2) an education such as a people's elementary school offers. As a rule an examination for admission is required. From this examination the candidates excused are only the graduates of a fully graded school and of two years' continuation school of six hours per week, or those who have secured in a high school the privilege of one year's voluntary service in the army. The examination for admission includes only two branches, German and arithmetic. For these the requirements are the composition of a narrative or a simple business letter and the selection of simple examples from common arithmetic, geometry, and mensuration. He who fails in this examination may enter a preparatory class. (3) The third requirement is twelve months' of active work at a building trade.

The twelve months of active apprentice work is not required of young people who enter a school for the building trade to learn surface improvement work (Tiefbau) and who have served two years in surveying land, in hydraulic works, in road and railroad

building, in melioration work, as accountants in the royal land office, as surveyor's assistants, or have completed their apprenticeships as brick or stone masons, or have served in the engineer or artillery corps of the army for four years. Locksmiths and mechanicians who wish to go through the course of surface improvement (Tiefbau) may be admitted to the lowest grade of a school for builders if they have served in their trades as apprentices for four years (or three years as apprentices and one year as journeyman). In case they are entitled to the privilege of only one year's voluntary army service they need only two years of practical work as apprentices.

Should any of the young men indicated in the foregoing paragraph, after attending the school for builders for three years, give up the idea of preparing for surface improvement (Tiefbau), they are allowed to attend the two highest classes in architecture, but only after an interruption of their school studies through a full year's practical work in any of the building trades. In exceptional cases young men who have a good school education may, with the consent of the governor of the province, be admitted after only six months of practical labor, provided they agree to go through six additional months of trade labor before entering the second grade. In such a case the fact is noted in the promotion or term report.

If a student shows that he is incapable of following the theoretical instruction owing to his lack of practical experience, further attendance may be denied him until he has gained that experience. Students wishing to enter a higher grade than the first must prove to the satisfaction of the faculty that they possess the required knowledge and skill; hence an examination for admission is necessary.

Scholars of the Royal Prussian Mining School and the School for Builders in Berlin, as well as all who come from schools of other German States,[a] provided the interval is not longer than a year, may be admitted without examination to a grade to which their term report would entitle them in their former school. Students are also admitted who come from the builders' department of the industrial schools of Thorn, Trier (Treves), and Halle.

(*c*) APPLICATION FOR ADMISSION.

Accompanying the student's application for admission the following documents are required: (1) A curriculum vitæ composed by the applicant in his own handwriting; (2) a diploma of the elementary, middle, or secondary school where he received his preparation; (3) reports of any continuation or vocational school he attended; (4) documentary proof of his having had the practical experience in

[a] Non-Prussian schools for the building trades which have been accepted as equal in scope with the Prussian schools are those of Munich, Nuremberg, Chemnitz, Dresden, Leipzig, Plauen, Zittau, Stuttgart, Karlsruhe, Hamburg, Bremen, Lubeck, Darmstadt, Gotha, Zerbst, Holzminden, Strassburg, Chemnitz (State Building Academy), Bingen, Coburg.

actual work which shows the name of the building contractors under whom he worked and the nature of the work he has been engaged in; (5) a testimonial of the home authorities concerning his conduct and nativity.

If no objections are raised, the applicant receives a card of admission which he must show when he claims admission. Those who must first pass an examination are notified of the date set for the examination. If any applicant is prevented by unforeseen circumstances from entering the school, he should inform the director at once.

(*d*) LENGTH OF SCHOOL TERMS.

The instruction begins on October 18 for the winter semester, and on April 2 for the summer semester. If these dates fall on Sunday or Monday, the school opens on the following Tuesday. The winter semester closes, as a rule, on March 18, and the summer semester on August 24. The Christmas vacation extends through 14 days, and Whitsuntide vacation through 5 days. If Easter occurs during the school term, Good Friday and Easter Monday are holidays.

(*e*) TUITION FEES.

The tuition fee is 80 marks ($20) per semester; in the schools at Cologne, Frankfort on the Main, Essen, and Berlin it is 100 marks ($25). Foreign students must pay 400 marks ($100) and 500 marks ($125), respectively. In exceptional cases a reduction may be granted by the provincial governments. The fees must be paid in advance at the beginning of each semester. If a student enters later than on the day of opening, or leaves before the semester is closed, no reduction or rebate is allowed. Besides the tuition fees, a small contribution for accident insurance is charged. The required drawing boards, utensils, and drawing materials, as well as the text-books, blueprints, etc., must be bought by the students themselves. Information as to the things required is given at the beginning of the term.

(*f*) FREE TUITION AND STIPENDS.

Indigent students may be released from paying the prescribed fees after they have passed through the work of one grade with success, and have conducted themselves faultlessly. Stipends are granted only to indigent and successful students.

A petition for free tuition should be handed to the director on or before May 15 for the summer semester, and on or before November 15 for the winter semester. Petitions for stipends should be handed in, on or before January 15 for the winter semester, and on or before July 15 for the summer semester. Later petitions are not considered. A petition for free tuition or for a stipend should be accompanied by

(1) a curriculum vitæ; (2) the last term or school report; (3) a testimonial from the police office of the student's residence, which gives evidence of his good deportment, his financial needs, and his nativity. In repeating a petition which has been granted for former semesters, the last term report is all that need accompany the application. All assistance is granted under the condition that it may be revoked in cases of lack of diligence in study or misconduct.

(*g*) SCHOOL REGULATIONS.

(1) Every student is in duty bound to obey the rules of decorum and good conduct inside and outside the school. Respect for and obedience to the teachers of the institutions are required.

(2) Attendance at lessons and exercises must be regular and prompt, and participation in school excursions ordered by the director, or in festivities arranged by the school, is the student's duty. If a student wishes to be excused from attendance upon certain lessons, he must obtain permission from his class teacher. The excuse is good only for one day; if it is to be extended over several days, the director's consent should be obtained. If a student is absent on account of sickness, the class teacher must be informed, at the latest, on the second day of the absence. A physician's certificate may be required.

(3) The necessary text-books and utensils, so far as they are not furnished by the school, must be purchased by the student himself.

(4) For any careless destruction of school property and damage arising from it, the student is obliged to pay. Objects loaned to a student must be returned in good condition.

(5) Staying in the schoolrooms after lesson hours is allowed only if the director gives consent.

(6) Smoking in the schoolhouse or while coming to and going from school is not allowed.

(7) Foreign students, or those who do not live at home, may choose or change their lodgings only with the consent of the director. Living in inns or hotels is not permitted to students.

(8) Membership in any society is permitted only upon consent of the director. Participation in any students' secret society is immediately followed by dismissal from school.

(9) Class meetings or excursions must not take place without the consent of the director.

(10) If a student leaves the school during the semester, without giving notice and stating causes to the director, he loses all right to a term report, and he can not be readmitted.

(11) Punishments that may be incurred are: (*a*) A reprimand by the teacher or by the director; (*b*) reprimand before the assembled faculty; (*c*) threat of dismissal, which is communicated to the legal

guardian in case of a minor; (*d*) dismissal from the school. A Prussian student dismissed on account of lack of diligence or bad conduct, can not be readmitted to any other Prussian school for the building trades without the consent of the minister of commerce and industry.

(12) The students are required to obey any orders of the director with reference to cleanliness of building and other matters of detail.

(*h*) TERM REPORTS, PROMOTION, AND LEAVING EXAMINATION.

At the close of each semester, the students receive a term report concerning their attendance, conduct, application to studies, and results in the various branches.

Scholars who upon a second examination fail of promotion owing to lack of application or ability, are excluded from admission to any other school for builders in the Kingdom. Exception to the rule can be made by the minister of commerce and industry.

At the close of each term, an examination for senior students takes place (the leaving examination).

Those who finish the course of surface improvement (Tiefbau) without having finished the course of architecture (Hochbau) are not admitted to the leaving examination until they have completed the course in architecture.

(*i*) PRIVILEGES ARISING FROM ATTENDANCE.

(1) According to the law regulating the mastership of masons, carpenters, and stonecutters, persons who have passed the leaving examination in any school for builders recognized by the State, may be excused from written and oral examinations in mathematics, statics, and theory of building construction.

(2) In selecting clerks and secretaries of building, communal or state, for the offices of building administration, or clerks and secretaries in army and navy offices, applicants must produce a diploma from a state school for the building trades, or from a similar institution designated by the authorities as of equal efficiency.

(3) Students who have gone through the two courses, architecture and surface improvement, are preferred in filling subordinate technical positions in any hydraulic or railroad construction office under the Government.

(4) All applicants for subordinate technical offices within the department of public works are excused from the theoretic part of their professional examination if they can show that they are graduates of a school for the building trades. Similar priviliges are granted in the railroad service of the State.

(5) Also for the construction, maintenance, and repair of roads, with their bridges and culverts, for canalization, waterworks, and street pavement, provincial and city governments require for their subordi-

nate technical officers men who have successfully graduated from schools for the building trades.

(6) The royal Saxon ministry has decided to admit graduates of a Prussian state school for the building trades as equal in efficiency with those of similar schools in Saxony, and to admit them to examinations for trade mastership.

(7) The privilege of "one year's voluntary army service" can not be obtained by attending a school for the building trades. But such students, if they prove talented, are admitted to an easier examination before the officers' recruiting authorities. (Section 89 of Rules of the German Army Administration.) Military service may be postponed until after graduation if the student presents a request signed by the director of the school.

II. Schools for Metal Workers.

1. *Schools for Machine Builders* (or of mechanical engineering) (with a course of four semesters).—These schools are designed to prepare so-called "middle" technical office clerks and foremen in machine-building factories and related industrial branches in which production by machines takes place; likewise, to give factory superintendents and owners of such industrial institutions an opportunity to acquire the technical knowledge necessary for successful business.

Conditions of admission.—The required preparation for admission to the lowest grade may be proved: (1) By testimonials showing that the applicant has successfully attended a classical, semiclassical, or modern secondary school up to the grade called "Lower Secunda," that he possesses the necessary skill in drawing, and has done practical work in a workshop or factory for two years. (2) By giving proof of having attended for two years the preparatory classes of any machine builders' school and possessing the required knowledge and skill for admission. (For admission to these preparatory classes a good elementary education and two and one-half years' apprentice work in a workshop are required.) (3) By producing a testimonial showing that he has obtained the privilege of one year's army service, that he possesses the required skill in drawing, and that he has completed two years of practical work in shop and factory. (4) By producing a report of successful attendance at any vocational school designated by the ministry of commerce, and showing that he possesses the required skill in drawing, and that he has completed two years of practical work in shops or factories. (5) By passing an examination for admission and proving three years of practical experience in shops or factories. The director of the institution may, with the consent of the local board of trustees, reduce the requirement of three years of experience.

Cost of attendance.—Tuition fee, 75 marks (about $18) per semester. The school in Cologne charges 100 marks ($25). Other expenses for books, drawing utensils, stationery, etc., about 120 marks ($30); board and lodging for ten months are calculated to amount to about 500 to 700 marks ($125 to $175). Needy Prussian students may obtain stipends or be released from paying tuition fees.

Terms and vacations.—The beginning of the terms differs in the various schools; special inquiries addressed to the director will secure information.

Privileges arising from attendance.—The diploma of graduation from these schools serves as a proof of the students' possession of the required technical knowledge and skill for the position of technical secretary in the navy, for the position of administrative railroad engineer, or for the position of railroad secretary in the administration of state railroads.

2. *Schools for Shipbuilders and Ship Engine Builders* (with a course of four semesters).—These schools are intended to supply administrative engineers or officers of construction for shipyards, and offer future owners and superintendents of such industrial plants opportunities to acquire the necessary knowledge and skill.

(*a*) *Conditions of admission.*—The conditions of admission are the same as are required in schools for machine builders, except that the practical experience must have been gained in shipyards.

(*b*) *Costs of attendance.*—These are the same as for schools mentioned under II, 1.

(*c*) *Terms and vacations.*—See II, 1.

(*d*) *Privileges arising from attendance.*—Graduation diploma serves as proof that the graduate possesses the technical knowledge and skill required of technical secretaries and clerks in the German navy.

3. *Lower Machine Builders' Schools* (with a course of four semesters; in Cologne, three semesters).—These schools are intended for lower technical foremen in shops and for clerks in the factory bureaus; also to equip owners of small shops with the required knowledge and skill in drawing.

(*a*) *Conditions of admission.*—Documentary proof of an elementary education and four years' experience in workshops. Attendance at a continuation or evening school during apprenticeships is also desirable. The directors have the right to reduce the requirement of four years' experience in deserving cases.

(*b*) *Costs of attendance.*—Tuition fee, 30 marks ($7.50) per semester. Other costs like the preceding schools.

(*c*) *Terms and vacations.*—See II, 1.

(*d*) *Privileges arising from attendance.*—Graduates are admitted to the state examination for inspector of seals and weights. The pos-

sessors of a diploma from these schools are also preferred for positions as foremen in state railroad shops.

4. *Smelting Schools,* with a course of four semesters, prepare foremen for mining and smelting works.

(*a*) *Conditions of admission.*—A simple elementary education and at least four years' practical experience in smelting works. Attendance at a continuation school during apprenticeship is desirable. For young men who have acquired the privilege of one year's army service, documentary evidence of having had two year's practical experience in smelting works is sufficient. Directors of schools for smelters may allow exceptions from the rule referring to preceding practical experience.

(*b*) *Costs of attendance.*—Same as in preceding schools.

(*c*) *Terms and vacations.*—Same as in preceding schools.

5. *Technical school for coppersmiths.*—This school is intended to prepare foremen and technical heads for coppersmith works; also to offer the necessary knowledge to shop and factory owners, especially the required accomplishment in drawing and designing.

(*a*) *Conditions of admission.*—Admission to the lower grade is dependent upon an elementary education and three years' practical experience in coppersmiths' shops. Attendance at a continuation (or evening) school during apprenticeship is desirable. The director of the school may allow exceptions from the rule regarding preceding practical experience.

(*b*) *Costs of attendance.*—Tuition fee, 50 marks ($12.50). For other expenses see II, 1.

(*c*) *Terms and vacation.*—See preceding schools.

6. *Technical schools for the iron and steel industry* (with courses of four to six semesters).—These schools are intended to prepare skilled laborers in the cutlery trade and in other so-called small iron and steel industries; that is, to offer the theoretical knowledge and practical skill to enable them to rise to higher positions, such as foremen, inspectors, and independent masters.

(*a*) *Conditions of admission.*—An elementary education and the completion of the 14th year of age.

(*b*) *Costs of attendance.*—Tuition fee, 30 marks ($7.50) per semester. For other expenses see II, 1.

(*c*) *Terms and vacations.*—See II, 1.

(*d*) *Privileges arising from attendance.*—The diploma of graduation is regarded as documentary evidence of having passed the examination for journeyman.

7. *Evening and Sunday schools for metal trades.*—These schools are affiliated with secondary schools for the metal trades. (The courses are for engine builders, locksmiths, blacksmiths, shipbuilders, etc.)

Their object is to impart the necessary knowledge for the various trades and to train the student in drawing.

(*a*) *Conditions of admission.*—Applicants for admission must prove that they are employed in the metal trade; that they are no longer subject to compulsory attendance at a continuation school; or that the authorities, owing to their membership in these evening schools, have released them from attendance at continuation schools, partly or entirely.

(*b*) *Costs of attendance.*—The tuition fees vary in the different schools. As a rule students pay 10 marks ($2.50) per semester for 10 hours of instruction a week. The principals of these schcols will give the desired information.

(*c*) *Terms and vacations.*—See II, 1.

8. *Courses for locomotive engineers* (with two semesters, 10 hours a week).—These courses offer only theoretical instruction for the preparation of locomotive engineers.

(*a*) *Conditions of admission.*—Documentary evidence of at least three years' experience in locksmiths' and blacksmiths' trades.

(*b*) *Costs of attendance.*—Tuition fee 10 marks ($2.50).

(*c*) *Terms and vacations.*—See II, 1.

(*d*) *Privileges.*—Release from requirements of section 2, paragraphs 1 and 8, of the law referring to professional examination of locomotive firemen, and release from requirements of section 2, paragraphs 3 and 10, of the law referring to the professional examination of locomotive engineers. Those who have been employed in railroad shops have the preference in the selection of locomotive firemen and engineers. Those who have no experience in railroad work of any kind, but who have attended these courses, have the preference for employment in railroad shops.

III. Technical Schools for the Textile Industries.

These schools are classed as weavers' apprentice shops, lower textile schools, and higher technical schools for the textile industries. In the weavers' apprentice shops young men are trained in serving at mechanical looms, and women and girls from the country are trained in using hand looms at their own homes during the winter. In the lower technical textile schools foremen are trained, and in the higher textile schools it is the superintendents, owners, and directors of factories who receive a thorough preparation. In this particular each institution pertains to a specific branch of the vast industry represented in the locality. In some institutions separate classes are opened for merchants and for designers, some have separate classes in which young women are taught intricate handiwork, preparing linen for the market, and tailoring.

The tuition fees for the full higher course are 100 marks ($25) for natives, 500 marks ($125) for foreigners, per semester. Students who take part only in the practical exercises pay 50 marks ($12.50) if natives, 250 marks ($62.50) if foreigners. For native temporary attendants who may choose their own lectures, the fees are 15 marks ($3.75) for one course (a lecture and attending exercise) a week; for foreigners, 50 marks ($12.50). There is also an admission fee for foreigners of 60 marks ($15) for the full course.

The fee for a full course in the lower technical schools amounts to 30 marks ($7.50) per semester for natives, 250 marks ($62.50) for foreigners. Students who take part in the practical exercises only pay 30 marks ($7.50) per month if natives, 125 marks ($31.25) if foreigners. Temporary attendants choosing special exercises pay 10 marks ($2.50) if natives, 30 marks ($7.50) if foreigners. The admission fee is 30 marks ($7.50) for the full course, but this is charged only to foreigners.

The fees for the courses for designers and dressmakers, as well as for the evening and Sunday schools, vary a good deal and are adapted to the prevailing local conditions.

IV. Schools for Industrial Arts and Trades.

The institutions called variously "Industrial art schools,"[a] "Schools for industrial arts and trades," "Trade schools and schools for industry," or simply "Trade schools," serve the purpose of furnishing skilled labor and intelligent direction for all kinds of industries or trades. The industrial art schools are mostly day schools; the industrial art and trade schools are open during the day, and offer evening lessons to laborers who are employed in wage-earning work and can not attend in daytime. The trade schools are almost all evening schools, and arrange their lessons so as to serve young laborers and apprentices.

One feature is common to all schools, namely, that each adapts its course or programme of studies to fit the peculiar industrial conditions of the locality; they offer opportunities for instruction in all kinds of skilled labor and all branches of art industry (designing). The programme of studies consists partly of individual courses in exclusive arts, partly of groups of courses all related to a predominant local industry; for such groups a fixed course of study is arranged. In no school is the course so rigidly enforced, however, as to prevent talented students from branching out into individual and original work. In most schools of this kind preparatory classes are opened, either for students insufficiently prepared for admission or for those deficient in drawing and sketching. At every school of this kind

[a] Such schools are called "Schools of design" in this country.

vocational classes are organized, in which the purely artistic work in designing or general technical drawing are taught. Lectures in these schools give way to designing and drawing, and in late years the workshops assume an ever-increasing importance.

The evening schools for apprentices provide for both demands, designing and technical work. In many schools instruction is given also in mathematics, mechanics, physics, and knowledge of metals. The different branches of drawing in the day schools are divided into general and technical branches; the general branches are differentiated again into artistic design and practical working drawing.

The vocational courses, for which the general drawing courses prepare, are the most important part of the instruction in industrial-art schools. Adaptation to local industrial conditions is the reason why few of these schools have uniform programmes of vocational study. In all industrial-art schools, however, are found fixed courses for decorative painters, for furniture designers, for sculptors and modelers, for locksmiths and jewelers. Most of these schools offer, besides those mentioned, courses for engravers, etchers, enamelers, chasers, flat-design draftsmen, lithographers, and book designers; in some there are courses of wall decoration, of ceramic arts, and of bookbinding, and some teach weaving designs for hand looms and woman's artistic handiwork.

In every one of these specifically vocational courses the student receives, as far as possible, complete preparation for his occupation, so that he or she may sketch or design all artistic work or trade plans and be enabled to practically execute in material proposed designs or plans, as well as to invent designs. The programme of each vocational class offers instruction and adequate training, also, in the related artistic and technical arts, as well as careful application of working drawings and vocational designs. Aside from the various drawing classes, there are lectures on technical subjects, such as knowledge of metals, science of construction, making estimates, and business rules relating to trades.

The duration of these vocational courses varies from two to four years; most of them are arranged for from six to eight semesters.

All these schools have a number of workshops. The shops most frequently found are those of the decorators, modelers, chasers, engravers, enamelers, and wood carvers. In classes for decorators the actual application of sizewater colors is practiced. Some schools have workshops for lithographers, jewelers, and printers; a few have also shops for artistic bookbinding and gilding, for the ceramic arts, for hand weaving, stonecutting, woman's art work, leather working, and photography. The aim is everywhere the same, namely, not to replace the master courses, but, first of all, to raise the execution of any task to a higher artistic and technical level.

In the form of class lectures all industrial-art and trade schools treat the history of art and principles of style with which knowledge of ornamental forms is connected. A further subject of class lectures is anatomy.

In all industrial-art and trade schools evening and Sunday classes are maintained. Instruction in these classes is confined strictly to the limits of the separate trades. Every apprentice has the opportunity during the evening to participate in lessons of vital interest to his trade; and the abundant provision of such lessons, as well as the liberty granted him to select from among them, enables him to find interesting instruction and work for every evening of the week. The lessons in drawing and designing during the day are divided into general artistic and vocational drawing lessons. In general lessons, instrumental and geometric drawing are preferably taught from the first or elementary steps upward. In free-hand drawing the subjects are human forms, as well as tools and objects of nature; in many schools, copying from plaster casts and flat copies is found. For lessons in lettering, especially round-hand lettering, all these schools make provision.

Technical or vocational drawing begins here, as it does in continuation schools, with the drawing, according to scale, of objects pertaining to the particular trade of the student. For trades approaching art industry, such as those dealing with ornamentation, ornamental drawing and modeling are taught from the beginning.

The vocational classes in the evenings can not, as a matter of course, aim, like the classes in day schools, at making original designs; but they offer to their students of the more technical vocations an amount of knowledge and skill in drawing which proves very useful in the pursuit of their trades. In more artistic vocations at least a certain artistic taste is developed.

The industrial-art and trade schools have vacations of twelve weeks a year, which are divided up in brief vacations at Easter, Whitsuntide, summer, fall, and Christmas. The summer or hot season vacations are in some parts of the country connected with the fall or harvest vacations; in other parts they are separate.

Admission of new students takes place, as a rule, at the beginning of the winter and of the summer semester.

Attendance at these schools does not result in any kind of privileges, except that in some schools having classes for the building trades or for machine building the privileges held out to students of the builders' and machine builders' schools are granted likewise. The principals of industrial-art schools are often able to secure for their students the privilege of only one year's army service granted students of schools of fine arts.

Foreigners are uniformly charged five times the amount of tuition fees paid by natives.

V. Schools of Domestic Science, Commercial and Industrial Schools for Girls.

Of the girls' schools only the three state institutions at Posen, Potsdam, and Rheydt have a uniform organization. Each of these schools has four departments: Domestic science, industry, business practice, and a normal department. In the department of domestic science the students take a general survey of everything a thorough housewife should know and do. The course extends through one year. In the industrial department the students have opportunities to prepare themselves well in several occupations (making underclothing, tailoring, millinery, artistic handiwork and drawing, washing and ironing, cooking and baking) according to their own choice and inclination; the duration of the several courses and the tuition fees vary. The business department is organized in two divisions corresponding to a secondary commercial school and a lower day school for business. For admission to the former, girls must be at least 17 years of age and must have graduated from a girls' high school having a nine-year course. In these departments commercial correspondence and conversation in French and English are taught. The course lasts one year. In the lower business schools, girls of elementary education are admitted at 15 years of age. This course also lasts one year. In the normal department students are prepared to become teachers of domestic science and artistic handiwork in elementary, middle, and high schools, as well as for positions in industrial continuation and vocational schools. The course is fixed according to rules and regulations issued jointly by the minister of commerce and the minister of education, on June 24, 1907, and the separate order of the minister of commerce, on January 23, 1907.

With these institutions dormitories (Pensionate) are connected. The price of board and lodging for native Germans amounts to 860, 1,000, and 1,200 marks ($205, $238, and $285); for foreign students the charges are 1,200 or 1,500 marks ($285 or $357). The service includes lodging, board, heat, light, laundry, free treatment by physician in light cases of sickness, and free use of home remedies. There is also a state school of domestic science, industry, and business at Thorn, but this school has no normal department.

The private girls' schools, although subsidized by the State, are organized in various ways. Certain institutions being well endowed, gradually adapt themselves partially or entirely to the course and organization of the state schools. Since the industrial schools for girls are still in the process of development and local conditions are constantly changing more minute information concerning them is here omitted.

VI. Courses for Trade Masters.

The so-called master courses are institutions intended to raise small shop industries to a higher level of efficiency by the instruction of shopowners and factory superintendents in practical and theoretical branches. The main object is to offer opportunities to the students to acquaint themselves with novelties and new technical processes and methods within the limits of their own trades, to teach them model methods for a business of medium extent and improved technical and commercial organization.

For this purpose the independent master courses are equipped with workshops for a number of trades, in which the latest and best tools and machines are in working order. The instruction is divided into full courses of six to eight weeks, and partial or brief courses of two weeks, which may be arranged at intervals several times a year. The beginning of the courses is advertised in the press. The number of participants in each course is usually limited to ten, so as to afford opportunity for individual instruction.

Conditions of admission.—Admission to the master courses is, as a rule, restricted to applicants not under 24 and not over 45 years of age, who have served in the army or were not drafted. In selecting the participants, independent masters are preferred; of journeymen those are preferred who intend to open shops of their own.

Applications.—Applications for admission must be made upon blank forms furnished by the director of the courses, accompanied by a curriculum vitæ, documents proving the applicant's practical employment, and a testimonial by the local police department concerning his conduct.

Costs.—The amount of tuition fees differs in the various institutions and is published by each separately.

Release from tuition fees and grant of financial aid.—If a participant can prove that he is indigent, the minister, upon application, may release him from paying the tuition fees and grant him, besides, means to defray his expenses. These grants differ for masters and journeymen, for natives and foreigners. If an indigent person has been admitted, he may receive railroad fare (third class), if he lives at a considerable distance from the locality where the courses are conducted. The petition for release from fees and for a grant of money should accompany the application for admission.

Other advantages.—All utensils, tools, and raw materials needed are furnished to the participants free of cost, except small drawing materials and stationery. A diploma of attendance is given to those who have completed the course; it contains a statement as to the result of attendance. An examination does not take place.

Courses of study or weekly programmes of some of the vocational schools in Prussia are found in Annual Report of the Commissioner of Education for 1908, Volume I, pages 269 to 274.

CHAPTER VIII.

EDUCATION IN CANADA.

Dominion of Canada, comprising nine provinces and "the territories," with an area of 3,747,574 square miles and a population of 5,371,515 (census 1901).

TOPICAL OUTLINE.

Movements pertaining to the universities of Canada: Development of the University of Toronto; recent growth of McGill University; Laval University, Quebec and Montreal; university tendencies in the other provinces.—Summarized statistics of universities.

Provincial systems of public instruction: Principal features.—Summarized statistics.—Salient particulars in the current record: Measures for promoting manual training; nature study; agriculture, and technical branches; spirit of the new departures.—The royal commission on industrial education. Schools health inspection act, British Columbia.

MOVEMENTS PERTAINING TO THE UNIVERSITIES OF CANADA.

Canada is marked at the present time by great activity in respect to the extension of the scope of higher education and the concentration of its resources. This activity is particularly noticeable in Ontario and Quebec, and may best be illustrated by reference to the leading universities of these two provinces.

In the former the movement for concentration meets with less opposition than in the sister provinces, and has already resulted in raising the University of Toronto to the plane of a provincial institution, bearing a relation to the Ontario government somewhat similar to that which the state universities of our own country bear to their respective governments. The steps of this gradual transformation are of interest not only as part of the recent history of higher education in Ontario, but also for their bearing upon a question of wider importance, namely, that of preserving scholastic standards without prejudice to small but time-honored colleges.

The history of this development has been fully covered by the volume prepared for the commemoration of the sixtieth anniversary of King's College, the old nucleus of the university. From this volume [a] is derived the following account of the principal events leading up to the present organization of the University.

[a] The University of Toronto and its Colleges, 1827–1906. The original work was completed by appendixes comprising the report of the royal commission of 1905–6, and the university act of May 14, 1906.

University of Toronto.

THE FORMATIVE PERIOD.

The University of Toronto was created by royal charter, bearing date March 15, 1827, "as a university in close connection with the Church of England." The original endowment consisted of one-half the land grant of 500,000 acres of land made by the House of Assembly in 1798 for the promotion of "religious and moral learning, and the study of the arts and sciences." In 1828 the corporation of King's College was created, to which were conveyed by letters patent the lands selected for the university endowment. The site for the university was chosen the same year. The corner stone of the university building was laid April 23, 1842, and the formal opening took place June 8, 1843, when 26 students were enrolled. The amended charter of King's College, obtained in 1837, annulled certain provisions of the earlier charter; among them the religious tests applied to members of the college council. The charter of 1837 provided that it shall not be necessary that "any member of the said college council or any professor to be at any time appointed shall be a member of the Church of England or subscribe to any articles of religion other than a declaration that he believes in the authenticity and divine inspiration of the Old and New Testaments, and in the doctrine of the Trinity." A little more than a decade later the university was completely secularized (act of 1849), and its control passed to the State. By an act of 1851, amending the charter of the university, it was transformed into an examining body, the work of instruction being relegated to separate but affiliated colleges. At the same time University College was created as a separate corporation, and the faculty of arts, hitherto represented by King's College, was transferred to it; the faculties of law and medicine were discontinued, the work of professional education being left to independent, affiliated colleges. The three independent colleges—Trinity, Victoria, and Queen's—were at that time in active operation, but as none of these availed themselves of the privilege of affiliation, University College became the vital center of the university, sharing in its material resources, which included in addition to the endowment of public lands, 61 scholarships, each valued at $120.

The period 1853 to 1886 was marked by the clash of rival agencies in the field of higher education, while at the same time the developments of science were creating new educational demands and calling for largely increased resources. Under these conditions, the reorganization of the university became a matter of imperative necessity, and after prolonged agitation and discussion a bill to this effect was introduced into the legislature, the substance of which had already secured the indorsement of representatives of the religious denomina-

tions under whose fostering care the rival colleges had developed great strength and value. Thus supported, the bill was enacted into law as "the federation act," 1857.

In view of subsequent events, it is enough to note here that this act not only provided for the federation of other higher institutions with the University of Toronto, but for their representation in the senate, the governing body, and in the university council, which had advisory and disciplinary functions. The university was once more made a teaching body, with power to constitute faculties in arts, law, medicine, and engineering. According to Mr. N. Burwash, president of Victoria College—[a]

> University College continued to hold its separate corporate powers; its council consisted of the president, the professors, and the dean of residence; and these were intrusted with full power for the government of the college. The subjects of instruction assigned to the college were Greek, Latin, French, German, English, oriental languages, moral philosophy, and ancient history. The transfer of subjects from the college to the university, or vice versa, required the unanimous consent of the Senate.

In pursuance of the federation policy, the university senate immediately entered into an arrangement with the Toronto School of Medicine, already in affiliation, by which its professors became the medical faculty of the university. After prolonged conflict, the general conference of the Methodist Church agreed to the federation of Victoria University, which included faculties of arts and theology, and the relation was consummated November 20, 1890. Immediately thereafter representatives of Victoria took their place in the senate of Toronto University. The buildings of Victoria in Queen's Park were completed in the autumn of 1892, at an estimated cost of $230,000, and constituted an important addition to the fine group of buildings on the campus. The federated University of Toronto then included the university faculty of arts, the university faculty of medicine, University College, Victoria College with faculties of arts and theology, two theological colleges—Knox and Wycliffe—closely associated with University College; St. Michael's College, which taught besides theology two university subjects and one college subject, belonging to the department of philosophy. There were also in affiliation a number of professional and secondary schools.

In its practical operation, defects in the federation scheme were naturally disclosed, and, as a result of a movement for the inclusion of Trinity University in the federation, important changes looking to the perfecting of the federation system were considered from time to time, and eventually embodied in the university act of 1901, which related chiefly to the governing bodies of the university.

In accordance with this act and under the supreme authority of the Crown vested in the lieutenant-governor as visitor, with powers which

[a] University of Toronto, 1827–1906, page 58.

might be exercised by commission, the university was to be governed by three bodies, as follows:

(1) The trustees, in charge of the property interests of the university.

(2) The academic officers, senate, and convocation, in charge of the academic work.

(3) The university council, responsible for the students in regard to their scholastic duties, associations, etc.

FINANCIAL DEVELOPMENTS.

The following particulars relative to the financial development of the university are derived from an account by the bursar of the university:[a]

The original endowment of the university was derived from the portion of the land grant of 1798, comprising 225,944 acres of land, allotted for that purpose. By the end of 1855 there had been sold 186,444 acres, or nearly nine-tenths of the whole grant, at an aggregate of $1,175,536. The sale of the lands was practically completed by 1904, when the total sum realized amounted in round numbers to $1,500,000. The fund thus accrued was, in part, invested, and forms the nucleus of the present endowment of the university. This endowment was augmented by an additional grant of land in 1897, by scholarship foundations amounting to $83,000, by donations from various sources, and an annual grant from the legislature which was fixed, in 1897, at $7,000, and so continued till 1905.

In 1904–5, the assets of the university were as follows:

Site lands, academic buildings, equipment, and furniture	$2,131,256.13
Lands at present unproductive	38,302.00
Leased properties	504,796.06
Investments, cash, and accounts receivable	858,035.27
Total	3,532,389.46

With reference to the above presentation, the bursar says:

> Deducting the sum of the various trust funds, scholarships, endowments, etc., for which the university is directly liable, amounting to $216,464.76, leaves the figures of $3,315,924.70 as representing the general endowment, the net assets of the University of Toronto at the opening of her fourth quarter century of existence.

THE UNIVERSITY ACT OF 1906.

The events reviewed will suffice to illustrate the gradual process by which the university was changed from a denominational institution with a comparatively narrow field of influence to a state university affecting the intellectual life of the entire population. The change was coincident with an increase in the public interests and activities

[a] Outline of the Financial History of the University, by F. A. Mouré; in the University of Toronto and its Colleges, 1827–1906, pp. 71–77.

calling for the services of highly trained men, and it still remained to develop to their full efficiency the group of institutions comprised in the university confederation. In view of this necessity, a commission [a] was appointed in 1905 by the lieutenant-governor of Ontario, to inquire into and report upon the system of administering the affairs of the University of Toronto and of University College.

The commission pursued its inquiry for several months, during which time the workings of leading universities in the United States were personally investigated by the members of the commission. Dr. Goldwin Smith, one of the members, was familiar with the constitution and administration of the English universities, so that a very wide range of expert knowledge was brought to bear upon the problems to be considered. [b]

In their report, the commission reviewed the history of the university, rehearsed the conditions that made reorganization necessary, and accompanied their recommendations with a draft bill. This bill, with certain modifications, was accepted as the basis of the university act which was unanimously adopted by the legislature in the session of 1906. In the reconstitution of the governing bodies of the university, the senate and president became the supreme sources of authority; in the formation of the senate, the principle of representation of the federated and affiliated institution, and the faculties and graduates, was fully recognized.

A committee styled the caput was created by the act of 1906, consisting of the president of the university as chairman, the principal of University College, the heads of the federated universities, the heads of the federated colleges, and the deans of the faculties of the university. The duties of the caput relate to matters affecting more than one faculty, or the federated institutions, and, in a broad sense, it acts as an advisory council to the president and the board of governors of the university, the latter being the successor of the former body of trustees, but invested with larger rights, powers, and privileges.

In addition to the caput, the following councils are recognized in the act: The council of the faculty of arts, the council of University College, and councils of each of the remaining university faculties.

The act declares that the "School of Practical Science is hereby united with and shall form a part of the university, and constitute the faculty of applied science and engineering thereof." It is also provided that the name of the university shall be changed to the University of Ontario, upon the proclamation of the lieutenant-governor to that effect.

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[a] The commission was constituted as follows: J. W. Flavelle (chairman), Goldwin Smith, W. R. Meredith, B. E. Walker, H. J. Cody, D. Bruce Macdonald, A. H. U. Colquhoun (secretary).

[b] The universities of the United States visited were Wisconsin, Illinois, Chicago, Michigan, Cornell, Johns Hopkins, Princeton, Columbia, Yale, and Harvard.

For the purpose of making provision for the maintenance and support of the university and of University College it is provided that "there shall be paid to the board out of the consolidated revenue of the province, yearly and every year, a sum equal to 50 per centum of the average yearly gross receipts of the province from successive duties."

The institutions named in the act of 1906, as federated with the University of Toronto, are Victoria University (founded by the Methodists as a college, 1836; federated, 1892), Trinity College (founded by the Church of England, 1852; federated, 1906), and three theological colleges—Knox, Wycliffe, and St. Michaels.

Victoria and Trinity were universities with degree-conferring powers, which were surrendered at the time of the federation, excepting only the power to confer degrees in theology.

The act provides that—

the graduates and undergraduates in arts, science, and law of a federated university and such graduates and undergraduates thereof in medicine as have passed their examinations in Ontario from and after the date when such university became federated with the university, and so long as such federation shall continue, shall have and enjoy the same degrees, honors, and status in the university as they held and enjoyed in the federated university.

Of special significance is the provision that—

instruction in arts in the university (except postgraduate instruction) shall be free to all regular matriculated students thereof who are enrolled in University College or in a federated university and who enter their names with the registrar of the university, but this provision shall not include exemption from laboratory fees, gymnasium fees, or fees for physical examination or instruction;" and, further, that "all students proceeding to a degree in arts in the university, unless in cases for which special provision shall be made to the contrary by statute of the senate, shall be enrolled in University College or in a federated university.

The affiliated colleges, which at present number eleven directly affiliated and three by reason of previous affiliation with Victoria and Trinity, prepare students for matriculation in the university and for "any university examination subsequent to that for matriculation leading to a degree in that branch of learning in which instruction is given in such college." It is, however, specially provided "that such student shall not be entitled, unless by special permission of the senate, to present himself for any examination leading to a degree in arts or in any other faculty of the university."

The distinctive character of the institution resulting from the long process of consolidation is set forth by the commission of 1905–6 as follows:

The organization of the university is not exactly parallel to that of either an American or a British university. Through federation we have developed a form of organization that is unique. The state provides a complete system of education in arts in the University of Toronto and the University College. The subjects taught in University College are taught also in the denominational colleges of Victoria and Trinity. All the students who take lectures in the university subjects must be enrolled in one of these

three colleges. We belive that the university has thus by apparent chance hit upon a system which, if properly and loyally worked, provides a combination of strong personal influence on students with the broad outlook and widened sympathies that come from membership in a great university. The colleges will maintain the importance of liberal culture in the face of commercial and industrial development and the growth of scientific activity. The colleges will be able to bring the strongest influences to bear upon their own comparatively limited number of students and to foster a common life among them free at once from the narrowness of the small university and the lack of social union of a huge undivided university. In the colleges of the United States efforts are being made to break up the great aggregation of undergraduates in arts into smaller groups, which may be more easily handled for disciplinary purposes and for more efficient direction of the work. The divisions proposed seem more or less artificial; at best they are lateral, such as class organizations. In our approximation to a college system we have at hand a more excellent method of subdivision by which men of all years and all courses are bound together by a tie of membership in a common college, and the teachers of the various colleges are enabled to come into closer personal touch with the men under their charge. The combination of a state college and denominational colleges provides variety of ideal and spirit and avoids the dead level of uniformity that might ensue in one large undivided body, and furnishes to each member the needful stimulus of healthy rivalry.

PRESENT STATUS.

The university occupies a fine site, which, originally remote from the city, is now in the midst of one of the choice residential districts. The main university building, the library building, laboratories, and buildings for special departments are all situated on the campus. The Victoria College buildings were erected on the campus after the federation was accomplished.

The beautiful buildings of Trinity College are in the midst of a park, 35 miles in extent, somewhat remote from the university site.

In the federated university liberal education in the fullest sense of the expression is represented by the faculty of arts, University College, and Victoria and Trinity colleges. The requirements pertaining to these constituent divisions determine the purely scholastic standard of the university, which is guarded both by the entrance and graduation requirements.

According to announcements in the latest calendar of the university, candidates for the degree of bachelor of arts must pass the junior matriculation examination or offer specified equivalents. The examination comprises, as obligatory subjects, Latin, English, history, and mathematics, and as optional the choice of any two of the following: Greek, German, French, experimental science.

Undergraduates proceeding to the degree of bachelor of arts must be enrolled in University College, Victoria College, or Trinity College, and must attend lectures throughout the session in all the subjects of their academic year, unless the council of the faculty, on the recommendation of the college in which they are enrolled, grant them dispensation from attendance for the whole or part of the session.

* * * * * * *

Dispensation from attendance at lectures will not be granted to students in the courses for which laboratory work is required.

Candidates who have been granted dispensation from attendance at lectures must comply with the regulations respecting term work in so far as essays and exercises are concerned.

* * * * * * *

Term work.—In the general course reports on the term work of every student enrolled as proceeding to a degree will be made in all the subjects of each year.

In an honor course reports in term work will be made whenever such work is specified as an essential part of the course.

* * * * * * *

No candidate will be granted pass standing in a subject of the general course unless he obtain at least 33 per cent of the examination marks, as well as 33 per cent of the aggregate of the term work and examination marks in that subject.

No candidate will be granted honors in a subject where term work is taken into account unless he obtain at least 50 per cent of the marks at the May examination, as well as 50 per cent of the aggregate of the term work and examination marks in that subject.

The general arts course comprises Latin, English, history, and religious knowledge continued throughout the four years; science studies distributed as follows: First year, mechanics, physics, and biology; second year, chemistry and geology; third year, physics. In the second year the history of philosophy, psychology, and logic are taken up; in the third year, ethics and English constitutional history; in the fourth year, economics, constitutional law, and ethics. In addition to the foregoing, choice must be made each year of any two of the following branches: Greek, Hebrew, German, French, Spanish, religious knowledge (the last named more extended than in the pass course).

Honor courses are offered in the classical languages, modern languages, the sciences, the historical and ethical branches, and in philosophy. Students who complete the prescribed course, either general or honor, and pass the required examinations receive the degree of bachelor of arts.

This scheme of general education, it will be seen, provides for modern branches without the sacrifice of the older studies—the classics and ethical and religious subjects.

The bachelor's degree, which crowns the arts course, is a prerequisite to the degrees of M. A. and Ph. D. and to matriculation as a regular student in the faculty of education. This degree also admits a student to the third year of the law course and to the medical course without examination.

While the idea of liberal education as a discipline alike of the intellectual and moral nature, and in all forms of knowledge, has thus been maintained in the university, the importance of more specialized courses of instruction is fully recognized. In making provision for such courses care has been taken to preserve regard for culture values in education, so far as this is compatible with the

special end in view. Thus, the same examination is required for admission to the faculty of household science and to the faculty of forestry as for admission to the arts course, but the curricula of the two faculties are specialized. Candidates for admission to the faculty of applied science and engineering must also pass the same entrance examination, excepting that equivalents are allowed for Latin and Greek.

A suggestive example of the combination of general and professional courses of instruction, with a view to shortening the period of preparation for the active duties of professional life, is afforded by the institution in the arts curriculum of a course entitled "The honor department of biological and physical sciences." This course, the calendar states—

is specially adapted for students who intend entering eventually upon medicine, and embraces the purely science subjects which are demanded of students in the primary years of medicine. It is therefore possible for a candidate who has obtained his arts degree in this course to enter immediately the third year of medicine, and he will be qualified to present himself for the degree of bachelor of medicine two years after graduating in arts. In other words, it is possible for one to obtain the degrees of bachelor of arts and bachelor of medicine after six years' study at the university.

The very great advantages of this course to a student entering medicine are obvious. The preliminary science subjects of the course in medicine are taught in much greater detail in the arts course, as in the latter is included advanced laboratory and experimental work, such as is not required in the purely medical course of studies. Further, the student is required to become proficient in modern languages, an acquirement which is of great value to the student of modern scientific medicine.

The following tabular scheme shows the degree courses maintained in the several faculties and the period of study or other conditions required for the respective degrees:

Diplomas conferred.

Faculty.	First degrees.		Postgraduate degrees.	
	Designation.	Years in course.	Designation.	Conditions for attainment.
Arts	B. A	4	M. A	1 year after B. A.
Household science	Bachelor	4	Ph. D	2 years after B. A.
Education	B. A	4	M. A	B. A. and special work.
			Ph. D	Do.
			B. Pæd	B. A. and professional work.
			D. Pæd	B. Pæd. and professional experience.
Applied science and engineering	B. A. Sc	3	C. E. M. E. (mechanical and mining). E. E	Bachelor's degree and 3 years' professional work.
Forestry	B. Sc. F	4	F. E	Do.
Medicine	B. M	5	M. D	Bachelors of 1 year's standing and original thesis.
Law	LL. D	4	LL. M	Do.

Upon prescribed conditions the university confers the diploma of public health, the degree of doctor of dental surgery, the degree of doctor of veterinary surgery, a diploma in commerce, a diploma in gymnastics and physical drill, and a diploma in music.

Students who complete the four-year course in the Ontario Agricultural College, which was affiliated with the university in 1888, receive the degree of bachelor of the science of agriculture.

While in its enlarged scope the University of Toronto is the directive force in higher education in the Province of Ontario, it has also been brought into vital relation with the system of public instruction through the recognition accorded to the faculty of education. This faculty was created by a resolution of the governors of the university in 1906; its curriculum was adopted in June, 1907, and in October of the latter year its first session was opened. The courses of instruction are intended to prepare candidates for diplomas as special or regular teachers and, in particular, for provincial certificates as first-class public-school teachers and as high-school assistants and specialists. The full courses in this faculty lead to postgraduate degrees in arts and philosophy and to degrees in pedagogy. With regard to provision for the practical application of the theoretic instruction in the actual work of teaching, the announcement is made that, "pending the erection of its own model schools, the faculty will use the public and high schools of Toronto for purposes of observation and practice teaching. It will conduct its other exercises in the rooms of the university and its colleges, and amid university influences."

The education department, on its side, accepts the courses of instruction in the faculty of education in lieu of examination for the certificates issued by the department according to a prescribed scheme of correlatives.

The registration of students in the constituent colleges and the faculties of the University of Toronto and the number of professors for the scholastic year 1907–8, so far as reported, were as follows:

University of Toronto, 1907–8.

Colleges.	Students.	Members of the faculty.	Additional instructors, assistants, etc.
University College	796	19	5
Victoria College	384	18	3
Trinity College	108	13	.....
Total	1,288	50	8
University faculties.[a]			
Arts	276	45	40
Medicine	723	66	60
Applied science and engineering	627	58	.....
Household science	[b] 105	.....	.....

[a] Not reporting number of students are faculties of law and forestry.
[b] Registered as follows: University College, 2; Victoria, 15; occasional, 73; normal, 15.

In the foregoing account of the University of Toronto incidental reference is made to Dr. Goldwin Smith, who was a member of the commission under whose advice the plan of federation and expansion, as explained in this chapter, was developed. The death of this distinguished man, which occurred June 6 of the present year, has deprived Canada of a citizen whose remarkable powers were always at the service of the public welfare. Although Canada had been for many years his chosen country, Dr. Goldwin Smith belonged almost equally to the United States, while at the same time he formed, as it were, a bond of union with the mother country. He was born at Reading, England, August 23, 1823. His preparatory education was acquired at Eton. He was graduated from Magdalen College, Oxford, in 1845, and later took the degree of M. A. He gained various prizes and two scholarships, and in 1847 became a fellow of University College, Oxford. The same year he was called to the bar at Lincoln's Inn, but he never practiced law. In 1882 Oxford gave him the degree D. C. L., and in 1896 Princeton made him an LL. D. He was regius professor of modern history at Oxford from 1858 to 1866. In 1868 Goldwin Smith removed to this country, and from that year until 1871 was a lecturer at Cornell University on English and constitutional history; in the latter year he removed to Canada, but still continued to hold an honorary or nonresident professorship at Cornell. Hence the universities of all three countries may fairly claim a share in his distinction. He illustrated, in fact, in his own person that union of English commonwealths which was one of his fondly cherished ideals.

McGill University.

McGill University, Montreal, Quebec, owes its origin to a private endowment bequeathed by the Hon. James McGill, a native of Scotland, who emigrated to Canada and accumulated a fortune in the fur trade. His will, dated January 8, 1811, left an estate and a sum of £10,000 in money "to found a college in a provincial university, the erection of which had already been provided for by the generosity of the British Government. Three leading citizens of Montreal were among the trustees appointed under his will, who were directed to convey the subject property of the bequest to the Royal Institution for the Advancement of Learning, a body which, in 1802, had been incorporated by the legislature for the establishment of free schools and the advancement of learning in the Province of Quebec." The will provided also that the college or one of the colleges in the university, if established, should be "named and perpetually be known and distinguished by the appellation of McGill College."

The project of a provincial university failed, but the Royal Institution took measures to secure a charter for McGill College, which was

granted in 1821. On account, however, of difficulties in the settlement of the estate, the scholastic work did not begin until 1829, when students were received in the faculties of arts and medicine. After a prolonged struggle the citizens of Montreal awoke to the value of the institution; an amended charter was secured in 1852; and in 1855, with the advent of a new principal, an era of prosperity began.

The governors (members of the Royal Institution for the Advancement of Learning) and the principals and fellows (representing the faculties and departments of the university, the graduates, and affiliated colleges) together constitute the corporation, which is empowered to make all regulations for courses of study, matriculation, graduation, discipline, and the granting of degrees.

A special feature of the constitution is the clause by which the supreme authority over the institution is vested in the Crown, but to be exercised "by His Excellency the Governor-General of Canada for the time being as visitor." This relation raised the university to the national plane.

Through the affiliation of high schools the university has become a directive force in the work of the Protestant public schools, while by the expansion of the faculty of applied science and the recent incorporation of Macdonald College its scope has been extended to include the modern sciences and technical professions.

The faculties of McGill University, the first degrees conferred and the prescribed term of study for the same, are shown in the following table:

McGill University, faculties and degrees.

Faculties.	First degrees.	Years in course.
Arts	B. A.	4
	B. Sc.	4
Applied science	B. Sc.	4
	B. Arch.	4
Law	B. C. L.	3
Medicine	M. D.	a 5
	C. M.	a 5
	D. D. S.	a 4
Macdonald College, faculty of agriculture	B. Agr.	.....

a Sessions of eight months each.

The postgraduate and second professional degrees conferred by the university and the principal conditions pertaining to them are as follows: M. A. and M. Sc. on graduates after at least one year of graduate study; D. Ph., after at least three years' graduate study; D. Lit. (doctor of literature) upon graduates of at least five years' standing, having the M. A. degree, distinguished by special research and learning as indicated by an original thesis on some subject in the domain of literature or philosophy; D. Sc. upon candidates having

the degree of M. A., M. Sc., or M. D. and at least five years' professional experience and special distinction; D. C. L. upon bachelors of law of at least twelve years' standing who pass a required examination.

In addition to the degrees named above, the university confers the diploma of commerce, for which a two years' course is arranged in the faculty of arts; a diploma in household science, for which a two years' course is maintained in Macdonald College; and the degree of bachelor of music upon candidates fulfilling the specified conditions.

Apart from Macdonald College, the growth of the university has been by a process of inward expansion; hence, as compared with the University of Toronto, there is a noticeable tendency to concentration, rather than to the multiplication of faculties; for example, the faculty of arts includes a year's course in education for students who wish to obtain an academy diploma for the Province of Quebec; the faculty of applied science comprises ten specialized technical courses, including chemistry, the different orders of engineering, metallurgy, railways (theory and practice), all leading to the degree of B. Sc., with mention on diploma of the particular course of study pursued.

Macdonald College, which occupies a beautiful site overlooking the Ottawa River at Ste. Anne de Bellevue, 20 miles west of Montreal, comprises three departments, all of which have been organized to meet educational demands arising from modern conditions.

These departments are as follows:

The school for teachers, which offers a comprehensive and thoroughly practical training in the art and science of teaching.

The school of agriculture, which aims to provide a thoroughly theoretical and practical training in the several branches of agriculture.

The school of household science, in which young women receive training which will make for the improvement and greater enjoyment of home life.

By an agreement with the government of the province, confirmed by legislative act, it is provided that the teaching and training in the school for teachers—

shall, subject to the regulations at all times of the Protestant committee, be under the direction of a committee, to be called the teachers' training committee.

According to an agreement sanctioned by the legislature, the above-named committee consists—

of the principal of McGill University for the time being, who shall be ex officio chairman; of two persons appointed by the Protestant committee; of the English secretary of the council of public instruction; of the professor of education in McGill University for the time being; of the principal, for the time being, of Macdonald College; of the head, for the time being, of the teachers' training department of Macdonald College; and of one person appointed by the corporation of McGill University; the persons appointed, respectively, by the corporation of McGill University and by the Protestant committee to hold office for a term of three years and to be eligible for reelection.

Through the authority conferred on this representative committee, the "school for teachers" in Macdonald College becomes practically a provincial normal school of university rank.

The graduate instruction offered in McGill University was formally organized in 1906 by the establishment of a graduate school in which are registered all students "following advanced courses of study in subjects which, in the undergraduate work, fall within the scope of the faculties of arts and applied science.

"The faculty of the graduate school consists of the professors of the faculties of arts and applied science, but the initiative and administration of the school is placed in the hands of a committee selected from these faculties and known as the 'committee on graduate studies.'"

The university has met the demand for an abridgment of the period of preparation for professional life by combinations of undergraduate and professional courses of instruction. Medical students may thus secure the bachelor's degree and the doctor's degree in eight years, and law students the B. A. and B. C. L. in six years.

Affiliation of Vancouver College, British Columbia, with McGill University was effected in 1896, when an act was passed by the legislature of British Columbia authorizing McGill University to exercise the same rights in that province as in the Province of Quebec. The act provided for—

the incorporation of a body politic under the name of "The Royal Institution for the Advancement of Learning in British Columbia," with power to establish, at such place in British Columbia as McGill University may designate, a college for the higher education of men and women, such college, in respect of courses of study and examinations, to be deemed a college of McGill University, and the instruction given to its students to be of the same standard as that given in like subjects at McGill University at Montreal. In pursuance of the objects of its foundation, therefore, the Royal Institution in 1906 established at Vancouver the McGill University College of British Columbia, by agreement with the board of school trustees taking over the arts work previously done by Vancouver College, with extension of the scope and options allowed, and adding the first two years of the course in the faculty of applied science.

In 1908 Victoria College, British Columbia, which had been in affiliation with McGill University, was merged into the university college. Alberta College, in the province of the same name, which was affiliated with McGill University soon after its organization, has become the constituent college of Alberta University, created in 1907.

The number of students registered in McGill University in the session of 1909–10 was 1,912, of which total 31 were duplicate registrations.

The distribution of students was as follows: In arts, McGill College, 402—men, 277; women, 125; in the affiliated colleges of

British Columbia, 119; in the special courses for teachers, 34; applied science, 592 (including 33 in British Columbia); law, 55; medicine, 327; graduate school, 85; Macdonald College, 329.

Laval University.

Laval University, the center of higher education for the Catholic population of the Province of Quebec, is extremely conservative, but at the same time it has taken measures to meet the new demands of modern life. The university was founded by the Seminary of Quebec (ecclesiastical body) in 1852, in which year a royal charter was granted by Queen Victoria. By a papal bull of April 15, 1876, the university was accorded full canonical recognition, and the bishops of Quebec were exhorted to use every effort to bring the Roman Catholic colleges and seminaries throughout the province into affiliation with this central institution.

In respect to matters of doctrine and discipline the university is under the supervision of a superior council consisting of the archbishops and bishops of the Province of Quebec, under the presidency of the archbishop of the city of Quebec, who is the apostolic chancellor of the university. The four faculties—theology, law, medicine, and arts—were organized from the first. The affiliated colleges must, at least, prepare students for the examination for inscription in the faculty of arts and for the baccalaureate examination. The higher seminaries or theological schools of the province, in order to be affiliated, must meet the required conditions as regards doctrinal beliefs and must prepare students for the degree of bachelor of theology. The higher degrees conferred by the university are the licencié and doctor, corresponding to the similar degrees conferred by the universities of France.

The most significant event in the more recent history of Catholic higher education in Quebec was the creation of Laval University at Montreal (1876) as a branch (succursale) of the parent institution, but having independent administration and equality of privileges.

Like the older university, the Montreal branch is organized in four faculties. Apart from the fact that it brings provision for higher education within easy access of the youth of Montreal, its importance lies in the affiliation of several schools of modern type, namely, the Polytechnic of Montreal; the Agricultural Institute at Oka, founded in 1893 by the Trappist Fathers of Notre-Dame-du-Lac; and a school for the higher education of girls, founded by the Sisters of La Congrégation de Notre Dame.

The Agricultural Institute was founded in 1893, and has already exercised a marked influence by exciting an intelligent interest in

rural industries and in preparing young people for them. As a result of affiliation with the university an advanced course of instruction in agricultural subjects has been organized in the institute.

Number and distribution of students in the faculties and affiliated schools of Laval University, Quebec and Montreal, 1908–9.

	Students.	
	Quebec.	Montreal.
Faculty of arts	[a] 88	43
Faculty of theology	128	268
Faculty of law	73	99
Faculty of medicine	92	214
School of comparative medicine and of veterinary science	.....	27
School of dental surgery	[b] 3	47
School of pharmacy	[c] 6	71
Polytechnic school	.....	[d] 164
School of surveying	33	.....
School for the higher education of girls	.....	44
Total	423	977

[a] Includes 70 students of the theological seminary following the arts course in the university.
[b] Course in dentistry.
[c] Course in pharmacy.
[d] Affiliated with the university.

Movements in other Canadian Universities.

The solicitude for established standards manifested through all changes by the three universities above considered is equally noticeable in the remaining universities of Canada, whether in the older provinces or in those recently organized, and is undoubtedly due, in great measure, to the unbroken relation with England and the privilege of affiliation with the universities of the mother country if the standards meet the requirements. This privilege carries for students who may seek admission to English universities recognition of the work previously accomplished in the Canadian universities. At the same time there are signs that the modern spirit is affecting the higher institutions throughout the Dominion.

The need of consolidation has been recognized in Nova Scotia, which, for a population of about 460,000, has no less than eight universities or degree-conferring colleges. With a single exception these are denominational institutions—three Roman Catholic and one for each of the following denominations: Church of England, Baptist, Methodist, and Presbyterian. Dalhousie College and University, Halifax, which started under Presbyterian auspices, was reorganized by the legislature in 1863 as an undenominational and provincial university, in which character it has attracted a larger number of students than all the other universities combined. These institutions formerly received government grants, which were withdrawn in 1881 on account of the opposition to a proposed plan of consolidation.

The recent development of technical professions has given new motives for consolidation and an agreement has recently been reached by which four of the universities of Nova Scotia—namely, Acadia, Dalhousie, King's, and St. Francis Xavier, together with Mount Allison University in New Brunswick—have come into affiliation with the Nova Scotia Technical College.

Under the terms of this affiliation the separate universities offer a uniform course in engineering covering the first two years of a four-years' course, and the Technical College offers the last two years in four branches of engineering, viz, civil, electrical, mechanical, and mining. It is announced that—

a similar arrangement is also being tried in coordinating the general courses in each university to lead to a university post-graduate examination as the scholarship basis of the new academic class of teachers. Some subjects are accepted as passed in each university, such as history, philosophy, and psychology, while others are tested by the new examination syllabus in such subjects as English, foreign languages, mathematics, and the sciences.

The Technical College, which is situated in Halifax, has recently taken possession of a new building equipped for instruction in all orders of engineering and also for meeting the needs of students in technical branches who are not aspirants for a professional degree.

Provision for technical education in Nova Scotia is completed by the agricultural college at Truro. This institution has entered into affiliation with the Provincial Normal College in carrying on the Rural Science School maintained during the months of July and August of each year; the purpose of this school is to bring the pupil teachers directly in contact with the various phases of nature, encouraging them to study at first hand soils and plants, insects and birds, and weather phenomena, everything, in fact, which constitutes the environment especially of their rural school scholars. A regular curriculum is followed, which, when completed to the satisfaction of the instructors, entitles the teacher to receive the Rural Science diploma.

The chancellor of the University of New Brunswick in his report for 1909 urges the need of increased resources for the department of mathematics and the department of physics and electrical engineering, and for the provision of advanced courses in education. In view also of current interest in agricultural education he expresses the hope "that any scheme relating to this matter may be worked out in connection with the university and in close affiliation with the technical work now carried on there."

The University of Manitoba, Winnipeg, is the only degree-conferring institution in the province, and the colleges of the province are affiliated with it.

The University of Alberta was created by an act of 1906, the year following the admission of the province to the Canadian union, and was organized in 1907 with faculties of arts and science. Women are admitted on the same conditions as men to the degree courses of the arts faculty.

The University of Saskatchewan, which province was also admitted to the union in 1905, was established by legislative act of April 3, 1907. The act provides for the maintenance and support of the university by provincial appropriations and for the affiliation of collegiate institutes. The university senate is authorized to "make full provision for the education of women in the university in such manner as it shall deem most fitting; provided, however, that no woman shall by reason of her sex be deprived of any advantage or privilege accorded to male students of the university."

There are at present about 18 degree-conferring institutions and 30 colleges in the Dominion, with a registration of nearly 20,000 students.

The following particulars relate to universities whose reports have been received at this office:

University statistics, Canada.

Name.	Date of foundation.	Endowment as reported in 1904.	Students, 1908–9.
University of Alberta, Strathcona	1907	.....	45
University of Manitoba, Winnipeg	1877	[a] $150,000	461
University of New Brunswick, Fredericton	1800	[b] 8,964	153
University of Acadia College, Wolfville, Nova Scotia	1838	241,970	191
Dalhousie College and University, Halifax, Nova Scotia	1818	420,000	420
University of King's College, Windsor, Nova Scotia	1790	140,000	47
University of Toronto and University College and Federated Institutions	1827	3,315,924	4,583
Laval University, Montreal	1876	.....	977
Laval University, Quebec	1852	.....	421
McGill University, Montreal, Quebec	1821	[c] 5,010,569	1,912

[a] Acres of land.
[b] Government grant.
[c] Cash endowment as reported in 1910, exclusive of lands, buildings, and plant. Of the total, $2,002,333 belongs to Macdonald College.

THE PROVINCIAL SYSTEMS OF PUBLIC INSTRUCTION.

Principal Features.

By the British North American act of 1867 the right to legislate on matters respecting education was left to the governments of the four provinces (Ontario, Quebec, Nova Scotia, and New Brunswick), which were then united under the general name of Dominion of Canada. The same right has been assured also to the provinces that have since entered the confederation—Prince Edward Island, Manitoba, British Columbia, Northwest Territories, Alberta, and Saskatchewan. (Until 1905 the two last-named provinces formed a part of the Northwest Territories.)

Prior to the federation, education had become a matter of interest in all the provinces. Ontario had a well-organized system of public schools, Quebec had brought its parochial schools under public supervision, and the smaller maritime provinces had proved their interest in the cause both by legislation and by grants for schools from public funds. The Ontario system has been adopted as a model, to some degree, in the remaining provinces, Quebec alone excepted.

The control of the system of Ontario is vested in the minister of education, who is more than an executive officer. As a member of the legislature he initiates and largely directs school legislation, and his judicial functions and powers of appointment add weight to the policies he advocates. No other province has reposed equal authority in the chief officer of education, but all have sought to secure uniformity of school provision and educational standards by means of government control.

In Quebec the schools are sectarian; that is, they are distinctively either Roman Catholic or Protestant schools. The former are under ecclesiastical control, which for this purpose is organized in accordance with the provisions of the school laws; the Protestant schools are in like manner under Protestant control. In Ontario, Alberta, and Saskatchewan provision is made for separate schools for Protestants and for Catholics where desired, and the supporters of these separate schools are exempt from the payment of local taxes for the support of the public schools. The separate schools are subject to government inspection and, in general, are under the same regulations as the public schools.

The public elementary schools are free schools, excepting in Quebec, where fees are charged which may not exceed 50 cents a month nor be less than 5 cents a month. In the model schools and academies of this province, which correspond to the grammar and high schools of our own States, the fees may be higher.[a] In the high schools of Ontario fees are charged, but may be, and often are, remitted at the discretion of the school authorities. With these exceptions the public schools of the several provinces are free and

[a] The following extract from a letter from the department of public instruction, Quebec (dated June 30, 1904), throws light upon certain peculiarities of school classification and administration in that province:

The terms "model school" and "academy" as used in this province are likely to be misleading to strangers, and there is now a proposal to change our nomenclature so as to remove the difficulties which now exist in this direction.

Our public schools are "elementary" covering the first four years' work; "model," covering the fifth, sixth, and seventh years; and "academy," covering the eighth, ninth, and tenth years. The work is continuous, so that the last year of one grade qualifies for the first year of the next.

Inasmuch as many school municipalities defray the expenses of schools of all grades from a general fund, it is impossible to know exactly the total cost of elementary education as distinguished from secondary education.

Our clerk of statistics reports that the elementary schools receive approximately 90 per cent of the total contributions for school purposes (in 1903 reported to be $3,471,989), and that the secondary schools receive the remaining 10 per cent.

nonsectarian, their support being derived from provincial grants and local (municipal) appropriations and school taxes.

The mode of apportioning the legislative grant among the school districts differs in the different provinces, but in all there is apparent the purpose to make the provincial appropriation a means of stimulating rather than of lessening local effort in behalf of the schools.

The increased public provision for education to meet new industrial demands has naturally caused some increase in administrative agencies. This is particularly noticeable in Ontario, where the central department has been strengthened by the addition of an advisory council and a superintendent of education. The latter is expected to aid the department by virtue of his professional experience and knowledge dissociated from the full administrative control which remains in the hands of the responsible minister.

The advantages of this addition to the professional strength of the department are shown by the consolidation of the laws pertaining to the department, the revision and consolidation of school laws and programmes, and the compilation of a draft syllabus of studies for the guidance of teachers. In this last work the department sought assistance from the Ontario Educational Association in order that the revision might represent the results of the largest practical experience.

Statistical Summary.

In view of new departures in popular education the following statistics pertaining to the public schools may be regarded not alone as indicating their present status, but as a standard by which their progress in the era of expansion upon which the Dominion is entering may be estimated:

Statistics of public elementary and high schools.

Provinces.	Population (census 1901).	Date of school statistics.	Enrollment.		Average attendance.	
			Total.	Ratio to population.	Total.	Ratio to enrollment.
				Per cent.		*Per cent.*
Ontario	2,182,946	1908	485,133	22.22	292,048	64.32
Quebec	1,648,898	1908–9	367,012	22.25	285,729	[a] 77.85
Nova Scotia	459,574	1909	101,680	22.12	61,787	60.76
New Brunswick	331,120	1908–9	67,785	20.47	42,720	63.02
Manitoba	255,211	1908	71,031	27.83	40,691	57.23
British Columbia	178,657	1908–9	36,098	20.25	25,350	70.23
Prince Edward Island	103,259	1909	18,073	17.50	11,543	63.83
Alberta	[b] 185,000	1908	39,653	21.43	18,924	47.95
Saskatchewan	[b] 257,000	1908	47,086	12.16	26,082	55.39
Northwest Territories	.....	.....	25,191	.....	.....	.....

[a] In the elementary schools the ratio of average attendance to enrollment is 73.85; in the model schools it is 82 per cent and in the academies 86.5.
[b] Population 1906.

Statistics of public elementary and high schools—Continued.

Provinces.	Teachers.	Percentage of males.	Expenditure.		
			Total.	Per capita of enrollment.	Per capita of population.
Ontario	10,878	17.00	$9,329,658	$19.23	$4.27
Quebec	12,131	13.43	[a] 5,059,495	13.78	3.06
Nova Scotia	2,694	13.06	1,243,697	12.42	2.70
New Brunswick	1,942	12.9	829,709	12.24	2.50
Manitoba	2,526	23.7	[b] 2,070,294	29.14	8.11
British Columbia	900	.....	1,547,700	42.87	8.66
Prince Edward Island	595	33.6	183,206	9.43	1.77
Alberta	1,468	.....	[c] 2,636,835	66.50	14.25
Saskatchewan	1,298	.....	[d] 2,929,829	62.22	11.40
Northwest Territories	.....	.....	.....	.....	.....

[a] Includes $1,649,344, cost of maintenance of subsidized independent schools.
[b] Also $1,156,473 for debentures and promissory notes.
[c] Includes $1,757,114 for sites and buildings, and interest on notes.
[d] Includes $1,394,217 for sites and buildings, and interest on notes.

Salient Particulars in the Current Record of Public Schools.

The movement for the promotion of manual training in the public schools of Canada, and the allied movement for the improvement of rural education by the establishment of school gardens, and the consolidation of rural schools,[a] have passed the experimental stages and have either become permanent features of the systems of public instruction or have effected marked modifications in the spirit and methods of the schools.

These two movements, it will be recalled, were fostered, in the initiatory stages, by the liberal donations of Sir William C. Macdonald, administered by Dr. James W. Robertson, who became, subsequently, the principal of Macdonald College.

With regard to manual training in urban schools, it should be stated that the education authorities themselves had in many instances started the work before the Macdonald fund was donated. The present status of the forms of practical training started by this fund, or accelerated by its administration, is shown by the following particulars drawn from recent reports:

Ontario.—In Ontario, 49 manual training centers were reported for 1907, of which 13 were in public schools of Ottawa, 7 in Toronto, 4 in Hamilton, and 6 in normal schools. In 1908 the number was increased by 3 centers, and in 1909 by 5 centers.

Household science centers have been established in 9 schools of Toronto, in 4 schools of Hamilton, and in 18 additional schools in different localities.

[a] For a detailed account of these movements supported by the Macdonald fund, see Report of the Commissioner of Education for 1907, Vol. I, chapter 7, pp. 225-237.

Commenting on these particulars, Mr. Leake, the inspector of technical education, says:

The magnificent gift of Mrs. Massey Treble to the university of an ideal building for carrying on household science work marks an era in its development and offers an example worthy of the consideration of our wealthy men.

There is not the same difficulty in securing properly qualified teachers in this subject as exists in the case of manual training, largely owing to the fact that before an individual can take the necessary course in order to qualify as a manual training teacher he must have at least a second class normal certificate, while the corresponding qualification for household science is junior leaving or junior matriculation.

The outlook for both these subjects is extremely bright. As pointed out in the report for last year there were 13 towns of a population of 5,000 or over without manual training or household science. That number has now been reduced to ten and several of the ten will probably undertake the subjects in the near future, while several towns of less than that population are seriously considering the desirability and advisability of doing so.

The further developments needed in the province as stated by Mr. Leake are as follows:

1. Modification of the course in the last two years of the public school in which boys and girls might have the option of taking a two years' course in vocational training suited especially to the particular locality.

2. The establishment of vocational schools that would take the boy, industrially inclined, at 14 years of age and give him a two or three years' trade course. For admission to these schools the entrance examination should not be required.

3. Manual training in wood and metal and household science, including needlework, laundry, and general house management, in every high school. Without losing any of their cultural value these subjects could and should have a decidedly more industrial trend than they have at present. The equipments should be used for both day and evening classes.

4. A development of the courses in mechanical, machine, and architectural drawing and industrial design in every high school and the inclusion of more elementary industrial drawing in the public schools. This is the basis of any technical or industrial training.

Interest in school gardens and consolidated rural schools in Ontario has developed into a broader scheme of public instruction for rural communities. This is indicated by several measures of which the most important is the continuation schools act bearing date April 13, 1909. This act provides for the better organization of the continuation schools already existing and offers new inducements for the establishment of additional schools of this class. The continuation schools are virtually high schools closely coordinated with the public schools, and carefully adjusted as regards curriculum, length of course, etc., to local demands. A continuation school may be organized as an upper department of a public school under a special teacher or as an independent school, and may serve two or more school districts by an agreement on the part of their respective school boards. County councils are also empowered by the act "to create and constitute continuation school districts." These elastic

conditions indicate the purpose to open the door of opportunity to every child in the province, without, however, interfering at all with the prior rights of established high schools, the law expressly providing that a continuation school shall not be established or maintained in a high school district.

In his report for 1909, the inspector of continuation schools says:

The opportunity to start a continuation school is no less favorable to a rural board of trustees than to the board of a village or a town.

In the case of a rural school section the grants from all sources may be regarded as at least the equivalent of the salary of the continuation school teacher. In the first place the township must pay annually the same grant toward the salary of the continuation school teacher as it is required to pay in the case of the principal of the public school. Except in the case of the small number of weak townships this grant amounts to $300. Then there is the fixed annual grant of $200 paid equally by legislature and county council, the annual grant on minimum equipment amounting to $70, similarly paid, the annual grant on accommodations averaging about $30, similarly paid, the annual grant on salary of teacher, amounting to 50 per cent of all salary in excess of $400 up to a limit of $1,000, also similarly paid. * * * Hence a rural school board paying a continuation school teacher a salary of $700 might expect to receive under ordinary circumstances annual grants from township, county, and government, amounting to $750. If the salary were $800 the grants would be not less than $800 as a rule. Then there is a source of considerable revenue in fees paid by pupils, the usual fee being $1 per month per pupil. This is a charge that is very willingly met by parents who appreciate the advantages of a continuation school. At present there are 128 continuation schools employing 185 teachers and attended by pupils from 920 school sections. The number of pupils enrolled during first half of the past year was 4,164, and during second half year, 4,400. The average continuation school could therefore depend upon having a roll of not less than 22 pupils per teacher, and a regular attendance that would yield a revenue of $150 per year in fees. Thus it may be seen that under ordinary circumstances a continuation school may be maintained in the average rural school section without adding directly to the taxation of the section. Where a section is central, in some special way, to several surrounding sections it is the more desirable that the school board of that section should use its position of vantage by leading in the establishment of a continuation school.

The purpose to make special provision for agricultural instruction through the agency of continuation schools is indicated by a clause of the act providing that—

Where an agricultural department is established by the minister in a continuation school, the council of the county in which the continuation school is situated shall, on or before the 15th day of December in each year, pay to the board of the school in which such department is established the sum of $500 which shall be applied by the board to the purposes of such department.

It is interesting also to note in this connection that the amended public schools act of Ontario provides that—

The council of a township may engage the services of a person holding the degree of bachelor of science of agriculture or other certificate of qualification from the Ontario Agricultural College and approved of by the certificate of the minister or of an instructor qualified as required by the regulations, to give instruction in agriculture, manual

training, and household science in the public schools of the municipality, and the council may levy and collect from the ratepayers of such municipality who are public school supporters, such sums as may be necessary to pay the salaries of such instructors, and all other expenses connected therewith.

And further, that—

The board of a rural school section or of a union school section or a number of such boards may severally or jointly engage the services of any person qualified [as explained above] for the purpose of giving similar instruction to the pupils of their respective schools.

In Ontario, the entire scheme of technical education is under the direction of a special inspector included in the official staff of the education department. This officer has made an extensive study of the industries of the province with a view to adapting the technical training to the actual conditions surrounding the pupils, after the preliminary course in manual work and drawing in the lower grades of the public schools is finished. As a result of this investigation, the inspector advises that a system of vocational training be organized, parallel with the last two years of the public school course and with the high school course, as a means of fitting the boys industrially inclined for entrance upon the trades of their respective localities.

Quebec.—Industrial training is included in the educational theories of several religious orders which have maintained schools in the Province of Quebec, and the recent awakening of general interest in the subject accords, therefore, with the course that has been pursued, to some extent, in their schools. Public action in the matter is now directed to the systematic treatment and wider extension of this order of training. In his report for 1908–9, the superintendent of public instruction notes an increase in school gardens, which reached a total of 132, distributed among five counties, and an increase in the number of "young gardeners" from 2,200 in 1908 to 3,789 in 1909.

Attention is also called in the report to the two technical schools recently established by the government in Quebec and Montreal, respectively. These schools are intended to meet pressing industrial needs, and the hope is expressed by the superintendent that "training schools for apprentices will also be established in manufacturing centers, such as Sherbrooke, St. Hyacinthe, and others." In this connection, the superintendent urges the importance of drawing as a branch of instruction underlying all industrial and technical training. Although the education act of Quebec requires drawing to be taught in the public schools, in this respect the act is a dead letter, on account, as the superintendent explains, of the want of competent inspectors, trained teachers, and well-defined methods of instruction.

New Brunswick.—The chief superintendent of education for New Brunswick reports 12 school gardens in operation in that province in 1908–9, and special efforts on the part of the board of education to

promote an interest in agriculture through the medium of the schools. The report states that—

a leaflet entitled, "Nature study and agriculture" has been supplied to all the schools with excellent results. Next year there will be in connection with the Normal School a garden such as will furnish our teachers with the idea of what may be accomplished in the ordinary country district, and very soon it is expected that a suitable text-book dealing with the whole subject will be prescribed.

The director of manual training in this province reports steady progress in that branch and in the kindred subject of household science. Success in both depends almost entirely upon the services of special instructors, and experience shows that where such are employed their influence extends far beyond the particular schools in which they are engaged. For instance, it is stated by the director that—

in Sackville, where all the senior boys and girls are provided for in the fully equipped manual training and household science rooms, the manual training instructor, Mr. Peacock, has organized a course in hand work throughout the lower grades. The instruction is given by the regular grade teachers, who are most enthusiastic in the work, under the guidance and supervision of Mr. Peacock.

Nova Scotia.—The report of the superintendent of education in Nova Scotia shows marked appreciation of schools having manual training departments. In the section of mechanics there was an increase from 1,824 pupils in 1908 to 2,082 in 1909, and in the section of domestic science corresponding increase from 2,881 to 3,347.

The measures adopted in this province for promoting special forms of technical and industrial training already provide for three orders of instruction suited to different industrial demands. The lowest stage is represented by the trade classes, which are opened in the evening and pertain as a rule to a special trade. An example is afforded by a class in Halifax, organized in accordance with the views of "a special committee from the Halifax Merchant Tailors' and Cutters' Association." The report states that—

the Merchant Tailors' and Cutters' Association promised their hearty cooperation; a public-spirited manufacturing clothier promised to provide the materials and to dispose of the finished product; the association agreed to find a competent instructor. The department of technical education furnished a room with a manufacturing type sewing machine, press boards, gas and electric irons, and tables on which to lay out and make up work.

Local technical schools were provided for by an act of 1906, which authorized "the council of public instruction in any industrial community, upon the recommendation of the director of technical education," to establish such a school provided that the "locality itself should contribute in the support of the school;" also, that—

the government supplies the scientific apparatus necessary to carry on the work, and will bear half the cost of instructors if the locality supplies the rooms, heat and light, and bears the other half of the cost of instructors.

The management of these local schools is in the hands of a managing committee, which consists of members of the school board, local manufacturers, foreman in the local shops, and representatives of the trades unions. On every committee a few men took an active interest in the schools and gave the movement impetus by visiting the classes frequently and offering practical suggestions for greater efficiency.

Schools of this type have been carried on "in the four chief manufacturing centers of the province, viz, Amherst, Halifax, New Glasgow, and Sydney."

The coal-mining schools, as explained in the superintendent's report,

are conducted with the purpose of teaching the special science and mathematics as applied to this basal industry and modern practice in coal mining. * * * The subjects range from fractions in arithmetic to trigonometrical functions of angles and plane surveying. In addition there are also taught English composition, geology, elementary electricity, elementary mechanics, mechanical drawing, and modern mining practice.

At the present time nearly every colliery town in the province has its evening school, where instruction as outlined above is offered. In each school are held preparatory classes in arithmetic and English composition. If the student has a fair working knowledge of arithmetic through decimals and can express his thoughts in writing as accurately as a pupil in the seventh grade, he is allowed to enter the regular coal-mining classes. These preparatory classes are attended by many young boys who merely wish more general education and who do not intend to enter the coal-mining classes at all.

The men who take up the more technical instruction usually do so with the intention of taking the examinations given under the auspices of the provincial government for certificates of competency as colliery managers, underground managers, or overmen. It is customary to take the examination for overman one year, then the examination for underground manager, and then take one or two years more to acquire their manager's certificate.

The classes are held almost altogether in the evening, but in Springhill, Glace Bay, Westville, and Sydney mines, instruction is given in the daytime to men who are permanently on night shift.

The instructors in coal mining are engaged permanently by the department of technical education and spend their whole time and effort in teaching the technical classes connected with this industry. These men have had years of practical experience in positions of responsibility, and besides being actual coal miners have educational qualifications that fit them for teaching. They conduct the evening classes as well as special day classes in the public schools.

Assistant instructors are appointed to hold classes in special localities which can not be visited by the regular instructors on account of inaccessibility or because there are more applications for classes from a certain district than the instructor can possibly hold.

Other provinces.—Reports from the remaining provinces indicate interest in the subject of manual training, and also in the promotion of school gardens and of practical training in agriculture; but the demand for these subjects is less pressing than in the provinces above considered. In his report for 1909, under the head of "Special subjects of instruction," the chief superintendent of education for Prince Edward Island observes that "manual training and agriculture have now been taught in the Prince of Wales College and in a few of the

schools for a number of years, while domestic science has more recently been added to the curriculum;" but the majority of the school districts are indifferent to these subjects, and in his opinion "legislation is necessary to provide due support for such training, as voluntary action is not forthcoming." He adds: "If the government would only establish at certain centers, say, the first-class schools or a few of them, departments of agriculture, domestic science, and manual training, with a few acres of land for experimental purposes, it would be possible to make agriculture a living subject of instruction and opportunity would be available for conducting in earnest classes in the two other subjects."

The newer provinces are fully alive to modern demands; but their resources are taxed to furnish the fundamental conditions of efficient school systems, teachers, and buildings, for both of which liberal provision is made. British Columbia reports manual training schools in New Westminster, Vancouver, and Victoria, and the inspector of this branch advises that it may be made compulsory where "there are sufficient boys to warrant a school being opened."

In Manitoba a special committee was recently appointed "to investigate the question of agricultural courses for secondary schools," and after extended inquiry into the work as carried on in other provinces and in the United States the committee advise that "every high school in the province should be given the privilege of establishing a high-school course in agriculture, to be carried on parallel with the existing courses for teachers' certificates and for matriculation in the university."

In Edmonton, the capital of Alberta, the school population, it is said, has been doubling every three years for the past ten or twelve years, and it requires great effort to keep up with the increasing educational needs of the population. Nevertheless, the school board of the city is making liberal plans for secondary education The recently erected high-school building in that city has excellent equipment for laboratory instruction, for manual training, and for a household-science department. This building occupies a portion of a valuable site recently secured by the board on which it is proposed in the near future to erect a building for an advanced manual training or technical school.

Spirit of the New Departures.

The importance of the recent departures in public education in Canada lies not so much in the tangible results as in the spirit awakened by the effort. The practical branches of instruction, whether manual arts, nature study, or agriculture, have not been approached from "the occupational point of view," to quote a phrase from Professor Bailey, but "from the educational and spiritual." This large con-

ception of the subject was emphasized by Doctor Robertson during a recent visit to England in an address before the national meeting of the county council associations—that is, the assemblage of the local educational authorities of the kingdom.

The subject of Doctor Robertson's address was "Canadian methods of education for the improvement of rural conditions." He said in part:

They had worked at the problem as a human one rather than as one of land or of crops or of profits. Those who attacked it as a human problem had far more success than those who made it merely a calculation of crops. He knew of one illustration school for the improvement of rural conditions—a fine building, the children's home of the locality, not merely a schoolhouse, but the pride of the place, as it ought to be, with a school garden of the right sort, provision also for the teaching of household science and of manual training—and he had seen children there picking flowers, rolling on the grass, and climbing the apple trees. That was the sort of thing he wanted all over.

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Agriculture was not breaking clods nor moving soil, nor even gathering and selling crops. It was the case of old mother earth as a home for the race. Not only an occupation for profits, but a great public interest, a national business, having direct bearings on the real and most lasting welfare of the people. It was not a question of getting agriculture into the common school, but of getting the common school founded on agriculture. The three great maternal occupations were farming, home-making, and the teaching of children, and all general education should be for these, for they nurtured the rest. All schools should have some nature study, some household science, some manual training, and just as much reading, writing, and arithmetic as they had time for. The people of the towns were equally concerned in agriculture with those who lived on the land, and the great task was to make this earth a better home for better children. Agriculture appealed to the highest in man, and he would respond, whatever his rank in life. He had never found any satisfaction in appealing to the farmer from the point of view of getting an extra 10 bushels per acre, but if he could show him that his child's weal was concerned it was always a strong appeal. He had seen a school garden with fathers and mothers round it as thick as bees on a young crop.

Having evidently in mind the prejudices of English authorities against government interference in local affairs, Doctor Robertson drew a pertinent lesson from the policy of the Dominion government.

The Federal Government, although it could not spend money on education, maintained a system of experimental farms and carried on excellent research work, which was a national service. It maintained a series of illustration stations which helped their poultry and dairying immensely, a branch for the protection of the health of animals, and gave illustrations of the value of using good seed. It kept a corps of workers for the extension of markets, a corps of inspectors at the seaports to see that perishable goods were stored safely, and inspectors at Liverpool to see them properly discharged.

The provincial governments had charge of education; they maintained experimental farms and agricultural colleges which affected the work in the schools. The governments had done a great deal of valuable educational work for "grown ups." He had never known a man too old to be susceptible to educational influences if only they appealed to his imagination and his pride. Both federal and provincial governments gave aid to the adult population in work. Financial aid in rural education was being increased because it paid. In 1890 he set to work with £1,000 for dairying.

That had now grown to £60,000, and other grants had grown similarly. In 1900 the value of all field crops was £42,000,000, in 1909 it was £109,000,000. Some of this was no doubt due to emigration and migration; but would there have been any of either if there had been no methods of helping the people to do well? He could remember the time when people migrated *from* instead of *to* the Northwest. The improvement was really due to the education of the grown-ups, to research, and to illustrations.

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The whole idea of their system was to shift the emphasis from the study of subjects for the passing of examinations to the training of the pupils into ability for the work of life, particularly in rural occupations, in homes and in schools. They must provide the stimulus of physical facts for the grown-ups while modifying the training of the young. They had to train the faculties of thinking, acting, and loving, and if in these things they kept the people close to them they would have an enthusiastic following.

Royal Commission on Industrial Education.

The most significant sign of the new influences that are shaping education in Canada is the recent order in council appointing a royal commission to investigate industrial training in the leading countries of America and Europe.

This action was taken in accordance with the request of the premiers of the several provinces who express the conviction "that industrial efficiency is all-important to the development of the Dominion and to the promotion of the home and foreign trade of Canada in competition with other nations, and that industrial efficiency can be best promoted by the adoption in Canada of the most advanced systems and methods of industrial training and technical education."

The following particulars relating to the members of the commission[a] are cited from the Toronto Globe of June 3, 1910:

Professor Robertson, the chairman of the commission, is one of the best known educationalists of the Dominion. As commissioner of agriculture for the Dominion Professor Robertson had much to do with shaping the splendid work of the department of agriculture, and his exceptional constructive ability was recognized and found expression in the establishment of Macdonald College at Ste. Anne de Bellevue, of which until recently he has been the principal. To Professor Robertson, perhaps more than any other single individual, has been due the progress which has been made in the introduction of manual training in the different schools.

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Hon. John N. Armstrong, who will represent the maritime provinces on the commission, has been a member of the legislative council of Nova Scotia since 1889, is a barrister by profession, and one of the best informed of the public men of eastern Canada.

Dr. George Bryce, who will represent the west, is also one of the leading educationalists of the Dominion. He was the founder of Manitoba College, is a member of the Manitoba board of education, and is, perhaps, more fully acquainted with the history, education, people, and resources of western Canada than any other Canadian. Doctor Bryce is president of the Royal Society of Canada.

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[a] The official list of the members of the commission is as follows: James W. Robertson, C. M. G., LL. D., of Montreal, Quebec, chairman; Hon. John N. Armstrong, of North Sydney, Nova Scotia; George Bryce, LL. D., F. R. S. C., of Winnipeg, Manitoba; M. Gaspard De Serres, of Montreal, Quebec; Gilbert M. Murray, B. A., of Toronto, Ontario; David Forsyth, M. A., of Berlin, Ontario; James Simpson, of Toronto, Ontario; secretary and reporter to the commission, Thos. Bengough, C. S. R.

M. Gaspard De Serres, who will represent the province of Quebec, is president of the new Technical Institute in Montreal. He is a well-known financier and philanthropist, a man of sound judgment. To him, as much as to any other man in the province, is owing the splendid progress already made in technical education in the Province of Quebec.

The technical institute.—Technical institutes of the Province of Ontario will be represented by Mr. David Forsyth, of Berlin, Ontario, principal of the Berlin Collegiate and Technical Institute. Mr. Forsyth is a graduate and medalist of the University of Toronto. It was due to Mr. Forsyth's interest in the cause of technical education that Berlin became one of the earliest towns to establish technical work in connection with its collegiate.

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At the present time it has the best equipment of any city or town school of Ontario, as is evidenced by the fact that the grants to the Berlin Collegiate and Technical Institute from the provincial government since 1904 have exceeded those of any other school.

Labor and capital.—The two bodies that during recent years have been the most active in urging upon the Dominion government the necessity of appointing a commission on technical education are the Canadian Manufacturers' Association and the Dominion Trades and Labor Congress. In appointing Mr. Murray and Mr. Simpson on the commission the Dominion government has virtually given to these important bodies their own nominee. Mr. Murray has for some time past been the secretary of the Canadian Manufacturers' Association. He has prepared and presented to the government several of the petitions of the manufacturers in reference to the necessity for the appointment of a technical education commission. His appointment has been strongly recommended by the members of the association. Being familiar with manufacturing interests of the Dominion generally, and in touch with leading manufacturers in all parts of Canada, it is doubtful if any person could have been found better fitted to gain for the commission the views of the manufacturers as to their several needs.

The same is true of Mr. Simpson as respects labor. Several years in succession he has presented to the Dominion government on behalf of the Dominion Trades and Labor Congress of Canada the views of that body as respects the necessity for the appointment of a commission on technical education. At its last meeting at Quebec the Dominion Congress unanimously concurred in the following resolution: "That this congress emphatically reaffirm its declarations in favor of the immediate appointment by the Dominion government of a commission on technical education, and that copies of this resolution be immediately sent to the right honorable the prime minister and the minister of labor. Further, that this congress submits the name of Mr. James Simpson, Toronto, with the request that they appoint him as the representative of the wage-earners of Canada on the said commission, as he is eminently qualified to fill such a position."

Apart from having the unanimous indorsation of the Dominion Trades and Labor Congress, Mr. Simpson has, perhaps, a wider knowledge of the subject of technical education and the needs of the workers in this connection than any other labor representative in the Dominion. He was a member of the technical education commission appointed by the board of education of Toronto a short time ago. At the present time he is chairman of the board of education of the city of Toronto and a member of the technical education committee of the trustees' section of the Ontario Educational Association. He is vice-president of the Social and Moral Reform Council of Canada, and for years past has held many important positions in connection with the labor movement.

Mr. Thomas Bengough, who has been appointed secretary and reporter of the commission, is one of the best-known members of his profession in the Dominion. He has, however, in addition to his exceptional qualifications as an expert reporter,

special qualifications in connection with the present commission, having made the subject of technical education a special study, and being the author of an important publication containing the results of investigations personally conducted into methods employed in the teaching of manual training, industrial art, domestic science, and kindred subjects.

The commission began its practical work on the 18th of July, on which date two sessions for conference were held at the Nova Scotia Technical College, followed by an examination of the institution and an extended visit to the industries of Halifax.

Medical Inspection of Schools in British Columbia.

An important measure, "The schools health inspection act, 1910," was passed by the legislature of British Columbia and received the sanction of the King in September of the present year. The provisions of this act illustrate the large possibilities of such a measure, and also indicate the means by which local authorities may be held to their duties in regard to the general welfare without impairment of their rights.

The act requires that "the school trustees of every city and of every rural municipality school district in the Province of British Columbia shall appoint one or more school health inspectors, and shall assign to each inspector the schools to be inspected, and provide them with proper facilities for the performance of their duties as health inspectors of schools and school children."

In districts outside of cities and rural municipalities the appointment of school health inspectors rests with the provincial board of health.

The school health inspectors must be duly certified physicians, authority, however, being granted to the provincial board of health to appoint other persons for certain parts of the service when it is deemed necessary.

Every school health inspector is required to make a thorough "examination as to the general health of all children attending school in the district of which he is such inspector, and of all teachers and janitors in such district." He must also "examine all school buildings and school surroundings in his district, and report to the board of school trustees, fully and in detail, the result of such examinations."

The board of school trustees are ordered to take such action upon the report of the health inspectors as may be deemed necessary to eliminate all sources of danger arising from the condition of pupils or teachers or from the insanitary conditions of the buildings.

In addition to the general examination of children, the act requires that—

The school trustees of every school district in the province shall cause every child in the public schools to be separately and carefully tested and examined at least once

in every school year as to the condition of sight and hearing, of throat and teeth, and as to any other physical disability or defect liable to prevent his receiving the full benefit of his school work, or as to whether he requires a modification of the school work in order to secure the best educational results. The tests of sight and hearing may be made by teachers having authority from the provincial board of health. The school trustees shall cause notice of any such defect or disability requiring treatment to be sent to the parent or guardian of the child, and shall require a physical record of each child to be kept in such form as the provincial board of health shall prescribe.

It is further required that children who may have been exposed to contagion shall be referred for further examination to a school health inspector, who, in such a case, must be a duly certified physician, and no child so referred "shall be permitted to return to school unless and until he delivers to the teacher in charge of the school a written certificate, signed by the school inspector, permitting such return."

It is worthy of note, also, that the school health inspector is required to have supervision over physical exercises of pupils attending school, and, in special cases, to modify or prohibit such exercises.

The remuneration of health inspectors is charged upon the school district, and the duty of seeing that the health act is enforced rests upon the school trustees of each school district.

In the case of schools in remote and isolated places the school trustees and teachers are authorized to make the best arrangements possible for the purposes of the act; the school boards of city and municipal school districts may pass by-laws and regulations for the better carrying out of the provisions of the act, but such by-laws and regulations must be approved by the provincial board of health before they become operative.

All appointments made under the provision of this act are subject to the approval of the provincial board of health, and every year a report must be made by the respective school board inspectors to the provincial board of health in such form as that body may require; and special reports on the health conditions of the children in any particular school or schools may at any time be demanded by the board of health.

It is further ordered that "An annual report on school health inspection shall be prepared by the secretary of the provincial board of health and submitted to the honorable the provincial secretary for presentation to the legislature every year."

CHAPTER IX.

CURRENT EVENTS PERTAINING TO EDUCATION IN THE LATIN-AMERICAN COUNTRIES.

Centennial Celebrations.

The scholastic year under review (1909-10) has been one of unusual interest in the twenty Latin-American republics, because it marks for several of the number the close of a century of national independence, and the spirit awakened by the public celebrations of this event has spread to the States that have more recently attained independence.

The significance to ourselves of these national movements may best be expressed by a citation from the first message of President Taft to the Congress of the United States. After reference to the political relations between the sister republics and our own, the President says:

> On July 9 next there will be open at Buenos Aires the Fourth Pan-American Conference. This conference will have a special meaning to the hearts of all Americans, because around its date are clustered the anniversaries of the independence of so many of the American republics. It is not necessary for me to remind the Congress of the political, social, and commercial importance of these gatherings. You are asked to make liberal appropriation for our participation. If this be granted, it is my purpose to appoint a distinguished and representative delegation, qualified fittingly to represent this country and to deal with the problems of intercontinental interest which will there be discussed.
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> The Argentine Republic will also hold, from May to November, 1910, at Buenos Aires, a great international agricultural exhibition, in which the United States has been invited to participate. Considering the rapid growth of the trade of the United States with the Argentine Republic and the cordial relations existing between the two nations, together with the fact that it provides an opportunity to show deference to a sister Republic on the occasion of the celebration of its national independence, the proper departments of this Government are taking steps to apprise the interests concerned of the opportunity afforded by this exhibition, in which appropriate participation by this country is so desirable. The designation of an official representative is also receiving consideration.
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> * * * * * * *
>
> Beside the fundamental doctrines of our Pan-American policy there have grown up a realization of political interests, community of institutions, and ideals, and a flourishing commerce. All these bonds will be greatly strengthened as time goes on and increased facilities, such as the great bank soon to be established in Latin America, supply the means for building up the colossal intercontinental commerce of the future.

The interest of the United States in efforts for the promotion of friendly relations between the nations of the western continent was shown by appropriations made by Congress during the session of 1909-10, as follows:

To meet the actual and necessary expenses of the delegates of the United States to the Fourth International Conference of American States to be held at the city of Buenos Aires, beginning on the ninth day of July, nineteen hundred and ten, and of their clerical assistants, one hundred thousand dollars.

To enable the Government to participate in the International Agricultural Exhibition and the International Exposition of Fine Arts, to be held at Buenos Aires, Argentine Republic, beginning in May, nineteen hundred and ten, and to participate in the Exhibition of Fine and Applied Arts to be held at Santiago, Chili, beginning in September, nineteen hundred and ten, and to provide for the compensation and expenses of commissioners thereto on the part of the United States, seventy-five thousand dollars.

For the expenses of the commission to attend the celebration of the centennial of the Republic of Mexico, to be held in the City of Mexico in September, nineteen hundred and ten, ten thousand dollars.

Three Latin-American Republics, Argentina, Chile, and Mexico, arranged for centennial celebrations on a large scale during 1910; Ecuador preceded these by an exposition held at Quito from August to November, 1909, which assumed an international character. Celebrations on a more limited scale took place also in other States of the group.

The plans for these various events, by the place they gave to education, recalled the purposes that animated the founders of the republics, and at the same time illustrated the present activity in respect to this interest.

The elaborate preparations for the centenary celebration at Buenos Aires included, besides the Pan-American Conference and the international agricultural exhibition mentioned in the President's message, other features related to education. Prominent among these features was the International Fine Arts Exposition, which emphasized in various ways the great importance attached to art as a factor in national development, both by the Government and by wealthy citizens. In the announcements of the commission, it was stated that in the small private exhibitions held each year in Buenos Aires, pictures and sculpture to the value of more than $200,000 are sold, and that the National Government, the provincial governments, the municipality of Buenos Aires and those of the principal cities of the country would be liberal purchasers of the works shown.

The government interest in the fine arts is indicated by liberal grants to the National Conservatory of Music the School of Drawing, and the School of Art.

The International Exhibition of Hygiene was held in connection with the International Congress of Medicine in which eminent physicians from many different countries participated. The hygienic

exhibit was planned with special reference to recent efforts for improving the sanitary condition of the capital. For this purpose the Argentine Congress in its last session authorized the President to expend 18,000,000 pesos.[a]

Chile celebrated its national centenary by an International Agricultural and Industrial Exhibition which opened at Santiago, September 18, 1910. Exhibits, both pictorial and statistical, indicated the relation of technical and scientific education to industrial prosperity.

As in that of the Argentine Republic, a feature of the Chilean celebration was an International Exposition of Fine Arts. This exposition was held in the newly erected Palace of Fine Arts which will remain as a permanent memorial of the occasion. It comprises the four sections of international, national, and retrospective national art, and art as applied to industries.

The centennial, for which the Government of Mexico made lavish provision, commemorated the efforts of a hundred years ago, on the part of native patriots under the lead of the heroic priest Father Miguel Hidalgo, to secure for Spanish citizens born in Mexico the same political rights that were enjoyed by immigrants constantly arriving from Spain. This endeavor is regarded as the initial event in the series of struggles which ended with the establishment of the Republic in 1857.

It was decided by the national commission in charge of the centennial arrangements to use the funds at their disposal for permanent works of national importance, and the month of September was practically given over to dedicatory exercises in the City of Mexico.

The ceremonies relating particularly to education, as announced in the programme issued by the commission, were as follows:

September 2: Opening of the hygiene exposition under the auspices of the superior board of health, showing the progress of Mexico in hygiene and sanitation from 1810 to 1910.

September 6: Flag parade by school children.

DEDICATIONS.

September 5: The new seismological station, by the minister of fomento; the amphitheater of the National Preparatory School, by President Diaz and the minister of education, Justo Sierra.

September 7: Two new high schools in the Plaza de Villamil, by the minister of education.

September 9: The new normal school for women.

September 12: The new normal school for men, by President Diaz; placing in the Real Seminario de Mineria a tablet in honor

[a] The current exchange value of the Argentine peso is 96½ cents.

of students who participated in the war for independence, by governor of federal district and city council.

September 22: The National University, literary and scientific festival, President Diaz and Minister Sierra participating.

Unusual interest attaches to the inauguration of the University of Mexico, which existed heretofore in an embryonic form represented by the National Medical Institute, and special schools of jurisprudence and science. The full scheme of the National University has not yet been published, but its inauguration in this eventful year marks it as typical of the highest aspirations of national life.

The United States was represented at the centennial ceremonies by a delegation appointed by President Taft, consisting of General Curtis Guild, Jr., former governor of Massachusetts, and eleven special representatives. General Guild bore the title of ambassador extraordinary to Mexico and the other members of the delegation the title of ministers plenipotentiary.

Educational Notes.

While in many respects the Latin-American countries have marked individuality, they show in regard to education many common characteristics. Primary education is not widely diffused in any one of the States as would be inferred from both the official statistics of primary education and the high ratios of illiteracy. But in estimating this condition it is necessary to keep in mind the social customs and traditions inherited from the Spanish ancestry, the long-continued political disturbances, the general state of the agricultural regions, as well as the mixed character of much of the population. Under such conditions it is impossible to secure general public sentiment or support for popular education. Outside of the chief cities what has been done to promote the interest, even in the most progressive of the Latin-American States, is the work of leaders who have kept steadily in view the relation between popular intelligence and the welfare of republics.

The principal cities of these various States, and in particular the capitals of the Argentine Republic, Chile, and Mexico, have at present very good systems of public schools, many of which bear favorable comparison as regards grading, buildings, and standards with the city schools of our own country. Professional training for teachers is generally fostered, and the normal schools of Mexico, Bolivia, Brazil, the Argentine Republic, and Chile are of a high character.

Secondary education is maintained by both public and private agencies and follows pretty closely the plan of the modern side of the French lycée; in Chile, German models prevail. The secondary schools, *colegios* and *liceos*, are the schools of the directive classes and

prepare students for admission to the highly specialized university faculties.

The most recent developments in public education relate to the establishment of industrial and technical schools and the corresponding extension of the scientific faculties of the universities.

It is not the purpose here to present a complete survey of education in the countries considered,[a] but simply to bring together notes drawn from consular and official documents illustrating the activity in respect to education which marks the opening of a new century.[b]

MEXICO.

Consul Louis Hostetter writes that one of the greatest benefits accruing from the establishment of peace with the Yaqui Indians has been the enlargement and betterment of the public schools in the Mexican State of Sonora. Of the new institutions in the city of Hermosillo, he says:

"A short time ago a new school for boys was opened in a new building erected at a cost of $22,500 gold, and in February another new building for girls, Colegio de Niñas de Leona Vicario, was dedicated. It cost $32,500 and $10,000 for furnishings. It contains 13 class rooms, also 8 for library, gymnasium, music, etc. Domestic science, sewing, etc., are to be taught. The governor announced at the opening exercises that as the Yaqui troubles were at an end, it was the object of the officials to improve the school system in every manner possible, and that any improvements suggested by the principal or school board would be adopted; in fact, the idea was to make the schools of the State of Sonora the best and most advanced in the Republic. Money formerly used as a war fund against the Yaquis is to be used for the improvement of the schools. Another school is to be erected at a cost of $32,500, or more if necessary. There is an attendance of over 2,300 scholars in Hermosillo, and the schools are maintained at a cost of $40,000."

Consul L. J. Keena states that an appropriation of $7,500 United States currency has been made by the Chihuahua state legislature for establishing a state reform school for youthful vagrants and criminals, who will be taught scientific agricultural methods. It is hoped by this instruction to make them industrious citizens. The school will be situated about 17 miles from the city of Chihuahua.

Medical inspection of schools in the federal district of Mexico was provided for in a decree of July 1, 1896, organizing the general direction of primary instruction. In 1902 this service was extended to normal schools, and in 1908 the service was reorganized and greatly extended. The general plan of this service and its methods and results, so far as these can be set forth by diagrams, tables, and official circulars, formed a very interesting feature of the Third International Congress on School Hygiene, held at Paris from the 2d to the 7th of August of the present year.

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[a] The statistics of primary education for the Latin-American countries are given annually with the corresponding data pertaining to other foreign countries in the table of foreign elementary education included in the second volume of the Commissioner's Annual Report.

[b] For convenience of reference the countries with respect to which notes have been received at this office are arranged according to their geographical relations rather than alphabetically.

CENTRAL AMERICA.

In the movement for a closer union of the five States comprised in Central America, Costa Rica is rapidly assuming leadership, a fact that was emphasized by the choice of the site for the Palace of Peace, the gift of Andrew Carnegie, intended to mark in a signal manner the dawn of a new era in Central American affairs. The palace, which was erected in Cartago, was unfortunately destroyed by the earthquake disaster which occurred on May 4, 1910, but the donor has already indicated his purpose of renewing the gift.

At the second Central American Conference, which was held at San Salvador February 1 to 5 of the present year, a convention was signed providing for the establishment in Costa Rica of a pedagogic institute for Central America, and in accordance with this convention a suitable location for the buildings of the institute was selected in the vicinity of the city of Baba, and plans for the erection of the same are in progress. The choice of Costa Rica for a central institution of this kind is a fitting recognition of the progress of public instruction in this state. For primary schools alone the Government appropriates about $325,000 annually, or an average of $12 per capita of enrolled pupils; special appropriations have also recently been made for industrial education. According to official orders, issued in 1909, arrangements were made for establishing "preparatory schools of arts and crafts (Escuelas Preparatorias de Artes y Oficios) and schools of domestic instruction for women in the various provincial capitals."

The State of Guatemala has been particularly active in providing for the study of English in the public schools and, it is reported, has recently arranged for teaching this subject by the use of the phonopraph.[a]

Honduras is endeavoring to secure a better class of teachers for its primary schools by making increased appropriations for the salaries of teachers. The National School of Medicine has recently been put upon a firm financial basis, and it is hoped that it may soon recover its former prestige. About 25,000 pesos are annually spent to support students of engineering and other practical professions in the United States, Mexico, and Europe.

The minister of public instruction of Nicaragua, in a recent report, deplores the low condition of primary education in the Republic. Five times as many schools, he declares, are required as have been provided, in order to meet the actual needs of the population. There were four institutions of secondary instruction in the State in 1908, one each for boys in Managua, León, and Granada, and a normal school for young women in Managua. The enrollment was 876, with

[a] See Bulletin of the International Bureau of the American Republics, February, 1910, p. 294.

an average attendance of 788, or 90 per cent of the enrollment. The State pays at the rate of $5 a month for each pupil.

The programmes of the several secondary schools are all nonclassical. The course in the normal school includes methodology, pedagogy, Spanish, mathematics, zoology, botany, drawing, physical sciences, and singing. Higher education is represented by three faculties of law, which had, in 1908, an attendance of 28 students, and by the faculty of medicine and surgery, which had 11 professors and 26 students. The law course is very comprehensive, including philosophy of law, civil, comparative, and constitutional law, criminal law and criminology, medical law, statistics, and academic courses in Spanish and American literature, in history and political economy.

There is an agreement with other Central American states by virtue of which degrees granted in any one of them are recognized in Nicaragua as of equal weight with its own. Possessors of degrees granted in foreign countries must pass a brief examination and prove the authenticity of the degrees. Twelve young Nicaraguans were selected for education in other countries in 1908 at the expense of the State. Of these, five were sent to Chile, six to the United States, and one to Italy.

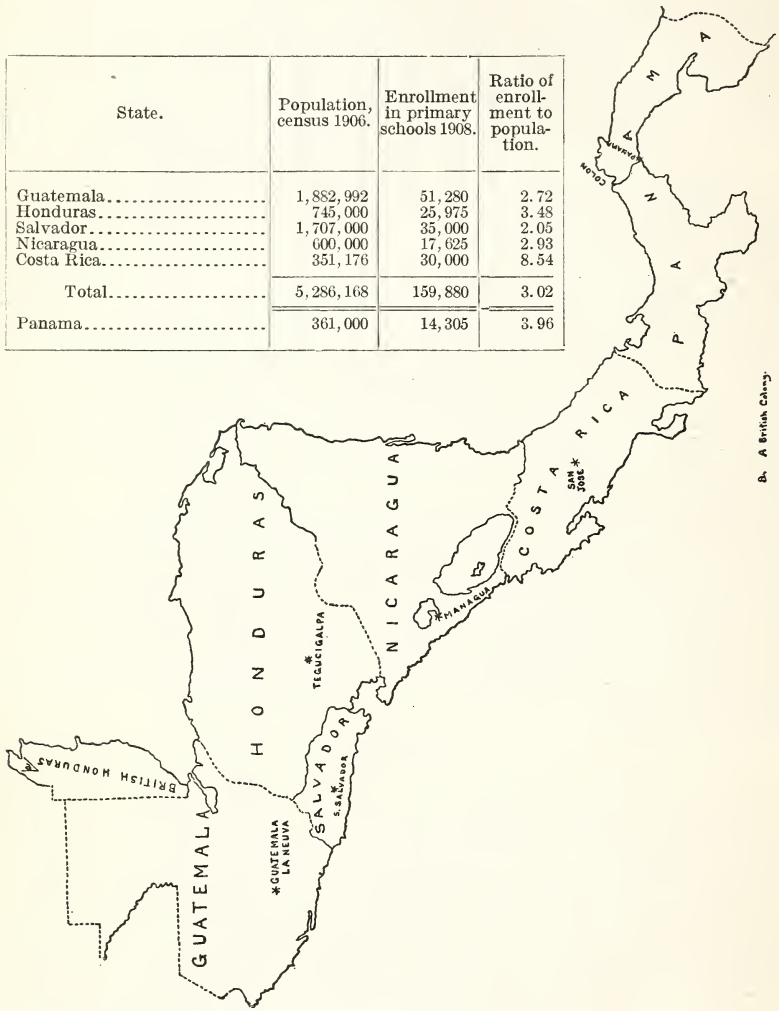
The Government of El Salvador maintains a system of national primary schools which are intended to be models for those supported by cities and departments. The National University comprises faculties of medicine, pharmacy, natural sciences, dental surgery, a school of law, and a school of engineering. The Government also maintains a National School of Agriculture and a practical school of arts and trades.

PANAMA.

In Panama the control of education is centralized in the National Government. The capital city is the seat of several important institutions, among them a National School of Music and Declamation, one of Arts and Trades, a National Museum, and a Municipal Library. The lately established National Institute comprises a normal school, a high school for boys, a business college, and a college of languages. The State bears the expense of the professional education of 62 students (47 boys and 15 girls) in the colleges of the United States and Europe. Recently the Government has secured permission from the United States to establish at different places in the Canal Zone schools for both sexes of Panamanians. These schools are to be taught by natives, and the expenses to be borne by the state treasury. In all the colleges and official schools of the capital and of the chief cities—Colon, Bocas del Toro, and David—the English language forms a part of the course of instruction.

The relative areas of the States of Central America are indicated by the map below. The table accompanying it brings into comparative view the population and school enrollment of the several States.

State.	Population, census 1906.	Enrollment in primary schools 1908.	Ratio of enrollment to population.
Guatemala	1,882,992	51,280	2.72
Honduras	745,000	25,975	3.48
Salvador	1,707,000	35,000	2.05
Nicaragua	600,000	17,625	2.93
Costa Rica	351,176	30,000	8.54
Total	5,286,168	159,880	3.02
Panama	361,000	14,305	3.96



MAP OF CENTRAL AMERICA AND PANAMA.

CANAL ZONE.

The influence of the educational work now going on in the Canal Zone, under the auspices of our own Government, upon current movements in Latin-American states can hardly be overestimated. Naturally, primary education is our first concern. From the official report covering the year 1908–9[a] it appears that a census of the

[a] Report of Hon. J. C. S. Blackburn, head of department of civil administration.

children of school age and the children enrolled in school is carefully kept, and, in order to prevent the waste of time and effort on the part of pupils, from their enforced transfer from school to school through the shifting of the laborers, attempts are made to unify the courses of study in all the primary schools of the zone. In March, 1909, these schools numbered 29, scattered in 21 towns along the line of the canal from Panama to Colon. Of the total number, 12 schools were for white children, with an enrollment of 675, and 17 for colored children, with an enrollment of 1,417.

Two high schools were provided during the year, one at Culebra and one at Cristobal. Children at other points in the zone requiring high-school instruction were provided with transportation over the railroad by the commission to attend school at those two points. Instruction was given in algebra, geometry, physical geography, general history, botany, English, German, French, Spanish, and Latin. The normal amount of work carried by each high-school pupil was four subjects. The total enrollment of high-school pupils during the year was 25 children.

Experiments were made with school gardens at a few points and met with sufficient success to warrant their establishment next year at every school where there is available ground. The only expense attending their establishment is the cost of fences and water connections.

In some of the schools the teaching of Spanish has been extended down from the high school and seventh and eighth grades to the fifth with success, probably due in a large measure to the opportunity pupils have of speaking the language outside of school hours.

In January arrangements were made with the sanitary department for a monthly medical examination of the pupils in the white schools, and each child was examined once during the year for eye, ear, nose, and throat trouble.

The following summary of a report by the superintendent of schools is taken from the Canal Record:

In his report for October the superintendent of schools states that more than half of the teachers in the schools for white children are graduates from universities or normal schools in the States. There are 35 teachers for the schools for white children, and of this number 12 hold A. B. degrees, and 11 certificates from normal schools, while all of the teachers have had two or more years of successful experience in the States or the Canal Zone.

"So far as my experience extends I feel that the zone system of schools will not suffer by comparison with any in the States of like size. Personal inspection of all the white schools, and reports made by supervisors, justify the belief that inadequate school facilities are not among the sacrifices made by families who come to the Canal Zone. There is some inefficient teaching, but not more than is to be found in any system of this size."

Three high schools are maintained at the present time—one at Cristobal with an attendance of 20 pupils, one at Gatun with 8 pupils, and one at Culebra with 15 pupils. Of the total number of pupils 11 are being transported to Cristobal and 11 to Culebra.

The superintendent states:

"As to the quality of the work, no disparagement is meant the teachers when I say that it is not such as will be accepted by the leading colleges and universities in the States. None of the higher schools of any standing will accept work done in

high schools with less than three teachers, all of whom must devote their time to the teaching of high-school subjects."

To overcome the disadvantages presented by maintaining three small schools, and so dissipating the energies of the teachers by obliging them to teach in all departments, to make it possible to establish a good working library at small cost, and to gain for the high school the advantage of the school enthusiasm that comes with numbers, it is recommended that the high schools be concentrated in one school at Cristobal with a half-day session beginning at 1.15 o'clock and closing at 4.15 o'clock in the afternoon. The children from points along the line would go to Cristobal on the train leaving Panama at 10.45 in the morning and return on the train leaving Colon at 4.30 in the afternoon. The superintendent states that "the certificate of such a school would be honored anywhere, and the arrangement would give the zone a system from the first grade up as complete and as thorough as any in the States."

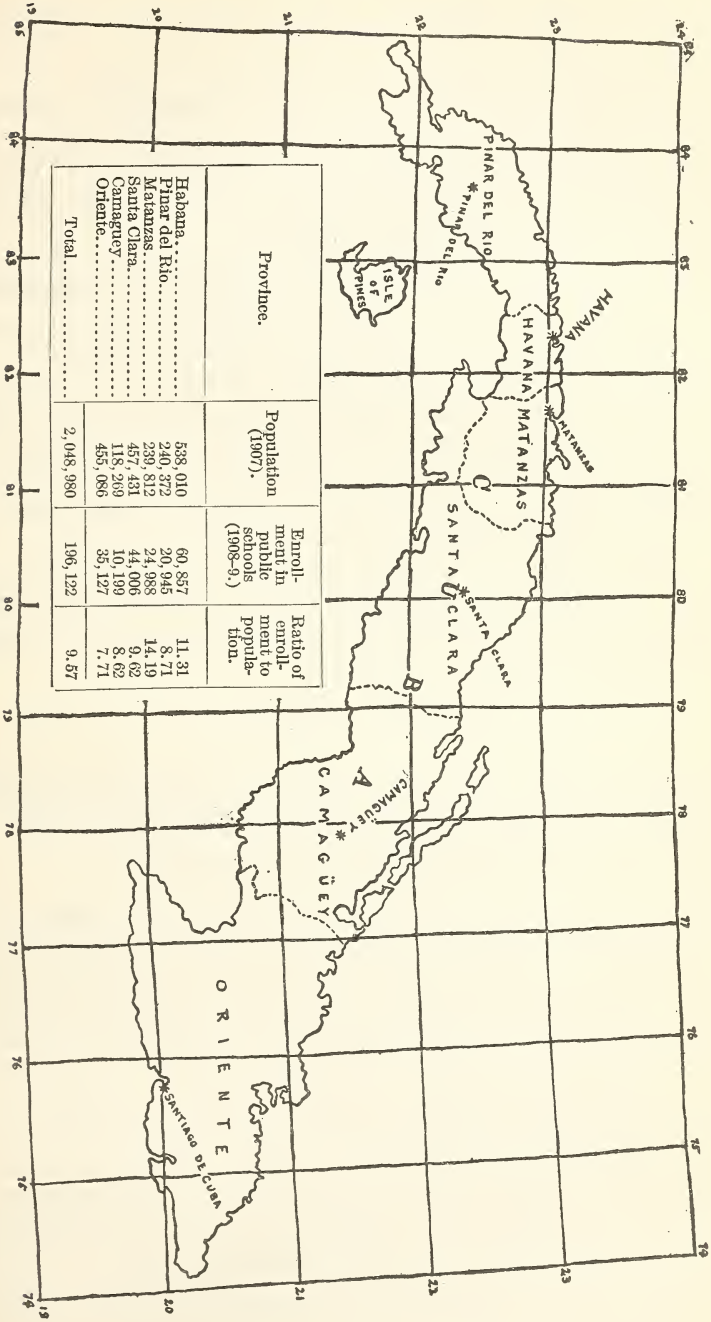
Answering an inquiry as to the feasibility of compulsory education in the Canal Zone, the superintendent says that such a law would operate principally among the non-American children, and that the present appropriation is inadequate to meet the demands that would be made by enforcing the law. He believes, however, that there are urgent social reasons why the Government should enact a compulsory education law, as the social future of the Canal Zone depends largely upon the future generations of the natives and the negroes living here. With this idea in view the course of study in the schools for colored children has been reorganized, with the end of laying more stress on industrial than cultural work. Reading, writing, spelling, the fundamentals of arithmetic, hygiene, and language now constitute the curriculum in the colored schools. Some American history and geography are given, but as reading lessons, not as history or geography lessons. In addition it is planned to do some elementary work in agriculture and horticulture. To this end the commission has been asked to appropriate small plats of ground near the Culebra building.

The superintendent of schools has been directed to prepare a report on the question of industrial education and institutions for the correction of juvenile offenders.[a]

CUBA.

The recent development of public instruction in Cuba is sufficient of itself to justify the events which led to the independence of the island. The work of organizing public instruction began under American auspices. In 1904 there were reported 1,936 public schools with an enrollment of 143,085 pupils; in 1909 the pupils in public schools numbered 196,122, an increase of 53,037 pupils, or 37 per cent in five years. In the latter year there were also reported, outside of the city of Habana, 305 private schools with an enrollment of 13,050 pupils. This brings the total enrollment in elementary schools to 209,172, or very nearly 10 per cent of the population, the highest proportion reached by any one of the Latin-American countries. It is worthy of note, also, that whereas formerly few schools were found outside the principal cities—Habana, Matanzas, Santiago de Cuba, and their immediate suburbs—at present the schools and pupils are very well distributed throughout the island. This fact appears by the comparison of the enrollment with the population as in the table accompanying the map on the following page.

[a] See Canal Record, November 10, 1909, p. 86.



Province.	Population (1907).	Enrollment in public schools (1908–9.)	Ratio of enrollment to population.
Habana	538,010	60,857	11.31
Pinar del Río	240,372	20,945	8.71
Matanzas	239,812	24,988	14.19
Santa Clara	457,431	44,006	9.62
Camaguey	118,269	10,199	8.62
Oriente	455,086	35,127	7.71
Total	2,048,980	196,122	9.57

MAP OF CUBA.

The efforts to extend elementary education have had a stimulating effect upon secondary schools which, even in Habana, were disorganized during the long period of revolutionary struggles. The six provincial institutes which maintain courses of instruction leading to the bachelor's degree are now aided from the public treasury, and the salaries of professors have been materially increased. The University of Habana reports for 1909 a total of 634 students, many of whom were enrolled in more than one faculty.

According to the decree of the military governor of Cuba, bearing date June 23, 1899, and still in force, graduates of foreign institutions, in order to practice their respective professions in Cuba, must present their degrees to the department in charge of public instruction, and the said degrees will be registered by the University of Habana when the applicant has fulfilled certain requirements. After the degree has been registered, the applicant, upon the payment of the necessary fees, which are fixed at $35 in United States money or its equivalent, must pass an examination which is conducted by a board of five professors, three of whom, at least, must belong to the faculty corresponding to the profession which the candidate desires to pursue. This order accords fully with the purpose of the Cuban authorities to maintain the high professional standards which have been set by the University of Habana.

ARGENTINE REPUBLIC.

The President of the Argentine Republic has issued a decree establishing an important new educational institution in Buenos Aires, to be called the Higher Normal School (Escuela Normal Superior). Its plans are outlined by Consul-General R. M. Bartleman:

The object of this new school is to provide more teachers for the various primary and secondary schools, which are in constant need, with the rapid growth of the school population, of more trained educators. The course in the new school is three years. Only graduates of normal schools or those who have completed similar studies may enter it. The course is very complete, especial stress being laid on mathematics and the sciences, on the history and science of education, and on the art of teaching.

By another decree the President is authorized to establish rural normal schools for both sexes at San Justo, in the province of Santa Fe; Victoria, in the province of Entre Rios; Dolores, in the province of Cordoba; De la Banda, in the province of Santiago del Estero; Chilecito, in the province of La Rioja; Rosario de la Frontera, in the province of Salta; and at Resistencia, in the territory of the Chaco. It has also been stated that a normal school would soon be established at some point in the territory of the Chubut, probably at Puerto Madryn. President Alcorta emphasizes in this decree the urgent necessity of providing the rural districts with adequately trained teachers, and of devoting more attention to children of school age in outlying districts. These new normal schools are to be organized and opened as soon as possible.

The present minister of public instruction, Dr. Rómulo S. Naón, is extremely anxious to bring the teaching staff of the Republic to a high state of efficiency, this being a part of his programme of educational reform; and the creation of these new normal schools is understood to be part of a plan now being worked out toward this

end. It will be remembered that the first normal schools in Argentina were founded by teachers brought from the United States by President Sarmiento.

Consul-General R. M. Bartleman reports that the large modern three-story building of the Government Industrial School in Buenos Aires, completed at a cost of $1,000,000 Argentine paper ($424,600 United States currency), was opened on May 24, and over 500 pupils are receiving instruction. This new building is completely equipped with apparatus for practically teaching nearly all mechanical employments, instruction also being given in some branches of electricity. Its chemical laboratory and scientific library are both good.

SECOND INTERNATIONAL CONGRESS OF AMERICAN STUDENTS.

On July 15, 1910, the Second International Congress of American Students, organized by the University Federation, convened in Buenos Aires. In the discussions of the congress special emphasis was placed upon subjects pertaining to the medical profession, including the equipment required by the medical schools to meet the remarkable advance in medical science and the conditions for admission to the practice of the profession.

Mr. C. H. Sherrill, president of the United States University Club at Buenos Aires, reports that he held a reception in the legation offices, on the night of July 16, in honor of the Congress of American Students to which he had been accredited as a delegate by Yale University. This reception was attended by the legation staff, delegates to the students' congress, and representatives of different South American universities as well as of many universities of our own country. On account of the small representation of delegates to the congress from the United States, Mr. Sherrill was authorized to appoint delegates from resident graduates, and accordingly a company of delegates, almost all natives of Argentina, was made up, representing 21 American colleges and universities. This action proved to be a very happy incident in the proceedings of the congress, as it not only increased the number of colleges represented but made a strong impression of the cordial spirit of fraternity between the South American graduates and their colleagues from this country.

An interesting feature of the centennial celebration in Buenos Aires was a series of lectures delivered in that city by M. Clemenceau (the former premier of France) on the history of democracy from the earliest times to the American Declaration of Independence. In his first lecture M. Clemenceau aptly discriminated between the "practical Anglo-Saxon democracy of North America and the idealist Latin democracy of South America" and expressed the hope that the two would "continue their onward march, not with any hostile intent against each other, but in a way which would ultimately bring them together."

MEDICAL INSPECTION AND PUBLIC HYGIENE.

Medical inspection of schools is thoroughly organized in Buenos Aires and also in the city of La Plata. Preparation for the service of public hygiene is a particular feature of the government schools at Rosario. A very complete brochure on the subject was prepared for the International Exhibition of Hygiene at Buenos Aires, copies of which were forwarded to the International Congress on Hygiene at Paris.

BOLIVIA.

The progress along educational lines in the Republic of Bolivia is indicated by the fact that whereas in 1904 the legislative appropriation for this service amounted only to 128,000 bolivianos, the budget for the present year amounted to 1,900,000 bolivianos, or more than ten times the earlier amount. In accordance with the resolutions adopted by the educational congress of 1908, the system of primary and secondary instruction has been put on a much firmer basis and the schools under local authority brought into closer conformity with the official programmes followed by the free national schools. The normal school founded in Sucre has already achieved international reputation. A college conducted in English, and known as "The American Institute," was established about four years ago at La Paz. This institution has proved so thorough and efficient, and has given such great satisfaction in regard to the mastery of English and modern subjects, that the Government has decreed that its certificates or diplomas shall admit the holders to the universities of the Republic without examination.

BRAZIL.

A presidential decree, dated September 23, 1909, authorizes the establishment of free industrial schools in the capitals of the States. In order to make industrial education more general throughout Brazil, the Government offers to aid the state administrations, municipal governments, and private associations which shall establish trade schools. Trade schools are now established in the States of Piauhy, Maranhao, Rio Grande do Norte, Parahyba, Pernambuco, Alagoa, Espirito Santo, Rio de Janeiro, Parana, Matto Grosso, and Rio Grande do Sul.

CHILE.

Chile has a well-organized system of public instruction under strong central administration, and consequently the facilities for education are more uniformly distributed than in other states here considered. Agricultural education has been specially promoted by the "Sociedad Nacional de Agricultura," and the Government contributes liberally toward the maintenance of the same. The Agricultural Institute and the Industrial Agricultural School at Chillan are other estab-

lishments for practical agricultural instruction, and besides these the Government maintains a number of model farms and contributes largely toward the expenses of maintaining the Quinta Normal at Santiago, in which are comprised a museum, a zoological garden, and a number of experimental stations for the cultivation of trees, vines, etc. The National Agricultural Institute, situated at Santiago, maintains professorships in rural economy, arboriculture, viticulture, and vinification, agricultural chemistry, rural legislation, also a veterinary school.

At Copiapo there is a practical school for mining, and at Santiago and La Serena are schools for practical instruction to mining engineers and miners.

COLOMBIA.

The Government of Colombia has begun the work of reorganizing the system of public instruction by appointing a committee to investigate the systems of foreign countries and by the establishment of five additional normal schools—three for men and two for women. Each of these schools is to be allowed a subvention of $400 a month, which will serve as tuition fees for poor but promising students who shall have signified their intention of serving as public school teachers. The official programme for the normal schools is extensive and includes practical branches adapted to the different classes of students. A practice school is an adjunct of each of the normal schools.

A congress of students of the three Republics which at one time constituted the Great Colombia—that is to say, Colombia, Ecuador, and Venezuela—was held in Bogota, capital of the Republic of Colombia, from July 20 to August 7, 1910, in honor of the one hundredth anniversary of the proclamation of national independence of Colombia. The object of the congress was to strengthen and cement the relations of friendship and good will that now exist among the university students of the three Republics, to discuss educational and scientific subjects of general interest, and to encourage the adhesion of the educational centers of the three nations to the League of American Students of Montevideo, Uruguay. Among the prominent subjects of discussion was that of the desirability and possibility of the unification of university curricula and the value of college degrees.

ECUADOR.

The industrial awakening in Ecuador is indicated by the growing appreciation of the importance of higher scientific and technical training. During the year the Government sent about 100 young men to the different colleges and universities of the United States in order that they might prepare themselves to become civil, mechanical, electrical, naval, and mining engineers. Another 100 were sent to Europe for the same purpose.

PARAGUAY.

Higher education in Paraguay is provided in the University of Asuncion, which offers a six-year course in law, social science, and medicine; shorter courses in pharmacy and other technical branches have recently been added. This university shows very plainly the influence of the French system, and relations between the students of the two countries have been promoted by the action of the French authorities in facilitating in various ways the admission of students from all the Latin-American countries into the educational institutions of Paris and of the Departments.

PERU.

Measures have recently been taken to enforce more rigidly the high standards of admission to the National School of Agriculture. The official orders on this subject prescribe that the "candidate for admission must be between 15 and 20 years of age, of good character, and of sufficient mental attainments to pass an examination on the primary subjects taught in the public schools."

Each Department is allowed a certain number of scholarships, the National Government paying the necessary expenses, i. e., subsistence, lodgings, and laundry, and a weekly stipend to such students as are fortunate enough to secure scholarships from their respective Departments. The instruction imparted in this school is of an eminently practical kind, and the aim constantly kept in mind is that the graduates are to be effective farmers, who on account of their familiarity with the most advanced systems of agriculture, will become leaders in all matters of agricultural reform.

An executive decree has recently been issued authorizing the attendance of teachers in the active service on special courses in methodology maintained in the normal schools. The decree also provides for the admission to the normal school for men of 50 day pupils, 16 to 25 years of age, who pass the required examinations. By this means it is hoped to increase the number of intending teachers and also to extend the influence of normal-school training.

During the present year the Government appointed an educational commission charged with the duty of preparing an educational bill to be presented at the next national congress.[a]

URUGUAY.

Uruguay is well supplied with secondary schools and higher institutions. At the head of the educational system is the University of Montevideo, with faculties of law, medicine, the arts, agriculture,

[a] The commission is composed of five members, as follows: President, Dr. Manuel V. Villaran, former minister of justice and instruction; secretary, Dr. E. H. Bard, educational adviser to the minister of justice and instruction; Dr. Alejandro Maguina, fiscal of the supreme court and former director-general of secondary and higher instruction; Dr. Carlos Wiesse, professor of history in the University of San Marcos; and Dr. J. Matias Leon, senator and former minister of justice and instruction.

mathematics, and social sciences. Recently there has been a marked increase in the enrollment in primary schools, and the Government has taken measures to so increase the number of these schools that there shall be one for every 1,000 inhabitants. The law requires that all teachers in state schools shall possess a good knowledge of the English language, and courses in the English language and literature are provided at the university.

VENEZUELA.

In a special report on primary education in Venezuela, the American consul at La Guaira, Mr. Isaac A. Manning, states that at the close of 1909 there were 1,543 primary schools in the State with an enrollment of 48,718 pupils. On this enrollment, a total average attendance was maintained of 35,114, equivalent to 72 per cent of the enrollment. Of the entire number of pupils, 3,091 were above 14 years of age. The number between 7 and 10 years was 17,945, and between 10 and 12 years, 12,921. The Government maintains at Caracas the National Academy of Fine Arts, the School of Arts and Trades, and the Central University; the University of Los Andes is situated at Merida.

From the foregoing notes pertaining to education in the States of Central and South America certain tendencies are apparent. The higher education is drawing the representative men of the different States into closer and closer relations and thus is making for political concord; at the same time the industrial and commercial expansion, which is not limited to a few States, has created a general demand for men of scientific and technical training to exploit the resources of the mineral regions and direct the vast and ever increasing agricultural enterprises. It is a hopeful sign that with this social and economic activity, the imperative need of a wider diffusion of primary education is commonly recognized. The need is reiterated in the messages of presidents, in the reports of ministers of public instruction, and in political addresses. It forms a leading subject in the organ of the Central American Union which officially declares that—

> Without regard to differences of religious and political creeds or forms of government, modern society recognizes that the collective interest and the common and the individual welfare depend upon the development and perfection of general education. * * * For this reason no true republic can disregard the interests of public instruction, and especially those of the elementary school, the indispensable institute for the masses, the radiating center of democratic principles and social fraternity.

CHAPTER X.

EDUCATION IN FRANCE.

France, Republic: Area, 204,092 square miles; population, 39,252,267 (1906). Civil divisions having special functions in educational administrations: Departments (90 in number, including 3 in Algiers), communes (cities or villages).

TOPICAL OUTLINE.

PART I. SYSTEM OF TECHNICAL INSTRUCTION.

Historical review—The congress of 1889—Typical schools of the primary class—The present tendency—Secondary technical schools—The higher technical institutions.

PART II. THE SYSTEM OF PUBLIC INSTRUCTION.

Secondary and higher education: Current tendencies—Statistics, current and comparative: Secondary schools for boys; secondary schools for girls; the universities and special schools.

The state system of primary instruction: Review of the half-decade 1901–2–1906–7—Supply of schools—School population and enrollment—Teachers: Number and classification; salaries, professional training—The higher primary normal schools—Teachers' Federation versus the Government—Efficiency of the schools: Size of classes; average attendance; certificate of primary studies; the higher primary schools—Agencies complementary to the schools—Libraries and Musée Pédagogique—Expenditures.

PART I. TECHNICAL INSTRUCTION IN FRANCE.

HISTORICAL REVIEW.

The history of technical education in France, which covers more than a century, divides into three quite distinct periods. The first of these periods, extending from 1789 to the restoration of the Bourbons, was marked by the creation of national institutions for utilizing the forces and furthering the conquests of science. Chief among these were the Museum of Natural History, established in 1793; the Conservatoire National des Arts et Métiers and the École Polytechnic, both created in 1794.

The second period, extending from 1815 to the Franco-Prussian war, was distinguished by private enterprise in this field of activity. A signal example is afforded by the special School of Commerce and Industry founded at Paris in 1820 by two merchants of the city. After a varying history of nearly fifty years the school was acquired by the Paris Chamber of Commerce in 1869, since which date it has enjoyed uninterrupted prosperity.

The precedent set by the School of Commerce excited similar efforts in respect to other industrial interests and in 1829 a second technical

school, the École Centrale des Arts et Manufactures was opened in Paris, also under private auspices. This school, which is still flourishing, began operations upon the eve of the Revolution of 1830, which gave the direction of public affairs to the bourgeois. "As a class," says Proudhon, "the bourgeois prize comfort, luxury, the joys of life, in other words the possession of wealth." Thus by habit and temper they were specially fitted to exploit the material resources of the country and to apply the resources of science and the new forces of steam and telegraphy to the uses of industry and trade; the brief period of their supremacy, 1830 to 1848, was marked by great industrial activity.

Under the impulse of liberal ideas which brought about the second revolution, the social improvement of the masses became a matter of equal solicitude with their industrial training. The double purpose is illustrated by the scope of the Philotechnic Association, founded at Paris in 1848. Like the Polytechnic Association which dates from 1830, the later society aimed to impart scientific and technical instruction to the industrial classes by means of lectures and systematic lessons. But the Philotechnic also placed stress on benevolent and social efforts for the young who were drawn, without adequate care or protection, into the ranks of commerce and manufactures. The work of these two societies, which are still in active operation, increased rapidly, and auxiliary branches were formed in all the chief cities of France. Both societies were in time recognized by special decrees as of public utility, the Polytechnic in 1869 and the Philotechnic in 1879. As their subsequent history shows, both had the vigor of public agencies with the freedom and flexibility of private bodies.

The movement for industrial training was widely extended also by the trade unions, or syndicates of workmen, which multiplied rapidly after 1830. These associations were then, as they still continue to be, centers of political and economic agitation in which social and economic theories, those of Fourrier, Proudhon, etc., were passionately discussed. The leaders in these unions also worked to raise the standard of the arts and crafts which they represented, as many of the principal trade schools of France attest by their crude beginnings in this period of unrest.

The commercial importance of all this activity, and especially of the prolonged and widely diffused efforts for the improvement of the artisan class in France, was signally shown by the London Exposition of 1851. The attention of the world was here drawn to the artistic superiority of French manufactures, and as a consequence the year of the coup d'état, which gave to the artistic industries of France new impulse by the requirements of a luxurious court, brought also the added stimulus of foreign demands.

Thus, before the present Republic was created technical institutions of the higher order had been firmly established in France, and numerous specialized trade schools were in vigorous operation.

But, meanwhile, the industrial progress of the country was threatened by the changed conditions of apprenticeship in the shops themselves and a consequent decline of technical skill; the condition was greatly aggravated by the influx of people into the cities. In 1836 there were but three cities in France with a population above 100,000; in 1866 there were eight. The whole urban population which in 1846 comprised one-fourth the population of France had risen in 1872 to nearly one-third. The need of new agencies to deal with the new conditions was recognized by M. Duruy, one of the greatest among the many able men who have served France as minister of public instruction. He sought to turn the whole force of the system under his direction to the economic improvement of the nation. His practical reforms began with provision for the higher instruction in the sciences, but his purpose embraced the entire scheme of public instruction. "Without declassing any," he says, "this should elevate all in their varied conditions, the workman in the fields and cities, by means of the primary schools; artisans, traders, and agriculturists, by means of special schools." The ministry of M. Duruy closed on the eve of the disastrous events which gave unexpected emphasis to his ideas. It was in the midst of the siege of Paris that a school was opened by the mayor of the fifth arrondissement, for the purpose of providing employment for the numerous children who were left without occupation, as well as for the teachers who had been compelled to withdraw from the suburbs of the city. The school survived the siege and under the advice of M. Salicis, inspector of public instruction, whose name it bears, it was taken over by the city as an experimental school for a proposed scheme of manual training. It offers at the present time the most complete illustration of manual training in elementary grades, although this has become a common feature of the elementary schools of the capital. Following soon after, came the second step in the municipal movement. In 1872, M. Gréard, at that time chief of the Paris system, submitted to the city council a proposition for the opening of a school for instruction in the wood and iron industries. His powerful advocacy carried conviction and the École Diderot was the outcome.

The success of the school was such that a special commission was appointed by the prefect of the Seine to investigate the subject and to advise as to the means of supplying the increasing demand for schools of the new type. Other cities, Lyon, Havre, Rouen, etc., followed the example of Paris, and an era of municipal activity in regard to technical instruction succeeded to that of private enterprise.

The state organization of primary technical instruction in France owes its inception to a discussion in the Chamber of Deputies in Jan-

uary, 1878. The results of French industry, as displayed in the Paris Exhibition of that year, were held to be unsatisfactory. Chambers of commerce and leading manufacturers urged the matter upon the attention of the Government, and propositions looking to the creation of an independent system of primary technical instruction were submitted to the Chamber. These were rejected, but it was finally agreed that primary technical training should be annexed to the existing primary schools. Hence, the law of December 11, 1880, which provided for schools of manual apprenticeship (écoles manuelles d'apprentissage) to be assimilated, as regarded support and regulations, to the higher primary schools having a distinctly technical character (écoles primaires supérieures professionnelles).

The same year, 1880, the legislature authorized the creation of another order of schools, the écoles nationales professionnelles, which were intended to illustrate the kind of primary education that might replace in society the decaying apprenticeship system by an effort beginning with the infant class and following the child to the adolescent period. As explained by M. Buisson, the general director of primary instruction, these schools are—

> not, in any sense, special technical schools, more or less complete schools of engineering (écoles d'arts et métiers); they are associations of schools comprising an infant and a primary elementary school, and at each stage technical instruction which, commencing from the earliest age, when it is of little importance, continues up to the very end of the course, when it becomes of the first moment. When he has arrived at this final stage the apprentice, who now only needs the practice of his trade to become a workman, leaves the national school and goes either into a workshop or into a technical school, in the proper sense of the term.

It was believed that such schools would "lead a youth to the threshold of the factory or the engineering school, armed not alone with general and with special knowledge, but with the aptitudes and habits of work which would enable him after a few months of practice in a particular calling to become a finished workman."

Three schools of the character indicated were established in 1886 and 1887. They were supported by the State and with a fourth school subsequently opened have been the objects of really lavish expenditure. On the other hand, the technical high schools, which have been gradually converted into practical schools of commerce and industry, are municipal or communal schools, aided by the State and varying in equipment and in resources according to local conditions.

It may be said, then, that the third period in the development of technical instruction in France, the period of the Republic, has been marked by the controlling influence of municipalities and the National Government. Private enterprise and corporate action have not ceased, the associations that rose in the second period are in full

activity to-day, chambers of commerce and trade syndicates maintain technical schools and endow technical scholarships, but it is recognized that only national and city authorities can adequately provide for the industrial training of the masses.

THE CONGRESS OF 1889.

The great change that took place in the industrial and agricultural world in the decade ending 1889 was focused in the Universal Exposition held at Paris that year, and the significance of this change for education was the principal theme of the congress on technical education, perhaps the most notable of the series of congresses auxiliary to the exposition.

According to the decisions of this congress, technical instruction in its broadest sense has for its object the study of the arts and sciences, in view of their application to a definite trade or profession. The training must be as varied as the trades and professions, its degrees being determined in each case by the end in view. To avoid confusion it was decided that hereafter in international usage, the term "technical instruction," without a modifying word, shall be held to include both industrial and commercial training.

As regards the grade or stages of instruction in France, the congress defined primary technical instruction as that which is given in schools of apprenticeship and in the higher primary schools (i. e., schools for pupils above 12 years of age); secondary technical as the instruction given in the schools of arts and trades; superior technical, the instruction given in the Central School of Arts and Manufactures and in institutions of the same high order. This classification agreed in the main with the conditions under which technical instruction was carried on in France at the time.

TYPICAL SCHOOLS BELONGING TO THE CLASS OF PRIMARY TECHNICAL INSTRUCTION.

The municipal and national schools already referred to fall into the first class recognized by the Congress of 1889, i. e., that of primary technical instruction, and although they arose from conditions of life and of industry peculiar to France, nevertheless, as regards purpose and methods, they are types of what vocational schools must be, or at least incline to be, everywhere. Hence, detailed accounts of a few of these schools offer valuable suggestions to ourselves at the present time. Naturally, as Paris led in the provision for primary technical instruction at public expense, the schools of this city have formed models for the rest of France and are of chief interest to the foreign investigator. At the same time, it must be remembered that the Paris technical schools, of which there are now

fifteen (seven for boys and eight for girls), present a wealth of equipment, a perfection in detail, and a standard of achievement attainable only in a great center of manufactures and trade, and, it may be added, of luxurious tastes and requirements. Further, it should be said that while, nominally, the Paris schools are included in the state system of public instruction they are, in fact, under the supervision and control of the municipality, which jealously guards its independence. The schools are practically supported by the city, and so far from being subject to ministerial regulations furnish the model for national procedure. In Paris a child enters the infant school at about 3 years of age and the primary school at 6. Here begins a regular course of manual training which, in the case of boys, is generally conducted in a school workshop, and, in the case of girls, comprises sewing and the cutting of garments, millinery, and other feminine industries. As soon as the certificate of primary studies is gained, or at about 12 years of age, the pupil is eligible for admission to either a higher primary school or an école professionnelle.

The École Diderot.—For admission to the École Diderot, a boy must be at least 13 years of age and not more than 17. The following account of this school is taken from the report of a commission of experts,[a] who recently made an extended investigation of schools of its class in Europe:

The Diderot School, the first "professional" school created in Paris, had for its expressed object "the making of well-instructed and skillful workmen, capable of earning their living on leaving the school."

The instruction is both theoretical and practical. The pupils enter school at 7.45 a. m., and leave it at 6 p. m.; but there are two breaks, viz, 12–1.15 and 3.15–3.30. The school year commences on September 1 and ends July 31, the month of August being a vacation month.

The school claims to be, above all, a school of apprenticeship, the general instruction occupying only a secondary place. In fact, general instruction is reduced to the lowest limit in order to allow the pupils to spend as much time as possible in the workshop.

The course is of three years' duration. The programme, which may be divided into two parts, viz, theoretical and practical, is as follows:

École Diderot.—Programme of theoretical instruction.

Subjects.	Year, and hours per week.		
	I.	II.	III.
Arithmetic and algebra	2	1	1
Geometry	2	2	1
Theoretical and practical technology	3	1	1
Physics		2	
Hygiene and economics			2
Theoretical mechanics		1	
Drawing	4	4	4
French	1	1	
History and geography	1		

[a] New South Wales. Commission on primary, secondary, technical, and other branches of education, 1905.

The programme of practical or manual instruction includes forge work, turning (metal), fitting, etc., fine mechanical work, pattern making, carpentry and joinery, locksmithing, brazier's work, and plumbing. During the first year five and a half hours are devoted daily to these; during the second year, six hours; and during the third, seven and a half hours.

The organization of the practical work is very good. The pupils on arrival are distributed among the nine workshops, where manual instruction is given. In each section a first-year pupil is placed, as soon as possible, between a second and third year pupil.

In the forges, first-year pupils are strikers, etc., make up the fire, and in this way become familiar with their later duties.

As far as possible the work done is utilized. The work, in detail, consists of parts of complete machines to be later fitted up.

A large part of the tools and machine tools in the establishment is the work of the pupils. As there is no foundry in the school, the patterns made by the pupils are sent outside for the necessary castings, but the main part of the work is done in the school.

The work in the section of mechanics of precision comprises the making of geodetic and physical instruments. In these the last degree of care is necessarily taken as to exactness. Each student studies the tools he uses, first from a purely kinematic point of view, and then under supervision uses it for making a special piece of apparatus. In this way he better appreciates the conditions by means of which exactness is attainable.

The motive power is derived from two engines, a steam and a gas engine, each of about 15 horsepower. A second and a third year pupil are required to attend to the steam engine under supervision continuously for a week.

Twice a year the pupils of each section of the school execute the same piece of work, i. e., there is one piece of work for each section. This is done from drawings or sketches and without explanation, and marks are given, and also money prizes, according to the quality of the work so determined. Besides this, marks are given for theoretical and practical work, conduct in class and workshop, and each pupil receives a monthly reward in money based thereupon.

At the distribution of prizes at the end of July each year, each pupil who has acquitted himself well, in respect of his theoretical and technical studies, receives an indenture of apprenticeship (un brêvet d' apprentissage), and further a sum of money, and such tools as will enable him to carry out his work.

Several times a year pupils of each section visit suitable industrial establishments, under the guidance of the appropriate instructors, who give such detailed explanations as seem to him necessary. Each pupil makes a report, illustrated by sketches.

The École Estienne, an institution of even wider fame than the École Diderot, is an école du livre, and bears the name of a celebrated family of printers and publishers, whose first publications go back as far as the commencement of the sixteenth century. In 1881 the municipal council of Paris undertook "to create a school the object of which was to educate artistic workmen, qualified not only to carry out the work of ordinary typographers, but also that of allied arts." The school was opened in 1889, and in 1895 special buildings were erected, covering about 3,256 square meters on a plot of about 5,600 square meters. The cost of the buildings was $283,191 (1,415,959 francs). The annual budget, in round numbers, is 255,000 francs ($51,000).

The following particulars are set forth in the official regulations for the school:

The course lasts four years, and in certain cases may be extended to five years; from 75 to 90 pupils are admitted yearly.

Admission is by examination, the age for which is between 13 and 16; the pupil must be French and domiciled in Paris or its environs.

Pupils resident in Paris are admitted free. The suburban communes must pay 200 francs ($40) per annum for each pupil resident in the suburbs.

Breakfast is furnished gratuitously to pupils resident in Paris; those from the suburbs must bring their breakfast or pay at a rate fixed by regulation.

Instruction in the École Estienne.—The theoretical instruction has for its object the completion of the general instruction of the "apprentices," including "those indispensable ideas which should be possessed by every workman who desires to excel in his craft."

The principal subjects of the theoretical course are: (i) French language; (ii) history and geography; (iii) the reading of Greek for typographers; (iv) the conceptions of mathematics and geometry; (v) the physical and natural sciences as applied to the arts and to the publishing industry; (vi) the history of art; (vii) the history of printing and publishing; (viii) modeling; (ix) the drawing of ornaments, etc.; (x) drawing at sight and industrial drawing; (xi) gymnastic and military exercises.

The theoretical instruction is given every morning from 8.30 till 12, and is general for all pupils of the first and second years. In the third and fourth years it is divided into three orders of special courses, viz, (1) for engravers, lithographers, gilders; (2) for compositors, photographers, photogravurists, etc.; (3) for typographic founders, copper-plate workers, etc. The courses are specially adapted to the practical requirements of each.

Pupils of the third and fourth years take theoretical courses for four mornings a week; the whole of Friday and Saturday is passed in the workshop.

The technical courses occupy from 1 to 6 in the afternoon, Monday to Saturday, inclusive, for all pupils. They embrace fifteen different callings, viz:

Typography.—Type founding, composing, and adjusting; printing with hand and machine presses, photography and galvanoplastic work.

Bookbinding.—Bookbinding, gilding on leather. (Three special teachers also come once a week to give instruction in gilt-edging, marbling, chasing upon leather, etc.)

Engraving.—Engraving upon wood, engraving in relief, copper-plate engraving, printing.

Lithography.—Lithographic engraving, chromolithography, lithographic drawing, lithographic writing, printing with hand and machine presses.

Photography.—Photography and such derivative processes as photogravure, phototyping, etc. (This part of the instruction does not aim at being completed in the school.)

Examinations and discipline, École Estienne.—In each branch of the school there is an examination at the end of each four months (trimestre; really about three and one-half months), when the pupils are arranged in order of merit. Those who do not obtain sufficient marks either repeat the work already gone through or are dismissed from the school, at the discretion of a superintending council (conseil de surveillance).

The final diplomas are a diploma of honor, an ordinary diploma or certificate, merely stating that the courses of the establishment have been satisfactorily followed during the four years.

Each pupil receives a book in which his marks are entered both for studies and conduct. It is delivered to him every Saturday evening, and must be returned on the following Monday morning at the school, signed by his parents or guardians.

Rewards are given in the shape of books, gravures, tools, or money. Pupils who do well are entered at the end of each "trimestre" in an honor list, and those who are thrice entered on such list receive an "honorable mention" at the end of the year.

From the nature of the specialties of this school, its theoretical course is much more extended and cultural in character than the general course of instruction in any other one of the schools of its class. The instruction in the French language is intended to impart a critical knowledge of the language and its literature, and also to familiarize the pupils with those aspects of the language that are required for expert typographical work.

The theoretical course includes, besides the French language, history and geography, history of books and history of art, mathematics and accounts, physical and natural sciences, especially as applied to the book industry, and a very extended course in drawing, modeling, designing, decorative composition, and industrial designs.

The thoroughness of the technical instruction may be illustrated by the following account of the lithographic course, cited from the report of the commission of New South Wales already referred to:

Lithographic drawing, École Estienne.—The instruction in this subject comprises three sections of work, viz, work with ink, with the pencil, chromo-photo-lithography. The course is four years. The fundamental work is that in ink, and this extends throughout the course. The work with the pencil is taught, but the profound modification introduced by photography is necessarily recognized. Nevertheless, instruction with the pencil is indispensable to the lithographer, and is of great use in the chromograph. By its use, even with one color and with one printing, quite a range of nuances are possible. The instructor is careful to seize every opportunity of developing the æsthetic judgment of the pupil, and he endeavors to make the courses in the school react against any treatment of industrial art as if it were inferior to art in the more abstract sense of the term.

First year.—Mode of cutting lithographic pencils, of converting steel bands into pens. Study of the calque. Various methods of transfer to stone. Execution on stone of simple models for the purpose of initiating the pupil into the use of the lithographic pen and the grease pencil. Necessity for habits of order and cleanliness to secure good results. Handling the stones. Mode of safeguarding against accident. Exercises with lithographic pen and pencil. Geometrical exercises involving use of compass and ruler. These studies are made progressively difficult. Copy of engravings, etc.

Second year.—Exercises in imitative drawing suitable for lithographic execution. Work with the lithographic pen. Landscapes, ornaments, figures, exercises on the stone from models so graduated as to compel the pupil to surmount successive difficulties in execution, and with the pen increasing the difficulty. Shadows by hachures, exercises in drawing from nature, introducing practical deductions as to the phenomena of perspective and light effects. Copies of simple engravings, exercises in pointillé (genre Jehenne), exercises with lithographic pencil as applicable to chromolithography. First attempt at color combination. Interpretation of sketches, photographs, oil paintings, water-color paintings, work in distemper, pastels, etc., by work with the lithographic pen (pointillé and etching), by shade, and the lithographic pencil.

Third year.—Execution on the stone of subjects presenting difficulties of modeling or effect. Continuation of exercises of preceding year. Artistic anatomy. Ornamental composition. General laws governing motifs and subjects, treated from the decorative point of view. The applications of geometry to drawing, descriptive geometry, projection, perspective, etc. The object of this work is to enable pupils to draw to any desired scale industrial objects which one may wish, for example, to figure in an album or an industrial catalogue. Study of combinations of color. Autography, geometry,

machines, figures, and ornaments. Exercises on the use of the eraser and on the use of varnish on the stone. Shading in order to heighten the light effect. Drawing of industrial objects from nature, plan, elevation, section, perspective. These drawings are transferred to the stone or to the zinc and are lithographed by means of etching, pointillé, the pencil, etc. Chromolithography, study of the combination of colors. Copies of the fine engravings of the sixteenth and seventeenth centuries. General interpretation by means of the lithographic pen of photographs, paintings, drawings, etc.

Fourth year.—The work of the preceding years is advanced in the fourth year, and the independent studies are united so as to call into exercise the range of manipulative skill already acquired. Zincography: Various features of zincography, work upon grained and pumiced zinc. General recommendations as to work on zinc. Chromolithography, chromotypography. The execution of pictures and subjects by each process. Ornate letters for commercial work. Type of work suitable for industrial albums, catalogues, etc. Views of industrial establishments in black and in color. The above work is done in each different style, and an endeavor is made to secure that boldness and thoroughness of treatment without which a good and free impression can not be obtained. Study of the combination of colors. Analysis of pictures in pastels, water colors, oils, distemper, camaieu, sepia, ceramics, etc. Drawing from nature of industrial objects and interpretation on stone by various methods. General recapitulation.

Stone engraving, École Estienne.—The object of the teaching of this subject is to facilitate the production of drawings, illustrations, etc., for commerce, science, etc. (for example, billheads, addresses, catalogues, views, architecture, plans, geographical and topographical charts, demonstrative figures, etc.).

First year.—Charts simple, English lettering, vignettes, conventional signs in topography, various forms of writing, industrial drawing. The exercises are varied in such a manner that the pupil shall have as far as possible a general aperçu of his calling.

Second year.—Plans to the scale of 1 in 5,000 to 1 in 10,000. Towns, rivers, limits, roads, frontiers, English writing, ornaments in Greek style. Map of part of the State: Fortifications, railroads, bridges, etc. Italic and round writing, ornaments in Roman style, vignettes. Maps showing rivers with two banks and various conventional signs, Gothic and Roman writing, Gothic ornaments, maps with roman and italic letters, classic characters, mechanical plans, complicated vignettes, Renaissance ornaments.

Third year.—Bâton and Egyptian characters. Complete map. English circulars. Mechanical drawing in perspective, application of shadows, vignettes and ornaments of Louis XIV and Louis XV. Sketches from manuscript, billheads, business cards, visiting cards, labels, registers, circulars in bâtarde, topographical maps, engraving of industrial objects to scale from sketches and from nature. Conventional topographical signs, titles, and various characters, ornamental and fantastic letters, monograms, etc. Complicated industrial objects. Ornamental objects from various industries, copper, glass, etc., from nature.

Fourth year.—Mountains on a large scale, complete map. Medal engraving. Elaborate billheads and vignettes. Various views of industrial establishments, landscapes, animals. Arrangements of various motifs, elaborate billheads, and cards. Industrial engraving of increasing complexity. Complete engraving of a topographical map. Frontispieces. Engraving of scientifical, botanical, and zoological drawings. Engraving of diplomas. Views with figures, landscapes, and animals. The use of nitric acid on stone and zinc.

Lithographic writing, École Estienne.—The end of this course is a technical study of lithographic work on the stone and with the pen, of writing in vignettes and their various applications, commercial, industrial, and artistic. The technique of the pen demands of the pupil a considerable amount of skill in drawing; of its importance nothing need be said.

First year.—Use of rule and square. Drawing on the stone of English and round characters in capitals and small letters with the aid of the lead pencil, executed in lithographic ink, using Brandauer's or Mitchell's pens. Precautions to be taken in the use of greasy inks.

Second year.—Drawing of characters of all kinds. Use of the drawing pen. Calque, its various applications, transfer to the stone. Practical exercises with the steel point; outlined drawing from models, cutting a lithographic pen.

Third year.—Ornamental characters, white letters shaded with fillets, register, mountings, and gray lines; various works executed in ink. Shadows interpreted by the lithographic pen, drawing from models. Combination of letters and vignettes. Colored labels.

Fourth year.—Recapitulation and development, using more complex models. Elaborate labels. Titles for music, pictorial advertisements in several colors, brushwork, interpretation of photographs by means of lithographic pen. Various compositions.

In addition to lithographic drawing, the course in lithography includes printing with hand and machine presses. The latter comprises a course in wood engraving, in relief engraving, copper engraving, and copperplate printing.

REMAINING SCHOOLS OF THE PARIS GROUP.

The five remaining technical schools for boys in Paris, belonging to the primary class are as follows: The École de physique et de chimie, the character of which is indicated by its title; the École Bernard-Palissy, virtually a school of fine arts applied to industry; Germain-Pilon, a school of practical drawing; the École Boulle, as distinguished for furniture and cabinetmaking as Diderot is for ironwork; and the École Dorian, a municipal orphanage, which gives extended training in iron and wood work.

The courses in these schools, as in the two schools described more fully, cover three or four years.

The eight municipal technical schools for girls in Paris are, in the main, devoted to what are commonly recognized as trades for women, such as tailoring, millinery, flower making, fine lingerie, etc. The courses are necessarily much less varied than is the case in respect to the schools for boys, and also less stimulating to the mind. The most interesting schools of the class are those due to the initiative of Mme. Élisa Lemonnier, whose name they bear. In 1856 this philanthropic woman founded a société de protection maternelle pour les jeunes filles, transformed in 1862 into the société pour l'enseignement professionnel des femmes, which opened in the same year the first technical school for women in France. Three years later Mme. Lemonnier died, but the work was carried on in her spirit and the society soon had in charge four schools to which girls over 12 were admitted after examination. In 1907 the schools were taken over by the municipality of Paris, which has continued their work upon the lines originally marked out but with regard to the later developments of the industries to which the training is directed. These are all industries in which decorative drawing and design form an essential factor; on

this art side, and in the manipulation of the material which enters into the final product, such as tapestries, lace, ivory, precious metals, leather, copper, ceramics, etc., the training is elaborate and thorough.

THE NATIONAL TECHNICAL SCHOOLS.

Attention has already been drawn to the fact that the four national schools included in the class of primary technical instruction were intended to illustrate a new theory of education for the industrial classes, and, in time, to revolutionize the existing system of primary education. These hopes have not been realized, and the schools are differentiated from those already described, simply by the fact that they are state supported and comprise a group of schools, namely, infant school, primary school, and specialized technical school under one direction.

Candidates for admission to the industrial section of one of these national schools must have secured the certificate of primary studies.

The programme of this section, like that of the écoles pratiques d'industrie, comprises general and technical instruction but less time is given to workshop practice, viz: The first year, 14 hours a week; the second, 17½ hours; the third, 24½ hours. The programme for the first year is the same for all schools of this class, but in the second year specialization begins, the work thenceforth bearing immediate relation to the special trades of the respective districts in which the schools are situated. At Vierzon, it is related to ironwork and painting on pottery; at Voiron, to working in paper, linen, and silk; at Armentières, to ironwork and weaving.

THE PRACTICAL SCHOOLS OF INDUSTRY.

The practical schools of industry, as already explained, are schools maintained by the united efforts of the government and the communes in which the schools are situated, and are under the official direction of, and receive government aid through, the department of commerce and industry.

The official time-table of the schools for boys is arranged as follows:

General instruction.

Subjects.	Years and hours per week.		
	I.	II.	III.
French	3	3	1½
History	1½	1½	
Geography	1½	1½	
Natural history and hygiene		1½	1½
Physics	1½	1½	
Chemistry		1½	1½
Arithmetic	1½	1½	1½
Accountancy			1½
Total	9	12	7½

Industrial instruction.

Subjects.	Years and hours per week.		
	I.	II.	III.
Workshop practice	30	30	33
Drawing	6	6	6
Geometry	1½	1½	1½
Mechanics	.....	.....	1½
Industrial economy	.....	.....	1½
Total	37½	37½	43½

To the above must be added time spent in study, amounting to nine hours per week in each year.

The character of the practical courses may be inferred from details pertaining to a single school. In the École pratique d'industrie de Lille, for boys, there are 5 forges, 6 anvils, 2 vises, the area of the shop being 132 square meters (about 1,420 square feet). The carpenter shop, of the same area, has 21 benches, 4 wood lathes, and 1 band saw. These equipments pertain to the course in physics and its industrial application. Each of the remaining practical courses, namely, photography, weaving, and practical mechanics, has equally complete equipment.

The programme of the corresponding schools for girls gives larger time to general instruction through the addition of ethics and ordinary sewing and cutting out of garments, and the strictly industrial instruction is somewhat reduced in amount. The latter is arranged as follows:

Industrial instruction.

Subjects	Years and hours per week.		
	I.	II.	III.
Workshop practice	24	27	30
Drawing	6	3	3
Total	30	30	33

To the above must be added a further six hours a week for preparation of studies.

In the commercial section, or the separate commercial school, as the case may be, the time assigned to workshop practice in the above programme is devoted to business specialties.

According to the latest official statistics, covering the year 1907, the four écoles nationales professionnelles had an enrollment of 1,473 pupils, an increase of 358 since 1900; the number of the practical schools of commerce and industry had increased in the same time from 33 with an enrollment of 4,992, to 55 with an enrollment of

11,503. The budget for 1910 carried an appropriation of 586,185 francs ($117,237) for the former schools and of 1,793,930 francs ($358,786) for the latter.

PRESENT TENDENCY.

The examples that have been given may suffice to illustrate the character of primary technical training in France; it is distinctly vocational, it is carried out with marvelous system and thoroughness, and everywhere it tends to extreme specialization. The endeavor has been made at times to engraft the training upon the general system of primary education, an endeavor which would appear to be comparatively easy in France where primary education is Pestalozzian in spirit and method, and the higher primary schools all give more or less technical instruction. At other times the endeavor has been made to emphasize general instruction in the schools of the technical type. This was notably the case in the École de la Martinière, the most famous of the primary technical schools of Lyon. The school was established in 1830 by private initiative and is managed under a trust deed, the trustees acting conjointly with the minister of commerce. The purpose of the school was "to give a sound, practical training to those who are to enter industrial or commercial life at a comparatively early age." For more than a half century it was educative in the general sense, preparing boys for industrial life but not training them for the exercise of any particular calling. This policy was modified in 1895 by providing for technical specialties in the third year of the course. By this action, says an English authority, "the most important stronghold of a system of generalization in French primary technical instruction may be said to have fallen."

Specialization was definitely adopted as the government policy by the law of 1892 which placed the practical schools of commerce and industry under the sole charge of the minister of commerce and industry, thus removing them entirely from the system of general primary instruction. At that time a department of technical instruction was created in the ministry named, and appropriations covering salaries and many other expenses were offered through this ministry for schools giving instruction in commerce and industry to pupils from the elementary schools. Subsequently the écoles nationales professionnelles were transferred to the same ministry.

The growth in this independent direction is illustrated by a recent enterprise, of which Mr. John C. Covert, United States consul at Lyon, reports as follows:

During some years past a project has been under consideration to establish a national weaving and embroidery school in Lyon, and the minister of commerce, Mr. Cruppi, has recently taken up the subject and proposes that the National Government at Paris

shall act with the municipality of Lyon in the premises. It is proposed that the latter contribute $193,000 to the enterprise. The minister of commerce has set forth in a recent statement his plan of organization and conduct of the school as follows:

"It will be necessary at first to provide for the apprenticeship of young men who wish to engage in the manufacture as a life business. This would include a course of apprenticeship for hand and steam looms for warpers, designers, setters on card, readers, piqueurs, and monteurs.

"There should be a complete and progressive apprenticeship, including such a technical knowledge as will enable the workman to carry on his trade intelligently. Parallel with this, an analogous organization should furnish the same instruction to the departments of dyeing, preparing, printing, embroidery, and the machinery used in weaving.

"A higher department, which might be called the superior section of technical instruction, should receive future manufacturers, mill owners, overseers, samplers, young men from 17 to 20 years of age, already possessing solid elementary instruction and a fund of technical information which would permit them to assimilate rapidly the knowledge of the art of manufacture in all its branches and to make new designs. This organization should be supplemented by courses of lectures intended to promote elementary improvement and to increase the fund of information of the workingmen and apprentices who were unable to attend the school before going to work in the factory. The school would thus popularize all knowledge useful to manufacturers or workmen in the silk industries. Boarding and day pupils will be received in the school."

In respect to the present policy it may be said that the principle of intensive specialization is generally approved by French authorities; but as regards the age at which specialization should be encouraged, and the policy of separate and often antagonistic administrations of the two types of primary education, general and special, there is a conflict of opinion. This conflict increases as the need of professionally trained teachers for the primary technical schools becomes more and more evident. Temporary provision has been made for meeting this necessity by the institution of normal sections in several of the higher technical schools; but this action threatens to introduce social distinctions among the laboring classes of France at the very time when the effort is being made to break down the long-standing distinctions between the lower and the upper classes of society. On these two phases of the general problem of primary technical education, namely, that of early specialization and dual administration of the two types of primary education, the last word has not been spoken in France.

The purpose of the foregoing review of technical instruction in France has been to show, in particular, the character of the schools and the instruction characterized as primary, the ever-increasing movement from the less practical to the more practical types of schools, and the relation of the primary technical school to the system as a whole. The last consideration requires brief reference to the higher orders of technical institutions.

SECONDARY TECHNICAL SCHOOLS.

The congress of 1889 comprised schools of arts and trades under the head of secondary technical instruction. At this point the classification is confusing unless it be remembered that the committee had in mind a particular group of institutions, the écoles nationales d'arts et métiers. These schools, as their title indicates, were established by the Government with a clearly defined purpose and a carefully planned organization.

The great body of art and trade schools in the country, belonging to the secondary class, were established by corporate bodies, i. e., chambers of commerce and trade syndicates, by associations such as the Philotechnic, or by private individuals. They are distinguished from the schools of the primary class by many features of which the most important are: (1) Their narrow specialization; (2) the maturer age of their pupils, who are, as a rule, persons already working at their trades; (3) the general absence of entrance requirements; (4) their origin and sources of support. The names of individual trade schools are a sufficient index of their character. Examples are: The technical schools for masons, established by the Paris societies of masons and stonecutters; courses for tailors maintained by the incorporated body of tailors; schools for jewelry manufacture maintained by the jewelers' syndicate. The purpose of all such schools and courses is to perfect workmen in their craft. The instruction is almost always free; indeed, gratuity is the impressive feature of this enormous effort on the part of manufacturers, employers of labor, chambers of commerce, and trade unions, to maintain the standard of French industrial art and its commercial prestige.

The national schools of arts and trades are highly specialized technical schools with elaborate equipment for workshop practice. Situated respectively at Aix, Angers, Châlons-sur-Marne, Lille, and Cluny, each one is easy of access to all the departments of a great geographical section. A law of 1906 authorized the establishment of a sixth school of the class, at Paris, which will be opened the present year.

The conditions for admission to these schools are substantially as follows:

1. French citizenship.

2. To be above the age of 15 and below 17 at the time of the competitive examination for admission, which takes place on the 1st day of October in each year.

Two examinations are required. One before a jury sitting in the principal town of the Department, and the other before a government commission appointed by the minister of commerce. The admission requirements comprise written composition and oral examinations

in orthography, arithmetic, the elements of geometry, lineal and ornamental drawing, and the four elementary operations of algebra.

Each of the schools admits about 300 pupils, and as the course of instruction covers three years, 100 new students are accepted annually. Most of the pupils are from the public schools, and belong to the working classes or are the sons of small shopkeepers and government officials. They are all "internes" (boarders). The annual contribution of the pupil is 600 francs, for which he obtains full education, board, and lodging; an additional sum of 300 francs is required for the full three years' course outfit. In general, however, at least three-fourths of the pupils are in receipt of government scholarships, which cover the cost of tuition and living. Hence, practically, the schools are gratuitous. The government appropriation for their current expenditures amounted in 1910 to 1,873,483 francs ($374,696). This sum was 23 per cent of the total appropriation for technical and commercial education.

The purpose and achievements of the écoles nationales d'arts et métiers were characterized by President Faure in an address before graduates as follows:[a]

> Though originally only designed to provide the great army of industry with sergeants—i. e., with managers and foremen of works—the results have so far surpassed expectation that in many instances the sergeant has become the commissioned officer and the manager has developed into the engineer. The system which assigns to each of these institutions a certain number of departments as its special domain gives them an all-embracing, as well as uniform, influence. As the principal training grounds of mechanical skill, more especially in metallurgy, they are, undoubtedly, of first-rate importance to the country. They possess the initial advantage of a high standard of admission, permanently secured by a difficult competitive examination. The students are thus from the outset picked candidates, and not only have they an entrance examination to pass, but the teachers of theory, the engineers, the managers of workshops, are themselves selected by a competition of which the conditions are determined by the ministry of commerce. The director of the school holds his appointment directly from the same minister. Only those students who pass through the entire course of three years receive a diploma, which is subject to an examination, and which confers the title of "Élève breveté des écoles nationales d'arts et métiers." No student who is without this diploma has any title to call himself a pupil of the school. A special diploma is reserved for those who pass the final examination with distinction. The schools themselves are under the jurisdiction of the minister of commerce, and under the immediate supervision of the prefect of the Department in which they are situated. For the three hundred places, in round numbers, which they offer for competition each year there are no less than between 1,200 and 1,300 candidates. They have all the prestige of government institutions, by which a French parent lays so much store. An even more potent source of attraction is the prospect which they hold out to all fairly industrious and well-conducted students of escaping two years of military service. Such dispensation is granted by law to four-fifths of of the number of students who at the leaving examination succeed in obtaining 65 per cent of the possible total of marks.

[a] Cited from report of the Science and Art Department (England) on French Technical Education, by Mr. Charles Copland Perry.

HIGHER TECHNICAL EDUCATION IN FRANCE.

The highest grade of scientific and technical instruction in France is given in special schools, such as the Conservatoire National des Arts et Métiers, the École Polytechnique, etc. These schools are intended to prepare men for the technical service of the state, or to become directors of great enterprises which require both scientific and technical knowledge.

The higher technical schools are under different ministries, namely, the ministry of commerce, of agriculture, of war, etc., according to their specialties.

The principal schools of this high order under the ministry of commerce and industry are the following, all situated at Paris:

	Approximate number of students.	Budget (state appropriation).
		Francs.
École Centrale des Arts et Manufactures	700	780,000
Conservatoire National des Arts et Métiers	100	1,159,800
École des Hautes Études Commerciales	320	.....
Institut Commercial	245	.....
École Supérieure de Navigation Maritime	.....	.....

Other technical schools, as the Polytechnique, the Institut Agronomique, etc., are under the ministries to which their specialties pertain.

A significant fact in the recent history of higher education in France is the multiplication of chairs for scientific branches in the university faculties, and the equipment of laboratories and institutes for the promotion of scientific research and experimentation. As a result of this activity, provision for the highest order of technical training, which was formerly confined to the special schools located at Paris, is now made, to some extent at least, in all the university centers of the country. For example, at the University of Marseille there is a chair of industrial physics and another of industrial chemistry, and similar chairs at both the University of Bordeaux and that of Nancy. At the University of Lille there is a chair of applied chemistry, and both here and at Lyon chairs in chemistry applied to industry and to agriculture. Through this extension of university activities, extreme specialization in the province of higher technical education in France is giving place to the principle of coordination and philosophic unity.

PART II. SYSTEM OF PUBLIC INSTRUCTION.

SECONDARY AND HIGHER EDUCATION.

CURRENT TENDENCIES.

The system of schools and higher institutions in France under the minister of public instruction, although organized in three departments for administrative purposes, presents in reality two great divisions, one comprising the secondary schools and universities, the other the primary schools. These two divisions are distinct in their origin and scholastic character; but there has lately been a gradual approach of the primary system to the secondary schools through the assimilation of the higher primary schools to the local colleges. The local, or communal, colleges belong to the department of secondary education, but while the lycées, the typical secondary schools of France, are established and maintained by the State the colleges are established by local authorities, the State contributing to their maintenance. Although the colleges follow the same official programmes as the lycées, few of them offer the full secondary course of instruction, so that they have formed a sort of inferior order of secondary schools, or a preparatory stage to the upper section of the lycées. The boarding departments of the colleges are often under private management, and sometimes this is the case with the entire establishment. The proviseur or director is then not only burdened with the household expenses, but is responsible for the progress of the students, although he has nothing to do with choosing the faculty, as all the professors are appointed by the minister of public instruction. Hard pressed by the rival clerical schools, and by the higher primary schools, as the latter have expanded, many of the colleges have dragged on a very uncertain and feeble existence. Others, having more liberal support from local authorities, have become important regional schools, drawing patronage from a large radius. The new programmes of secondary education (decree of 1902) which accord equal recognition to different courses of studies, i. e., the classical, the Latin scientific, and the modern, have been specially advantageous to the colleges which are thus free to adjust themselves somewhat to local circumstance. The modern courses of instruction are coordinated to those of the higher primary schools, and hence it is possible for pupils to pass from the latter into the colleges. This movement is fostered by government bourses open to competitive examination, and intended to enable promising youths, whose parents can not afford the expense of a college education, to meet the tuition fees and cost of living. The secondary schools, it must be remembered, are not free schools, and this fact has determined their social distinction. The

gradual approach of the primary and secondary systems is therefore significant for social as well as for educational reasons.

The secondary schools comprise the whole scheme of liberal education which, in that sense, is complete in itself; it is also the preparatory stage to the specialized university faculties and the higher special schools, such as the Polytechnic, the Conservatoire National des Artes et Métiers, etc. These relations between secondary and higher education have existed for many centuries, the secondary schools being merely a modernized form of the colleges which grew up around the University of Paris, and the provincial universities of the medieval period. Under the old régime there was no hard and fast line between college and university instruction, and hence recent efforts for extending the scope and increasing the student body of the faculties of science and literature are virtually a return to the former conception of liberal education as a university function. Under the system of specialization which Napoleon adopted for the higher education, the faculties of literature and science were little more than examining juries, and under the Republic, up to a very recent date, they simply added to this function that of preparing candidates for the agrégation or examination for professorships in the lycées. Although no marked change has taken place in this respect, the increase in the number of matriculates in the two faculties named shows that they are gradually attracting students who have other careers in view. The faculties of science, with their recent equipment of laboratories and technical institutes, are drawing to themselves young men destined to become directors of great industrial enterprises; in like manner, the faculties of letters are becoming the resort of students interested in the economic and social reorganizations of the time, and also of both young men and young women who are preparing for positions as school inspectors and professors of normal schools. This extension is stimulated by recent measures which provide for the admission of students who have not obtained the bachelor's degree to certain courses in the faculties here considered.

It appears from this cursory review of current movements that the rigid lines of demarkation, social and scholastic, that have broken up the unity of educational processes in France are relaxing, and what may be termed a democratizing influence is gradually permeating the whole system.

STATISTICS, CURRENT AND COMPARATIVE.

In the absence of a recent report from the minister of public instruction on the department of secondary education, the latest particulars pertaining to the institutions comprised under that head are taken mainly from the Annuaire statistique which covers the year 1909.

Secondary schools for boys.—From the following table it appears that the enrollment in the public secondary schools has increased by about 8,000 since 1901, the grand total of secondary students is considerably less than at the earlier date, the difference being very nearly 26,000. In a measure this decline is doubtless due to the increased attendance upon higher primary schools and upon the practical schools of commerce and industry. It is also to be presumed that the reports from the private secondary schools are incomplete.

TABLE 1.—*Enrollment in secondary schools for boys.*

Classes of institutions.	1901.		1909.	
	Number.	Students.	Number.	Students.
State schools:				
Lycées	110	54,830	111	60,548
Colleges	228	33,372	231	36,282
Total	338	88,202	342	96,830
Private schools	.....	[a] 99,200	.....	[b] 64,558
Grand total	.....	187,402	.....	161,388

[a] Of these, 90,200 in schools belonging to the religious orders, including 22,328 in schools preparing candidates for theological seminaries; 9,000 in secular schools.
[b] Clerical and secular.

In his report as chairman of the committee of the Chamber of Deputies on the budget of public instruction for 1910, M. Steeg calls attention to two significant tendencies in the secondary schools for boys: First, the decline in the number of boarders (internes); in the lycées there were 25,279 boarders in 1885; in 1908 there were a little less than 17,000. In the same period the number of boarders in the colleges fell from 15,277 to 12,854. On the other hand, the number of boarders in private secondary schools and in private boarding houses that accommodate students is increasing. M. Steeg notes also the continued decline in the number of students taking Greek and the increase in the number and quality of the students attracted to the section of Latin and science.

In the five years from 1906 to 1910, inclusive, the total increase in the appropriation for secondary schools for boys has been 2,785,550 francs ($557,110), which has been used chiefly to meet the increase in the salaries of professors and assistants. The total appropriation by the Government for the maintenance of secondary schools for boys amounted in 1909 to about 20,789,502 francs ($4,157,900).

Public secondary schools for girls.—Public secondary schools for girls bear the same names as those for boys, but they are administered separately and are under different regulations as regards programmes and standards. The number of these institutions still continues to increase, though necessarily not with the almost phenomenal

rapidity of the earlier years of their history. In 1908 the enrollment in 47 lycées for girls was 17,352; in the 61 communal colleges, 10,624, and in the public secondary classes not yet organized as schools, 6,695, making a total enrollment of 34,671 girls in public secondary institutions as against 32,607 in 1906. The total appropriation for the current expenditures for these institutions in 1909 was 3,355,575 francs ($671,115). This was an increase of 1,360,000 francs ($272,000) above the amount appropriated for the same purpose in 1906. Including in one sum the separate appropriations for secondary schools for boys and for girls, and additional appropriations applicable to both or else intended for special purposes, the entire amount allowed by the State for this service in 1909 was 29,966,177 francs ($5,993,235).

UNIVERSITIES AND SPECIAL SCHOOLS.

TABLE 2.—*Distribution of students in state universities.*

Universities.	Number of students.	
	January 15, 1907.[a]	January 15, 1909.[b]
Paris	15,789	17,311
Aix-Marseille	1,269	1,261
Besançon	325	267
Bordeaux	2,496	2,610
Caen	814	707
Clermont	281	301
Dijon	966	1,014
Grenoble	896	1,102
Lille	1,560	1,639
Lyon	2,783	2,840
Montpellier	1,752	1,891
Nancy	1,841	1,971
Poitiers	962	927
Rennes	1,498	1,597
Toulouse	2,675	2,788
Schools of medicine not included in the universities	2,290	936
Alger		1,605
Total	38,197	40,767

[a] Report of the budget.—Service of public instruction, 1908, by Maurice-Faure, p. 27.
[b] Ibid., 1910, pp. 124, 131–136.

TABLE 3.—*Distribution of state university students, by faculties for specified years.*

Faculties.	Students.	
	1907.[a]	1909.[b]
Law	15,551	17,046
Medicine	6,599	7,333
Sciences	6,349	6,408
Letters	5,710	6,216
Pharmacy	1,735	1,510
Extra-university schools of medicine and pharmacy	2,253	3,384
Total	38,197	41,897

[a] Report on the budget.—Service of public instruction, 1908, by M. Maurice-Faure, p. 25.
[b] Bulletin Administratif, 1909, No. 1868, p. 503.

The state appropriation for the current expenses of the universities amounted in 1909 to 14,489,444 francs ($2,897,888).

The following special schools of university rank are under the minister of public instruction: Collège de France (appropriation, statistics for 1909, $115,290); Museum of Natural History (appropriation, $206,618); Practical School of High Studies (École Pratique des Hautes Études) (state appropriation, $70,633; city, $7,200); School of Archives (École Nationale des Chartes) (appropriation, $14,800); School of Oriental Languages (appropriation, $35,060); French School of Archæology at Rome (appropriation, $14,500); French School at Athens (appropriation, $23,540); École Nationale des Beaux-Arts (appropriation, $84,052).

The Superior Normal School, which has been consolidated with the University of Paris, received a separate appropriation in 1909, amounting to 268,600 francs ($53,720).

STATE SYSTEM OF PRIMARY INSTRUCTION.

REVIEW OF THE HALF DECADE, 1901–2 TO 1906–7.

The system of primary education in France is a subject of special interest because of its highly centralized control and its political uses. It is essentially a government system, carefully planned as a means of strengthening the Republic and closely watched lest at any point it should fail in this service. The operations and progress of the system have been systematically recorded by the statistical commission created for that purpose in 1876. A preliminary report covering the year 1875 was issued by the commission within a year of its appointment, and beginning with 1878 a quinquennial report has appeared at regular intervals down to the present time. The president of the commission, M. E. Levasseur, is one of the most eminent statisticians in Europe, and under his direction the successive volumes have preserved a uniform plan. The eighth quinquennial, covering the period 1901–2 to 1906–7, which has just appeared, is in the main the basis of the present review, pertaining to salient particulars of the situation. In order to show progress, comparisons are instituted where possible with the corresponding data for the preceding decade.

SUPPLY OF SCHOOLS.

Before the Republic existed a clerical system of education had been established which had great vitality and wide diffusion. Guizot's law of 1833 recognized church and other private schools

as communal schools within the meaning of the law, but the laws of the Republic have gone further and required every commune to establish public schools. For a time, however, schools under private control were also recognized by the present Government. The effort to bring the entire body of youth under instruction, which is a matter of great importance in every country, has been accompanied in France by a constant endeavor to substitute public for clerical schools.

It appears from the quinquennial report that of the total number of communes in France in 1907, namely, 36,584, all but 69 had established a public school. Of the latter, 16 had private schools sanctioned by the authorities; the remaining 53 communes are small and isolated. The law also requires that communes of 500 inhabitants or more should maintain a separate public school for girls. This obligation had been met by 17,268 communes out of 18,061 belonging to the class indicated. There were also 3,654 communes having less than 500 inhabitants that had established a separate public school for girls.

The number of schools, public and private, at the beginning and end of the half decade under review was as follows:

	1901–2.	1906–7.	Increase or decrease.
			Per cent.
Secular	2,568	11,583	+77.7
Belonging to religious orders	14,817	1,499	−89.9

SCHOOL POPULATION AND SCHOOL ENROLLMENT.

The obligatory school age in France is 6 to 13 years (law of March 28, 1882), hence the population between those ages serves as a measure of the required school provision. This item is included in the census which is taken every five years in France (Table 4). As the age analysis of the last census (1906) had not been completed at the time of this writing, comparison can not be instituted between school enrollment (Table 5) and school population, as for previous censuses. It may be inferred, however, from the comparison of school enrollment with total population (Table 6), that the condition in this respect in 1906 was practically the same as in 1901.

TABLE 4.—*Population at census dates named and ratio of school population to total population.*

Year.	Total population.	Increase (+) or decrease. (−).	Children between 6 and 13 inclusive.	Increase (+) or decrease (−).	Ratio to total population.
		Per cent.		*Per cent.*	*Per cent.*
1891	38,343,192	+0.32	4,639,526	−1.89	12.1
1896	38,517,975	+ .79	4,636,381	− .07	12.14
1901	38,961,945	+1.15	4,497,298	− .03	11.54
1906	39,252,245	+1.75			

TABLE 5.—*Enrollment in primary schools for specified years.*

Year.	Total number of pupils.	Boys.	Girls.	In public schools.	In private schools.	In secular schools.	In schools belonging to religious orders.
1891–92	5,556,470	2,805,849	2,750,621	4,281,183	1,275,287	3,900,977	1,655,493
1896–97	5,531,418	2,782,547	2,748,871	4,190,320	1,341,098	3,911,806	1,618,612
1901–2	5,550,284	2,775,978	2,774,306	4,177,575	1,374,709	4,040,329	1,509,955
1906–7	5,585,025	2,808,323	2,776,702	4,583,053	1,001,072	5,356,812	228,213

TABLE 6.—*Comparison of primary school enrollment with population.*

Census year.	Ratio of enrollment—	
	To population 6 to 13 years of age.	To total population.
	Per cent.	*Per cent.*
1891	119.7	14.49
1896	119.3	14.37
1901	123.4	14.24
1906	.....	14.22

The number of pupils in infant schools, "écoles maternelles," not included in the foregoing tables, was 651,955 in 1906–7, which would raise the total school enrollment to 6,236,980, or 15.6 per cent of the entire population. It should be kept in mind, however, that the children in infant schools are below the obligatory school age and that the establishment of public infant schools is optional with the communes.

Table 5 not only gives the total enrollment in primary schools, but also the classification of pupils by sex and by classes of schools. The relative strength of the different classes of schools is made clear by Table 7, showing the ratio which the enrollment in each class bears to total enrollment.

TABLE 7.—*Proportion of total enrollment in different classes of primary schools at years specified.*

Year.	Public.	Private.	Secular.	Schools of religious orders.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
1891–92	77.1	22.9	70.1	29.9
1896–97	75.7	24.3	70.7	29.3
1901–2	75.2	24.8	72.7	27.3
1906–7	82.0	18.0	95.5	4.5

From the above ratios it is seen that public schools made a decided gain in the last half of the decade, while during the same period secular schools, public and private, made a much greater gain, and the enrollment in schools of the religious orders dropped to a nearly neg-

ligible quantity. The series of tables pertaining to teachers (Tables 8 to 10) illustrate the same movement. Teachers belonging to religious orders have not only been eliminated from the public teaching service, but, with the exception of members of a few orders, that still have the legal right to exist in France, have been excluded from the Republic. The cause of this change is found in the law of October 30, 1886, providing for the gradual elimination of members of the religious orders from the public teaching service, the more recent associations law (1901) and the law of 1904 providing for the entire suppression of the teaching orders within a period of ten years. These laws have been fully explained in previous reports of this series.

TEACHERS.

TABLE 8.—*Number and classification of teachers of primary schools for specified years.*

Year.	Total number of teachers.	Men.	Women.	Men and women.	
				Public.	Private.
1891–92	146,674	66,363	80,311	102,486	44,188
1896–97	152,274	67,339	84,938	105,774	46,503
1901–2	159,073	68,111	90,962	108,614	50,459
1906–7	151,914	66,045	85,869	115,507	36,407

From the above table it appears that there was a decrease of about 7,000 in the total number of teachers in the primary schools in 1907 as compared with 1902. This loss was due to the suppression of clerical teachers, as will be seen by an examination of Table 9. The men teachers belonging to religious orders were entirely excluded from public primary schools before 1896–97.

TABLE 9.—*Lay versus clerical teachers for specified years.*

	Public schools.				Private schools.			
	1891–92.	1896–97.	1901–2.	1906–7.	1891–92.	1896–97.	1901–2.	1906–7.
Men:								
Lay	55,559	56,373	56,705	57,771	1,423	1,278	1,224	7,119
Belonging to religious orders	132	.....	.....	.....	9,249	9,685	10,182	1,155
Total	55,691	56,373	56,705	57,771	10,672	10,963	11,406	8,274
Women:								
Lay	35,446	40,385	46,212	56,948	6,186	5,500	5,181	23,300
Belonging to religious orders	11,349	9,013	5,697	788	27,330	30,040	33,872	4,833
Total	46,795	49,398	51,909	57,736	33,516	35,540	39,053	28,133
Grand total	102,486	105,771	108,614	115,507	44,188	46,503	50,459	36,407

TABLE 10.—*Proportion of lay and of clerical teachers for the years specified.*

	Public schools.				Private schools.			
	1891–92.	1896–97.	1901–2.	1906–7.	1891–92.	1896–97.	1901–2.	1906–7.
Men:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Lay	99.80	100.00	100.00	100.00	13.33	11.65	10.8	86 +
Belonging to religious orders	.20				86.70	88.35	89.2	14 +
Women:								
Lay	75.74	81.75	89.00	98.60	18.45	15.47	13.3	82.8+
Belonging to religious orders	24.26	18.25	11.00	1.40	81.55	84.53	86.7	17.2+

Salaries.—Notwithstanding the fact that the public expenditure for primary education has been greatly increased by the complete secularization of the service, the additional funds required to meet the increased salaries provided for by laws of March 31 and December 30, 1903, and to insure the more rapid advancement of the teacher from lower to higher classes, in accordance with the financial law of April 22, 1905, have been annually forthcoming. In 1908 the Government appropriated for the salaries of teachers in primary schools in communes of less than 150,000 inhabitants 173,409,000 francs; in 1909, 175,593,514 francs; the proposed appropriation for the same purpose for 1910 is 179,596,414 francs. This represents an increase in three years of 6,187,414 francs, equivalent to $1,237,482.80.

The salaries allowed by the State for teachers of elementary primary schools under the new regulations are as follows:

Class.	Male teachers.		Female teachers.	
	French currency.	United States currency.	French currency.	United States currency.
	Francs.		*Francs.*	
Probationers	1,100	$220	1,100	$220
Fifth	1,200	240	1,200	240
Fourth	1,500	300	1,400	280
Third	1,800	360	1,600	320
Second	2,000	400	1,800	360
First	2,200	440	2,000	400

Principals in charge of schools receive additions to the fixed salary of the grade to which they belong, as follows: If in charge of a school of three or four classes, $40 per annum; if more than four classes, $80.

For promotion from the fifth to the fourth grade and from the fourth to the third the required term of service is five years; from the third to the second, six years, the candidates being advanced in the order of seniority (laws of March 31 and December 30, 1903).

In addition to the salaries provided by the State, every commune is required by law to provide residence for the head teacher of its public school (in the smaller communes an assistant teacher, if there is one, is generally the wife or sister of the principal), or its money equivalent, and a commune may increase the salary. Outside of the large cities, however, the local increase of salaries is seldom granted without the requirement of other teaching.

The salaries in the higher primary schools begin with a minimum of 2,000 francs ($400) in the fifth class, and rise by successive increments of 300 francs to the third class, for which the successive increases are 200 francs each, so that teachers of the highest or first class receive 3,000 francs ($600).

Professional training.—From the following table it appears that the decline in the number of candidates for admission to normal schools, which excited alarm at the beginning of the last half decade, has been overcome. This change doubtless results in great measure from the improvement in the financial prospects of teachers.

TABLE 11.—*Primary normal schools.*

	Schools for men.			Schools for women.		
	Number of schools.	Number of students.	Number of teachers.	Number of schools.	Number of students.	Number of teachers.
1891–92	87	3,878	890	85	3,707	711
1896–97	87	3,865	897	85	3,871	852
1901–2	86	3,897	974	84	4,094	873
1906–7	85	5,294	858	84	5,200	880

The standard of qualification for the public-teaching service was fully maintained throughout the half decade 1901–2 to 1906–7. In the latter year 99½ per cent of all the primary teachers had secured a professional diploma. Of the men, 63 per cent had the lower diploma (brevet eléméntaire) and 36.7 per cent the higher diploma (brevet supérieur); for the women, the corresponding ratios were 62 per cent and 37.2 per cent.

THE HIGHER PRIMARY NORMAL SCHOOLS.

The two higher normal schools intended to prepare professors for the primary normal schools show steady increase in enrollment during the half decade reviewed. The number of students at Fontenay-aux-Roses, the higher normal school for women, rose from 49 in 1902 to 63 in 1907. The latter year there were also 14 persons admitted to hear the lessons and lectures (auditrices libre). The resident staff of the school comprised 32 members as in 1902, the number of external professors, who are charged simply with the conduct of class exercises, was reduced from 24 to 22 in the period.

The higher normal school of St. Cloud for men had 36 students in 1902 and 43 in 1907. Since its establishment in 1882, this institution has received 426 students, of whom 16 have died and one only has left the service; the 409 remaining graduates are all filling important positions in the primary normal schools, or the higher primary schools, or in the inspectorate.

TEACHERS' FEDERATION VERSUS THE GOVERNMENT.

The troubles growing out of the endeavors of the Government to suppress socialistic tendencies among the teachers, which became acute the year following the period covered by the quinquennial volume, give promise of satisfactory adjustment. The action of the Government was regarded by the teachers as an interference, both with their right to form and express political opinions and their right to organize in associations for mutual benefit and protection. The number of such associations has rapidly increased within recent years, and finally a general federation of teachers' associations was formed; naturally, political questions absorbed attention as well as those relating to the professional interests and material welfare of the members, and strong sympathy was manifested by the leaders of this federation with the socialistic movement. While maintaining its right to the loyal support of the teachers, the Government has lately receded from the extreme position that was assumed some two years ago in respect to the federation. The director of the primary system, speaking officially, says:

> The administration has recognized the necessity of modifying its course of procedure and henceforth will be prepared to deal not with individual teachers alone, but with the professional associations, and to explain and to justify to them measures that may be adopted. This is a cause of congratulation not alone for the administration itself, which will be at once better informed and better understood as regards its own intentions, but also for the entire teaching service, which by this course will gain force, dignity, and wisdom. For, indeed, only those who are free can be truly wise.

EFFICIENCY OF THE SCHOOLS.

The following conditions brought out in the quinquennial report have a direct bearing upon the efficiency of the schools:

Size of classes.—As regards the size of classes in public schools only, statistics for 1907 disclose the following facts: The proportion of classes having 50 pupils or fewer was 95.6 per cent; from 51 to 60 pupils, 4 per cent; 61 to 70 pupils, 0.4 per cent; 71 to 80 pupils, the small proportion of 0.1 per cent; more than 80 pupils, 0.05 per cent. In his introduction to the report the minister of public instruction notes the existence of 5,131 classes in the public schools with more than 50 pupils and of 50 classes with more than 80 pupils.

Average attendance.—As a means of estimating the average school attendance, it is customary to compare the actual attendance on a specified day in June and in December—the months of the lowest and highest attendance—with the total enrollment for those months. It appears from the comparison on this basis that the school attendance on December 2, 1901, was 79.3 per cent of the month's enrollment, and on June 2, 1902, 74.9 per cent of the month's enrollment. In 1906–7 the ratios of attendance in public primary schools to total

enrollment were as follows: December 1, 78.2 per cent; June 1, 74.6 per cent. In the private primary schools, which attract, generally, a more select class of pupils, the ratios were higher, but the reporter observes that the statistics for the private schools are much less reliable than for the public schools.

Certificate of primary studies.—The certificate of primary studies, instituted in 1834 and recognized by the law of 1882 as a means of stimulating an interest in elementary study, has conduced in part to the early withdrawal of pupils from school. The certificate exempts the holder from the obligation to attend school, and the reports show that a large proportion of children who come up to the examination for this award are at the minimum age (11 years) allowed for candidates. For the majority of the successful candidates the examination is the end of school life. In the twenty years 1877–1897 the number of certificates awarded rose from 36,841 to 186,031, an increase of 404 per cent. The number of certificates obtained in 1907 was 221,317, an increase in ten years of 19 per cent, which may be regarded as a normal growth.

The higher primary schools.—The most important evidence of a growing appreciation of education on the part of the French people is afforded by the progress of the higher primary schools to which only pupils are admitted who have gained the certificate of primary studies or have passed a required examination. This examination is not open to candidates under 13 years of age. The course of instruction in the higher primary schools covers three years, to which a fourth may be added.

The enrollment in the higher primary schools, which is included in Table 5, rose from 34,563 in 1901–2 to 45,978 in 1906–7, an increase of 33 per cent. The total for the last year named included 27,167 boys and 18,518 girls. In addition to the organized higher primary schools, there are higher-grade classes (cours complémentaires) attached to elementary schools in places that have not yet made provision for an independent high school. The enrollment in these classes rose in the period considered from 34,048 to 41,690. Altogether, the number of pupils in the higher primary grades had reached at the end of the half decade reviewed a total of 87,668 as against 68,611 in 1902.

Attendance upon higher primary schools is encouraged by the scholarship funds in aid of young people of ability whose parents can not bear the expense of supporting them during this extended period of study. The appropriation by the Government for this purpose in 1908 amounted to 750,000 francs ($150,000).

The continued decline in the number of illiterates may be regarded as proof of the increasing efficiency of the schools. Attention was

called in the previous report of this series to the fact that from 1900 to 1902 the ratio of illiterate conscripts fell from 14.6 per cent of the total number to 4.3 per cent. In 1906 it had fallen to 3.5 per cent.

AGENCIES COMPLEMENTARY TO THE SCHOOLS.

France is particularly noted for the number and variety of agencies intended to promote the intellectual, industrial, and social welfare of the masses after the brief period of school life is closed. Among the efforts of this kind in which the educational side is particularly emphasized are systematic courses of lessons for youths and adults and popular lectures conducted by teachers and professors of the regular schools. This work, fostered by the Government, has extended throughout France. In 1907 the courses of lessons under public auspices were attended by nearly 600,000 students.

Among private societies particularly active in the work of adult instruction are the Ligue de l'Enseignement, the Polytechnic, the Philotechnic, and the Union française de la jeunesse. The three societies last named maintain technical evening schools in addition to classes for general instruction. All the societies make provision for public lectures, which are illustrated generally with the magic lantern.

Intimately related to the work of the continuation classes is that of several supplementary agencies for promoting the social and industrial welfare of the laboring classes. Among these may be mentioned the associations of old pupils formed for mutual helpfulness, known generally as the "Petites A," which number now about 8,000, comprising nearly 1,000,000 members. The remarkable success of two recent congresses of the associations in the academic district of Caen suggested to the Ligue de l'Enseignement the idea of uniting all the associations of this character in a grand national congress. The proposition was approved by the Government, and the congress which convened on the 18th of July of the present year at Havre, under the presidency of the minister of public instruction, was opened by the President of the Republic in person. Two thousand delegates, representing 1,300 societies, participated in the sessions. Among the purposes of the "Petites A" are the collection of funds for the benefit of members in cases of sickness, want of employment, etc., and the encouragement of the members to increase their preparation for business or other vocations by special courses of study. Sports and games and military drill are also encouraged as means of physical development. The congress at Havre decided upon the formation of a national union of the associations and a committee has been appointed to elaborate a constitution and by-laws for this society.

The conciliatory policy adopted by the Government toward the teachers' federation and its encouragement to this national union of former pupils are new manifestations of the purpose to secure for the Republic the loyal support of the people through the agency of the public schools.

LIBRARIES AND MUSÉE PÉDAGOGIQUE.

Among agencies auxiliary to the school should be included school libraries, which increased from 43,411 with 6,977,503 volumes in 1902 to 44,021 with 7,757,917 volumes in 1907, and teachers' reference libraries, which, on account of consolidations, decreased during the half decade from 2,674 with 1,034,132 volumes to 1,131 with 673,279 volumes. The crown of the auxiliary system is the Musée Pédagogique, which was reorganized in 1879 and has become the recognized center of unifying and inspiring influences for the entire system of public education.

In its present form the Musée comprises a pedagogical library, a publishing office or bureau of information, and an educational museum.

The library had 72,000 volumes in 1904 and reported 2,739 applicants for books and 26,180 volumes called for, of which 15,877 were loaned for consultation at home.

Among the auxiliary services which the institution performs is that of furnishing magic-lantern slides and other material for the illustration of popular lectures and courses of instruction coming under the general name of continuation classes. The packages of slides loaned in 1906 numbered above 7,000. Recently a special office has been opened in the Musée Pédagogique as a center for all the agencies, public and private, that are engaged in the great work of popular education, supplementary to that of the primary schools. The building is provided with halls for meetings of public school teachers and for lectures given by professors of higher education. The latter are intended chiefly for the benefit of teachers.

Funds in aid of pupils (caisses des écoles), which, by law, every commune should provide, numbered 17,376 in 1907. The total funds deposited amounted to 9,110,459 francs ($1,822,091.80) and the disbursements to 7,501,937 francs ($1,500,387.40). These funds are used to furnish clothing to poor pupils and school dinners (cantines scolaires).

In Paris cantines were maintained in all the public schools in 1907 at an expense of 1,472,671 francs ($294,534). Of the total amount the city contributed 78 per cent, the remainder being met by the pupils who purchased meals. The total number of meals served was 11,239,894, of which 7,835,058, or more than two-thirds, were gratuitous.

With respect to this service, which is widely extended, the United States consul at Nantes, Mr. Louis Goldschmidt, reported recently as follows:

The cantines are installed in each nonsectarian (public) school and are intended to furnish poor children with hot and nourishing food. In one of the rooms of the school there is a refectory where the meal takes place. At five minutes to 11 the children get out of their classes. They go into the courtyard, where, under the vigilant care of one of the schoolmasters, they wash their hands at the washstands. Then at 11 o'clock they place themselves in regular order and walk into the refectory.

Each child, before entering this room, gives a check to the master. This check is given to the poorer children in an unobserved manner and without charge, and is sold at 15 centimes (3 cents) to the scholars whose parents are more able to pay. Thus the children's pride is not hurt, there being no difference between the one who pays and the one who does not.

The meal lasts three-fourths of an hour. Two of the older children are appointed to watch over the younger and see that they all secure their food. One of the masters also superintends the meals. The weekly bill of fare has been arranged as follows:

Monday: Cabbage soup; sausage and beans. Tuesday: Bean soup; stew; jam. Wednesday: Meat soup; rice; pie. Thursday: No school. Friday: Vegetable soup; cod fish; rice. Saturday: Meat soup; sausages or blood pudding; beans.

In addition each child receives half a pint of wine mixed with water. The food is cooked in the municipal free soup houses, called Fourneaux Municipaux. From there it is brought to the schools, where, if necessary, it is heated again before being served to the children.

In one of the schools on the first day 112 scholars were present, and a larger number have since partaken of the meals. The school cantines are useful and humanitarian, will certainly tend to the betterment of the poorer classes, and will no doubt help in securing better educational results.

In all important particulars in respect to which the quinquennial report furnishes data for comparison, it appears that the public primary schools made marked progress in the period 1902–1907. The number of schools increased, the number of teachers increased by larger proportion, and their financial condition was improved. This advance was accompanied by a decided increase in the public expenditure for primary instruction, as is shown in the following table:

TABLE 12.—*Total current expenditure for public primary schools.*

Year.	Total expenditure.		Proportion from each contributing source.	
	Francs.	United States equivalent.	State.	Communes.
			Per cent.	*Per cent.*
1891–92	186,306,075	$37,261,215	67.6	32.4
1896–97	214,015,250	42,803,050	67.0	33.0
1901–2	236,598,969	47,319,793	65.5	34.5
1906–7	283,337,098	56,667,419	68.2	31.8

The above table does not include the expenditure for school buildings, amounting in 1907 to 30,500,000 francs ($6,100,000), borne by the State and communes together, nor the amounts expended for the same purpose by the larger cities which receive no aid from the State. The expenditure for private primary schools, which in 1907 enrolled over a million children, is not reported.

The government appropriation for the entire service of public instruction, which amounted in 1905 to 237,014,806 francs ($47,402,961), reached the total of 274,513,609 francs ($54,902,722) in 1909, an increase of 37,498,803 francs ($7,499,760).

The department of primary instruction necessarily receives the larger part of this appropriation, about 75 per cent, as the State has gradually assumed the entire current expenses of primary schools. The product of the local school tax is turned over to the public treasury; but it is only in the largest cities that this tax meets, even approximately, the amount required to run the schools. Paris, however, and a few other cities not only bear the whole burden of their primary schools but contribute, by the excess of their school tax, to the expenditure for the nation at large.

CHAPTER XI.

FOREIGN CURRENT EVENTS.

Contents.—Education in Spain—Commercial education in Japan—Educational notes from consular reports.

EDUCATION IN SPAIN.

PRESENT UNREST.

The unrest which has pervaded Latin Europe in the past few years has taken the form of anti-clericalism, and has found expression in a decided opposition to the predominating influence of the clergy in school matters. The school has long been the center of the struggle between church and state in France, and lately has become so in Spain. The struggle in the latter country attracted world-wide attention by reason of the events connected with the riots in Barcelona in July, 1909, which culminated in the execution of Francesco Ferrer, the well-known teacher and enthusiast for educational reform.

Ferrer's zeal in the cause of reform had been manifested by the introduction into Spain of schools for the people, in which instruction was given in accordance with the modern science of teaching in modern and practical subjects, but all religious instruction was excluded from the curriculum. At his own expense he founded 120 of these lay schools, and others of the same kind soon began to appear.

The views of the Spanish clergy upon the lay or modern schools of the type introduced by Señor Ferrer are expressed in a protest against them presented to the premier in November, 1909.

This protest, after explaining that the lay schools were closed by the Government as a consequence of the events occurring at Barcelona, urges that they should not be reopened. This request is made upon the grounds that antireligious education is an evil in itself, and directly contrary to Spanish law. "The existence of such schools," the protest declares, "is opposed to the international law which is denominated the Concordat, Article II of which provides that 'the instruction given in schools, whether public or private or of any sort,

shall in all respects be in strict conformity with the doctrines of the Catholic religion itself;' with the law of public instruction, whose articles 295 and 296 prescribe the fulfillment [of the Concordat], setting forth the regulations in connection therewith relative to the agreement between the two powers; and the fundamental law or constitution of the Monarchy, whose Article XI forbids other 'public demonstrations than those of the state religion,' and a public demonstration is that of the professor who, in a public school, attacks all the foundations of religion before his pupils."

The protest closes as follows:

> In virtue thereof, it being an act of justice, and the law demanding that the so-called modern or lay schools, closed by order of the legitimate authority, be not opened again, we hope and expect from the spirit of justice and of uprightness of Your Excellency, whose life God preserve many years, that the command of the law be carried out.

The protest was subscribed by the cardinal of Spain and all the Spanish archbishops and bishops.

It is hardly necessary to recall at this time the intense excitement throughout Europe over the unfortunate affair at Barcelona. As regards education in Spain, the significant outcome of this aroused sentiment was the resignation of the ministry, followed by the nomination of a moderate Liberal cabinet. Upon the recommendation of the new minister of public instruction, a royal decree was issued February 3, 1910, which, notwithstanding the ecclesiastical protest cited above, restricted the inspection of private schools to the hygienic conditions of the premises and to providing for the prevention of words or deeds contrary to morals, to the fatherland, and to the laws.

The programme which Premier Canalejas has laid down, and in which he confidently anticipates the support of the Cortes which was elected in May upon this issue, includes the revision of the Concordat of 1851, the registration and regulation of the religious orders, government control of public education, and the recognition of freedom of conscience.

STATE OF PRIMARY EDUCATION.

It is difficult to form an adequate conception of the state of popular education in Spain because the statistics are not sufficiently recent and complete, but the general condition of primary schools and the high rate of illiteracy are exciting alarm. The subject was considered at a recent assembly of the directors of primary education throughout the various Provinces of Spain, held at Madrid under the auspices of the minister of public instruction and fine arts, who calls these officials together once a year for the purpose of obtaining reports as to the condition of schools, schoolhouses, and teachers in different parts of the Kingdom. These officials, reporting one by one as to conditions in their respective localities, were very nearly unanimous in

protesting against the backwardness of primary education among the Spanish people.

In 1860 the first attempt was made to gather official statistics in Spain as to the percentage of literacy and illiteracy of the population. At that time it appeared that 75.52 per cent of the population could neither write nor read. In 1877 the percentage was 72.01, in 1887 it was 68.01, and in 1900 it was 63.78, children of all ages being included in these computations. From this it would appear that in forty years there has been an improvement of nearly 12 per cent in literacy. The improvement has been doubtless mainly in the cities, where the percentage of illiteracy is less than in the country regions. In the year 1900 the population of Madrid was 539,825, while the number of illiterates was 163,743, or practically 30 per cent. In the same year the population of Barcelona was 533,000, while the number of illiterates was 258,462, or about 48 per cent.

The superior educational advantages offered by the cities, as well as the general greater attractions of urban life and the larger opportunities there found for earning a living, have made emphatic here that which is apparent in nearly all civilized countries—the much greater proportionate increase in population in the cities than in the rural regions. From 1877 to 1900 the population of Spain increased about 12 per cent, but that of Madrid increased nearly 36 per cent, that of Barcelona about 114 per cent, that of Valencia upward of 48 per cent, and of Bilbao more than 154 per cent.

The school system of Spain has been worked out upon an elaborate plan, which, theoretically, ought to accomplish excellent results. The department of "public instruction and fine arts" comprises the following divisions: (1) Universities and institutes, (2) primary instruction and schools, (3) fine arts, (4) public buildings [for educational purposes], and the bureau of archives, libraries, museums, accounts, copyrights, official registers, exchange of publications, etc., all administered under the immediate orders of the undersecretary of public instruction. In the department of public instruction are also the Geographical and Statistical Institute, the royal academies, and the astronomical and meteorological observatories. There is likewise a council of public instruction and fine arts, which is a central consultative authority and which deals with all branches of the department of public instruction.

The country is also divided academically into ten university districts each under the control of a rector, and there is in each of these districts a university council as a consultative authority.

Public instruction is free of charge, attendance is compulsory between the ages of 6 and 12, and elaborate machinery is provided for obtaining complete registration of all children between those ages and for compelling their attendance at schools. The conditions dis-

closed by the official reports indicate, however, that these laws are not generally enforced.

Vaccination is compulsory and a certificate of recent vaccination is required for admittance to the public schools, yet smallpox prevails nearly all over Spain and is never absent from the large cities. The percentage of pock-marked people one sees in the army and in the streets is very large indeed.

Christian doctrine is required to be taught and is taught in all the public schools, and the doctrine, naturally, is that of the Roman Catholic Church.

The prescribed courses of study are sufficient to give a good primary education if the practical administration of the schools were as satisfactory as the theory of organization.

According to the census for the year 1900, the number of primary schools was 24,462, of which 22,654 were supported by the State and 1,608 by some of the Basque provinces.

A great number of the buildings used for school purposes are rented and are very poorly adapted for the purposes for which they are used. The rent paid by the State for school buildings in 1900 was 2,149,362 pesetas ($414,827). The provisions for heating and ventilating are very inadequate. The general heating apparatus is a brazier of coals, which necessarily gives out gases and a comparatively small amount of heat, and causes headaches and stupor among the pupils.

According to a memoria drawn up by the Count de Romanones, until quite recently minister of education, during his four months' tenure of office there should have been in 1908, 34,366 public schools in all Spain and the Canary and Balearic islands, while the number of schools shown by the statistics to be in actual existence is 24,861, or 9,579 less than are required by law.

There were also 5,212 private schools in existence in the country at that time, of which 508 were kindergarten schools, 2,010 were for boys, 2,589 for girls, 57 were night schools, and 48 were Sunday schools. Of the whole number of private schools, 5,014 were Catholic institutions, 107 were so-called lay schools, and 91 were classed as Protestant schools.

The memoria dwells in particular upon the unsanitary condition of the school buildings, the want of proper inspection, and the inadequate salaries of school-teachers, and, both by reason of its detailed presentation of the facts and the remedies proposed, indicates a determined purpose on the part of the Government to bring about needed reforms. Minister de Romanones proposed to transfer the control of primary education entirely to the State; to replace the hired buildings by state schools to be paid for partly by the State and partly by the municipalities; and to provide from state funds for a fixed minimum salary for the directors and teachers of primary

schools. The minister referred to, owing to his appointment to the presidency of the congress, is prevented from carrying out these reforms, but it is understood that his successor, Señor Burell, fully intends to give practical effect to the proposed measures.

COMMERCIAL EDUCATION IN JAPAN.

There are five higher commercial schools in Japan, located, respectively, at Tokyo, Kobe, Yamaguchi, Nagasaki, and Osaka. The expenses of the first four are defrayed by the Government and by tuition fees. The Osaka school is supported by the municipality. The schools at Tokyo and Kobe have a four years' course of study; the course in the three remaining schools covers three years.

The Kobe Higher Commercial School was created by an imperial order of 1902, and was established in May, 1903, under the direct control of the minister of education. It differs from the other higher commercial schools by reason of special entrance conditions provided for graduates from lower commercial schools. The prospectus announces that—

> The course of study, extending over four years, consists of the preparatory and the principal courses. The preparatory course is divided into the first and second departments and extends over one year, while the principal course is for three years. The first department of the preparatory course is for graduates of middle schools and the second for graduates of commercial schools.

The programme of the principal course.

Subjects.	First year.	Second year.	Third year.
	Hours per week.	*Hours per week.*	*Hours per week.*
Commercial morality	1	.....	.....
Commercial correspondence	1	1	.....
Commercial arithmetic	2	2	.....
Commercial geography	2	2	.....
Commercial history	.....	.....	3
Commercial products	2	2	.....
Political economy	4	3	3
Finance			
Statistics			
Law of bankruptcy	4	3	5
Civil law			
International law			
Theory and practice of commerce	5	4	8
Bookkeeping and accountancy	3	2	.....
English	6	6	6
Chinese, French, German, Russian, or Spanish (elective)	.....	5	5
Gymnastics	2	2	2
Total	32	32	32

The faculty includes a number of native professors who have obtained degrees at universities in the United States and England.

An interesting feature of the institution is the students' association (Gakuyū-kwai), to which all the students belong. The director is

ex-officio president of this association and the professors and instructors are honorary members. The association controls the following departments, each one of which has a professor at its head:

Ethical culture (Kōfū-bu).
Oratorical department (Kōen-bu).
Linguistic department (Gogaku-bu).
Athletic department (Undō-bu), subdivided into the tennis and baseball sections.
Military arts department (Bujutsu-bu), subdivided into the jūjutsu, archery, and fencing sections.
Boating department (Tantei-bu).
Publication department (Hensan-bu).

The heads of the departments elect a vice-president, and all the officers, except the president, hold office for a term of one year.

The Kōfū-bu (literally, the department for elevating customs) has for its purpose the cultivation of a proper school spirit. To this end all the students are formed into about 50 clubs (yūdan) according to the localities from which they come. These clubs hold meetings from time to time for the purpose of promoting development both in character and learning.

* * * * * * *

The linguistic department is organized for the purpose of giving the students opportunities to practice the use of English as well as of the second foreign language, the study of which each student is required to pursue during the last two years of the school course. It is optional with the student which language he chooses among Chinese, French, German, Russian, and Spanish. In the year 1909–10 the numbers in the second and third years of the principal course studying each language are as follows:

Language.	Special students.	Second year.	Third year.
Chinese	1	26	17
French	3	28	40
German	2	54	45
Russian	.....	8	8
Spanish	1	7	.....

Once a year the linguistic department holds a public meeting at which theatricals are performed and orations are given in the above-mentioned languages as well as in English.

For every-day use the department has a "foreign tongue room," in which it is the rule that the mother tongue shall not be used. In this room students and professors gather as opportunity offers for informal conversation, games, reading, or debating.

The annual tuition fee in the Kobe school is 30 yen (about $15). The advanced character of the course of instruction is indicated by the average age of the students which in 1909 was 19 years in the preparatory course. The number of graduates for that year was 101.

EDUCATIONAL NOTES FROM CONSULAR REPORTS.

BELGIUM.

TRADE SCHOOLS.

Gun-making and metal-working schools of Liege.

Consul H. Abert Johnson, of Liege, furnishes the following report concerning the two most important Belgian trade schools of his district, the gun-making and metal-working schools:

New buildings have recently been erected for the use of the gun-making school, covering an area of 2,872 square feet and costing about $30,000. Pupils who have passed the requisite primary course in the public schools are admitted to this school from the age of 12. The course of study comprises, among other things, a preparatory training in the various branches of gun making, fashioning gun-stocks, assembling the parts of a gun, making the breech mechanism, burnishing, engraving on metal, etc., and in addition a course in practical mechanics for those who are to become tool makers, a course in the theory of arm construction, and, finally, a course in drawing. The school hours are from 8 a. m. to noon and 1.30 p. m. until 5.

In the annual report attention is called to an element contributing to the decrease in the number of pupils of the school. It asserts that, taking into consideration that machine work is continually becoming more generalized in all branches of industry, that of firearms included, it has been deemed necessary to organize in the school a special section for training a certain number of pupils in the handling of machinery in general, and in particular those machines that are used in gun making. Certain other leading industries of the locality, however, notably that of the manufacture of automobiles, having during the past few years experienced a period of marked prosperity that called for a decided increase in productive capacity, have increased their force of skilled mechanics by recruiting from other industries through offers of increased wages. In this way many of the younger workmen were withdrawn from other industries, even before they had completed their terms of apprenticeship, and it appears that this movement was especially noticeable in the firearms industry, pupils of the firearms school having been attracted by offers of higher wages than they would have received in the gun-making trade after the completion of their course at the school.

Machine-tool work.

Realizing these conditions, a large number of the pupils of the school of gun making desired to become enrolled in the section organized for the study of machine tools, so that the number in this depart-

ment of work largely increased, to the detriment of the other departments of the school. Measures had to be taken to correct this tendency, and the committee decided to limit the number of pupils in the section devoted to the study of machine tools, establishing a maximum enrollment of forty pupils, and it was further decided that the work of these pupils should be confined almost exclusively to the classes of machine tools that are especially applicable to the gunmaking industry.

The report referred to asserts that although the demand for skilled mechanics in the automobile industry might at first tend to increase the number of pupils who aimed to perfect themselves in the handling of machine tools it would eventually bring about a decrease in the number entering the school with the intention of becoming gunsmiths, thus tending to defeat, in a large measure, the object for which the school had been established.

Great demand for trained men.

The pupils in the department of chasing and engraving, recently introduced, have advanced so rapidly that there is danger of many of them leaving the school before the completion of the prescribed term, with the view of insuring a certain wage, by working either in their own homes or in factories. It is necessary, therefore, that the school authorities take some measures to prevent such action and to retain the pupils in the school until they have completed the course and are prepared to take their place in the industry as first-class workmen. To attain this end the school committee has decided, by way of experiment, to allot to each pupil a part of the value of the work performed by him, with the hope of thereby inducing him to complete the course.

Graduates from this school are in demand and have little difficulty in finding employment immediately after leaving the school, and the school authorities have decided to send each year to the various manufacturers of firearms a complete list of the graduates of the school.

Besides the purely technical part of the school, the pupils enjoy the advantages of a certain amount of general instruction given in lectures on various subjects. Lessons are also given in hygiene in conformity with the programme of the Society of the Red Cross in Belgium. The pupils also have facilities for visiting the various industrial establishments of the neighborhood under the guidance of the director of the school and the professors.

Metal-working school.

Probably the most important trade school, after that of gunmaking, is the École Professionnel de Mécanique, devoted to the education of machinists and skilled iron and steel workers. This school was

opened in 1901. Pupils are admitted between the ages of 12 and 16 years, but they are required to pass an examination in French, arithmetic, and geometrical drawing, and to be in good physical condition. Instruction is given free of charge to Belgian subjects. A midday meal is furnished to the pupils free of charge. The curriculum of the school comprises political economy, hygiene, arithmetic, geometry, mechanical drawing of machinery, bookkeeping, physics, chemistry, mechanics, algebra, the technology of the workshop and work in iron and wood, instruction in the construction of automobiles and cycles, etc. The practical instruction is given in the workshop established in the school, which is supplied with all the necessary tools and machinery. The course is arranged in such a manner as to permit the pupil, after two years of work in the school, to enter a factory of machine construction, a foundry, etc.

The entire course comprises a third year of studies devoted to machine tools. This school is attended by 350 pupils.

[The other trade schools of Liege treated of in Consul Johnson's report are as follows: Tailors, horticulturists, tanners, house painters, plumbers, carpenters, cigarmakers, printers, and shoemakers.]

SCHOOL CHILDREN'S SAVINGS.

Consul H. Abert Johnson, reporting from Liege, says that one of the elements contributing to the remarkable prosperity of Belgium and of the great majority of Belgian financial and industrial enterprises is undoubtedly to be found in their habits, as a people, of thrift and judicious economy. He traces the outcome of this trait as developed in the schools:

Some forty years ago a movement was initiated to encourage these habits of economy in the children attending the public schools. As in the case of most innovations of this nature, practical results tending to confirm the wisdom of such a movement were slow in coming to the front. The movement found among the corps of teachers many supporters, while on the other hand a large majority of the professors and teachers resolutely opposed it. By some it was asserted that the organization of such a service would prove to be a cause of disorder and a lack of discipline in the schools; others expressed doubts as to the efficacy of such a departure. However, after a time an agreement was reached, and January 1, 1869, the communal council decided to put the plan in operation.

Liege at that epoch possessed some twenty primary schools. The total sum deposited by the scholars of fifteen of these schools during this first year was $2,589. Two years later the total amount deposited was reduced to $483 for ten schools, and in 1874 only nine schools out of twenty-five put into practice this system of saving on the part of the scholars, although during this year the total amount deposited reached $942.

Modifications that led to success.

Such meager results, it must be admitted, were not encouraging, and held out scant hope for the ultimate success of the movement. Shortly after this the communal council again took up the question, and after certain modifications had been agreed upon, these savings institutions seem to have been established on a more solid basis, and from that time up to the present they have continued to prosper in a highly satisfactory manner. The objections on the part of those opposing the movement seem to have been eventually overcome, so that the institution was then introduced into every school. In 1876 a philanthropic citizen of Liege donated 1,000 francs ($193), to be used in the purchase of savings deposit books, to be distributed to children whose means were limited. Later he gave 2,000 francs, the interest on which was to be given as a prize each year to the director or directress of that school in which the greatest amount of zeal was shown on the part of the teaching body to encourage the idea of saving among the children. In 1875 another Liege philanthropist gave 6,000 francs, to be distributed during the period of twenty years to the most meritorious scholars of the primary schools who took advantage of the savings institution. These generous actions contributed in a large measure to the prosperity of the movement. To-day, when the ideas of thrift have become such a part of the life of every nation, the desire to save and economize has taken a complete hold on the school children of this locality, and the teaching element has taken up the idea with enthusiasm and are doing everything to further its development.

The figures given by the latest statistics conclusively show that the period of experiment has passed, and that the idea of an institution for school children's savings has become an integral part of the public-school system of this locality. The total amounts deposited by the scholars of the Liege public schools at the beginning of the last scholastic year reached $55,158, to which may be added the $36,980 deposits made during the year. The interest paid by the government savings banks on these deposits amounted to $1,361. The amounts withdrawn by different pupils of the schools amounted only to $21,486. The total amount deposited by the school children at the end of last July reached $71,778.

PUBLIC LIBRARIES.

In the following report from Liege, Consul H. Abert Johnson tells of the plans in Belgium to equip public libraries with books of greater benefit to the people:

For some years the provincial council has granted subsidies to certain libraries known as "bibliothèques populaires," organized by

provincial communes for the purchase of books. In their selection too decided an inclination was shown for works of somewhat questionable utility, mostly novels and fiction, while the subsidies were granted with the idea that preference would be given to scientific works and those on social and economic questions. In order to correct this the provincial authorities have provided for a competent board to supervise such purchases. It will prepare a catalogue of books, the purchase of which is obligatory on those communes receiving subsidies. In preparing these catalogues the board will be governed in each case by local needs and conditions, the character of its industries, and the intellectual progress of its inhabitants.

This movement seems to meet with general approval, and it is believed that the catalogues will prove especially beneficial in small and isolated townships, where difficulties would often arise in selecting competent persons to purchase books for a public library.

NETHERLANDS.

School for Training Officers for the Fishing Fleet.

Consul Henry M. Morgan, of Amsterdam, furnishes the following information concerning the fishing school at Ymuiden for training captains and mates for the Dutch fishing fleet:

Since the opening of the fishers' harbor at Ymuiden, in 1896, the port has become the principal fishing center of the Continent. In the year 1908 over $2,000,000 worth of fish was sold in the fish markets of the town. This was largely exported in daily shipments to foreign countries by rail in a fresh state. In view of the importance of this industry a school was started in 1906 at Ymuiden with the idea of obtaining in the future a staff of thoroughly trained captains and mates for sailing and steam fishing boats. Although the school has been in operation for only two and one-half years the results obtained are very satisfactory.

Every Dutch boy who has passed successfully the physical examination and can show a good character from the public school which he attended can obtain permission to enter the school, which is divided into three classes.

The first class, the work of which covers a period of one year, starts in November, and is for boys just leaving school, between 13 and 16 years of age, who are taught arithmetic, geometry, the Dutch and English languages, shipbuilding, geography, practical and theoretical navigation, laws of navigation, steam mechanics, refitting of vessels, first aid in case of accidents, making and repairing sails, nets, etc. The theoretical work is done on shore in the schoolroom; the

practical part on board the instruction vessel in the fishing harbor of Ymuiden, and on board a sailing vessel called the *Ymuiden*, which puts out to sea from February to October.

Sea practice—Certificates.

From November till February the boys remain on shore; afterwards they are sent to sea in the fishing vessel, five boys at a time, for eight days, and so on till October. During their stay in the harbor the boys sleep on board the instruction vessel, so that they may become accustomed to a life on board ship. This instruction vessel is fitted out for ten boys and is under the supervision of a captain and his wife; the captain gives practical lessons in repairing, refitting, etc. The boys have forty hours class work a week, of which fourteen hours are practical work. After the first year they can obtain a certificate from the board of directors, who find employment for them on board sailing vessels, so that they can learn fishing thoroughly and earn their own living. Their wages are about $10 per month. The board provides each boy with a whaling suit of cloth, shoes, etc., on entering the school, but the boys are obliged later to refund the money out of their own earnings, from which 20 per cent is deducted and paid direct by the captain of the vessel on which the boy is serving to the board of directors. The cost of such an outfit is about $24 per boy.

After having spent two or three years at sea the boys return to the school to prepare in the second class for the government examination for the certificate of mate of fishing vessels, which preparation occupies about five months. After another year at sea they return for the last course of three months in the third class, which prepares them for the government examination to obtain their certificate of captain, so that in six years the whole course can be done. In the last two classes they work twenty-two hours a week.

For the first course no fee is paid, but for the last two courses pupils have to pay $1. If a pupil is not considered diligent enough or if he goes to sea before having obtained a certificate from the board after the first year, he is immediately dismissed and his parents or relations are compelled to refund the money paid for his outfit. The society was started by voluntary contributions and the Government lent the two training vessels. In several other ports there are similar schools, but this is the only one in which lessons are given the whole year round. At the end of the first year twelve certificates were given to the pupils, for whom employment was found on the different fishing boats and trawlers of Ymuiden. The reports from the captains of these boats concerning the work of the pupils are satisfactory up to the present.

GERMANY.

TECHNICAL SCHOOLS.

Hamburg's broad system of giving scientific instruction.

Consul-General Robert P. Skinner explains the comprehensive facilities afforded in the German State of Hamburg to fit pupils for technical and scientific positions of trust:

The public school system of Hamburg includes a technological institute, known here as the Technikum, and which is, in part, a continuation school, and certain continuation schools pure and simple. The technological institute provides an opportunity for scientific education in the following branches: Construction of machinery, electro-technology, shipbuilding, construction of ship machinery, and marine engineering. For all of these branches regular lectures and exercises are provided. The Technikum includes also a preliminary school for the following branches: Shipbuilding and construction of machinery and electro-technology.

The Technikum educates pupils for positions as technical managers, managing officers, and constructing engineers, especially for marine engineering, and as thoroughly trained engineers for the commercial fleet. The teaching staff includes thirty-five specialists and technicists, all experts. The instruction continues two years, and in the preliminary schools six months.

To be admitted it is necessary to possess a certificate showing that the student is required to serve one year only in the army, or a "patent" as a marine machine engineer of the first class. He must prove that he has had two years of practical experience prior to seeking entrance, and if he is unable to furnish proof of sufficient preparatory training he is obliged to pass an examination which he is authorized to take only after having had three years of practical experience. The final examinations take place before a board of commissioners. The annual tuition fee is 144 marks ($34.27) in the ordinary course of instruction, and 50 marks ($11.90) for instruction in the preliminary school.

A certificate from this school enables the holder to enter the "middle career" in the Prussian railroad system, to entrance into the technological institutions of the German infantry and artillery, into the imperial patent office, and into the "medium technical" service of the imperial navy. Marine engineers graduated from the school are entitled to act as second engineers on shipboard, and after having been so employed for two years may then become first engineers without further examination.

Carriage building and building trades schools.

The carriage-building school is a special branch of the Technikum, in which students are instructed to be cartwrights, wheelwrights, and coach builders. There are two classes in which the course of study is six months each. Pupils must be able to furnish proof of sufficient practical experience before entering, and a final examination must be passed. This school possesses an important collection of models. The tuition fee is 60 marks ($14.28) for six months' course.

The building-trades school is also a special branch of the Gewerbeschule providing instruction in overhead and underground construction, graduating masons, stonecutters, and carpenters. Pupils have an opportunity of acquiring special theoretical knowledge and practice in technical drawing, whereby they are enabled to accept positions as medium technicists or to become architects. There are two departments of five classes each, one beginning in the winter and one in the summer. A final examination must be passed before a board of examiners. Pupils can also be prepared for entrance by taking a preliminary course in the building-trades school. The tuition fee for the six months' course is 90 marks ($21.32).

Applied arts school.

The art school is still another branch of the Technikum intended for pupils desiring to become draftsmen, workmasters, and foremen. The following are the departments: Architectural decoration of interiors, plastic art, decorative painting, art of proportion, measurement and dimension, bookbinding, the working of precious metals, photography, technique of reproduction, hand and machine embroidery, and drawing. There is also a preliminary school to fit pupils for entrance.

In the evening and Sunday classes of the art school apprentices in the different trades have an opportunity to cultivate the art of drawing, and to this extent it is a continuation school. The tuition fee is 24 marks ($5.71) for six months, day instruction, and 10 marks ($2.38) for six months, evening instruction.

Continuation mercantile schools.

The continuation schools of Hamburg, properly speaking, provide mercantile instruction for men and women. In the men's school there are courses of study in German, English, French, Portuguese, Spanish, and Danish, writing, commercial arithmetic, bookkeeping, commercial correspondence, stenography, and general commercial knowledge. Work begins at 7 p. m. in eight different schools in the city. The tuition fee is 6 marks ($1.42) for a six months' course,

from which fee pupils without means are entirely exempted. The winter course continues from October to March, and the summer course from April to September.

It is provided in paragraphs 120 and 154 of the German trades law that employers shall allow sufficient time to their apprentices under 18 years of age to enable them to frequent the commercial continuation schools. All apprentices in commercial establishments are recommended to become students in these schools, so that they may receive the necessary theoretical and professional instruction while, at the same time, they work practically.

There are two continuation schools for women, in which German, English, French, and Spanish, writing, typewriting, stenography, arithmetic, bookkeeping, correspondence, and drawing are taught. These courses begin at 5 and at 7 p. m. The afternoon courses are preparatory, while the evening courses are intended for women who are employed.

Pupils are only admitted if they have passed the first class of the public schools, or have received preparatory training of another character. The courses begin in April and October, and the tuition fee for six months' instruction is 6 marks ($1.42).

Hamburg navigation school.

The Hamburg navigation school is open to pupils who can prove that they have had forty-five months of practical experience prior to entering; they must have been seamen for twenty-four months, twelve of which must have been passed on sailing vessels; or, they must have served as mate for twenty-four months, after having passed the examination entitling them to accept such a position. The preliminary courses are open to any sailor having made at least one voyage. Since October 1, 1891, a school for marine engineers has been connected with the navigation school.

An imperial inspector is always present during the final examinations.

School for blacksmiths.

Vice-Consul James L. A. Burrell describes the operation of the German School for Blacksmiths at Halberstadt, in the Magdeburg district:

Young smiths receive instruction in shoeing oxen and horses and preparation for the examination in shoeing, which was made compulsory in the German Empire by the imperial act of July 1, 1883, and is held in the various provinces by state examining commissions. The school is supported by appropriations from the city, the province, and from the two agricultural associations in Halberstadt. The courses of instruction last three months and four of them are given

during the year, beginning each quarter. The theoretical instruction is in charge of a retired military veterinary surgeon. The charge for the practical and theoretical instruction, including the use of iron, etc., is only 25 marks ($5.95) for the course. Board and lodging can be had in the school very cheaply. For young blacksmiths without means four free courses, with board and lodging, are provided each year. Candidates who pass excellent examinations receive premiums. Only six persons may take part in each course of instruction.

Mercantile progress.

Deputy Consul-General Simon W. Hanauer writes from Frankfort that to cultivate the artistic taste of German storekeepers and their salespeople the German Association for Mercantile Education, with the aid of the German Work League, has recently instituted instruction courses of six weeks' duration in the cities of Berlin, Leipzig, Halle, Halberstadt, Magdeburg, and Brunswick. A number of other German cities will now also receive these instruction courses, which are directed by distinguished art critics, experts in trade, design, and fashion. Subjects of instruction have hitherto been the art of decorating dwellings, draperies and clothing, the manufacture of artistic small wares, and the decorating of shop windows. There is no doubt that this system of educating manufacturers and sellers so as to attain high artistic taste and beauty of style in production will enhance German reputation and promote the sale of German productions to foreign countries.

AUSTRIA.

AUSTRIAN TEXTILE COLLEGE.

A new Austrian school for instruction in textile industries is described as follows by Vice-Consul Edward T. Heyn, of Reichenberg:

Early in 1910 a new spinning school, erected by the Reichenberg Chamber of Commerce and Trade, was opened here, which is said to be the most complete institution of the kind on the European continent, and as large as any in Great Britain, the home of textiles. It is the first of its kind in Austria.

The new institution has been united with an already existing weaving school, and, in honor of the sixtieth jubilee of the Austrian Emperor, received the name "Emperor Franz Josef Technical School for Textile Industry." A fine new building to house both schools has been erected at a cost of $118,755. The Austrian ministry of public works contributed to the building fund, and the school will be under its charge and annually receive government support.

When the plan of erecting a spinning school was first suggested objection was raised on the ground that only practical knowledge was necessary in spinning, which could be best obtained in a factory.

However, the leading authorities in Austria, both scientific and in business life, were agreed that a thorough theoretical knowledge was a valuable aid in practical work. The spinning school in its theoretical instruction will therefore devote attention to the physical and chemical qualities of fibers; consider the machines necessary for spinning; their theoretical and practical construction; and, finally, in lectures, give students an idea of how a spinning factory should be properly established and managed. The practical instruction in the workshops consists of active operation and regulation of machines as in regular spinning mills.

Equipment of various departments.

The first division of the school is devoted to cotton spinning, combined with a combing department; the second to cotton waste—that is, to the spinning of imitation and vicuna yarns; another to worsteds and carded yarns. The cotton-spinning division contains a complete cleaning apparatus and various systems of cotton openers, so that the working of every kind of raw material is possible. The cotton spinnery is also provided with six carding machines of various constructions, two stretchers, seven fine spinning machines, self-acting and ring-tension machines for thread and warp yarns. Especially equipped is the cotton-combing establishment, which, besides a preparing machine, contains four kinds of combing machines. The division for wool spinning possesses a large willow and two carding machines, one of which serves for the manufacture of rough wool for threads and warps. The worsted department, established according to a French system, comprises a combing department and a yarn and warp spinning equipment.

The Reichenberg Textile School aims not only to train practical workers for weaving and spinning, but also in other directions expects to be useful to industry. For this purpose it has established an extensive laboratory, with all kinds of apparatus, for examining fibers and fabrics and for instruction purposes. It is also hoped to establish a dyeing and finishing department. The weaving department is two large workshops, where practical instruction is given in hand weaving on forty-five looms. It also possesses the necessary tools for spooling, beaming, scissoring, cleaning, and designing; a workshop for mechanical weaving, with twenty-seven looms and eight preparing machines; weaving looms of every description; also one Northrop loom (invented in Massachusetts). Finally, all technical systems for cotton and wool spinning and weaving, especially those employed in the production of gentlemen's and ladies' cloth, carpets, velveteens, plushes, furniture and decorative material, and also linen and silk weaving machines.

ITALY.

NATIONAL COLLEGES FOR DISSEMINATING EXPERT KNOWLEDGE.

Consul Jerome A. Quay reports that at Florence there are three agricultural schools, all of them located at the Cascine park. He describes these Italian institutions as follows:

The first building is especially adapted for the study of gardening. This model school is the only one of the kind in Italy and accepts also foreign students. The instruction, both practical and manual, is extended to all work which is performed within hothouses, orchards, and gardens. After the pupils have undergone a certain amount of preliminary instruction they are taken to the orchards, then to the kitchen gardens, and thence to the flower gardens and hothouses, where they have practical instruction in the pruning of fruit trees, grafting of ornamental and fruit trees and domestic and American vines, sowing and transplanting, preparing, keeping, and planting of seeds, preparation of vegetables for the market, forced cultivation of fruits and vegetables, cultivation in hothouses, tepidarium and open-air culture of ornamental trees, plants, etc., and by this means the pupils acquire the necessary experience and skill in their profession. The second building is for girls. The teaching comprises: Agronomy, floriculture, gardening, poultry breeding, bee-keeping, the culture of silk cocoons, dairying, housekeeping, cooking, sewing, and dressmaking, as well as a general course of school instruction.

The scholars come from the better class of society, and when they have obtained their degree, which can be accomplished in about three years, it is the purpose of the school to send its graduates through the principal agricultural districts of Italy to disseminate their knowledge among the country folk who are interested in the cultivation of fruits, vegetables, and general farm products.

The third and last building is occupied by the Agricultural Colonial Institute founded by Prof. Gino Bartolommei Gioli, who lived for many years in Italian Africa. The school course comprises the teaching of colonial farming, the rearing and management of live stock, poultry breeding, felling of timber, etc., especially for young men who wish to settle in the Italian colony of Africa.

SPANISH TECHNICAL SCHOOLS.

INSTRUCTION FOR POLICEMEN, ARCHITECTS, AND MARINE CAPTAINS.

Consul-General Frank D. Hill, of Barcelona, Spain, supplies the following notes on special municipal schools which are provided in Spain:

A novel enterprise for Spain, a school for the police of the city, has just been opened in Barcelona. Classes will be taught photography and anthropometry, legislative ideas, practical police work, gymnastics, and the French, English, Italian, and German languages. Aspirants to places on the police force will be received up to fifty in number. The course in the Superior School of Architecture, a municipal enterprise, also began its session at Barcelona the middle of September. Matriculation at the Nautical School also began in September. The subjects taught, leading to the career of captain in the merchant marine, are: Algebra up to equations of the second degree, inclusive; progressions and logarithms, physical and political geography, lineal drawing, plane and spherical geometry, trigonometry, and elements of topography, geographical drawing, applied physics, cosmography, pilotage and navigation, and hydrographic drawing.

RUSSIA.

REGULATIONS FOR FOREIGN STUDENTS.

The Department of State has been officially informed that the minister of public instruction in Russia has issued a new rule whereby foreign students desiring to enter or to pass examinations at Russian schools will hereafter be required to produce documents certified, in the countries where they were obtained, by Russian diplomatic or consular representative in order to gain admission.

SCHOOL OF VITICULTURE.

Consul John H. Grout, of Odessa, reports that a school has been established at Tiraspol for the instruction of the viticulturists of the Russian province of Kherson, whose vineyards were planted without regard to uniformity or quality of the vines, many varieties of grapes being grown even in the smallest vineyards. The output, not being true to any sample and poor in keeping quality, realized less than one-half the price of that produced by the more experienced German settlers in the same province. The new school is expected in time to produce more satisfactory results.

AMERICAN SCHOOLS IN TURKEY.

In calling attention to the rapid extension of the use of the English language among the people of Turkey, especially in the interior of Asia Minor, Consul William W. Masterson, of Harput, writes as follows concerning the cause of this growth:

The principal agencies causing the spread of the English language throughout this country are the American missionary colleges,

schools, and orphanages. Much has been written of the great educational institutions conducted under American auspices in Beirut, Smyrna, and Constantinople, but in the interior of the country, where outsiders scarcely ever come, there are schools and colleges turning out hundreds of scholars each year, who, along with other studies, have taken a complete course in English. The most important of these are situated at the following places:

Marzovan: Anatolian college for boys, a school for girls, an industrial school, and an orphanage.

Sivas: A normal school, a girls' school, an industrial school, and several orphanages.

Talas-Cesaria: Schools for boys and girls, a kindergarten, and an orphanage.

Erzerum: Schools for boys and girls and an orphanage.

Harput: The Euphrates College, for boys; an industrial school, a kindergarten, and several orphanages.

Marash: Girls' college and an orphanage.

Van: Schools for boys and girls and an orphanage.

Bitlis: Girls' school and an orphanage.

Mardin: Schools for boys and girls.

Aintab: Central Turkey College, a girls' school, three primary schools, and an orphanage.

Ourfa: Schools for girls and boys and an orphanage.

Throughout the Empire there are 132 American educational and charitable institutions, and in all of these the English language is taught, to a greater or lesser extent. The graduates of the theological seminaries and the physicians connected with the medical college at Beirut are scattered throughout the interior, and all speak English. Another great means for the spread of the English language among the people are the Armenians who return from the United States, who are proud of their English-speaking capacity, who teach it to their children, and who send their children to the American mission schools to learn the language properly.

SOUTH AFRICA.

RAILWAY SCHOOLS IN CAPE COLONY.

Consul-General Julius G. Lay, of Cape Town, transmits the following report concerning the establishment of railway schools in isolated parts of Cape Colony:

A railway school system has been devised and inaugurated for the education of children living in out-of-the-way places, and it has also been utilized in cases of railway employees in centers of considerable population. Statistics of these railway schools for 1908 show that there are forty-one schools on the railways, with total enrollment of 2,133 pupils. Many of these children would have no educational advantages if it were not for the railway schools established especially

for them. The expense to the Cape government railways for these schools was $28,367 for the year 1907.

Wherever railway employees in isolated places can guarantee an average attendance of ten children or more, not otherwise provided for by the railway schools, the railway department and the education department, acting conjointly and each furnishing half the expense, provide suitable premises and a certificated teacher, at a salary of $390 to $487 per annum and quarters.

Children of railway employees are carried to and from these schools free of charge, and are charged slightly lower fees than in the regular government public schools; they must also provide their own books and stationery. No objection is raised to the attendance of the children of farmers who also may be living beyond the convenience of any government public school. An official of the railway, known as the education officer, acts as manager of all the railway schools, and where there are a sufficient number of parents they form local committees to assist him in managing the affairs of the school. He is always more or less guided by the opinions of the station masters or head officials of the railway. The schools are inspected regularly by the inspectors of the education department, and the children are advanced according to the standards of the public-school system.

Children attending these railway schools range in age from 5 to 15 years, over 20 per cent of the children being over 15. They are taken as far as the seventh standard, which comprises a knowledge of the following subjects: Arithmetic, euclid, algebra, grammar, history, dictation, composition, writing, reading, botany, geography, sewing, Dutch, French, and Latin. The schools are supplied with libraries, furnished by railway and education departments, the expense being divided in the same manner as other school expenditure. The total number of volumes in these school libraries is now 4,703. There is no compulsory education in Cape Colony, and 134 children of railway employees, it is stated, did not attend any school in 1908, for various reasons.

The Pretoria Normal College, in the chief city of the Transvaal, has a large campus on which adequate space is reserved for tennis courts and other games honored in English schools, and still more ample space for an experimental school garden, which forms an indispensable adjunct of the course in nature study. This course has been carefully worked out, and it is intended that every teacher who goes out from the normal school shall be well fitted to stimulate the interest of elementary pupils in agriculture, and thus prepare the way for a general support of agricultural schools and a diffused appreciation of scientific methods in the cultivation of the soil and the treatment of crops.

In the series of leaflets published by this institution during the present year, No. 5, devoted to nature study, consists of specimen pages from the notebooks of students. The notes and accompanying illustrations are so arranged as to show very clearly the sequence of topics in the course and the careful and thorough manner in which the instruction is carried out. The endeavor on the part of the normal school to stimulate an interest in this fundamental industry accords with the purpose of the British Government which, from the time of its occupation of the country, gave special attention to the organization and proper staffing of the department of agriculture. The Transvaal is, in the main, a stock-raising country, but there are portions well adapted for agriculture, and it has been deemed of first importance to specialize in agricultural schools as the conditions of the country suggest. Particular attention has been paid to the steppe regions which are said to resemble in many respects the plateau regions of our own Southwestern States.

AUSTRALIA.

STUDENTS OF WOOL INDUSTRY.

In announcing that the Sydney Technical College (an Australian state government institution) has opened a department for special instruction in the wool and sheep industry, Vice-Consul-General Henry D. Baker explains its curriculum:

The course of instruction includes sheep classing, sheep judging, wool sorting, wool classing, preparing wool for the market, yields of wool, valuation of wool, uses and qualities of wool, scouring wool, fellmongering skins, shearing-shed work, and wool-trade usages.

The method of training the students in this industry is most useful and practical. It is framed to fit them to undertake the classification, skirting, rolling of fleeces, and sorting skirts or pieces to the best advantage to the grower, and also to meet the demands of the buyers. As the practical work advances, lectures on all subjects relating to the growing of wool and its suitability for manufacturing purposes are given. Advantage is taken of the Sydney wool sales to get students acquainted with the general routine of the wool business, and how wool should be prepared to suit the requirements of the various nations which import supplies from Australia.

Instruction begins the first week in February and terminates on July 31, at the time of the Sydney sheep show and stud sheep sales. These two events afford valuable opportunities for study, and serve as finishing lessons to those students who intend adopting station life as a profession. After the term expires students who have obtained

their professional certificates in wool classing and have had sufficient shed experience may be recommended as wool classers and sorters. Other students who have been industrious and are desirous of going on to stations to gain shed experience at the wool tables are recommended to squatters to skirt, roll fleeces and sort pieces.

Unskirted and unclassed wools are purchased from time to time in order to give experience in classing and sorting, and, to students who intend to take up station life, a thorough knowledge of skirting, rolling, and making up the fleeces in the best marketable styles. Arrangements are made with smaller wool growers or agents to send such lots to the college for classification, the wools classed under this arrangement bearing the college stamp. Sheep classing is also taught, after the knowledge necessary for sheep classing has already been imparted, by study of the wool. Visits are made for this purpose to the sheep-sale yards and meat-preserving works under superintendence of an expert lecturer.

During shearing time the students handle sheep and wool in the sheds. Instruction is given in scientific examination of wool, including use of the microscope, the action of reagents, the structure and appearance of hair follicles and their growth, and the effects of dyeing, dipping compounds, scouring, "carbonization," climate, food, etc.

Some classes have also been formed for training machine sheep-shearing experts to meet the needs of station owners and managers. The instruction includes work in elementary sheet-metal working, sanitary engineering, blacksmithing, carpentry, and fitting and turning. A plant consisting of the most modern sheep-shearing machines, run by oil engines, is installed in the college premises. This course is complete in two sessions, each of six months. There is also a class for instruction in sheep shearing only, which is completed in one term of two months' duration. The object of this class is to give young men the opportunity of obtaining a sound, practical knowledge of shearing. Various types of machines are provided for this class. The instruction in classing and sorting wool covers two years, for which diplomas are given.

CHINA.

WESTERN LEARNING IN CHINA.

Vice-Consul C. L. L. Williams, of Chefoo, forwards the following report, prepared by Mr. A. W. Gilbert, of that consulate, on western learning in the Chinese province of Shantung:

It is claimed by some that there are 1,000 government and private schools in the province of Shantung that teach western branches of

learning, but in the absence of official or other reliable statistics this claim can not be verified. The Chinese, however, are showing unusual zeal in acquiring a working knowledge of English, which is gradually becoming the international language of commerce in the Empire, and especially in the coast towns. The province of Shantung contains 96 districts, in each of which there is at least one elementary school, while some districts have more than one. The intermediary or middle schools in the province number 13.

There is an imperial provincial college at Chefoo, where the French and Japanese languages hitherto held the place of first importance. These will in the future be dropped to second or third rank of importance. There are 10 other higher government institutions in the province devoted especially to western learning. In these schools 1,900 students are enrolled, 63 Chinese teachers are employed, and 9 Japanese, 4 American, and 2 German teachers.

In Chefoo there are 4 private schools for boys and 2 for girls given to western learning, and employing 18 Chinese and 3 foreign teachers. At Chingchowfu is a flourishing sericultural college founded by a Japanese who introduced a variety of Japanese cocoon.

Mission Schools and Colleges.

A careful inquiry into the extension of schools for western education in this province reveals the fact that by far the most extensive and effective work is being done by the Protestant missionaries, the most of them being Americans. This work is conducted under the supervision of college graduates, many of them being professional teachers. The schools (American and English) are graded according to the home standards, and thoroughness seems to be the keynote. Probably half of those enrolled pay their own expenses at school and are doing good work. The small schools in the country prepare pupils for the higher schools at the mission stations, which are always located near a principal city, and these in turn prepare students for the colleges and seminaries. With the exception of those who have "picked up" their English, most of the English-speaking clerks and employees come from the mission schools.

There are six mission institutions of higher learning, American and English, located at Tengchow, Hwanghsien, Weihsien, Chingchowfu, Tsinanfu, and Taianfu. A movement is now under way which will unite all these, together with some of the German schools, into Shantung Union University.

In Shantung are 134 mission schools for boys with an enrollment of 2,186 and 40 schools for girls with an enrollment of 835. Of the 220 teachers for these schools, 180 are Chinese and 40 are foreigners. The average salary paid a native missionary teacher for boys is $3 per month, and $2 per month is paid for women teachers. The native

teachers in government schools receive $10 to $25 per month, while foreigners receive $100 to $200 per month.

Special lines of educational work.

Aside from the common schools at Chefoo, are the two schools for the deaf (boys and girls); the Chefoo Industrial Mission schools in the silk district to the southwest, engaged in the manufacture of silk lace, etc., the mission buying the product and putting it on the market; the China Inland Mission boys', girls', and primary and kindergarten schools for foreign children; and the French school for foreign boys. A private school for foreign boys is also located at Wei-hai-wei and an embryo American school for foreign children has recently been opened at Hwanghsien.

In this connection, also, should be mentioned the English Baptist museum at Tsinanfu and the Chefoo museum of the American Presbyterian mission. This institution has a very large collection of mounted birds, fish, minerals, and stones, besides seals, wildcats, weasels, rabbits, water buffalo, wild boar, leopards, etc. The daily average attendance is about 300, and, like the Tsinanfu museum, has a chapel attached.

Outside the medical missionaries, there are only two foreign practicing physicians reported in this district. The 14 medical missionaries, with their 6 hospitals and 14 dispensaries, annually treat over 200,000 persons. A union medical college is now in process of construction at Tsinanfu, and is part of the Shantung Union University scheme. This university now has a union college at Weihsien and a union theological seminary at Chingchowfu.

Commercial forerunner.

The medical branch of missions is probably doing more toward reconciling the Chinese to foreign association than any other agency. In Weihsien, where no foreigner has hitherto been permitted to live, an American medical missionary has recently opened a dispensary. During a recent overland trip to that city, the mention of acquaintance with the missionary invariably put me on a friendly footing. Such contact with their work forces the conclusion that the missionaries are practical forerunners of commercial enterprise. They seldom fail to win the respect and esteem even of those who do not accept their doctrines, and thus unconsciously pave the way for further foreign intercourse.

The haste to make a flattering financial showing on the part of foreigners has been an important factor in delaying commercial intercourse in this country. However, a moderate respect for Chinese customs and laws, a friendly interest in the people as prospective customers, and normal business methods are doing much toward overcoming antipathy to foreign enterprise.

German-Chinese school at Tsingtau.

Consul Wilbur T. Gracey, of Tsingtau, transmits the following information regarding the new German educational scheme in the colony of Kiaochow:

A recent local newspaper, the Tsingtauer Neueste Nachrichten, publishes an article by the director of the new college, from which the following excerpts are translated:

The programmes, statutes, and schedules of the German-Chinese college at Tsingtau will shortly be published in both the Chinese and German languages.

The college consists of two departments, a preparatory school and a school of science. The preparatory-school course extends over six years, taking young Chinese of at least 13 years of age. These students must have had a good Chinese education and be qualified for the lower classes of high schools. A certificate relative to his qualifications must be submitted by the scholar seeking admittance, obtained after examination before the Chinese examiner at Tsinan and the inspector of studies of the college at Tsingtau, which examination is indispensable. Knowledge of the German language and modern sciences is not required for the preparatory school, but if newly entering scholars have such knowledge they will be admitted to the higher classes. An examination will be held before graduation from the preparatory school, which must be passed in order to obtain admission into the higher—second department.

THE SCHOOL OF SCIENCE.

The school of science consists of two great divisions: (1) A department of law and political science; and (2) a technical department, including natural history. The first department comprises the entire legal and state material, especially law; international law; general state and administrative rights; state laws; railway, mining, and maritime law; political economy; finances and comparative cases of real property. In addition the general outlines of a process or suit will be explained to the students, as well as the task of police administration.

There are laboratories for chemistry, physics, electricity, mineralogy, and geology, machine building, mining, etc. Students of the higher college are at liberty to choose their vocations, but must, however, strictly comply with the schedule. The students of the first term must remain at college for four years, but later discrimination will be made when the students enter, according to their knowledge of the German language, so that the courses will occupy the following periods: Legal course, three years; forestry, three years; building, two years; technical, four years.

The philosophical course will be taught by Chinese teachers, a medical branch will probably be opened after one year, and a subcourse will also be given in gymnastics, music, and art. The minimum age for the school of science is 20 years, and a good knowledge of the preparatory courses is essential to admission. If a student wishes to join the school of sciences without having visited the preparatory school, he must first pass an examination in both Chinese and Western sciences, a good knowledge of both the Chinese and German languages being necessary.

TEACHERS, TUITION, BOARD, ETC.

At present there will be employed at the college 12 German tutors and 10 Chinese teachers and interpreters, and as the number of students grows the staff will be increased. Buildings and dormitories are sufficient for the present and are in the best of condition. The fee for tuition in the preparatory school is 100 marks ($23.80), and for the school of science 200 marks ($47.60) per annum. Board and lodging costs 10 marks ($2.38) a month, so that altogether a preparatory-school student has to pay,

including tuition, 220 marks ($52.36), and the higher students 320 marks ($76.16) annually.

Application for admission is to be made to the director or the Chinese board of education at Tsinan. A translation office will be opened in conjunction with the college to prepare the necessary material.

German-Chinese High School.

Vice-Consul Edgar Kopp, of Tsingtau, reports that it is the intention of the management of the German-Chinese High School at that place to open a free course of lectures on popular scientific subjects, illustrated with pictures and experiments, for the benefit of the foreign residents. Besides these lectures, an evening course in the Chinese language and script, as far as necessary for daily use, will be given for the benefit of the German community. Two German professors are to lecture.

CHINESE MUSIC.

Invention and character thereof, musical instruments, etc.

In connection with his report on the foreign trade in musical instruments in China, Deputy Consul-General Clarence E. Gauss, of Shanghai, prepared the following paper on Chinese music:

The Chinese claim for their music the greatest antiquity. According to their annals, music was invented by the Emperor Fuhsi some three thousand years before the Christian era. At that time, however, music was not regulated by any laws, nor were the instruments of a complicated kind. But under the Emperor Huangti, 2700 B. C., the art of music made important progress, a certain note was chosen as keynote, the sounds were fixed and received names, comparisons were drawn between the notes and the celestial bodies of the universe and music became a necessity in the State, a key to good government. After Huangti his successors took pride in practicing music and composing hymns, and the post of music master was considered the highest dignity in the Empire.

Confucius spoke of music in the highest terms of sincere admiration, and recommended it as the best medium for governing and guiding the passions of men.

Chinese accounts describe ancient music as beautifully sweet and harmonious, but they give no idea of what it was like. Tsin-shih-Huangti, 246 B. C., ordered the destruction of all books, and as music books and instruments were included, the tradition of music was lost. Subsequent emperors, especially Yuen Tsung, 720 A. D., and Kangshi, 1721, made great efforts to revive music and bring it back to its old splendor, but the discussions and contradictory theories of various writers put the whole system into confusion, and caused the art of music to sink to the lowest rank.

Character of music.

Chinese music is written, like the language, in vertical rows of characters from right to left. The value of the notes or their length can not be ascertained, as rests, pauses, etc., are seldom indicated, and there is no division into bars. The Chinese use no chromatic scale, and they have nothing resembling our sharps, flats, etc.; that is, signs which in a piece of music sharpen or flatten certain notes.

The best Chinese musician can only conjecture the general form of a written piece shown to him for the first time; to be able to decipher it he must hear it played. Therefore, all the tunes are learned by tradition, and are continually modified by the individual taste of the performer, so that after a lapse of time the tunes become quite different from what they were originally, and scarcely two musicians will be found to play exactly the same notes when performing the same piece of music.

Chinese music is divided into two classes, ritual and popular. Under the name of ritual music must be comprehended all music performed at court or at religious ceremonies. Under popular music are grouped all theatrical, ballad, professional, and ordinary street-song music. Among a list of selections of Chinese music on a programme I find one entitled "Ta-Pa-Pan" ("The Eight Boards"), supposed to emanate from the pen of the great Emperor Kanghsi, together with the following entitled selections: "Opening the Hand," "The Maid of the Green Willow," "Mother Understands Me Well," "Alone at Home," "Dame Wang," "The Abode of Love," "The Widow's Lament," "Painting Fans," "Breaking the Looking-glass," "Making Verses with a Bird," "The Locust's Fate," "The Seal of Longevity," "The Ladder of Happiness," "The Happy Dream," "The Men who Fear Their Wives," "The Crockery mender."

Chinese musical instruments.

A paper entitled "A List of the Musical and other Sound-Producing Instruments of the Chinese," by A. C. Moule, B. A., Trinity College, Cambridge, has recently been published by the North China Branch of the Royal Asiatic Society in their journal for 1908. The author groups the instruments into three classes—sonorous substances, vibrating membranes, and wind instruments, and describes a vast collection of ancient and present-day instruments, including all styles of drums, tambourines, hoop drums, hand drums, rattle drums, war drums, etc.; clappers, rattles, castanets, gongs, bells, flutes, whistles, bamboo pipes, pigeon whistles, whistling tops, reed instruments, small hand organs, free-reed instruments, fiddles, conches, horns, and musical toys, many of them ancient, many of them sacred to the use of the imperial family or religious state cere-

monies. Some of them the present-day Chinese orchestral equipment, and no small number merely the signals by which certain corporations of Chinese hawkers announce themselves.

Foreign musical education of Chinese.

While the missionary and the western educator have been busy spreading Christianity and western learning among the Chinese, some little time has also been given to the introduction of western music. It is interesting to see the drum-and-fife corps, and sometimes even small bands, established in the modern educational institutions of China. Even in the Chinese schools, where the missionary-educated Chinese are rapidly being called as teachers, they are bringing with them the baby organ, to which they have become attached as students.

At a recent graduation-day ceremony at Shanghai in a Chinese girls' school conducted by American women many of the invited guests were surprised at the ease and accuracy with which several young Chinese girls played foreign musical selections on the violin and piano. According to a Shanghai dealer, the Japanese are being employed in large numbers as music teachers in Chinese schools, and they have had much to do with the inroad made by Japan in the musical-instrument trade in all lines.

COLLEGE OF MEDICINE.

Consul W. T. Gracey writes from Tsingtau that it is reported that according to the wishes of Viceroy Chang Chitung a college of medicine is about to be opened at the Chinese capital. Preliminary plans include the following measures:

As the school is to afford the highest medical training for the young men of the entire Empire, it shall not employ men on its faculty who do not come with the highest possible recommendations. In accordance with Chinese ideas the course is to be divided into three years of old Chinese medical practice and six years of modern western training. At the end of these nine years there is to be a thorough examination and then three more years of study and trial practice shall be demanded before the students shall be qualified doctors. This examination must also be passed by people who are now practicing on certificates from existing medical schools. No one who does not hold a literary rank of a fixed grade (Chü yen) shall be allowed to take these examinations, regardless of where he studied. Compensation to be paid by the students who will study at this new school is to be fixed at a future meeting of men appointed to have charge of the institute.

JAPAN.

Care of school children.

Consul George H. Scidmore, of Nagasaki, in answer to an inquiry, reports that a thorough physical examination of all school children in Japan must be made by physicians in April each year, and a monthly sanitary inspection, made by physicians also, of all school buildings, their contents, water supply, surroundings, etc.; also a monthly examination of pupils, but not so minute as the annual examinations. If a pupil is found to require medical treatment, the fact must be reported to the parents.

Proposed industrial school in Formosa.

According to Consul S. C. Reat, of Tamsui, an industrial and mechanical training school will probably be established in Formosa some time in 1910. It will probably be located in Taichu, a central town in the island. The Japanese Government has delegated a number of professors of the Tokyo Higher Industrial and Mechanical School to visit Formosa, and their recommendation will determine the action of the Government, but the consul adds that there is no doubt that the industrial conditions warrant the erection and equipment of such a school.

Medical education and status of foreign physicians.

In response to an American inquiry Consul George H. Scidmore, of Nagasaki, sends a report on medical schools and laws applying to the practice of medicine in Japan, from which the following extracts are taken:

Medical colleges are located at Tokyo, Kioto, Fukuoka, Chiba, Sendai, Okayama, Kanazawa, Nagasaki, Aichi, and Kumamoto. Students are required to have from eleven to twelve years of work in the elementary and middle schools before they are admitted to ordinary medical colleges, and in case of admission to the medical colleges of Tokyo, Kioto, and Fukuoka universities, students are required to pursue three additional years' study in the higher schools.

Graduates from the imperial universities and other approved medical schools must secure a license from the minister of home affairs before they begin to practice. A graduate of a foreign medical school or a holder of a physician's license, coming from a country that licenses Japanese physicians without examinations, may be licensed by the minister of home affairs. No person may practice medicine who has been convicted of felony, who is deprived of civil rights, or who has been sentenced to imprisonment or fined in connection with medical practice. For ten years books must be kept by physicians, and the names, ages, residence, professions, and the names of diseases of patients and the method of treatment applied to them must be entered therein. Physicians can not make a false advertisement by boasting of their talents, nor can they advertise as having a secret method of treatment.

CHAPTER XII.

EDUCATION IN CENTRAL EUROPE.

Contents: General survey of education in central Europe.—German association for school reform.—Material progress of the Prussian school system.—School hygiene in Germany.—Feeding school children in Germany.—Attendance and promotion in the schools of Berlin.—Teachers' sick leave in Berlin.—Young teachers in rural schools.—Salaries of teachers in German elementary schools.—A German normal-school course.—Normal and continuation schools in Prussia.—Middle schools in Prussia.—Secondary schools for boys in Prussia.—Salaries of teachers in Prussian secondary schools.—Coeducation in Prussia.—Secondary schools and military service.—Elementary schools in Hungary.—Coeducation in Austrian industrial schools.—Industrial continuation schools in Zurich.—German university students and their preparation.—Opening universities to normal-school graduates.—Native and foreign students in German universities.—Women students in Prussian universities.—Vacation courses in Jena.—German higher education reviewed.

GENERAL SURVEY OF EDUCATION IN CENTRAL EUROPE.

In Austria the urgent necessity of increasing teachers' salaries has brought the teachers of all the different nationalities and religious denominations closer together, but the very popular demand that the imperial, or federal, government ease the burden of the states (crown lands) by taking upon itself one-half of all the expenditures for public education does not seem to have much chance of realization in the near future. In December, 1909, an order was issued to provide all schools with hygienic inspectors or school physicians. A beginning in medical-school inspection was made in normal schools, but most of the elementary schools must wait until the means have been provided for this service. The clerical party, which is very strong in Austria, is making efforts to bring the schools under exclusively clerical supervision, but the teachers, basing their right to be supervised by professional educators on the school law of 1869, uphold the liberal spirit of the law and the practice of the last four decades, and express opposition to clerical rule in conventions and in the press. The latest conflict took place in the city of Vienna, where new emphasis was given to the idea of Empress Maria Theresa, i. e., that school is a "politicum."

The problem of remodeling the high or secondary school courses in Austria so as to satisfy the demands of modern life, instead of

preparing exclusively for universities (a problem which has long been solved in Germany by the establishment of Realgymnasia and Reformgymnasia), is now agitating municipal and provincial authorities as well as the Imperial Government. Public opinion has been aroused and attacks are made in the press and in parliaments on the study of Latin and Greek. It is the old combat between humanists and realists, which, however, will not result in doing away with philological studies in classical schools of Austria any more than in other countries, but rather in establishing new forms of schools which will pay due heed to the requirements of scientific professions, such as agriculture and forestry, architecture, mining, engineering, electrotechnology, and others. The acute stage of the conflict began in 1905 with the formation of a society for the protection of the interests of classical schools. At Easter, 1906, the German Reformgymnasia were taken as models for schools of a modern type. These schools have uniform lower grades and bi- or trifurcate sections in the upper grades, thus allowing the students to select their professions at a later age than formerly. In July, 1907, the minister of education set on foot an inquiry which was to deal with the whole subject of secondary instruction, and in March, 1908, new regulations for the graduation certificates were issued which affected the courses of all these schools, bringing them into conformity with modern life.

In Germany there are a number of storm centers. In Bavaria, for instance, the Teachers' Association, a branch of the National German Teachers' Union, is combating the policy of clerical school supervision. Their latest memorial demands that teachers be freed from the duty of performing lower church services (acting as sextons, beadles, etc.). The same motives are prompting the teachers of Wurttemberg, where a new school law (see p. 450 of Annual Report for 1909) has recently been passed, which introduces professional supervision in the cities, but leaves the clericals to perform that duty in rural districts. In Baden the Government is working out new school regulations made necessary by the law of 1906. The teachers in this State are still awaiting an increase in their salaries, while professional supervision will, as it appears, be secured in the near future. The importance of this question may be seen from the fact that the state teachers' meeting, held at Heidelberg and attended by 3,000 teachers of Baden, discussed the question for many hours, and almost unanimously passed strong resolutions in favor of such supervision. In Saxony the revision of the school law is not yet completed. Teachers and clergy are still discussing the scope and method of religious instruction in school. In Prussia the new regulations of girls' secondary schools (see p. 296 of the Annual Report for 1908) are carried out with all due deliberation and thoroughness, and the spirit of

that reform manifests itself in the increased attendance of young women who wish to prepare themselves for admission to higher institutions. A novel situation has developed in connection with the reorganization of girls' high schools, namely, the lack of men teachers. The latter prefer appointments in boys' schools, because it would be necessary for them to serve under women principals if they should accept appointments in girls' schools. The new salary law (see p. 452 of the Annual Report for 1909), though it has placed the Prussian teachers above those of nearly all other German States, is still unsatisfactory to them, since it is left to local authorities to determine the amount of rent indemnity to which teachers are entitled, and the amount proves to be inadequate, save in a few localities.

In Prussia, as well as in other German States, the teachers of the lower schools are anxious to obtain the right to pursue university studies, claiming that graduation from the six years' normal-school course is equal to that of the Oberrealschule. The only difference is the absence of foreign languages in the former, which, it is claimed, teachers do not need for the scientific branches they desire to study. The higher institutions of learning in Germany, the universities and polytechnica, experience an unusual increase in the number of students, but the professors do not always welcome the graduates of secondary schools because many of them are unfit, or waste their time during the first year of their courses. (See p. 491.) Perhaps the most important event in the history of public education in Germany of 1909–10 is the admission of the Teachers' Association of Alsace-Lorraine to the German National Teachers' Union. This is the keystone, so to speak, in the arch of the latter union, which has now about 150,000 paying members. Since each one of the members is a voter and, as a rule, an adviser to the parents as well as to his pupils, the Teachers' Union is a political asset, with which parties and Government are in the nature of the case obliged to reckon. This new relation has not been made without violent opposition on the part of the clergy. The Catholic bishops of Strassburg and Metz warned the teachers of Alsace-Lorraine not to join the National Union, but the governor of the province took the bishops very sharply to task for interfering with the teachers' political and civil rights.

In Switzerland, where the minimum salary of teachers is much less than in Prussia, and where their tenure of office is rather precarious, the teachers argue in the press and in public meetings that they should be placed on equal footing with local civil officers. The Schweizerische Lehrerzeitung, in a review of the year, gives the following items of local importance: In the canton (state) of Zurich certain increases have been granted by popular vote in a few local districts. A proposed bill for the reorganization of the continuation school system is encountering some opposition in public, inasmuch as

it makes higher claims upon local taxation. A law which fixes the amount of annuity for teachers' widows and orphans was passed in 1909. In the canton of Berne the technical school at Biel has been made a cantonal or state institution, and its somewhat antiquated graduation examination revised. The canton of Lucerne proposed a revision of its school law, which has passed the lower house. In the canton of Schwyz a revision of the school law was rejected by the referendum vote of the people. Uri has introduced new school regulations, and Nidwalden has established a pension fund for teachers. The canton of Glarus prepared a new school law which is so radical that the authorities, in order to save some good features of it, propose partial revision. In Solothurn, or Soleure, the annuity funds for teachers have been enlarged and the claims of annuitants increased. In Basel-Land the popular vote has rejected a new school law twice within a few years, and in Basel-City the organization of the schools has been subjected to severe criticism by the teachers; this is likely to lead to a revision of the law. The newly proposed bill attempts to amend the present regulations without serious changes of the fundamental forms of the old law. In Schaffhausen, likewise, a revision of the cantonal school law is under advisement. In Appenzell a. Rh. the popular vote has rejected the new school law for the fourth time, and in Thurgau, or Thurgovia, the teachers are urging an extension of the normal-school course. St. Gall is preparing a new school law; Aargau, or Argovia, has just succeeded in submitting a new law to the cantonal council. Graubünden, or Grisons, is suffering from lack of teachers, owing to the very low salaries paid. In Tessin, or Ticino, the school law passed by the legislature and rejected by referendum vote in 1908 has not been revived in amended form. Subject to much political strife are the schools of the St. Gotthard Railroad, which have become federal property through transfer of the railroad to the federal government. The schools of the canton of Wallis, or Valais, are in a transitory state, since the new school law, passed last year, requires changes which only time and patience can effect. A revision of the law affecting the secondary schools has begun. In Neuchatel the former academy has been changed into a full-fledged university, and the primary school law has been revised. In the canton of Waadt, or Vaud, the new law for secondary schools is being carried out. The "mutualité scolaire" received a bad shock when old-age insurance was adopted; hence the former will have to return to its original basis. Genf, or Geneva, celebrated the three hundred and fiftieth anniversary of its university in 1909, and passed a law concerning arts and industries which enables the authorities to establish a secondary technical school. The polytechnic institute at Zurich has adopted a new study order and now grants the degree of Dr. Ing. (doctor of engineering).

An inquiry among the Danish teachers concerning professional or clerical school supervision had the following result:

Question 1. Is it desirable that the rector or pastor of the parish supervise the schools?—Answer. Yes, 2,650 votes; nay, 700.

Question 2. Shall the teaching profession be represented in the supervisory offices?—Answer. Yes, 3,079 votes; nay, 280.

Question 3. Shall the church be represented in the supervision of schools?—Answer. Yes, 2,036; nay, 1,195.

Question 4. Is it desirable to retain instruction in religion in the schools?—Answer. Yes, 2,993 votes; nay, 377.

This shows that the teachers of Denmark are agitated by the same ideas at present discussed in Germany and Austria.

Thus we see in the organization and legal foundation of all the States of central Europe new features, increased motion, and adaptation to modern life—nowhere a standstill. Faster than ever the inner development of public education proceeds, and both the method and course of instruction are revised to produce men and women who can find their way through the multiplicity of demands arising from the complexity of modern life. The more changes are made in productive labor the stronger are the attacks on the old-time school and the higher is school reform valued. Everywhere, from the sea to the Alps, there is a noticeable educational unrest, which results in throwing overboard all antiquated methods, tottering institutions, and unnatural limitations. Luther's contemporary, Ulrich von Hutten, said at the beginning of the sixteenth century: "It is a joy to live now." This word may well be applied to the life and the scholastic preparatory institutions in central Europe at the beginning of the twentieth century.

GERMAN ASSOCIATION FOR SCHOOL REFORM.

In the fall of 1908, and again in 1909, a small number of men and women from various parts of the Empire came together in Berlin to discuss ways and means to change the entire system of public education from within. These gatherings recruited themselves especially from the ranks of teachers of elementary schools, and formed the Association for School Reform, which for nearly two years worked without calling the public press to aid them. The association took the Association for Reform of Industrial Art as a model, which, guided by a score of prominent artists, has done much to revive industrial styles and forms of the middle ages and to improve the products of building trades, decorators, furniture makers, bookbinders, and other trades. The Association for School Reform (central office in Hamburg) wishes to avoid bureaucratic regulations, and intends to appeal to school and family alike, in order to establish a closer

connection between the educative work of school and home and modern cultural life, that is, with the civilization of our time. The efforts of the association have been directed to the physical and psychical development of youth, and it avoids exclusively professional discussions by drawing into its sphere of labor laymen and women deeply interested in school reform. Early in March, 1910, the association issued invitations for a public meeting, at which Professor Meumann, of Halle, made an address, setting forth the aims of the association, whose activity is to be part of the large international pedagogical attempt at school reform, which aims at adapting school to modern civilization. To reach this aim, he urged, there were three obstacles to overcome: (1) The historic foundation of the present German school system; (2) the traditional methods of organization and methods of teaching; (3) antiquated laws and the want of adequate modern legislation. The reform of the schools, by adapting them to the demands of modern times, might be attempted from three standpoints: Science, practical life, and culture, both ethical and æsthetic. The speaker, in his address, touched upon the often discussed sciences, pedagogy, hygiene, and psychology. Doctor Köhne, of Berlin, dwelt upon the pedagogical interest of judges on the bench, and pleaded for the better preparation of judges and a better comprehension of juvenile character. Doctor Stern, of Breslau, spoke of the intimate relation of child study to general culture, and urged the establishment of a central office for child study, the questionnaires of which would be authoritative for the whole of Germany. Doctor Wetekamp spoke of optional studies in secondary schools, and Doctor Weygand, of Hamburg, about the participation of the physician in all matters of education. The association seems to have all the necessary qualifications of successful activity, since it is led by men of profound learning and has a very enthusiastic membership, consisting of teachers and laymen. As means are placed at the disposal of the association, it will support every attempt at school reform worthy of its attention, and thus gradually draw into cooperative action all elements in sympathy with its object.

MATERIAL PROGRESS OF THE PRUSSIAN SCHOOL SYSTEM.

The Sozial-Statistische Correspondenz (Berlin) reports that in the 28 large cities of Prussia (cities of over 100,000 inhabitants) the increase in the number of elementary schools amounted to 9,694 within the last twenty years. This is owing not only to the increase in population, but partly to the efforts made by the school authorities to reduce the number of pupils for each teacher. The city of Charlottenburg (sister city to Berlin) has gone furthest in this reform, for the maximum number of elementary pupils per class in that city

is 45. The increase in local expenditures for the lower schools during the last twenty years has been very large. Without counting the expenditures for teachers' pensions and other items, which are borne by the State exclusively, the 28 large cities of the Kingdom, the local school budget of which was $6,281,432 twenty years ago, now (that is, in 1909) pay $18,394,782. This is the result of local taxation only, state and provincial governments paying a considerable amount for the support of the lower schools. (See p. 447 of the Annual Report for 1909.) The largest local lower-school budget is, of course, found in Berlin, namely, $5,804,699; the smallest in Wiesbaden, $198,645. The per capita of local expenditures for the lower schools rose from $4.70 to $19.99 in Charlottenburg and $32.13 in Frankfort on the Main. The city of Halle has the lowest per capita local school expenditure, viz, $13.28.

SCHOOL HYGIENE IN GERMANY.

"Education without health is useless" is a statement of an American author made in discussing the necessity of promoting practical school hygiene. This idea, called forth by the social misery demonstrated by the physical condition of school children, leads more and more to the recognition of the necessity of employing physicians side by side with teachers in schools. In No. 6 of Zeitschrift für das Armenwesen (1909) Dr. Alfred Lewandowski (Berlin) gives a review of the attempts toward improving the physical conditions of school children in Germany. Though there seems much left to be done, a promising beginning has been made during the last decade.

In the summer of 1908 the central committee for "Jugendfürsorge" (care of children criminally inclined or merely neglected) sent out a set of questions to the governments of all German cities with a population of over 10,000. Of 524 of such communities 90 per cent replied. Of 468 localities, the population of which amounted to 21,503,976, and which had 3,023,133 pupils in 4,567 graded elementary schools, with 160,026 classes, there were found school physicians in 266; hence 202 cities had not yet resorted to the introduction of school physicians. Since 1908 the latter number has been greatly reduced.

Gymnastic exercises in the open air, during recesses and after school hours, were held in the lower schools of 193 cities, while the sessions were interrupted by calisthenic exercises in the schools of 236 cities and breathing exercises by open windows in the schools of 160 cities. Orthopedic gymnastics for children suffering from curvature of the spine are arranged in 22 cities. In 205 cities the school authorities offer opportunities for swimming baths in pools with constantly changing water; in 95 of these cities the city government

attends to the cleanliness of pupils in the municipal bathing institutions; in 216 cities the schoolhouses have shower baths in the basements.

Gymnastic school excursions on free afternoons (Wednesdays and Saturdays) are made in 163 cities; games for children in the open air on playgrounds and in neighboring groves are arranged in 357 cities; and in 382 the teachers are obliged to take their classes out walking through woods and fields. Four cities have arranged rowing matches; skating on ice is promoted in 174 cities; 226 cities have play afternoons as regular school lessons. In 36 cities forest sanitariums are maintained, 3 have forest homes for sickly children, and 8 have forest schools.

In 1908 as many as 443 cities offered instruction in the upper grades of school on the evil effects of alcohol. In 20 cities school dental clinics are established, and in 15 other cities such clinics were planned, the authorities merely waiting for the required appropriation; 53 cities attend in other ways to the teeth of their school children; and in 163 an examination of the children's teeth takes place at regular stated intervals. In 274 cities a careful examination of children's eyes is made at intervals, and records are kept; three cities have appointed professional oculists for that purpose; and 215 furnish glasses at the city's expense. For children with defective hearing 131 cities have appointed experts, but only 24 have arranged special schools for such children.

In 196 cities courses of instruction for teachers for curing defects of speech are arranged; in 171 cities special treatment of throat and nose diseases and for children suffering from impediments in their speech is arranged. Also for children of nervous troubles and for weak-minded children, 103 auxiliary classes in fully graded schools and 169 independent auxiliary schools are established. In 238 communities special physicians are appointed to determine the existence of tuberculosis among the school children; 109 cities merely exclude such children from attendance at school; in 139 other cities such children are sent to appropriate institutions at the city's expense.

This brief review shows what schools can do in a practical way in the field of hygiene. From the replies received it is seen that valuable experiments are made everywhere, partly in saving sick and weak children and partly in preventing contagion and infection, which might be a menace to the healthy. Physical health deserves fully as much attention in school as do mental and moral health. The question of organizing the department of physical development and health, so as to do the most good without seriously interfering with the intellectual school work, is of great importance.

To all the efforts mentioned in the foregoing may be added the duty of feeding hungry children, which is done in 201 cities. (See statistics following.) This is not done in Germany from charitable motives; free breakfasts or lunches are not given or taken as alms, but the whole movement is prompted by pedagogical motives, since instruction to hungry children is about as useless as it is to sick children. It may be stated that the appointment of school physicians is to-day (February, 1910) almost universal in Germany, and that in consequence of the work of these men, as well as of school nurses, new ideas have been developed, and improvements have been introduced, so that the foregoing report, nearly a year and a half old, is in some of its statements already antiquated.

FEEDING SCHOOL CHILDREN IN GERMANY.

The "Zentralstelle für Volkswohlfahrt" in Berlin published, in the fall of 1909, information regarding the feeding of school children in 201 German cities out of a total of 525 cities of over 10,000 inhabitants. The following tables are here reproduced, because they give the facts in the briefest possible form:

Cities of—	Total number of pupils.	Number of pupils given meals.	
			Per cent.
10,000 to 20,000 inhabitants	155,186	9,372	6.0
20,000 to 30,000 inhabitants	78,257	6,262	8.0
30,000 to 50,000 inhabitants	134,549	8,034	6.0
50,000 to 100,000 inhabitants	251,977	17,760	7.0
Over 100,000 inhabitants	1,109,680	53,442	4.7

Cities of—	Breakfast given to—		Luncheon given to—		Dinner given to—	
		Per cent.		*Per cent.*		*Per cent.*
10,000 to 20,000 inhabitants	2,094	1.3	3,281	2.1	3,997	2.6
20,000 to 30,000 inhabitants	2,994	3.8	1,547	2.0	1,721	2.2
30,000 to 50,000 inhabitants	2,474	1.8	4,284	3.2	1,276	.9
50,000 to 100,000 inhabitants	6,017	2.4	5,607	2.2	6,136	2.4
Over 100,000 inhabitants	28,794	2.5	9,054	.8	15,594	1.4
Total	42,373	2.5	23,773	1.4	28,724	1.6

ATTENDANCE AND PROMOTIONS IN THE SCHOOLS OF BERLIN.

The annual report of 1908–9 of the school authorities of Berlin contains some interesting statements concerning attendance, grading, and promotion of pupils in the elementary or Volks-schools. The detailed statistics may be omitted here and only totals quoted; moreover, the report gives relative figures, which for purposes of comparison are more useful.

The actual attendance in the eight grades was as follows:

	Classes.	Children.
First year	726	36,863
Second year	685	34,054
Third year	680	33,799
Fourth year	687	33,081
Fifth year	683	30,131
Sixth year	663	27,520
Seventh year	578	20,860
Eighth year	291	9,846
Special[a]	159	2,301

[a] The special classes are auxiliary classes for weak-minded, diseased, and crippled children.

During the four years stated below the average number of pupils per class room was as follows:

	1903–4.	1905–6.	1907–8.	1908–9.
In first grade	56.01	54.15	51.01	50.77
In second grade	55.77	53.89	49.90	49.71
In third grade	54.06	52.59	51.17	49.70
In fourth grade	50.15	50.12	48.52	48.15
In fifth grade	45.22	44.98	45.53	44.11
In sixth grade	40.91	41.72	42.04	41.51
In seventh grade	34.48	35.24	36.54	35.79
In eighth grade	31.16	32.39	33.83	34.42

In special classes the attendance is small—about 14.2.

This shows a steady decrease in the lower and a like increase in the upper grades. The average attendance of all the grades per class room during the years specified was:

	Children.		Children.
In 1890	55.04	In 1904	46.58
In 1895	52.52	In 1906	45.51
In 1900	49.62	In 1907	45.07
In 1902	47.56	In 1908	44.34

After completing the prescribed course of the year, or rather at the close of each of the two semesters, the following numbers of pupils withdrew from the schools attended during the semester:

	1905.		1907.		1908.	
		Per cent.		*Per cent.*		*Per cent.*
From special classes	178	0.73	277	1.14	302	1.26
From the first to third grades	119	.49	84	.34	59	.25
From fourth grade	754	3.09	569	2.33	510	2.13
From fifth grade	2,093	8.59	1,862	7.62	1,705	7.13
From sixth grade	4,794	19.68	4,317	17.67	3,847	16.09
From seventh grade	7,395	30.36	7,301	29.88	6,930	28.99
From eighth grade	9,028	37.06	10,020	41.02	10,558	43.32

The per cent of those who graduated from the highest or eighth grade at the close of the two semesters was 88.4 per cent in 1908; in 1907 it was 88.57 per cent, in 1905 it was 88.02 per cent, and in 1903

it was 87.10 per cent, there being two promotions a year. If we add the pupils who were permitted to leave school before reaching the eighth grade, having proved by an examination to the satisfaction of the supervisory authorities that they were competent, namely, 1,858 in number, those who completed the prescribed course may be said to have been 90 per cent.

Among American readers the question may arise, How is it that so many children in Berlin are withdrawn from school, the compulsory attendance act covering the ages of 6 to 14? The report answers that question by stating that 18,909 children reported to have withdrawn were merely transferred to other schools, the families having moved into other districts; 10,361 moved into the suburbs, the schools of which are not governed by the Berlin school board; 2,234 left the lower schools to enter the various secondary schools at 9 or 10 years of age; 556 children died; and 243 were assigned to reform schools or special schools.

The per cent of pupils promoted to the next higher grade at Easter and in the fall is stated to have been as follows:

	Easter of 1907.	Fall of 1907.	Easter of 1908.	Fall of 1908.	Easter of 1909.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
From first grade	86.9	88.05	89.82	87.67	89.93
From second grade	87.4	86.56	88.95	87.07	89.32
From third grade	86.3	86.14	87.82	86.41	88.32
From fourth grade	84.2	85.79	87.79	85.96	87.56
From fifth grade	85.9	85.68	88.39	86.85	88.23
From sixth grade	85.1	85.42	86.76	85.74	87.17
From seventh grade	78.6	80.13	83.45	82.25	83.57
Average	85.4	85.78	87.88	86.26	88.27

TEACHERS' SICK LEAVE IN BERLIN.

The Berlin school board published recently a statistical report of the cases of sick leave granted to the teachers of the elementary schools of that city in the school year 1908–9. Cases of sick leave of from one to three days are not taken into consideration, since they were granted by the principals of the building. The following five tables (taken from the Pädagogische Zeitung of Berlin, December 9) are of great interest, since they offer material for comparison:

TABLE 1.—*Total number of cases of absence owing to sickness.*

	Number of cases of sick leave.					Time of sick leave.	
	April, May, June.	July, August, September.	October, November, December.	January, February, March.	Total.	Number of days of sick leave.	Average number of days of sick leave.
Men teachers	251	185	212	272	920	26,604	28.92
Women teachers	229	215	193	240	877	26,972	30.75
Special teachers	51	33	33	51	168	5,043	30.02

TABLE 2.—*Men teachers.*

Periods of service, years.	Total number of men teachers.	Cases of sick leave.		Length of sick leave.	
		Number of cases.	Per cent of total number.	Number of days.	Average number of days of sick leave.
1 to 4	78	20	25.54	471	6.00
5 to 9	743	160	21.53	3,665	4.93
10 to 14	752	158	21.01	4,225	5.62
15 to 19	406	100	24.63	2,000	4.93
20 to 24	296	72	27.70	1,878	6.34
25 to 29	475	123	25.89	3,814	8.03
30 to 34	364	112	30.77	4,539	12.47
35 to 39	168	113	67.26	4,003	24 71
40 to 44	96	45	46.88	1,725	17.97
45 to 49	36	17	47.22	284	7.89
50 to 55	1	.....	.00	.....	.....
Total	3,415	920	26.94	26,604	7.79

TABLE 3.—*Women teachers.*

Periods of service, years.	Total number of women teachers.	Cases of sick leave.		Length of sick leave.	
		Number of cases.	Per cent of total number.	Number of days.	Average number of days of sick leave.
1 to 4	188	34	18.09	1,250	6.65
5 to 9	396	210	53.03	4,763	12.03
10 to 14	327	166	50.76	5,532	16.31
15 to 19	246	101	41.05	3,334	13.55
20 to 24	215	123	57.21	3,992	18.57
25 to 29	173	113	65.32	3,757	21.72
30 to 34	95	97	102.11	3,351	35.27
34 to 39	35	27	77.14	696	19.60
40 to 44	8	6	75.00	307	38.38
Total	1,683	877	52.11	26,972	16.03

TABLE 4.—*Special women teachers.*[a]

Periods of service, years.	Total number of special teachers.	Cases of sickness.		Length of sick leave.	
		Number of cases.	Per cent of total number.	Number of days.	Average number of days of sick leave.
1 to 4	27	11	40.74	243	9.00
5 to 9	54	17	31.48	469	8.69
10 to 14	106	53	50.00	1,581	14.92
15 to 19	128	47	36.72	1,614	12.61
20 to 24	59	27	45.76	728	12.34
25 to 29	16	13	81.25	408	25.50
30 to 34	1	.....	.....	.....	.....
Total	391	168	42.97	5,043	12.90

[a] Teachers of women's handiwork and domestic science.

The school authorities have gathered and published these data only during the last three years. A comparison of the facts of the last three years, however, is instructive, inasmuch as it reveals a disproportionate amount of time spent in sick leave by the women teachers, for more than one-half of all the women teachers of Berlin were ill more than three days in 1908–9, namely, an average of 30.75 days each; while the average days of illness of only one-fourth of the men teachers was only 28.92 days each. Here are the results of the three annual reports in relative figures:

Per cent of teachers on sick leave.

	In 1906–7.	In 1907–8.	In 1908–9.
Men teachers	19.71	23.86	26.94
Women teachers	33.31	40.73	52.11
Special women teachers	43.70	49.08	42.97

Average number of days of sick leave.

	In 1906–7.	In 1907–8.	In 1908–9.
Men teachers	6.21	6.91	7.79
Women teachers	11.29	14.05	16.03
Special women teachers	16.24	16.12	12.90

The report states the diseases mentioned in the physicians' certificates.

Kinds of diseases.	Number of cases of illness.			
	Men.	Women.	Special.	Total.
Acute infectious diseases	237	215	30	482
Chronic constitutional diseases	43	31	10	84
Nervous diseases	172	250	30	452
Diseases of the circulatory organs	64	39	9	112
Diseases of the respiratory organs	209	168	46	423
Diseases of the digestive organs	40	71	10	121
Diseases of the urinary organs	16	11	6	33
Diseases of the organs of motion	66	44	12	122
Skin diseases	35	24	7	66
Diseases of the special sense organs	38	24	8	70
Total	920	877	168	1,965

From the city of Magdeburg in the Prussian province of Saxony similar statistical results are reported. During the scholastic year 1908–9 the number of men teachers who were ill longer than three days was 137 in a total of 665. The number of cases of illness was 176 and the total number of days of absence 4,735. Among the 102 women teachers 32 were ill in 44 cases, and the time lost was 1,012 days; hence

the per cent of absence on account of sickness among the men was 26.9, among the women 43.1. During the year mentioned the average absence of men was 7.1 days, of women 9.9 days. The causes reported oftenest were diseases of the respiratory organs—2,057 days of the men, 417 days of the women; 799 days are credited to diseases of the digestive organs (men); 617 days to disorder of the nervous system (men); and 375 days to rheumatism (men). Women teachers lost 347 days through disorder of the nervous system.

In the Kingdom of Saxony a similar record was kept of 633 women teachers during the school year 1908–9. The result is as follows:

	Per cent.
368 were not sick at all	58.0
110 were sick from 1 to 3 days	17.3
71 were sick from 4 to 10 days	11.1
26 were sick from 11 to 20 days	4.8
12 were sick from 21 to 30 days	1.8
13 were sick from 31 to 40 days	2.0
18 were sick from 41 to 100 days 13 were sick from 101 to 200 days 2 were sick from 201 days to 1 year	5.0
	100.0

YOUNG TEACHERS IN PRUSSIAN RURAL SCHOOLS.

Judge Von Campe, member of the Prussian House of Deputies, discusses in the "Preussische Jahrbücher" (October, 1909) the relative age of elementary teachers in cities and in rural districts, and offers the result of his comparative study of the latest governmental school census (1906) in tables which are illustrative of the conditions prevailing in the Kingdom of Prussia. But since the circumstances which draw teachers to the cities and often away from the profession in ever-increasing numbers are the same in nearly all the other 25 States of the German Empire, the tables may be regarded as indicative of the conditions of the whole of Germany.

In order to understand the author's statements and the deductions he draws from the numbers, it should be explained that when he speaks of 2,754 vacant teachers' positions in 1906 he does not mean to say that these positions were not filled or that the children in such places were left without schooling. It does mean that those positions were not definitely but only temporarily filled by "aspirants," or by normal-school graduates who had not passed their "repetition examination," or by women of private normal schools lacking governmental approbation.

The author thinks the complaints that too many young teachers are employed in rural districts, where older and more experienced teachers are more necessary than in graded city schools, and that rural

teachers are "fleeing" to the cities are well founded. The governmental reports and statistics corroborate this statement.

The total number of Prussian elementary teachers in 1906 was 102,764 (in 1908, 108,761). Of these, 43,604 taught in graded city schools, 59,160 in rural districts. These totals include 2,754 positions which are only temporarily filled, or, according to the letter of the law, are vacant. Deducting from the totals also 17,784 women teachers (namely, 11,860 in cities and 5,924 in rural districts), as well as the 2,754 not definitely appointed, leaves 82,226 men teachers, namely, 31,033 in cities and 51,193 in the country, which is, briefly stated, a proportion of 3 to 5. The proportion of women teachers in cities and the country is 2 to 1.

The author then ascertains the ages of these teachers, as stated in the accompanying tables, as well as the ages of the women teachers (see table), arranging the latter conveniently in three groups. Applying the ratio of 3 to 5 for men teachers and 2 to 1 for women teachers, he ascertains the greater or smaller proportion of classified numbers which should be teaching in country schools or city schools, respectively, if their ages were in the same proportion. The author's tables, which are here reproduced, were used in the parliamentary commission on public education during the protracted discussion on the salary law. (See Annual Report of Commissioner of Education, 1909, p. 452.)

Considering that for every three men teachers in cities there are five in rural schools and for every two women teachers in cities there is only one in rural schools, it is seen that the recent increase in the number of women teachers in Prussia is chiefly found in cities, where men can find more lucrative employment than teaching, and that the positions thus vacated are taken by women. The latter being mostly city born, are not apt to apply for places in remote villages.

In regard to the ages of the teachers, the author concludes that in country schools almost every fourth man teacher and almost every third woman teacher is less than 25 years old. In country schools almost exactly every fourth teacher, regardless of sex, has not yet been 4 years in service, while, according to the average for city and country, about every sixth or seventh teacher should belong to that category. In cities, on the other hand, only every sixteenth teacher belongs to that category. Expressed in absolute figures, rural districts have a surplus of 4,135 young men and 760 young women, or about 4,900 young teachers more than they should have, according to the proportion indicated in the foregoing as well as in the tables, and the author is of the opinion that this is not a satisfactory condition. In parliament and in the press Professor Von Campe's opinion was stanchly upheld.

Ages of men teachers.

	Under 20.	20 to 23 years.	24 years.	25 and 26 years.	27 to 29 years.	30 to 32 years.	33 and 34 years.	35 years.	36 to 38 years.	39 years.
A. IN CITIES.										
1. Number of men teachers....	12	785	437	1,624	3,765	3,837	2,187	935	2,660	852
Total.....		1,234								
2. Since, in 1906, the cities had 31,033 teachers, while in rural districts there were 51,193, we may, for purposes of comparison, accept the proportion of 3 to 5, or assume that three-eighths of the total number of teachers were appointed in cities and five-eighths in rural districts. According to this ratio there should have been appointed.....	58	3,698	1,101	2,136	3,247	3,031	1,725	749	2,116	710
3. Hence the disproportion was (+) or (−).....	−46	−2,913	−664	−512	−518	+806	+462	+186	+544	+142
Total.....		−4,135								
4. Disproportion expressed in per cent.....	−79.3	−78.7	−60.3	−23.9	−15.9	+26.6	+26.8	+24.8	+25.7	+20.0
B. IN RURAL DISTRICTS.										
1. Number of men teachers....	142	9,077	2,500	4,073	4,893	4,247	2,413	1,064	2,982	1,042
Total.....		11,719								
2. According to the proportion of 3 to 5, shown in A 2, there should have been appointed.....	96	6,164	1,836	3,561	5,411	5,053	2,875	1,250	3,526	1,184
3. Hence the disproportion was (+) or (−).....	+46	+2,913	+664	+512	−518	−806	−462	−186	−544	−142
Total.....		+4,135								
4. Disproportion expressed in per cent.....	+47.9	+47.2	+36.1	+14.3	−9.5	−15.9	−16.1	−14.8	−15.4	−12.0

	40 and 41 years.	42 to 44 years.	45 to 47 years.	48 and 49 years.	50 years.	51 to 54 years.	55 to 59 years.	60 to 64 years.	65 to 69 years.	70 years and over.
A. IN CITIES.										
1. Number of men teachers....	2,044	3,207	2,102	1,143	592	1,841	1,525	1,066	356	63
2. Since, in 1906, the cities had 31,033 teachers, while in rural districts there were 51,193, we may, for purposes of comparison, accept the proportion of 3 to 5, or assume that three-eighths of the total number of teachers were appointed in cities and five-eighths in rural districts. According to this ratio there should have been appointed.....	1,641	2,701	2,004	1,059	518	1,633	1,335	960	337	61
3. Hence the disproportion was (+) or (−).....	+403	+506	+98	+84	+74	+208	+190	+97	+19	+2
4. Disproportion expressed in per cent.....	+24.5	+18.7	+4.9	+7.9	+14.2	+12.8	+14.2	+10.0	+5.6	+3.2
B. IN RURAL DISTRICTS.										
1. Number of men teachers....	2,331	3,992	3,241	1,682	790	2,515	2,036	1,519	543	101
2. According to the proportion of 3 to 5, shown in A 2, there should have been appointed.....	2,734	4,498	3,339	1,766	864	2,723	2,226	1,616	562	103
3. Hence the disproportion was (+) or (−).....	−403	−506	−98	−84	−74	−208	−190	−97	−19	−2
4. Disproportion expressed in per cent.....	−14.4	−11.2	−2.9	−4.8	−8.4	−7.2	−8.5	−6.0	−3.4	−2.0

Ages of women teachers.

	Less than 24 years.	From 25 to 44 years.	Over 44 years.
1. Number of women teachers in cities	1,388	7,740	2,510
2. Number of women teachers in rural districts	1,832	3,035	951
Total	3,220	10,775	3,461
3. According to the proportion of two-thirds to one-third, there should have been appointed—			
(*a*) In cities	2,146	7,183	2,308
(*b*) In rural districts	1,074	3,592	1,153
4. Disproportion, in absolute numbers (+) and (−):			
(*a*) In cities	− 758	+ 557	+ 202
(*b*) In rural districts	+ 758	− 557	− 202
5. Disproportion, expressed in per cent:	*Per cent.*	*Per cent.*	*Per cent.*
(*a*) In cities, about	− 35	+ 7.5	+ 9
(*b*) In rural districts, about	+ 70	−15	− 18

SALARIES OF TEACHERS IN GERMAN ELEMENTARY SCHOOLS.

NOTES.—The salaries mentioned in the following tables are those of class teachers, not of principals (rectors).

In cities local supplementary salaries are paid ranging from 400 to 900 marks, or $95.20 to $214.

Teachers receiving these salaries are all entitled to pensions or annuities of from 75 to 100 per cent of the average salaries received during the last five years of service.

States.	Salaries in first year of service.		Highest salaries paid after stated years of service.		
	Marks.(*a*)		*Marks.*(*a*)		*Years.*
Prussia	1,120	$266.50	3,300	$785.40	31
Bavaria	800	190.40	2,800	666.40	34
Saxony	900	214.20	3,000	714.00	24
Wurttemberg	1,200	285.60	2,600	618.80	29
Baden	1,000	238.00	2,800	666.40	23
Hesse	900	214.20	3,000	714.00	31
Saxe-Weimar	1,000	238.00	2,750	654.50	29
Oldenburg	900	214.20	2,400	571.20	34
Brunswick	800	190.40	2,700	642.60	34
Saxe-Meiningen	1,100	261.80	2,600	618.80	30
Saxe-Altenburg	1,300	309.40	2,600	618.80	29
Mecklenburg-Strelitz	900	214.20	2,200	523.60	27
Mecklenburg-Schwerin	1,000	238.00	1,600	380.80	25
Saxe-Coburg-Gotha	1,000	238.00	2,900	690.20	30
Anhalt	900	214.20	3,500	833.00	30
Reuss, junior line	1,000	238.00	2,300	547.40	26
Reuss, senior line	1,200	285.60	2,800	666.40	30
Schwarzburg-Sondershausen	1,100	261.80	2,550	606.90	30
Schwarzburg-Rudolstadt	1,000	238.00	2,400	571.20	29
Waldeck	900	214.20	2,460	585.50	31
Schaumburg-Lippe	900	214.20	2,400	571.20	27
Lippe-Detmold	900	214.20	2,400	571.20	27
Hamburg	1,600	380.80	4,600	1,094.80	25
Bremen	1,200	285.60	4,100	975.80	22
Lübeck	1,100	261.80	3,500	833.00	28
Alsace-Lorraine	900	214.20	2,400	571.20	32

a A mark equivalent to 23.8 cents.

A GERMAN NORMAL SCHOOL COURSE.

Since the teachers of the lower schools in Germany have of late been petitioning the state authorities in several States for admission to the universities it has become necessary to prove that a German normal-school education is equivalent to the education offered in secondary or preparatory schools. An examination of the course of study of the normal school in Lübeck may show how such a claim is supported. That school takes its students at the age of 15 from the city Mittelschule, an institution equal to the Prussian middle schools or

höhere Bürgerschulen. The course is one of six years, hence the graduates are not less than 21 years of age; if we add two years provisional employment, the definite employment of the teacher begins at his twenty-third year of life. The following is the course, which shows that four and a half of the six years are devoted to general, and one and a half years to professional education:

I. *General education.*

(Hours per week.)

Branches.	First year.	Second year.	Third year.	Fourth year.	Fifth year, first half.
Religion	3	3	3	3	4
History	3	2	2	2	3
German	6	6	6	6	5
French	3	3	2	2	2
English [a]	3	3	2	2	2
Geography	2	2	2	3	2
Natural sciences:					
1. Biology	2	2	2	2	2
2. Chemistry and mineralogy			2	2	2
3. Physics		2	2	2	2
4. Laboratory work	2	2	2	2	2
Mathematics	6	5	5	4	3
History of art					2
Drawing	2	2	2	2	2
Gymnastics and swimming	2	2	2	2	2
Music:					
1. Singing	1	1	2	1	1
2. Piano	1	1	1	1	1
3. Violin	1	1	1	1	1
4. Organ [a]		1	1	1	1
5. Theory of music [a]		1	1	1	1
6. History of music				1	
Manual training	2	2	2	2	2

[a] Optional study.

II. *Professional education.*

(Hours per week.)

Branches.	Fifth year, second half.	Sixth year.	
		First half.	Second half.
I. PEDAGOGY.			
History of education and its literature	5	5	5
Psychology	6	4	4
Theory of education		1	1
General didactics	4		
Special methodology—			
For religion	1	1	1
For German and object lessons	1	1	1
For arithmetic and geometry	1	1	1
For history and geography		1	1
For natural history and sciences		1	1
For penmanship and drawing		1	1
For singing and gymnastics		1	1
School management	2	2	2
II. EXPERIENCE IN TEACHING.			
Observation and preparation of model lessons	16	6	6
Giving lessons		6	6
III. SUPPLEMENTARY STUDIES.			
Philological group, consisting of lessons in history, religion, and three modern languages		5	5
Scientific group, consisting of lessons in geography, biology, chemistry, physics, and higher mathematics		5	5

NORMAL AND CONTINUATION SCHOOLS IN PRUSSIA.

The number of students in the 183 normal schools of the Kingdom of Prussia reached 18,000, in 1909, while in the year previous it was 17,500. This increase is owing to the opening of new normal and preparatory schools and the passage of the new salary law, which opens to teachers a better prospect for an adequate income than formerly. In consequence of the greater number of candidates prepared for the profession, the number of vacancies, which in 1901 was still 1,862, had decreased in 1908 to 1,345, though the number of positions increased from 90,208 to 108,761 during the same period. The term vacancies is not to be taken literally, since many of them are temporarily filled by candidates, who have not passed their examinations. The Government is making efforts to supply the demand for teachers by arranging special normal courses for students of public and private secondary schools, aside from the regular 3 and 6 years normal school courses.

The curriculum of state normal schools is so arranged as to prepare the students for the modern demands of industrial life, in order that the graduates of normal schools can act as teachers of continuation schools, general or vocational, as they may be. The prevalent custom is, not to employ, if it can possibly be avoided, skilled artisans for vocational work in continuation schools, since it is deemed best to keep the further education of youth in the hands of pedagogically prepared teachers. Artisans are apt to give too much attention to mere manual skill and tool work, and to neglect general or cultural studies.

The following passage from the speech of Emperor Wilhelm, as King of Prussia, at the opening of the winter session of the state legislature, is significant for the development of continuation schools:

> The care for youth who have passed the age of compulsory school attendance (14 years) requires a further extension and development of the continuation schools, not only in the cities but also in agricultural districts. Based upon the beneficial results of a law passed in 1904 for the Province of Hesse-Nassau and other provinces, my Government is preparing similar enactments for the Provinces of Pomerania, Silesia, and Westphalia, which will give the local governments the right to decree compulsory attendance at continuation schools, if they see fit to do so.

MIDDLE SCHOOLS IN PRUSSIA.

The term Mittelschulen, as used in Prussia, needs a definition. In Austria, Switzerland, and some southern German States the term is applied to schools which prepare for higher institutions, i. e., for universities, polytechnica, etc., hence in these countries the term is synonymous with high schools, academies, or secondary schools, as used in the United States. In Prussia the Mittelschulen are some-

thing different from preparatory schools for higher education. They are merely advanced elementary city schools, closely connected with the lower schools, but not at all related to secondary schools, that is, not leading up to them. They are intended to accommodate the sons and daughters of artisans, small merchants, shop owners, and the lower civil officeholders, who aim at a simpler and more immediately useful education than is offered in secondary schools, the graduates of which go to higher institutions. The real nature of these middle schools may be characterized by calling them advanced city schools, for, in fact, they can be found only in cities, where there are children enough to fill a middle school. Their students are, as it were, the result of natural selection, the more talented and ambitious young people, whose parents can afford to keep them a year longer under tuition than the majority.

These middle schools have recently (March, 1910) been reorganized by ministerial order, which provides (1) that they shall increase the number of compulsory grades from eight to nine, the lowest three, or even five, grades being parallel to the same grades in ordinary elementary schools; (2) that the local authorities may establish them without the three lowest grades, drawing the pupils from other primary schools, as high schools do; (3) that there is no objection to changing secondary schools without Latin (so-called Realschulen) into middle schools, if the local authorities so desire; (4) that in all middle schools tuition fees may be charged, while the eight years' elementary schools remain gratuitous; (5) that as a rule middle schools shall not be coeducational, but that for boys and girls separate middle schools shall be established as soon as the number of pupils permits; (6) that the three upper classes in middle schools shall in no case have more than 45 students, the lower may have as high as 50; (7) that women may be appointed as principals of girls' middle schools; (8) that in small communities middle schools may prepare to assume the character of secondary schools if they teach Latin and possibly Greek.

These schools teach the usual elementary branches and in addition offer elementary instruction in French and English, natural science, mathematics, bookkeeping, shop and garden work. In girls' schools woman's handiwork is substituted for boys' shop work. As a matter of course, these advanced branches, foreign languages, mathematics, and science, can not be taught to the same extent as is done in secondary schools, but they are taught with a view toward immediate application in business. Each school adapts itself to the peculiar demands of local conditions, some towns being more commercial, others more industrial, still others exclusively agricultural. In order that these schools may meet local needs, the prescribed courses are

made elastic, due heed being given, also, to the different requirements of the two sexes.

In order to induce small communities to aim at the establishment of secondary schools, they are given permission to organize a middle school, which may be changed, in future, into a classical or semi-classical high school, i. e., into a Gymnasium or Realgymnasium. Such middle schools must teach the beginning of Latin and Greek, besides French and English. In cities where there are not enough students to organize the entire nine years' course (6 to 15), two grades may be combined.

Middle, or advanced elementary, schools have been in existence for many years in Prussia, but in the statistical summaries of the state authorities they were always classed among the lower schools. Now the ministerial order recognizes them as a separate type of schools between elementary and secondary schools, hence their name. They meet distinct needs in large city populations, and are an expression of the tendency prevailing in Germany of segregating the social classes. Thus we find the Volks or elementary schools (6 to 14 years), the middle schools (6 to 15 years), the modern or realistic schools without Latin, called Realschulen (6 to 17 years), the classical high schools, Gymnasia (6 to 19 or 20 years), the semiclassical high schools, Realgymnasia (6 to 19 or 20 years), and the upper realistic high schools, Oberrealschulen (6 to 19 or 20 years).

In the United States the customary high school tries to meet the various demands by offering a variety of courses, the classical, commercial, scientific, and technical courses, but in Germany the authorities entertain the opinion that it is better to establish separate high schools. To a certain extent this is done in this country, as shown by the separate technical and commercial high schools in large cities. The Prussian middle schools are simply adding one more opportunity to talented and ambitious students to rise above the dead mediocrity of elementary education. They give their students an opportunity to extend and round out their elementary education, and offer them knowledge in a form which is practical and immediately applicable in business and shop, in office and factory while they act as apprentices. Thus, for instance, the students intending to enter commercial pursuits study commercial arithmetic, short-cuts, commercial geography, bookkeeping, and business methods; even history is permeated, as it were, with references to commercial tendencies and usages. The needs of the boys who aim at skilled labor in shops and factories are met, especially in the methods in which drafting, sketching, and manual work are taught. And the needs of girls are considered to a large extent. These middle schools appeal to pupils of elementary schools who can not afford to enter high schools, the tuition fees being too high and the courses too long.

SECONDARY SCHOOLS FOR BOYS IN PRUSSIA.

Kunze's Calendar of the secondary schools in Prussia, which closed its lists in May, 1909, states that the number of public high schools for boys increased during the previous year by the establishment of 12 new schools; the actual increase in the number of new schools was 13, but one old school was merged with another. Among the new institutions were 2 Gymnasia, 3 Reformgymnasia, 2 Realgymnasia, and 6 Realschulen; hence there were among the 13 new schools 9 which have no Latin in the three or four lower grades or no Latin at all.

During the last nine years there have been established 147 new secondary schools for boys. Of these, 69 were Realschulen or Oberrealschulen, or modern high schools without Latin and Greek (47 per cent); 26 were Gymnasia, or classical high schools (18 per cent), and 52 were Realgymnasia, or semiclassical high schools (35 per cent). Nevertheless, the classical schools still have the majority, namely, 364 institutions among 711, or 51 per cent. If we count the complete institutions only, eliminating those which lack the upper grades—in other words, considering only those the graduates of which may enter the university—we find that of a total number of 468 there are 324, or 69 per cent, Gymnasia; 85, or 18 per cent, Realgymnasia, and 53, or 13 per cent, Oberrealschulen. From this it follows that the proportion of university students who have had a classical preparatory education far exceeds the proportion of those who have a semiclassical or exclusively scientific education. This was plainly shown in an article in the Annual Report of 1909 (see p. 493), where the proportion of freshmen of classical education was stated to have been 77 per cent; those of semiclassical education, 9 per cent; and scientific education, 14 per cent.

The teachers and principals of secondary schools in Prussia have repeatedly called the attention of the central state authorities to the desirability of creating new schools rather than accumulating the students in large schools. Five hundred students in ten grades, they claim, should be the limit. The calendar quoted shows how far this pedagogically desirable limitation is acknowledged by the authorities. Of 711 high schools in Prussia, 85 had from 500 to 600 students; 32 had between 600 and 700; 1 had 884, and 1, 926 students; while 592 had less than 500 students.

SALARIES OF TEACHERS OF SECONDARY SCHOOLS IN PRUSSIA.

The Annual Report of the Commissioner of Education, 1909, contains on page 452 a statement of the salaries paid to elementary school teachers in Prussia, according to the new law passed in the spring of that year. The following table enables the reader to com-

pare the salaries of secondary schools with those of teachers in the lower schools. The table gives the schedule adopted June 5, 1909.

Gymnasia (classical), Realgymnasia (semiclassical) and Oberrealschulen (modern secondary schools).

Years of service.

	First year.	Third year.	Sixth year.	Ninth year.	Twelfth year.
SALARIES[a] PAID TO—					
Principals in Berlin[b]	$1,570.80	$1,713.60	$1,856.40	.....	.....
Principals in other cities[b]	1,428.00	1,570.80	1,713.60	$1,856.40	.....
Principals of schools lacking the two highest grades	1,237.60	1,428.00	1,570.80	1,713.60	$1,856.40
Class teachers and teachers of science	622.60	809.20	975.80	1,118.60	1,285.20
Teachers holding diplomas as music teachers, of other secondary or of middle schools	499.80	571.20	622.60	714.00	785.40
Teachers of elementary and of technical branches	428.40	499.80	571.20	622.60	714.00
Scientific assistants from whom those of class teachers and teachers of science are chosen	[c] 499.80	[d] 571.20	[e] 622.60	[f] 714.00	.....

	Fifteenth year.	Eighteenth year.	Twenty-first year.	Twenty-fourth year.	Twenty-seventh year.
SALARIES PAID TO—					
Class teachers and teachers of science	$1,428.00	$1,570.80	$1,713.60	.....	.....
Teachers holding diplomas as music teachers, of other secondary or of middle schools	856.40	927.80	999.20	$1,060.60	.....
Teachers of elementary and of technical branches	785.40	856.40	904.40	952.00	$999.20

[a] The fractions of a dollar quoted are the result of changing German money into American equivalents: One mark is equal to 23.8 cents.
[b] These also receive rent indemnity ranging from $214.20 to $428.40.
[c] First year.
[d] Second year.
[e] Third year.
[f] Fourth year.

COEDUCATION IN PRUSSIA.

During a lengthy discussion of the budget for education in the Prussian Diet in May, 1910, coeducation came in for more attention than is usual in that body. Doctor Maurer, a national liberal member, urged its adoption in secondary schools as an expedient, saying:

Since only one-half of the women of the nation are married, every father must be anxious to provide his daughters with a good education for the struggle that awaits them in life. That can not be done except by opening the boys' high schools for girls also. I do not advocate coeducation as a remedy for evils, but would suggest it as an expedient in small towns, in which it is literally impossible to maintain separate high schools for the two sexes. A separation may take place as soon as the available means and the number of students warrant it. It is a mere experiment I advocate. Prussia might utilize the experiences of other States of the Empire.

Minister of Education Doctor Von Trott zu Solz replied:

Now that the reform of girls' high schools, upon the basis of the recently issued regulations, has begun, it would seem best to patiently wait for the results from the application of these regulations. We shall see whether the regulations have hit the right solutions of vexing problems or not. We should await results, not in stagnation, but in quiet, steady work. [Applause.] To the women I address the warning not now to advance criticism and urge amend-

ments, but to join in the vigorous execution of the new regulations, and when the time is ripe for a change to present proposals for amending the regulations. The question of coeducation in secondary schools has been rejected on principle, because the Government is of the opinion that the intended reform of girls' education can better be effected in separate institutions, in which the individuality of the girls can be taken into consideration. It is extraordinarily difficult to depart from that principle. I acknowledge that in strictly carrying it out some hardship is felt here and there, but that can not be helped. I maintain the ground that no exception should be made from the rule which requires separation of the sexes in secondary institutions. To adopt coeducation would open up a number of new problems; for instance, that of the composition of the teaching staffs of boys' schools.

SECONDARY SCHOOLS AND MILITARY SERVICE.

The latest publication dealing with sanitary conditions in the Prussian army and recounting the number of students of secondary schools fit for military service in the various army centers of the Kingdom gives very detailed information, from which the important fact stands forth that only about two-thirds of the students are found physically fit to be drafted into the army or navy. The reasons are thought to be found in the almost exclusive mental work in the class room and at home and the neglect of physical exercises in the form of gymnastics or outdoor sports. The following are official figures:

During the last year the proportion of recruits who passed their school examination entitling them to the privilege of only one year's service, being found physically fit, was 62.2 per cent of those coming from classical high schools (Gymnasia), 64.4 per cent of those coming from semiclassical (Realgymnasia), and 67.7 per cent of those coming from modern high schools (Oberrealschulen). Hence more than one-third of those who were called to undergo the physical examination were found unfit to enter the army or navy. It is true that this examination of so-called one-year volunteers is rather rigorous, since reserve officers are commissioned or selected from these volunteers, but that does not explain away the large proportion of those found unfit. The proportion of normal-school graduates found perfect in health and stature was 73.1 per cent.

The proportion of the unfit was even greater when weakness or defects of sight and hearing were considered; much more than one-half were found to fall short of the required standard. The proportion of those accepted was 47.8 per cent coming from classical, 44.4 per cent coming from semiclassical, and 39.6 per cent coming from Oberrealschulen, while the proportion of normal school graduates was 79.8 per cent. That exclusive occupation with the printed page has a baneful effect upon the health of students has always been known, but the figures offered show conclusively the great extent to which this is true.

The foregoing has reference only to students of secondary schools. Quite a different aspect of the question is noticed when the annual draft of recruits coming from Volksschulen (elementary or people's schools) is considered. Nearly 90 per cent of these are fit for service, and some of the remaining 10 per cent are declared unfit merely because they have not the required height, but are otherwise healthy. The appalling condition of recruits from secondary schools has led to a thorough shaking up of curricula, methods of teaching, and school management in such schools in Prussia.

ELEMENTARY SCHOOLS IN HUNGARY.

Of the 16,561 elementary or people's schools in Hungary, 2,046 are state schools, 1,473 communal schools, 12,734 denominational schools, 37 are supported by societies, and 271 are private schools. From the fourth grade children may leave to enter high schools, either classical (Gymnasia) or modern high schools (Realschulen). The compulsory-attendance law requires school attendance between the sixth and the fifteenth year of life. Up to the completed twelfth year, the children are required to attend the regular day schools; from the twelfth to the fifteenth year they are required to attend either the general continuation school or the agricultural repetition school of three grades each. The state schools have been gratuitous since September 1, 1909; children in communal and denominational schools will be free from paying tuition fees after September 1, 1910. Many pupils pay 50 hellers matriculation fee, which is used exclusively for the maintenance of pupils' and teachers' libraries. Of the 2,595 kindergartens, 582 are maintained by the State, 1,403 by communities, 338 by denominational congregations, and 272 by private enterprise, supported in part by communities or religious congregations.

Aside from the repetition or continuation schools, there are obligatory vocational evening schools for trade and business apprentices; attendance at such schools is obligatory for the entire period of apprenticeship. There are in large cities also other vocational schools for both sexes. Indigent children in Budapest receive warm dinners, and are sent to vocational colonies in summer, shoes and clothing being provided in many cases also. Many schools have bathing facilities. In graded schools the sexes are taught in separate classes. A teacher, according to law, should not have more than 60 pupils, but there are many ungraded rural schools with 180 to 200 pupils to one teacher.

The course of instruction provides three grades for day schools, the lower, middle, and upper grade, each lasting two years. In the upper grade the pupils have 28 hours' instruction per week, in the middle grade 24 hours, in the lower grade 21 hours. The repetition or continuation school has 5 hours per week in winter and 2 hours in

summer. Obligatory branches of study are, besides the regular elementary branches, religion, female handiwork, gymnastics, and games in all the grades. Civics is taught to boys in the upper grades, or fifth and sixth year, while the girls are taught domestic economy.

Teachers are not allowed to accept employment after school hours, and can edit political journals only with the permission of the supervisory authorities. If a teacher is elected a member of Parliament, he is obliged to resign as teacher. He is subject to disciplinary punishment, if he agitates publicly against classes, nationalities, religious confessions, property, and marriage, or if he attempts to agitate for division of private and communal property. After ten years' service a teacher may be pensioned with 40 per cent of his salary; every additional year of service entitles him to 2 per cent more, until he reaches 100 per cent after 40 years' service. The teacher's widow receives 50 per cent of her husband's salary, if the latter does not exceed 1,200 crowns ($240); 20 per cent more of any salary over that amount. Each teacher's half-orphan receives one-fifth of the widow's pension up to the sixteenth year of life; orphans, both of whose parents are dead, receive double the amount. All the teachers, men and women, as well as the principals, are required to serve 35 hours a week in school.

COEDUCATION IN AUSTRIAN INDUSTRIAL SCHOOLS.

A new order, issued by the Austrian minister of public works, opens to girls all industrial schools in Austria. After an introduction, in which the minister recognizes the ever-increasing necessity of giving women a more suitable vocational and professional education, the order reads:

These considerations prompt me to order that all state industrial schools, as well as the industrial continuation schools without exception, be opened to girls, beginning with the scholastic year 1910–11, and that the admission of girls take place under the same conditions and under the same requirements at present in effect for boys.

The instruction is to be coeducational in all these institutions and in all their divisions or departments. Strict discipline and unremitting supervision must be exercised for the prevention of disorder. Directors and principals are urged not to make the least difference in judging of the accomplishments of the students, nor to treat them differently from considerations of sex. In the subjects and methods of instruction only such matters are to be treated as are admissible in coeducational institutions, and everything is to be omitted which, between man and woman, would be avoided from ethical considerations. The changes shall take place gradually and must be announced in the published programme of each school. After the close of the school year 1910–11, the experiences arising from this new departure shall be reported to the ministry.

The editor of "Die Frau" (Berlin), who publishes the foregoing abstract of the order, says:

The Austrian minister, as will be seen, leaves it to the women to care for the individual development of their sex, and expects that women, given free choice

of occupation, will select and find suitable vocations. However, men's organizations have done their part to make the minister's order illusory. The officers of the building trades' guild have resolved that they will under no circumstances employ girls as apprentices or in any other capacity, and so informed the minister, in order to prevent any useless study of their trades on the part of girls.

Still, it is not expected that girls will crowd bricklayers, stone masons, trench diggers, road builders, and similar laborers out of their occupations. There are many other industries and trades better fitted for women, and they will not be slow in making use of the opportunities offered by the minister.

INDUSTRIAL CONTINUATION SCHOOLS IN ZURICH.

The latest report on industrial continuation schools in the Canton of Zurich, Switzerland, contains some items of information of interest at the present time. At the beginning of the school year 1906–7, the present cantonal law, decreeing compulsory attendance for all industrial and commercial apprentices, both for boys and girls, came into force. The number of students grew rapidly, and with it the number of lesson-hours to be provided for, and that of teachers. During the first year, after the passage of the law, the number of students increased from 4,644 to 5,116, or 10 per cent; but while the increase among the boys was 13.8 per cent, it was only 2.3 per cent among the girls between 14 and 17 years of age. The customary apprentice examinations soon revealed the families that had neglected attendance at schools for apprentices, and fines were inflicted. In consequence of this the total attendance rose to 6,361, an increase of 24.3 per cent, or 23.3 per cent among the boys and 26.7 per cent among the girls. In 1909 the increase was only 121 students, or 1.9 per cent, showing that the law was generally obeyed.

The number of lesson-hours to be provided for in these schools grew with the attendance in almost the same proportion, so that a large number of parallel classes had to be arranged for. But while, years ago, the number of hours in summer was greatly reduced, there is now, according to the report, no appreciable difference between summer and winter sessions. The number of teachers has increased from 275 to 381, or 37 per cent, in four years.

The teaching staff consists of elementary school teachers, men and women, technical teachers for vocational instruction, and teachers for women's handiwork and other domestic work. The proportion of teachers for general culture-studies and for technical branches is 2 to 1. Only 11 of the 38 compulsory industrial continuation schools in the Canton of Zurich (population in 1905 was 459,269) were schools without direct vocational instruction. These 38 schools are, of course, not all the continuation schools of the Canton; there are altogether 237 such schools, including agricultural, commercial, domestic-science

schools, and others. The 38 under discussion are the only ones established for trade or shop apprentices.

The cantonal government appropriated 82,000 francs exclusively for these apprentice schools in 1909; the local school districts, aided by federal subsidies, pay the remainder of the costs, the exact amount not being ascertainable from the report, owing to the fact that in the general accounting the various kinds of continuation schools are not separated.

Many of these 38 industrial schools were started by guilds or labor unions, which had an interest in raising the technical skill of their youthful members, especially in drawing and sketching; in fact, it is asserted that the whole system of industrial schools in Switzerland is morally supported and substantially aided by the trades—that is, by the manufacturers and their employees. Hence it is that as members of the local boards governing this system of schools skilled laborers are elected by the people or appointed by the civil authorities. The most important point under discussion in connection with industrial schools in Zurich, as everywhere else at present, is the necessity of preparing suitable teachers, especially teachers for vocational studies, for not every skilled laborer is also a successful teacher, nor can every skillful teacher be also a teacher of technical branches with the same success with which he teaches the customary elementary branches and scientific studies.

GERMAN UNIVERSITY STUDENTS AND THEIR PREPARATION.

Doctor Tillmann published in the "Monatsschrift für höhere Schulen" a table, which shows the distribution of matriculated students in the four faculties of the 21 German universities in the summer of 1909, and also, in separate columns, as far as ascertainable, from which of the three kinds of secondary schools they graduated. To illustrate the tendencies in Prussian and non-Prussian institutions, the author separates the graduates of Prussian schools:

Faculties chosen by the students.	Prussian institutions.				Non-Prussian institutions.				Grand total.
	Gymnasia.	Realgymnasia.	Oberrealschulen.	Total.	Gymnasia.	Realgymnasia.	Oberrealschulen.	Total.	
Protestant theology	1,098	1	.....	1,099	1,074	9	2	1,085	2,184
Catholic theology	965	.....	.....	965	812	3	.....	815	1,780
Law and administration	4,586	687	282	5,555	4,769	467	160	5,396	10,951
Medicine, dentistry, etc.	2,691	442	153	3,286	4,022	782	159	4,963	8,249
Philosophical faculty	6,647	1,726	1,306	9,679	5,954	1,882	1,128	8,964	18,643
Philosophy	187	38	9	234	536	146	41	723	957
Classical philology	3,244	218	104	3,566	2,239	99	43	2,381	5,947
Modern philology	743	599	420	1,762	904	639	286	1,829	2,249
History	522	73	25	620	438	79	50	567	592
Mathematics and natural science	1,429	629	630	2,688	1,527	795	653	2,975	3,605
Other studies	522	169	118	809	310	124	55	489	607
Total	15,987	2,856	1,741	20,584	16,631	3,143	1,449	21,223	41,807

OPENING THE UNIVERSITIES TO NORMAL-SCHOOL GRADUATES.

Admission to universities for teachers who are graduates of normal schools is urgently asked in Germany, and several university faculties of philosophy are seriously considering the advisability of granting the request. The teachers claim that their general and professional preparation in normal schools enables them to follow academic lecture courses and scientific exercises, except that they lack knowledge of ancient and modern foreign languages, which deficit in the student's make-up may either be supplied by private study or by arranging courses which do not require extensive linguistic knowledge. Recently the University of Göttingen approached the idea of laying out a teachers' course of two years, which is to embrace German, English, and French, religion, history, higher mathematics, geography, physics, chemistry, botany, zoology, mineralogy, biology, and pedagogy. It is suggested that the course close with a diploma examination. Göttingen is not the only higher seat of learning which may in the near future be opened to teachers of the lower schools; in Leipzig, Giessen, Munich, and other universities the same idea is discussed. Prof. Rudolph Eucken, of Jena, remarks in an article on "Aspiration of German teachers" as follows:

> The continually increasing aspiration of the teachers of lower schools in Germany for a higher or university education is a phenomenon of great importance. There is a great connected movement among these teachers going on; we see a well-developed system of societies, which strive to further not only the personal material interests of the members, but also and especially their professional work and intellectual progress; we notice an indefatigable literary activity, expressing itself particularly in extensive contributions to the pedagogical press; but the most characteristic feature of this movement is the endeavor to keep posted on the progress and achievements of the sciences; and since these are primarily a concern of the universities, these teachers attempt to gain admission of some kind to them, and even to pursue a regular university course of study. Such efforts have not been without success. Despite all difficulties the number of elementary teachers attending universities is increasing constantly. These are as yet in a small minority, while the majority satisfy their desire for higher education by attending lecture courses especially designed for teachers, partly in university towns, partly in other centers. These courses, which originated in Jena and first took firm root in Thuringia, have spread over all Germany, and are still increasing. Subjects such as philosophy, pedagogy, history, literature, the many branches of natural science, and others are treated.
>
> The results of these courses are the best imaginable. Warm enthusiasm, deep earnestness, indefatigable diligence, eager attempts to follow up suggestions obtained by continued study, and generally abiding effects of impressions received are what the professors everywhere notice. In order to hear these lectures, some teachers had to walk many miles; they heeded neither storm nor rain, neither heat nor cold. What most distinguished the spirit prompting them was this—that they did not desire any mere popular presentation of the subjects treated, any easy-going but enfeebled exposition; they wished to go back to the fountain heads of knowledge, and shunned neither the trouble nor the labor it

cost to attain that end. Every professor taking part in these lecture courses was impressed with the genuine desire for higher education manifested by his hearers, and felt the rare joy of finding audiences really hungry and thirsty for more knowledge and intellectual activity—a pleasant contrast to the prevalent satiety of the times.

Such earnest and self-sacrificing efforts pervading the whole of a great profession can not be attributed to small personal motives or social ambition. The true impulse proceeds rather from the desire to dignify the work of their calling and bring the people's schools into a closer and more fruitful relation with the intellectual life of the nation. A natural outcome of this striving on the part of the teachers is the desire for admission to the university. In truth, great changes are in progress in this field, where an older and a newer way of thinking clash irreconcilably. The question thereby opened is a question of principle regarding the purpose of the people's schools and the estimate which is to be set upon their value. Formerly the idea was to limit the work of the schools to giving the great mass of people a very slender stock of absolutely indispensable knowledge and accomplishments. Under such limitation of the aim of school a certain mechanical training of the teachers sufficed, a training which seemed the better adapted the more it kept aloof from the intellectual movements of the times. Every close contact with modern currents of thought might appear as a dangerous disturbance. Yet it can not be asserted that such views are entirely abandoned even to-day. However, they have become the views of an extreme party, which vainly attempts to turn back the wheel of time; the work of to-day is carried on altogether according to a new way of thinking.

This new way of thinking is inseparably connected with the origin and development of the new pedagogy. To men like Pestalozzi and Fröbel the people's school is not a school merely for the needy, a special school for the lowest strata, but a general institution designed for educating the youth of the nation, an abode of "entwickelnd erziehender Menschenbildung." The human being is here to be taken charge of in the totality of his powers and lifted to the human level. The means to that end may be simpler in the elementary school than in other seats of learning, but the object in view is essentially the same, and it is this greater simplicity of means which allows the advantage of a more direct influence upon the growth of the soul. Those educational pioneers entertained the conviction that the process of education should extend back farther than had been the rule—back to the beginning; that it should be elementary to a greater degree than heretofore; and that all subsequent instruction could gain no proper foothold unless based upon thorough elementary work.

It was impossible to set such high value upon the beginnings and not at the same time recognize the extreme gravity and difficulty of the teacher's duties as thus extended. The enlargement of the scope of the people's schools must also directly elevate the work of the teachers and their standing as a class. Hence, the demands upon the teacher's preparation must also change. To be an educator of human beings is impossible without a scientific method, without ethical convictions, and psychological insight. Nor is it possible without a large degree of freedom in action and the closest contact with the intellectual life of the time. A natural consequence of such aspirations of elementary teachers is the undeniable desire to enter into relations with the university, for with us the university is the chief place where teaching and investigation come in contact with one another, where both are interwoven, where the problems of the time are in flux, and where the student may rise to intellectual independence and develop his individuality. To exclude any part of our national

intellectual labor from the university would mean to deprive it of freedom of movement; it would mean loosening its connection with the totality of national intellectual life.

NATIVE AND FOREIGN STUDENTS IN GERMAN UNIVERSITIES.

The total number of students in the 21 German universities during the winter semester of 1909–10 was 52,456, an increase of 3,739 over the winter of 1908–9. These totals do not include so-called "hearers," who are not matriculated. The following table does not include polytechnica and other higher seats of learning.

Universities.	State.	Province.	Number of students.
Berlin	Prussia	Brandenburg	9,249
Munich	Bavaria		6,537
Leipzig	Saxony		4,761
Bonn	Prussia	Rhineland	3,652
Breslau	do	Silesia	2,405
Halle	do	Saxony	2,393
Göttingen	do	Hanover	2,230
Freiburg	Baden		2,167
Strassburg	Alsace-Lorraine		1,995
Heidelberg	Baden		1,934
Münster	Prussia	Westphalia	1,906
Marburg	do	Hesse-Nassau	1,878
Tübingen	Württemberg		1,760
Jena	Thuringia		1,496
Würzburg	Bavaria		1,424
Konigsberg	Prussia	East-Prussia	1,367
Kiel	do	Schleswig-Holstein	1,290
Giessen	Hesse		1,261
Erlangen	Bavaria		1,121
Greifswald	Prussia	Pomerania	930
Rostock	Mecklenburg		700

The increase in the number of matriculated women students continues. There were 2,324, as compared with 1,856 in the previous winter. Berlin with 638, Munich with 183, Göttingen with 160, Heidelberg with 142, and Bonn with 135 women students appear to have more attraction for women than the other universities. The number of nonmatriculated young women rose from 1,772 to 1,928.

The foreign matriculated students in German universities were 4,409 in number, an increase of 332 over the previous winter. Of these 1,349 were in Berlin, 749 in Munich, 618 in Leipzig, 278 in Halle, and 211 in Heidelberg; the remaining 1,204 were scattered among the other universities. There was an increase in the number studying medicine, philosophy, philology, and history, while the natural sciences show a slight decrease. There were 1,858 students from Russia, most of whom came from the Baltic provinces, Finland and Poland; 792 from Austria-Hungary; 332 from the Americas, chiefly from the United States; 302 from Switzerland; 186 from Bulgaria; 184 Asiatics, chiefly Japanese; 142 from Great Britain; and 116 from Roumania. The remaining 487 came from other European countries.

WOMEN STUDENTS IN PRUSSIAN UNIVERSITIES.

This year another great increase in the number of women students in the universities of Prussia is to be recorded. In South German universities women had been admitted for many years, while the Prussian universities had been opened to them only if they came as hearers; matriculation, and hence a claim to employment by the State if they passed the required examinations, was denied them. Since the new regulations (see Annual Report of 1908, p. 300) have been adopted young women are admitted to matriculation. Councilor Tillman, of the Prussian ministry of education, announces the following summary for the winter semester of 1909–10. He states that 2,324 women were matriculated, an increase of 468 over the preceding winter semester. Of the four faculties, theology, law, medicine, and philosophy (the latter includes both branches, (*a*) mental philosophy, philology, and history, and (*b*) mathematics and natural philosophy), the faculty of philosophy has the largest number of women students, since it prepares teachers for secondary schools. Their number was 2,004, as against 1,453 in the previous year. The medical faculty had 266 women students, as against 188 in the previous year. The faculty of theology also shows an increase, namely, from 22 to 39, but the faculty of law, which includes the study of administration, had a slight decrease in the number of women students, namely, from 17 to 15. A general observation is that the young women in secondary as well as in higher institutions of learning—that is, wherever it is left to them to choose the studies—select those which deal with forms of knowledge rather than with facts. Thus we see them select languages, ancient and modern, literature, especially belles-lettres, mental philosophy and psychology, and similar fields of research; few select mathematics, physics, chemistry, physiology, medicine, and technology. This is, however, not characteristic of Germany. The same observation is made in every country where women are admitted to higher study and research.

VACATION COURSES IN JENA.

The vacation courses in the University of Jena, Thuringia, which were begun in 1889 by 2 professors, Detmer and Rein, and which at first embraced natural science and pedagogy, have increased in importance and extent, so that in 1909 the number of professors was 49 and that of the students 662. To the two branches with which the courses were opened have since been added the following: Languages, history, fine arts, theology, geography, political economy, philosophy, philology, psychology, literature. The following table gives a summary of the gradual growth of this voluntary institution. Since many American students avail themselves of the oppor-

tunities offered in Jena in the summer, the numbers may be of interest in this country.

Year.	Number of professors.	Number of students.	Students.		German students.		Foreign students.		Total number of Germans.	Total number of foreigners.
			Men.	Women.	Men.	Women.	Men.	Women.		
1896...	15	108	71	37	32	16	39	21	48	60
1900...	20	174	107	67	51	36	56	31	87	97
1904...	30	333	191	142	127	80	64	62	207	126
1908...	48	632	360	272	239	149	121	123	388	244
1909...	49	662	394	267	268	164	126	103	432	229

GERMAN HIGHER EDUCATION REVIEWED.

The new rector of the University of Munich, the second largest institution of the kind in Germany, Prof. Hermann Paul, reviews in his inaugural address the German system of secondary and higher education, and indulges in severe criticism, which, coming from the source it does, may tone down the fulsome praise so often bestowed upon the system. The address contains the following passages:

I shall not ask how often the ideal aims of university study are actually reached. Let us apply a more modest standard measure. The number of students who fail entirely is not insignificant. But greater is the number of those who, though passing prescribed school examinations, and thereby obtaining a claim to appointment in state service, are really unfit for service, and who, if they become in the course of years useful members of human society, owe little of that development to their university study. First, we have to admit it to be a grave fault that a not insignificant number of students admitted to the universities are not sufficiently equipped mentally for success in higher education. There is no question that many are dragged through the preparatory secondary schools who deserve to be eliminated for good reasons. The causes of this are not far to seek.

Most men, and also most teachers, are induced to be lenient so long as it is not at their own expense, and they forget to consider that their leniency injures not only the rest of mankind, but also those whom they intend to benefit, since, in fact, however, they injure them by leniency. Hence, such teachers are timid when confronted with the criticism of the public, especially the criticism of the weaklings' parents, many of whom are in high social positions; further must be considered the fear, on the part of the class teachers, of the school principal, who is apt to blame the former if many of his students are unfit for promotion. In Catholic districts it is not infrequently found that gymnasium students, destined to become students of theology, are treated with much more indulgence than other students. It is easily understood, but not to be approved, that indulgence is shown to mentally slow and even weak students, who are not indolent, but who fail to progress like normally endowed students. With regard to such the apparent indulgence becomes cruelty, because by promoting them to higher grades they are prevented in time from turning to professions in which their inborn aptitudes might suffice. Nor would it be possible to promote such students to the highest grades at all, if it were not for the fact that too much stress is laid upon dry memory work and too little upon the training of intellectual power, without which all memory work is useless.

The graduation examination in secondary schools acts most unfavorably, because just at a time when the students are ripest for a higher conception of things too much attention is paid to memorized knowledge and its mechanical repetition. With the want of intellectual training is most closely connected the lack of interest. It is unquestionable that among those who pass with a graduation diploma into the university there are many who have neither aspiration for a general higher education nor inclination for a special science or a future profession. The fault of this is charged in no small degree to the school, and not alone because of leniency toward those wanting in capacity. That some teachers should be unable to awaken interest is perhaps an unavoidable circumstance, which can be improved only by careful elimination of incapable candidates for the teachers' profession. Certain it is that a reform of many branches of study can take place only through greater interest on the part of the students. The student, according to my opinion, is too much accustomed to finish the set tasks and does nothing to follow his own inclination. Whenever an especial interest is discovered it is not promoted, but rather smothered to suit a uniform set scheme or course.

I believe the transition from school to university would be facilitated if instructors in the upper grades of secondary schools were given more liberty; if the number of obligatory studies were decreased and a larger number of studies were left optional. But even if that should be rejected the home work of the students might receive a more individual character, provided, of course, the necessary time be given for it. Such liberty may very well be granted within the control of the teacher. Among this individual student's work I class the compositions, for which no uniform themes should be set; such set themes are apt to be treated with distaste and to result in unnatural, artificial phraseology. The students might be allowed to choose their own themes and exhibit the results of certain studies. Of course there will always be students with whom the best pedagogical methods prove of no avail to rouse them to voluntary activity; such have no place in a university.

Moreover, there are the numerous dissipations in which academic youth indulge, talented as well as mediocre and stupid students, well trained and poorly trained. I shall not waste time in general moral exhortations, which are apt to prove useless in the face of frivolity and lack of energy. Only this much I desire to say: A student should seek his education not merely in lecture rooms and behind books. Though he make use of all opportunities offering themselves, to awaken his interest in many ways, as well as strengthen his body and develop his physical skill; though he may indulge in cheerful enjoyment of life, such as is suitable to youth—there may be much allowed in this respect—yet, a respectable amount of time would remain for actual study, and much might be gained, if that time were utilized in a proper manner. But to think that in order to use one's youth to the full, one should waste several semesters, is an error that will revenge itself. The results of such a life are too often hours of ennui, surfeited disposition and physical distemper, aside from the fact, that few succeed in freeing themselves from such a condition, when once produced by irrational indulgence.

Professor Paul then points to the fact that desire to obtain higher education is rarely the object of those who flock to the universities. In most cases it is the prospect of a future support in the State's service, or in other positions which will guarantee an ample income. The exclusive cause urging such students to study, is the fact that examinations are to be passed, and that leads to the inordinate

importance given to the value of memorized matters; that, however, has fatal consequences.

A student who thinks that cramming the memory is all that is needed to pass examinations, easily argues thus: "Why should I begin during the first semester to learn things I am apt to forget, before I need them in examination? I will rather wait till the end of my course, so that my memory may be fresh during the examination." And hence, the university career of many is divided into two parts of unequal length: A long one, in which they merely copy notes taken at lectures, and a brief one in which they cram their memory as much as possible with what they have jotted down. * * * He who is in earnest about his education should from the beginning not be satisfied to make notes of the salient points of lectures, but make earnest attempts at assimilating the matter. * * * No student should engage more lecture courses than he is capable and willing to utilize. The main cause why so many students are engaging to follow too many courses is found in the wish of their families, or their own wish, to spend no more time at the university than is prescribed by the state examination regulations. This wish is especially urgent in cases where state examinations are held only once a year, and where therefore a delay may mean a loss of an entire year.

The rector's address dwells upon the most fatal condition of university study—the mere receptive conduct of most students through the period of many semesters. Professor Paul demands more elementary exercises (similar to the tutorial instruction at English colleges and universities), during the first semesters. It should be the aim of the faculty to read no interpretation lectures without the active participation of its hearers. For exercises of another kind more must be presupposed, as a rule, and they can not be commenced quite so early, but it would not be necessary to postpone them till the very end of the course.

CHAPTER XIII.

EDUCATION IN ENGLAND AND WALES.

England and Wales, 58,324 square miles; population, 35,348,780 in 1908.

TOPICAL OUTLINE.

Statistical summary.—Growth and scope of public education.
Public elementary schools: Pupils; teachers; expenditures.—Current movements: Trend of recent legislation; Doctor Sadler, on present problems; higher elementary schools; Mr. Runciman, on rural education and evening schools; medical inspection; care of children.—Efficiency of elementary schools.
Secondary schools: Statistics; relation to the training of pupil-teachers; inspection; official regulations.
University education: Universities and university colleges receiving parliamentary grant.—Proposed reform at Oxford.—Report of a Cambridge committee.

TABLE 1.—*Summary of current educational statistics—England and Wales.*

[The information in this table relating to universities is taken from the Statesman's Yearbook, 1910, and from current calendars of the institutions. The remaining statistics have been compiled from the reports of the board of education.]

Institutions.	Date of report.	Registered students or pupils.	Professors or teachers.
Universities and colleges:			
Oxford (22 colleges, 3 halls, and noncollegiate students)	1909	3,826	.....
Cambridge (17 colleges, 1 hall, and noncollegiate students)	1909	3,699	.....
Bristol University	1909	543	79
Durham (1 college of arts, 1 college of science, 1 medical college)	1909	1,066	117
London (31 colleges and schools)	1909	9,600	1,242
Victoria University, Manchester (2 colleges)	1909	1,554	245
Leeds University	1909	932	155
Liverpool University	1909	914	317
Nottingham (college)	1909	900	67
Sheffield University	1909	850	131
Reading (college)	1909	609	80
Southampton (college)	1909	222	35
Birmingham University	1909	984	116
University of Wales (3 colleges)	1909	1,543	153
Lampeter (college)	1909	136	9
University colleges for women	1909	490	.....
Elementary day schools	1908	5,984,130	177,628
Training colleges for elementary teachers	1908	10,492	.....

GROWTH AND SCOPE OF PUBLIC EDUCATION.

The foregoing table presents, in a form convenient for reference, summarized statistics showing the enrollment in the elementary schools, colleges, and universities of England and Wales for the latest year reported. With comparatively few exceptions, all the institutions included in the table have been brought within the sphere of government supervision, and there are to-day closer rela-

tions between the different agencies of education in the Kingdom than at any previous time.

The system of public education in England and Wales has grown far beyond the limits recognized by the education act of 1870 and includes not only elementary schools but secondary schools also and certain forms of higher institutions. Its far-reaching scope may be inferred from Table 2, which includes all classes of schools under the combined control of Government and the local authorities.

TABLE 2.—*Schools and pupils under the board of education—England and Wales.*

Class of schools.	1906–7.		1907–8.	
	Schools.	Enrollment.	Schools.	Enrollment.
Elementary education:				
Public elementary schools	20,513	5,968,120	20,621	5,984,130
Certified efficient schools	74	5,056	75	4,988
Special schools—				
For the mentally or physically defective	187	11,762	190	13,247
For the deaf	49	3,368	47	3,421
For the blind	38	1,592	39	1,642
For epileptics	4	192	5	216
Poor law schools	68	14,928	66	15,470
Higher education:				
Evening schools, etc., for further education	5,933	736,512	6,874	751,600
Higher elementary schools	[a] 61	13,682	38	8,718
Secondary schools	768	125,678	840	81,719
Training colleges	74	9,147	79	10,492
Technical instruction:				
Technical institutions	33	2,747	37	2,863
Day technical classes	94	8,674	97	9,029
Schools of art	225	42,683	225	41,723
Art classes	44	2,650	40	2,493
Total	28,165	6,946,791	29,273	6,931,751

[a] Includes 22 London schools later withdrawn from the grant list for higher elementary schools.

PUBLIC ELEMENTARY SCHOOLS.

The public elementary schools included in the foregoing table had, it is seen, an enrollment of 5,984,130 pupils, equivalent to 17 per cent of the population; they maintained an average attendance of 5,292,150, or 88 per cent of the enrollment. The schools referred to are classified as follows: Council schools, corresponding to the former board schools, average attendance 2,942,482; voluntary schools, which now share in the local taxes, average attendance 2,339,973; and a few additional schools, average attendance 9,695.

TABLE 3.—*Number of teachers in England and Wales, 1907–8.*

Class of teachers.	Men.	Women.	Total.
Certificated:			
Trained	22,024	26,752	48,776
Untrained	9,181	33,171	42,352
Uncertificated	5,320	38,946	44,266
Others	5,714	36,520	42,234
Total	42,239	135,389	177,628

Evening schools and higher elementary schools (formerly higher grade schools) were integral parts of the elementary-school system before the passage of the law of 1902 or the creation of the board of education in 1899. They represent the highest development of the system of elementary education, in respect to which England has made phenomenal advance in the last twenty years, mainly through municipal enterprise.

TABLE 4.—*Current expenditure for elementary education in England and Wales, 1907–8.*

Purposes.	Expenditure.	Equivalent in United States currency.
Ordinary public elementary schools	£17,653,392	$85,795,485
Higher elementary schools	89,433	434,644
Industrial and special schools	439,935	2,138,084
Administration, loan, charges, etc.	3,804,242	18,488,616
Total	21,987,002	106,856,829

TABLE 5.—*Total expenditure for elementary education, England and Wales, 1907–8, classified by contributing sources.*

Source.	Amount.	Per cent of total.
Parliamentary grants	£11,104,303	50.5
Rates	10,485,206	47.6
Fees	131,703	1.9
Other local sources	265,790	
Total	21,987,002	.....

The foregoing statistics pertaining to the system of public education are drawn from the latest report of the board of education, covering the scholastic year 1907–8. The operations of the system for the scholastic year just closed (1909–10) were summarized by the president of the board in his statement before a committee of the House, July 14, supporting the motion for a grant of £8,660,000 to complete the sum necessary to defray the charges which would come upon the board during the year ending March 31, 1911. This summary showed continued advance in every particular that can be numerically expressed.

CURRENT MOVEMENTS.

TREND OF RECENT LEGISLATION.

The settlement of the education controversy in England, in common with larger questions of parliamentary policies, has been deferred as a consequence of the unexpected death of King Edward VII. The educational unrest remains, however, and the leaders of opinion and action in both parties are discussing settlement plans; the con-

ciliatory spirit of these discussions leads to the hope that a measure which shall be acceptable to Liberals and Conservatives alike, and shall conserve both vested and individual rights, will be forthcoming.

While measures relating to the administrative policy of the national system of education are thus in abeyance, there is great activity in practical directions, more especially in respect to the new duties imposed by the education law of 1902, the provision of meals act of 1906, the education (administrative provisions) act of 1907, and the children act of 1908.

These duties relate to the extension of the school period, the provision of agencies for higher (i. e., secondary and technical) education, care for the health and physical welfare of children, and for the protection and control of neglected and wayward children.

Part II of the education act of 1902 provides that—

2. (1) The local education authority shall consider the educational needs of their area and take such steps as seem to them desirable, after consultation with the board of education, to supply or aid the supply of education other than elementary, and to promote the general coordination of all forms of education, and for that purpose shall apply all or so much as they deem necessary of the residue under section one of the local taxation (customs and excise) act, 1890, and shall carry forward for the like purpose any balance thereof which may remain unexpended, and may spend such further sums as they think fit: *Provided*, That the amount raised by the council of a county for the purpose in any year out of rates under this act shall not exceed the amount which would be produced by a rate of two pence in the pound, or such higher rate as the county council, with the consent of the local government board, may fix.

(2) A council in exercising their powers under this part of this act shall have regard to any existing supply of efficient schools or colleges, and to any steps already taken for the purposes of higher education under the technical instruction acts, 1889 and 1891.

3. The council of any noncounty borough or urban district shall have power as well as the county council to spend such sums as they think fit for the purpose of supplying or aiding the supply of education other than elementary: *Provided*, That the amount raised by the council of a noncounty borough or urban district for the purpose in any year out of rates under this act shall not exceed the amount which would be produced by a rate of one penny in the pound.

The administrative provisions act authorizes the local authorities to aid, by scholarships or bursaries, the instruction in public elementary schools of scholars from the age of 12 up to the limit of age (16 years) fixed for the provision of instruction in a public elementary school, and, with the consent of the board of education, to extend this aid beyond the age of 16 years. This act provides also that money may be expended in maintaining—

for children attending a public elementary school, vacation schools, vacation classes, play centers, or other means of recreation during their holidays or at such other times as the local education authority may prescribe, in the schoolhouse or in some other suitable place in the vicinity, so far as the local education authority, in the case of a schoolhouse or place not belonging to them, can obtain for the purpose the use of the schoolhouse or place. The law also makes it the duty of the local authorities "to provide for the medical inspection of children immediately before or at the time of

or as soon as possible after their admission to a public elementary school, and on such other occasions as the board of education direct," and "to make such arrangements as may be sanctioned by the board of education for attending to the health and physical condition of the children educated in public elementary schools."

The children act is not strictly an educational measure, its main purpose being to bring into one systematized statute previous enactments on the same subject, and also to extend the legal provision for the care and control of the child population. It does, however, extend the province of the local education authorities, especially school attendance officers, and strengthens, directly and by indirect influence, the compulsory school attendance laws.

It will be observed that, in every case, the execution of these laws which, as regards many of their provisions, are permissive merely, rests upon the local education authorities. The difficulty in the way of focusing attention upon the great things that are being done in England to meet the necessities which are back of the laws themselves, may be understood from the fact that these local authorities include at present 62 county councils, 74 county boroughs, 137 autonomous municipal boroughs, 54 urban districts, and the Isles of Scilly; total, 328. It would therefore be impossible here to do more than present a general survey of the activities excited by the new measures, which can best be done by citations from the public utterances of educational leaders and from recent official reports.

The endeavor to increase the period of school attendance involves provision of schools above the elementary grade, and their adaptation to the practical needs of the people. The awakening on this subject is the significant fact in the recent development of the people themselves. The various aspects of this problem were considered in an address by Dr. M. E. Sadler, from which the following extracts are presented:

PRESENT PROBLEMS.

For the vast majority of English boys and girls, our system of national education is a torso. It ends too soon. It is a trunk without a head. How to remedy this defect with practical wisdom, without expenditure so immense as to provoke reaction, and with the convinced cooperation of enlightened employers of labor, and of all parents who unselfishly desire to further the best interests of their children, is becoming one of the pressing questions of the day. That the country has begun to realize the gravity of the situation is due in great measure to the devoted labors of many administrators and teachers who are present at this meeting. The country is also under obligation to others: To Dr. Stanley Hall, of Clark University, Worcester, Mass., for throwing into bold relief the educational problem of adolescence; to several of the inspectors of the board of education for strenuous and tactful, though necessarily often unrecognized, labor in diffusing interest in the question, and in suggesting methods of dealing with it; to the president of the board of education, for assigning the question to the consultative committee for consideration and report; to the poor-law commissioners (both majority and minority), and to the members of the interdepartmental committee on partial exemption from school attendance, for their references to the subject; to many local

education authorities, especially those of London, Manchester, Leeds, the West Riding of Yorkshire, Halifax, Lancashire, Bury, Rochdale, Widnes, St. Helens, Accrington, Haslingden, Cheshire, Gloucestershire, Cambridgeshire, and Finchley, for skilful and successful grappling with the educational difficulties involved; to many public-spirited employers of labor in almost all parts of the country—especially in the engineering trades, but also in many other industries; to the Workers' Educational Association, for bringing the matter effectively under the notice of the trade unions, and of the parents of the children; to those teachers, both in town and country, who though their labors are known only to a small circle, have rendered a national service by showing how great a contribution continuation schools inspired by the right spirit can render to social welfare; to those who, in the teeth of much local opposition, have exposed the evils of half-time; to the example of Denmark, Switzerland, and Germany, and especially to Doctor Kerschensteiner, stadschulrat of the city of Munich, for showing what can be done to meet the educational needs of adolescence, and for setting the problem in right economic perspective; to the press, for giving prominence to the complex issues of the problem; and last, but not least, to Scotland (to which English education owes already so great a debt), for leading the way in the United Kingdom toward a great extension of the educational responsibility of parents, employers, and the State.

These forces have already changed the attitude of public opinion. * * * We have in England to-day the promise of effective advance: First, through a stir of public opinion; secondly, through a careful examination and comparison of successful local experience; thirdly, through a courageous analysis of the economic and moral factors of the situation, as well as of the strictly educational issues; and finally, through legislation, adding to the powers of the central and local education authorities, and formally recognizing the responsibilities of employers and of parents toward young people during the critical years of adolescence, and of what, in modern life, corresponds to the stage of apprenticeship.

Out of some 1,300,000 boys and girls in England and Wales who are between 12 and 14 years of age, there are (to the best of our knowledge) about 211,000 (in addition to partial exemption scholars) who have already obtained exemption from attendance at school, and are receiving no further systematic education. Out of the 2,000,000 young people in England and Wales who have passed their fourteenth birthday but are still under 17 years of age, only one in four (so far as our knowledge goes) receives on week days any continued education. "The result" (I quote the finding of the consultative committee) "is a tragic waste of early promise. Through lack of technical training, hundreds of thousands of young people fail to acquire the self-adaptiveness and dexterity in handicraft which would enable them to rise to the higher levels of skilled employment. Through lack of suitable physical training their bodily powers are insufficiently developed and their self-control impaired. Through lack of general training their mental outlook remains narrow, their sympathies uncultivated, their capacity for cooperation in civic welfare stunted and untrained. In the meantime, modern industry, in some of its developments, is exploiting boy and girl labor during the years of adolescence. An increasing number of 'blind-alley' employments tempt boys and girls, at the close of their day-school course, by relatively high rates of wages which furnish opportunities of too early independence, but give no promise of permanent occupation and weaken the ties of parental control."

The present state of things is not only intellectually and economically wasteful, but often morally mischievous. City life enhances the danger. Unskilled, or relatively unskilled, employment at 13, with good money, tempts a boy (and an increasing number of girls) like a baited trap. A lad is drawn into a way of life which leaves him at 16 or 17 without a trade to his fingers, and with the habit of steady learning clean gone out of his head. The years between 13 and 16 or 17 are the years of educational leakage.

* * * * * * *

OUR COMMON AIM.

Differ as we may in judgment as to the legislative treatment of the problem, we find, I think, but little disagreement among ourselves in educational aim. Do we not virtually concur in thinking that all boys and girls ought to receive, during the years of adolescence, some form of continued education which will develop their physique, widen their mental outlook, cultivate their sympathies, prepare them for the responsibilities of parenthood, equip them for trustworthy efficiency in the occupation by which they will earn their livelihood, and fit them for the duties of citizenship? If this is to be done, it will be necessary to mortise the work of the day and evening technical classes into the work of the elementary day schools. We need in the latter more training of the hand and of the constructive powers, not with any prematurely technical purpose, but as a necessary factor in brain development and in a liberal education. This will not be possible unless we have smaller classes in the elementary day schools and unless the course of training for teachers can be so prolonged as to permit training in educational handwork to be included in their course of professional preparation without congestion of studies, without over-pressure of mind, without encroachment upon the indispensable liberal education, and without undue curtailment of that mental leisure which is needed for all healthy growth of interest, originality, and purpose. Nor do we conceive of the technical class, whether day or evening, as purely utilitarian or technological. Direct bearing upon subsequent employment or occupation it must have. But inseparable from its true educational influence is careful regard for the training of the body, for the cultivation of the sympathies and of the imagination by the love of literature, by music and by art, for an opening of the mind to the significance of civic responsibility, and also for those influences (often most powerful when least expressed in words) which help in forming a purposeful, steadfast, and disinterested character.

* * * * * * *

It is because in certain parts of Germany, and especially in Munich, and in the Kingdom of Wurttemberg, the technical education during adolescence has been so arranged as to include the element of civic training that we gratefully acknowledge the stimulus which educational administrators in this country have received from German example. But there is nothing in the German achievement, highly successful as it has been in many places, which need make us feel that we are hopelessly in the rear. * * * There is some reason to think that, even in the progressive parts of Germany (and there are large regions in which education is the reverse of progressive), the problem of securing continued education for the majority of girls, and also for those boys who are not intending to enter a skilled trade, is still far from having been effectively solved. We in England have indeed much to learn from Germany and from some of the cantons of Switzerland, but it is right to remember that, for historical reasons which are far from discreditable to us, we have approached the problem from the point of view of the individual rather than from the point of view of the State. I can find no country in which the voluntary attendance at evening classes is so large in proportion to the adult population as it is in England and Wales. I would venture to urge that our task is so to use the collective power of the State as to stimulate, but not to supersede, the energy and forethought of the individual. Bureaucratic collectivism in education seems to me as false an ideal as, at the opposite extreme, is chaotic and plunging individualism.

Under the head of special English difficulties, Doctor Sadler noted (1) the psychological—that is, the deep-seated—conviction on the part of the majority of English parents that a child's education ends when he leaves the elementary day school; (2) a lack of insight, on the part of too many English employers and foremen, into the true

meaning and value of education, and their failure to discharge their moral responsibility for the further education of the young people in their employment; (3) the noneducational tradition of the English trades unions; (4) administrative difficulties; (5) economic conditions.

Under the last consideration, Doctor Sadler said:

A system of compulsory attendance at continuation schools of all young persons between 14 and 17 years of age would, if universally applied in a satisfactory manner, involve for maintenance alone an additional annual expenditure of £2,500,000. For my own part, I believe that if the work in continuation schools were made (as it should be made) thoroughly practical, the cost would be considerably greater.

* * * * * * *

Even more serious, however, than the problem of taxation and of rates is the difficulty of adjusting a system of industry, competitive in most of its presuppositions, to an ideal of education which is in large measure collective in purpose. If the antithesis were a sharp one between an impenitently individualistic industrial system and a wholly collectivist theory of national education, we might well despair of a successful issue. But the antithesis is not so sharp as that. Industry itself retains much of the corporate spirit, and the trend of things is in many respects toward an increase of corporate organization in business matters. * * * The nation, like the individual, must be responsive to what is true in both ideals, for educational truth, like moral truth, is reached, in Pascal's words, "by a bold combination of opposites."

HIGHER ELEMENTARY SCHOOLS.

The higher elementary school affords the only means of prolonging the systematic education of the majority of children in the Kingdom, and the Government offers an inducement to the local authorities to maintain schools of this advanced grade by an extra grant for these schools when they conform to specified conditions. These conditions are especially helpful in the smaller communities, but they have not proved entirely satisfactory to the education authorities of the large cities. The twenty-two schools of this class in London have been withdrawn from the grant list since 1907, as stated by the county council in their report for 1909, as follows:

The council has abandoned its intention to provide additional higher elementary schools under Chapter VI of the code, in view of the fact that after prolonged negotiations with the board of education it was unable to obtain any substantial concessions on various fundamental questions. Consideration is therefore now being given to the question of the organization of a system of schools for pupils over 11½ years of age of a different character from the ordinary elementary school, but not subject to the board's regulations for higher elementary schools. With a view to assisting the inquiry, the council has agreed that as an experiment a specially approved curriculum should be put into operation at certain existing departments.

These experiments are vocational in their character, using the word as it is now current in educational discussions in this country.

Manchester, which under the régime of school boards led the country in the establishment of higher grade schools, has recently organized six higher elementary or "central" schools of a new type. In respect to the earlier high schools, the present chairman of the education committee says:

A continuous stream of clever boys and girls went out from these schools, and their successes in obtaining scholarships at secondary schools and subsequently at the universities proved the practical value of the carrying out of those traditions of elementary education which now in some quarters it has become the fashion to hold up to derision, and that on the part of persons who have yet to prove that the carrying out of their ideas will ever be attended by like success. The best traditions of elementary education mainly consist in the careful bringing up to a state of efficiency of the whole of every class in the school, rather than placing reliance upon a few of the more clever boys and girls, who receive special attention at the cost, I fear, of the remainder and far larger number. These traditions, I venture to think, are still worthy of encouragement.

After rehearsing briefly the measures which destroyed these earlier schools, the chairman continues:

Seeing that there was no future for schools so constituted, and being desirous of giving greater scope to the initiative of the teachers, we have established six of these central schools, and their aim will be thoroughly to equip boys and girls for industrial, commercial, and home life. In Manchester there is always a large demand for well-educated youths for the office and warehouse—boys thoroughly well grounded in arithmetic and English. In the central schools it will be our aim to meet this demand.

At a time when an increasing number of girls take up office and secretarial work it is absolutely essential that their special interests should not be neglected, and here also the central schools should be of great assistance to parents desirous of having their daughters so equipped. Another most important feature of the work of the central schools will be the practical housewifery classes. Each of these central schools will have attached to it a cottage simply furnished, with cookery utensils and laundry appliances. The special teachers in charge of the centers will reside in the cottage, and thus housework will be provided for the girls, who will receive a continuous course of instruction of about eight weeks' duration. The aim will be to show how in a simple and practical way the week's work of an ordinary house is carried out in the best and most orderly manner.

This branch of the central school is of such vast importance that it is worth while to go a little into detail. The general instruction throughout the course for the elder girls will deal with the qualifications of a good housewife—importance of cleanliness and order in the home; care and cleaning of sitting room, kitchen, scullery, bedroom, stairs, passages, washhouse, etc.; cleaning of flues, black leading, laying and lighting fires, washing up, care of glass, silver, knives, care of linoleum and oilcloth, carpets, mats, etc.; care of household brushes, laying and clearing the table, sewing, darning, household mending and patching, making aprons, etc.; home hygiene, simple first aid; the laying out of money to best advantage. The cookery will deal with the plan and preparation of the week's dinners, marketing, tea and coffee making, bread and cake making, jam making, cost of dinners, household accounts, household washing, with practical instruction of preparation for week's wash, sorting clothes, mending, removing stains, steeping clothes, etc.; washing of linen and flannels, drying, folding, mangling, ironing, and airing clothes. I have ventured to go somewhat into particulars in order to emphasize the thorough character of the essential training in household affairs which should be thoroughly taught to girls.

The school course will extend over four years. In the third and fourth years the instruction will be especially adapted to meet the future needs of the children. For this purpose the school will be arranged so as to provide (1) an industrial section, and (2) a commercial section, which will give the children opportunities of making special study of the subjects particularly appertaining to the nature of their prospective employments.

The committee have decided to adopt the system of granting leaving certificates, and hope thereby to give the pupils a definite aim in their courses of study, and also to provide prospective employers with a reliable guarantee as to the efficiency of the instruction imparted. This system will also tend to abolish the not altogether satisfactory examinations adopted in some instances by public bodies and others when dealing with youthful applicants for employment. The leaving certificates examination will be conducted by the committee's inspectors of schools yearly at the end of June, and will be open to all pupils who have completed their fifteenth year. The six central schools are conveniently situated, and will meet the needs of the different parts of the city. I venture to hope that this development of educational facilities will conduce to the progress of those children in the public elementary schools of the city who are so happily circumstanced as to be able to remain at school beyond the ordinary age.

The experiments in Manchester and London will undoubtedly be followed in other cities and counties. Hence it may be said that vocational, or industrial training, as distinct from either general or technical education, has found a secure place in the English system of public education.

From the detailed explanations of the workings of the system made by the president of the board, in his address on the budget, the following statements are quoted:

RURAL EDUCATION.

Every experiment of importance has taken the form of emancipating the children, and one of these, to which I wish to draw the attention of the House, is in a rural area. Schools which are conducted amid rural surroundings may have a rural development in the school. They may be conducted with a definite rural bias, or they may be specialized rural schools. The ruralizing of education is by no means a difficult matter. There is no reason in the world why all the equipment that surrounds a rural school should not be used for the purposes of education. The playground, the fields, a haystack, a cow house—all these things may be used as exercises in arithmetic and mensuration. The parish church or any old buildings in the neighborhood can be used for the purpose of illustrating history. The natural environment of the school will enable them to make explorations into nature study. The physiographical environment, roads, railways, woods, heaths, meadows, the industries, the rocks, and the soil can all be used as starting points in geography, and I am sure the honorable gentlemen opposite would agree that in no way can you start more profitably in teaching geography than by starting in the immediate neighborhood of the child's own home and school.

I take one of the best cases which has come under my notice. I hold it up as an example to other parts of the country. I hope the other 19,000 which I do not mention will not be jealous. It is a school in Cheshire. There are 200 boys on the register. They have five forms. They have a head master, three trained certificated teachers, and one uncertificated. The school, as some honorable members know, lies on the outskirts of Altrincham. Although it is in the county it is so near the town that it can be attended by the town children. What is its scheme? It provides for the ordinary subjects, and in addition it has organized bee keeping, woodwork, gardening, and practical nature study. Metal work and glasswork have just been introduced. Mathematics are conducted on the basis I have just described and woodwork has expanded out of the region of mere play into things of utility. Drawing includes simple sketching out of doors. Elementary science includes mechanics and physics, with experimental work, and they themselves make the material for the experiments.

Gardening is correlated with arithmetic and with English, for they have to write an account of all they have done with nature study and with what is known as hand and eye work. Bee keeping is taught to all the boys. They regard it as very great fun, and fourteen of them are known as "bee keepers." Seed testing is also conducted under the same rules. When my inspector first drew my attention to this he said that he found in the workshop there was a garden frame being made. They were finishing off the garden gate. One scholar had been making a model of a weigh bridge out of his own head. A good deal of attention was paid to nature study and drawing, and the school garden was planned by themselves, containing a number of beehives. There was every kind of experimental work, and the boys were cooperating in making a wind pump from their own design, pumping water out of their own well. This is a really intelligent school, and what is remarkable in it is that in the ordinary dry subjects, the A B C of elementary school work, the children are more efficient than in any of the surrounding schools. I thought the head master had done good work there. I thought he had done such good work that I might have him on my staff, and I appointed him two months ago. The managers of the school, I believe, disapprove of the appointment, but I am going to use him as soon as he has learned the ordinary routine of his work to act as a missionary and to carry out in other parts of the country the results of his own experiment.

HIGHER AGRICULTURAL EDUCATION.

Agricultural and rural work is done not only in the elementary schools—it is done in our secondary schools, as well as in technical schools. The agricultural work conducted under the board in the West Riding has resulted in a great spread of agricultural education in the evening schools. At Bedford they have an excellent farm school. In Wiltshire they have an itinerant instructor, or more than one, in manual farm processes. In Lindsey, one of the greatest of the agricultural areas, they have agricultural scholarships which carry their scholars right up to our universities. In Nottinghamshire they train elementary-school teachers in rural subjects. All this is good work, and is the growth of the last few years. But it is impossible that it should go on and be well done unless our instructors are paid good salaries. At present, I am sorry to say, I find the best of the agricultural instructors, trained in the agricultural department at Cambridge, instead of finding employment under our own county councils, go out to the colonies. I wish the colonies well, but I should wish first of all that our own counties should get the benefit of their services. But we can not retain them in this country unless we are prepared to pay them a living wage. Then there have been agricultural institutes put up here and there. All these are receiving the board's assistance. In the counties, in respect of which what is called the Block grant was not paid, the number of schools and classes recognized by the board in which agricultural subjects were taught was 429 in 1908–9. It is more than that now. That was a rise from 300 only three years previously. In the secondary schools in counties in respect of which the Block grant was paid the number of centers recognized by the board in which agricultural subjects were taught rose from nothing in 1906 to about 190 in 1910. All this means that there has been a great growth in the desire to reorganize and to use such agricultural educational opportunities as can be offered by the local authorities. One of the most remarkable rises has, however, been in the number of school gardens. In 1904-5 there were only five secondary schools earning the special grant for gardening. I think there were about 8,000 scholars at that time. At the present moment there are over 1,900 schools earning a grant for this purpose, and over 28,000 scholars are to be found taking advantage of these gardening classes. The rural courses in secondary schools have also been much improved. I hope, sooner or later, the disadvantage under which the rural areas have labored, in not having the education of their districts brought into close relation with the main industry of their districts, will be a fault in our educational system which will have passed away.

EVENING-SCHOOL ATTENDANCE.

It is necessary in order to secure that the funds spent on evening classes and evening schools should be spent to the best advantage that we ought to insist upon greater regularity on the part of the students. That is one of the reforms we look forward to in the future. The work done in these classes covers a vast range of subjects, and we are not prepared to exclude any subject provided it comes properly within the category of the classes. Any reasonable subject of real educational value may count for the purposes of the grant. A great deal of the work is of the greatest value. I recently visited a technical class at Burnley, and I found there not only were students taught to use their hands and eyes to good effect, but I found there some of the best pure science classes in the United Kingdom, and out of seven scholarships granted in the United Kingdom no fewer than four were won by that school. The work done in these classes must, however, very largely depend upon the amount of time expended by the student in his daily avocation. It is impossible that a student who commences work at 6 o'clock in the morning, and, with short intervals for breakfast and dinner only, leaves off at 5.30, should have the energy to take full advantage of the evening classes thus provided. Granting that they give six evening hours a week, and which, indeed, is a standing allowance, it is placing a strain on some students far beyond what they can bear. I have recently heard of some young students in Leeds who have broken down under the strain of doing their daily work and of attending evening classes. If they had lived in Middlesborough, Manchester, Harwich, Birmingham, Coventry, Derby, or Swindon, they would have been able to attend these classes during the day by the permission of their employers, and, I would add, by the encouragement of their employers. That is a matter which, I trust, will commend itself, not only to those who control our great railway companies, but also to small as well as large employers throughout the United Kingdom. The improvement required there must of necessity come from the largest employers first. I think a word of credit is due to the Admiralty, because they have led the way in this matter. As early even as 1843 they allowed some of their young persons who work in their dockyards and works to attend technical classes during their work hours. Some of the railway companies are also taking up this subject with a degree of enthusiasm which does them every credit. Recently the Great Northern Railway Company, who have a very large number of boys in their employ in London, have been insisting that in every case their boys should attend some classes, and many of these classes during their work hours. That example may well be followed in other parts of the country. Only by following it shall we be able to get into our schools boys between the ages of 13 and 17 in such a way as to enable them to take full advantage of the facilities there offered. Scotland, as usual, is leading the way in this matter, and the act for Scotland passed two years ago, I hope, will be followed by an act equally applicable to England, providing that attendance at continuation classes shall up to 17 years of age be compulsory.

MEDICAL INSPECTION OF SCHOOLS.

The administrative provisions act, as already stated, made it the duty of the local authorities of England to provide for the medical inspection of school children and to make arrangements, with the sanction of the Board of Education, for looking after the health and physical well-being of the pupils outside the precincts of the schools.

These provisions necessitated the formation of a medical department in the board of education, which was constituted in 1907 and has been extended and strengthened each following year. The first report of the chief medical officer or head of the department

appeared during the current year. The following particulars with respect to the service are taken from this document:

The department has prepared three general circulars, which have been published by the board and which are intended for the guidance and assistance of the local authorities.

In the first of these, circular 576 (issued in November, 1907), the scope and purpose of the act were explained, and especial stress was laid upon the need for the coordination in each area of the work of medical inspection under the control of the school medical officer with the public health service. The value of and need for assistance from the school nurse, the teacher, and the parents themselves was also explained, and suggestions were made for a schedule under which the actual work of inspection might be carried out and as to the points with which the annual report of the school medical officer might most profitably deal. Finally, the question of amelioration and physical treatment was briefly discussed, and the directions in which steps might provisionally be taken for acting on the initial results of medical inspection were indicated.

In circular 582 (issued in January, 1908) the suggestions contained in circular 576 were developed into a formal schedule for medical inspection, in which the board indicated the particulars, attention to which they regarded as constituting the minimum of efficient inspection. This schedule has, almost without exception, either been adopted entirely by the local education authorities or has determined the degree and character of their inspection.

Finally, in circular 596 (issued in January, 1908), the position of the school medical officer and his relation to the medical officer of health were dealt with. The recommendations in circular 576 as to the plan which the school medical officer's annual report should follow were amplified and made more definite. Considerable space was given to the question of the arrangements which might be made by the authority for the treatment, as distinct from the inspection, of school children, and emphasis was laid upon the necessity of coordinating in each educational area the work of the various acts concerning school hygiene, sanitation, and the medical supervision of defective or ailing children.

With regard to the extent to which local authorities have met the requirements of the law, the report says:

Up to the present—that is, up to the end of the education year 1908-9—there have been "recognized" by the board 307 school medical officers in 307 of the 328 local educational areas. In the remaining 21 areas medical inspection has been in operation, but for one reason or another the nominations made or the schemes submitted did not receive the board's recognition or approval during the last code year. The arrangements of some, however, of these 21 authorities will in all probability receive approval at an early date. The distribution of the 307 school medical officers is broadly indicated by saying that in England school medical officers have been recognized in 45 counties, 66 county boroughs, 132 municipal boroughs, and 42 urban districts; whereas in Wales such officers have been recognized in 6 counties (leaving 7 counties still unprovided for), 4 county boroughs, 4 municipal boroughs, and 8 urban districts.

In 224 out of the 307 areas for which a school medical officer is recognized the medical officer appointed was the medical officer of health of the area, and thus in the majority of cases a more or less complete unification of the two medical services was secured. In England 30 of these officers holding both appointments occur in counties, 41 in county boroughs, 101 in municipal boroughs, and 35 in urban districts. In Wales, as a whole, out of the 22 school medical officers recognized 17 are medical officers of health of the areas in which they work.

It will be seen that the remaining 83 authorities have appointed a school medical officer who is not medical officer of health of the area. In 76 of these cases, however, the school medical officer is appointed either to be under the supervision of the medical officer of health or directly to cooperate with him. Even in the remaining cases some degree of effective coordination, either personal or administrative, is the rule, and upon this principle, so important in obtaining smooth and effective working, the board have continued to lay emphasis.

The experience of the service thus organized illustrates in a striking manner the vital relation between medical inspection of schools, taken in its most restricted sense, and considerations of "the external sanitation of the school, the sanitation and hygiene of the home from which the child comes to school, and the whole business of securing cleanliness."

In view of the wide ramifications of such a service in its fullest scope, the report reviews the various classes of work that are now going on in England under the direction of local authorities, looking to the improvement of the physical condition of the children of the poorer classes. The import of the entire work is summed up in the conclusion of the report, as follows:

Much of the work undertaken by the education authorities has originated under the new act; some of it was in existence formerly, but has been strengthened and systematized; all of it has been coordinated and correlated, or at least a beginning has been made in this direction. Much of this medical work is already of proved value, and the efforts which have been made in many areas have been beyond praise. Broad and simple foundations have been laid; to build upon them wisely and patiently is the work of the future.

On the whole, one must say, however, that what most strikes the careful observer is that much remains to be done. The question of the physical condition of the people is one of the most pressing and insistent national problems. This first year's work in medical inspection does not reveal nor can it reveal any new kind of facts as to that condition, nor is it possible by any mental process or by any physical measurement to determine from the findings resulting from medical inspection whether or not there is, in fact, physical deterioration. But one thing is certain, that whatever be the academical or statistical value of medical inspection and school hygiene generally, it is yielding a substantial result in practical reform. In almost all educational areas this new work is contributing to a wider knowledge of child life than has been obtainable in the past, which can not fail to guide, encourage, and foster the highest kind of social development. To this must be added the beneficent results of medical treatment in tens of thousands of school children; nor can the further fact be ignored that the increased attention devoted to school hygiene, including the whole health conditions and physical training of the child, is already beginning to bear fruit in a better conception of the true ends of a state system of education.

CARE COMMITTEES.

The organization of care committees, under the general direction of local authorities, to look after the condition of necessitous children attending the schools is one of the most interesting signs of the awakening of the public conscience of England with respect to responsibility for the social welfare of the people. The duties of these committees and their relation to the education authorities

are illustrated by the following extract from the latest report by Doctor Kerr, medical officer of the education committee for London:

In April, 1909, the council decided to reorganize the care committees, which had originated two years previously in connection with the feeding of necessitous children in schools. These committees, when they become effective, can be of the greatest utility in following up much of the work concerning the physical condition of childhood. They will take an interest in all matters concerning the physical good of the children, coordinating all agencies bearing on this work outside the school. The work will be of interest and the utmost social importance, but will require much self-sacrifice and trouble on the part of these committees and ultimately an almost expert knowledge. Excepting certain special schools for physically defective, blind, or deaf children, the scheme as revised is intended to cover all schools. A children's care (school) committee is appointed for each school, and deals with the individual cases. The members will endeavor to procure cleansing, medical treatment, or amelioration of existing physical conditions of all children referred to by the doctors or nurses in the medical report book of the school, penetrating to the homes and endeavoring to influence more particularly the indifferent parents who do not attend to see the doctor and whose children are the difficult cases in which to obtain improvement. In cases where the usual official routine appears to offer no solution, the personal influence of members of the committee often finds a way. They have also the duty of determining which children are necessitous, and perhaps in this is the greatest difficulty of maintaining a standard. To help toward this and also to look after general principles and financial questions, 27 local associations of care committees have been formed, with representatives of the school committees, the teachers' consultative committees, and the children's care (central) subcommittee. They practically standardize the work of their district and report to the children's care (central) subcommittee, consisting of 12 members, and dealing with the administration of the education (provision of meals) act, 1906; section 13 (1) (a) of the education (administrative provisions) act, 1907; and section 58 of the children act, 1908, so that all matters concerning medical treatment or the amelioration of physical conditions will come under this subcommittee, whose importance in the future will be increasingly great.

EFFICIENCY OF ELEMENTARY SCHOOLS.

In a paper on "The relation of science to industry and commerce," which has attracted wide attention, Mr. R. Blair, education officer, London county council, presented striking testimony as to the value of the elementary schools of England, drawn from answers to inquiries that he had sent out, from many leading industrial and commercial firms of England.

Under the head of "Elementary-school training," Mr. Blair says:

Almost all [the firms] explain their preference for elementary-school boys in such a way as to pay a well-deserved compliment directly to the adaptability of the elementary-school boy and indirectly to the existing system of elementary education. A good many speak in high terms of the value of evening schools, including technical institutes and schools of art. Banks and insurance almost invariably (but other firms as well) seek for the secondary-school product. There is some call for the man trained at the highest institutions, but this call is so much confined to firms the works or business of which require technical skill that it is fully evident that the others do not yet feel the need for such men nor know how to use them. There appears,

also, with some frequency, the traditional fling at the public schools and at the universities.

Catch the boy as he leaves the elementary school and induce him to attend evening classes; add to that the training of the workshop or the business house, and you have the fairly common plan of training those who will rise above the rank of "hands." From the best of these come the foremen; from those in turn the submanagers are selected, and so on. It is interesting to see, however, that the possibility of a change is not unforeseen. "It happens," says one of our greatest industrial leaders, "that at the present moment all the men who fill the positions of responsibility in our office come from elementary schools. Naturally, they belong to a period when secondary schools were not so accessible as now, and probably the same remark may not be applicable to their successors."[a]

SECONDARY SCHOOLS.

By the act of 1899 creating the board of education the province of this central authority was extended to secondary schools, and regulations were at once issued defining the conditions under which secondary schools might have the benefits of government inspection and receive grants from the public treasury. The recent development of this branch of the service is shown by the following statistics:

TABLE 6.—*Comparative statistics of secondary schools.*

Year.	Number of secondary schools on grant list.	Total number of pupils under instruction.	Amount of grant paid.
1904–5	491	85,358	£200,591
1905–6	600	105,034	225,080
1906–7	677	115,744	324,334
1907–8	737	124,588	449,653
1908–9	[a] 802	135,776	(b)

[a] It should be noted that 9 schools, educating both boys and girls, which were classified as "dual" schools in 1907–8 were reclassified as 18 schools, for boys and girls, respectively, in 1908–9. The increase in the number of schools on the grant list between 1907–8 and 1908–9 is, therefore, in fact, not 65, as would appear from the above table, but 56.

[b] Figures not available, as the grants have not been yet adjusted and paid.

The board of education call attention to the fact that 136,000 pupils in the secondary schools, on the board's grant list, are equivalent to about 4.1 pupils per thousand of the total population in England; but there were also, on a rough estimate, "from 450 to 500 schools educating between 60,000 and 70,000 pupils," which would raise the number per thousand to 6.2. It is further noticeable that in 1905 there were 122 secondary schools on the grant list, enrolling 30,000 pupils, provided by local authorities (that is, provided as well as maintained). In 1908–9 the number of such schools was 258, with nearly 48,000 pupils, besides "38 more for which, though not technically 'provided schools,' the local education authority was financially responsible, with between 8,000 and 9,000 pupils."

[a] From a paper presented before the educational science section of the British association, at the Sheffield meeting, by Mr. R. Blair, M. A.

RELATION TO THE TRAINING OF PUPIL TEACHERS.

The secondary schools are brought into immediate relation with the work of public elementary schools by the system of pupil-teacher training recently adopted.

Year by year the secondary schools have taken a larger share in this work, and in 1908, of 615 centers at which pupil teachers were being trained, 453 formed integral parts of secondary schools and 17 were centers attached to schools of that grade, or a total of 470 centers out of 615, as compared with 288 centers out of a total of 482 in 1906.

INSPECTION.

The general results of the service of inspection maintained by the board in the interests of secondary schools may be inferred from the following citations from the report covering the year 1908–9:

Since the institution in 1901 of inspection of secondary schools by the board, 1,054 secondary schools have been fully inspected up to the end of the year 1908–9. Each of these inspections means that a thorough survey of the whole organization and work of the school, including its management and finance as well as its teaching, is made and recorded for the use of the school itself, of the board, and in all, except a few cases, of the local education authority responsible for the development and support of higher education in the area. This figure does not include any instances of second or third inspections of the same school. These are given below. All these schools, whether in receipt of grant or not, have had their efficiency and work carefully tested, and have received counsel, warning, or encouragement. A second inspection held a few years later often shows that the first has had very beneficial results.

A large part of the field of secondary education has thus been systematically surveyed for the first time in modern English history. That survey still goes on being extended, both as regards schools which are being created or reconstituted, and as regards existing schools, both public and private, which apply at their own instance for inspection and recognition by the board. But, apart from any large increase under either head (which is always possible), the limit for the present appears to have been nearly reached. This is shown by the following table, giving the figures (including pupil-teacher centers as well as secondary schools) for the last four years:

School year.	Number of first full inspections.	Number of second or third full inspections.	Total.
1905–6	227	20	247
1906–7	196	67	263
1907–8	106	84	190
1908–9	107	113	220

OFFICIAL REGULATIONS.

In 1904 the board wholly recast their regulations for secondary schools, endeavored to discourage early specialization by insisting on a sound general education up to the age of 16 at least, and required that the curriculum should provide duly graded and continuous instruction in such subjects as are necessary for a well-balanced education. Subsequent modifications of the regulations have kept the same object in view and

have provided more fully than was at first thought possible for elasticity in the scope and contents of the school course and for the encouragement of local initiative in meeting the varying requirements of different areas and in making the fullest use of existing means. A large amount of liberty is allowed in framing curricula according to the requirements of the area and to the aim which the particular school sets before itself, and the aim of the board is to encourage experiment and a healthy variation of type.

All improvements of curriculum depend on the establishment of proper schools with a satisfactory age of entry, an adequately prolonged school life, and a sufficient and efficient staff. Unless we have these, no large improvements in curriculum are possible. The efforts of the board toward improvement in these respects are now being warmly supported by many local authorities. An impediment to efficiency specially noted in the report of the royal commissioners was the unduly large size of classes. In 1906 the board introduced a regulation forbidding grant-earning secondary schools to have classes containing more than 35 pupils, and fixing the normal maximum at 30. By subsequent regulations they have made it clear that classes of between 30 and 35 are only allowed as an exceptional arrangement in order to meet special or temporary difficulties of classification. A better scale of salaries for assistant masters and mistresses has been secured, at any rate, in London and in many other parts of the country, and there is evidence of a marked and general improvement in teaching methods due to the great interest in the study of teaching as an art.

Every year shows improvement both in the age at which pupils enter the school and the time for which they remain at it. But much still remains to be done. There were about 20 per cent of the schools on the grant list for 1907–8 which had had a secondary school existence of at least three years, in which the average school life of the pupils leaving within that year was not over two years. The board are taking steps to enforce, where necessary, the definition of a secondary school laid down in article 2 of the regulations as regards the normal length of school life and normal leaving age. Several authorities have adopted with effective results rules by which the parents of children applying for admission to a secondary school enter into an undertaking (in some cases under penalty) to keep the children at school either for the full school course or for a named minimum period, unless for some approved reason. A notable instance occurred in one of the larger county boroughs in the north of England. There, in order to cope with what was described by the board's inspectors as a flooding of the schools with pupils who leave after a year or two years at the most, and the consequent waste in great part of the strenuous effort and liberal expenditure of the local education authority, the authority have lowered the age of candidates for their junior scholarships to between 10 and 12, have required an undertaking that pupils admitted to the schools shall not leave before the end of the school year following their fifteenth birthday, have established a system of maintenance allowances in suitable cases extending to the completion of the school course, and will call for the repayment of fees remitted and maintenance allowances made in the case of pupils who, without sufficient reason, fail to complete the full period for which the remission or maintenance allowance was granted.

The board of education are fully alive to the dangers attending central control, dangers which have been dwelt upon by many head masters of typical secondary schools of England (the endowed public schools) and which have excited more or less opposition to the government intervention in the province of secondary education. The board have recently been at much pains to reassure the public on this point. They say in their latest report:

The entire lack of organization commented on by the royal commission has now given place temporarily to a state of things in which there is a risk of organization

swallowing up everything else; * * * the tendency "to an imposed uniformity with a consequent discouragement of local and personal initiative and an absence of elasticity in the adaptation of schools to the special circumstances and to what may be called the specific genius of their own area."

As a means of guarding against these dangers, the fullest freedom is allowed under their regulations consistently with real efficiency in the education that is provided. Moreover, in addition to the general increase of elasticity which they have always kept in view as desirable and have found themselves able to give in successive revisions of their regulations, a special provision has lately been made for encouraging by means of a specific grant any carefully devised educational experiments of a pioneer and promising nature in methods of teaching. Several applications for this special grant have been made; so far it has been given in respect of two objects: (1) The new oral method of teaching the ancient languages, and (2) the interchange, under arrangements come to between the board and the education ministries of France and Prussia, of French or German teachers with English teachers.

* * * * * * *

The freedom of school authorities in initiating special types of curriculum and organization, or new experiments in method, must always, in the case of schools largely maintained through the board's grants, be to some extent limited by their having to obtain the board's previous approval.

It is interesting to note the opinion that "there is much more disposition in the case of girls' schools than in schools for boys to favor experiments and give free play to fresh ideas." * * * "The board have increased their staff of women inspectors to assist in the successful and sympathetic handling of this side of their work"

UNIVERSITY EDUCATION.

The board of education publishes annually a bluebook containing the reports from the universities and university colleges to which the board disburses the annual parliamentary grant, amounting at present to £100,000 ($500,000), for "university colleges in Great Britain," and from three colleges in Wales, to each of which an annual grant of £4,000 ($20,000) is made. The report for 1908–9, the latest issued, is introduced by a statement signed by the president of the board, Mr. W. Runciman, which sums up the main facts brought out in the several reports and thus offers a comprehensive view of the modern aspects of university education in the Kingdom.

The following statement is abridged from this presentation:

In the last ten years no fewer than five new universities have been founded in England, but the progress of institutions of older date has been no less marked. In July, 1909, King Edward VII laid the foundation stone of important new laboratories for the Imperial College of Science and Technology, a college for the highest studies in pure and applied science, which was inaugurated by royal charter in July, 1907, and was formed by the union under a single governing body of the Royal College of Science, the Royal School of Mines, and the City and Guilds' Central Technical College. In the following October the new buildings of the University College of South Wales and Monmouthshire were opened at Cardiff, and on that occasion the present King, as chancellor of the University of Wales, wrote words which apply equally to all the universities of England and Wales when he said, "We must look ahead and endeavor to be ready to meet all the requirements of scientific and intellectual progress. The

imperative necessity for higher education and research is becoming more and more recognized."

This encouragement to further effort has been tangibly supported by the Government. Acting upon the report of a special committee of inquiry, under the chairmanship of Sir Thomas Raleigh, K. C. S. I., the treasury, by a minute dated December 18, 1909, made an increased annual grant of £15,000 to the University of Wales and its constituent colleges. Of this sum £1,500 has been specially allocated to the Medical School of Cardiff and another £1,500 a year has been assigned to the university itself for the foundation of research fellowships.

The treasury has also made a capital grant of £20,000 toward the cost of the new buildings for the University College of North Wales, Bangor.

State aid to university teaching would, however, be of doubtful advantage if it did not stimulate private effort and induce benefactors to contribute in the present day as they did in the olden times, to give of their wealth for the support of that higher learning upon which now, more than ever, "the prosperity, even the very safety and existence, of our country depend."

The board is glad to find that there is no evidence of the springs of private beneficence failing, but rather that the growing national sense of the vital need of universities has impressed many of those, whether individuals or corporations, who are in the position to help. The following are some of the more important gifts made during the last twelve months:

Sir Alfred Jones, the well-known shipowner, who died in 1909, and who during his life had founded the School of Tropical Medicine in connection with the University of Liverpool, left to his trustees the sum of more than £500,000 upon trust for such charitable purposes and objects in England (or any British possession on the west coast of Africa) as they may in their absolute discretion think fit. For the guidance of his trustees, however, he made suggestions as to the purposes to which the money might be applied, and amongst them were the advancement, benefit, or support of education or science, and original research of all kinds in the cause of disease on the west coast of Africa.

Mr. Otto Beit, in December, 1909, gave £215,000 for the endowment of thirty medical research fellowships of £250 a year, each tenable for three years. The fund is to be entirely devoted to the furthering of medical research work, which is to be conducted, with a few exceptions, in institutions allied to London University. The fellowships are open to any man or woman of European descent who is a graduate of any approved university within the British Empire.

The late Dr. Charles Graham, who died in November, 1909, and had been since 1889 emeritus professor of chemical technology at University College, London, bequeathed his residuary estate to London University, to be applied to the promotion of research at University College Hospital Medical School "for the prevention, cure, or alleviation of human disease or suffering." The legacy was estimated at £35,000.

Still more recently, M. Albert Kahn, a well-known French philanthropist, has handed over to a board of six trustees a sum of £4,140 to provide for the annual award of two traveling fellowships, each of the value of £660. It is expressly desired by him that the trust shall be permanently associated with the University of London. The fellows, who must travel for at least twelve months, according to an itinerary regulated and prescribed by the trustees, will be elected by the trustees on the nomination of the vice-chancellor or other executive head of each of the universities in the United Kingdom, the president of the Royal Society, and the president of the British Academy. M. Kahn has provided funds sufficient for a period of three years, and is prepared at the expiry of that time to endow the fellowships in perpetuity if they should prove to fulfill the objects which he desires.

Mr. Alexander Elder gave, in 1909, a sum of £20,000 as endowment for a chair of naval architecture in the University of Liverpool, and Mr. W. H. Lever, of the firm

of Lever Brothers, Port Sunlight, in March, 1910, made a gift of £91,000 to the same university for the erection of a building in which the School of House and Town Planning could be accommodated, and also the School of Architecture, and for assistance to the School of Tropical Medicine and the School of Russian Studies.

City companies and corporate bodies have also made new contributions to the support of university education during the last year. The Goldsmiths' Company, who had already been generous benefactors of university education in London, made a gift in May, 1909, of £50,000 toward the cost of the new engineering buildings of the Imperial College of Science and Technology referred to above. The Drapers' Company made a further grant of £10,000 to the building fund of the new college at Bangor, to be applied toward the library and museum of the college. The same company make an annual grant of £7,000 to the East London College, which has been admitted for the first time this year to share, subject to the fulfillment of certain conditions, in the annual treasury grant made to university colleges. The company also grants scholarships in connection with this college to the annual value of £1,555.

As evidence of the realization on the part of the universities of their "joint responsibility to the national life," the report notes that "steps have already been taken toward the mutual recognition of their various matriculation examinations, and the northern universities of Manchester, Liverpool, Leeds, and Sheffield have, under their charters, established a joint matriculation board which conducts a single examination of all candidates for admission to any one of the four universities;" and, further, the movement "for a regular interchange of views, and for the better organization of facilities for advanced study throughout the Empire." With this purpose in view, the universities of Oxford, Cambridge, and London have united in inviting "the universities of the Empire to a conference to be held in the metropolis in 1912."

The following statistics, taken from Mr. Runciman's summaries, include all the institutions participating in the parliamentary grant which affects, "directly or indirectly, every university in England and Wales, except the two ancient foundations of Oxford and Cambridge."

TABLE 7.—*Universities and university colleges in England and Wales; returns of income, 1908–9.*

[Figures to the nearest £. Fees remitted, as a condition of grants, are shown in brackets.]

Name of university or college.	Fees.		Endowments.		Donations and subscriptions.		Grants from local authorities.		Grants from exchequer.		Other income.		Total income (including amount represented by fees remitted.)
	Total of all fees.	Percentage to whole income.	Total amount of endowments.	Percentage of total income.	Total amount.	Percentage of total income.	Total amount.	Percentage of total income.	Total from exchequer.	Percentage of total income.	Total amount.	Percentage of total income.	
ENGLAND.													
Birmingham	£17,176	31.6	£8,462	15.5	£1,344	2.5	£7,081	13.0	£15,070	27.7	£5,229	9.6	£54,362
Bristol	6,636	44.3	411	2.7	1,419	9.5	770 [195]	5.2	4,918	33.0	792	5.3	14,946
Leeds	14,641	25.9	7,183	12.7	2,285	4.0	15,522 [1,923]	27.5	15,167	26.8	1,765	3.1	56,563
Liverpool	19,721	27.1	16,198	22.3	4,863	6.7	14,350 [623]	19.7	16,132	22.2	1,334	1.8	72,599
Manchester	25,141	31.4	24,938	31.1	2,900	3.6	5,250	6.4	19,034	23.7	2,861	3.6	80,124
Sheffield	6,722	16.4	3,770	9.2	1,522	3.7	16,112 [1,063]	39.3	11,505	28.1	1,379	3.3	41,010
London: University College	23,686	42.4	11,066	19.8	3,421	6.1	1,960 [1,781]	3.5	11,250	20.1	4,485	8.0	55,867
King's College	26,387	53.4	1,582	3.2	4,473	9.1	4,171 [2,318]	8.4	9,704	19.6	3,077	6.2	49,394
Bedford College	8,002	46.8	892	5.2	516	3.0	1,924 [1,672]	11.3	4,944	28.9	819	4.8	17,097
School of Economics	3,741	29.0	115	0.9	2,031	15.7	3,845 [283]	29.8	3,080	23.9	81	0.6	12,893
Newcastle: Armstrong College	8,172	28.5	2,084	7.2	2,689	9.4	3,020 [608]	10.5	11,996	41.8	719	2.5	28,680
Nottingham	3,287	15.8	572	2.7	252	1.2	7,954	38.3	8,328	40.1	386	1.8	20,779
Reading	6,602	32.4	2,107	10.3	2,281	11.2	1,875 [273]	9.2	7,112	35.0	402	1.9	20,379
Southampton: Hartley College	2,790	22.9	525	4.3	130	1.0	3,869 [564]	31.8	4,765	39.2	71	0.6	12,150
Total	172,704	32.2	79,905	14.9	30,126	5.6	87,703	16.3	143,005	26.6	23,400	4.3	536,843
WALES.													
Aberystwyth	5,937	38.5	484	3.1	1,682	10.9	598	3.8	6,598	42.8	114	0.8	15,414
Bangor	3,616	24.7	2,897	19.7	627	4.3	709	4.8	6,672	45.5	136	0.9	14,658
Cardiff	7,111	34.6	535	2.6	561	2.7	2,804 [750]	13.6	6,678	32.5	2,865	13.9	20,554
Total	16,664	32.9	3,916	7.7	2,870	5.7	4,111	8.1	19,948	39.4	3,115	6.1	50,626

The total expenditure for the universities and colleges of England, in the above table, amounted to £530,267, and the expenditure for the three colleges in Wales to £52,221. Of the total expenditure for the English institutions, 66.6 per cent was applied to the remuneration of teachers, 11.5 per cent to the maintenance of buildings, and about 10 per cent to administration. The corresponding proportions for the colleges of Wales are 65.6 per cent for the teaching corps, 8.3 per cent for maintenance of buildings, and 13.5 per cent for administration. All the institutions maintain scholarships, the expenditure for this purpose representing, in the English institutions, 4.3 per cent of the total expenditure, and in the Welsh institutions, 7.2 per cent.

TABLE 8.—*Analysis of returns of students under instruction, 1908–9.*

Name of university or college.	Students preparing for matriculation.	Students preparing for degree courses (over 300 hours).	Degree courses of less than 300 hours. [Law students in brackets].	Research for post-graduate students.	Students in training to be teachers.	Whole-time students, i. e., over 300 hours.	Part-time students i. e., under 300 hours. [Evening students in brackets].	Total number.		Other students taking special courses of lectures, e. g., teachers, etc.
								Day.	Evening.	
ENGLAND.										
Birmingham	19	455	18	72	245	756	228	984	.....	.....
Bristol	21	125	.....	19	241	442	413 [287]	568	287	501
Leeds	10	370	55 [12]	54	134	657	508 [233]	932	233	64
Liverpool	.....	617	.....	112	230	997	147	1,144	.....	.....
Manchester	48	794	165 [38]	175	252	1,167	618 [199]	1,586	199	400
Sheffield	21	133	18 [6]	31	59	255	1,634 [1,390]	499	1,390	297
London: University College	.....	519	.....	308	80	1,225	250 [27]	1,448	27	2,500 [372]
King's College	.....	520	.....	126	108	1,040	732 [381]	1,391	381	800 [705]
Bedford College	19	172	.....	28	53	229	128	357	.....	.....
School of Economics	.....	175	.....	96	.....	274	1,003	274	1,003	.....
Newcastle: Armstrong College	.....	248	.....	9	204	407	999 [781]	625	781	.....
Nottingham	18	211	14	5	150	377	1,986 [1,737]	626	1,737	.....
Reading	1	90	8	13	113	345	888 [625]	608	625	.....
Southampton: Hartley College	10	73	15	4	148	210	498 [484]	224	484	.....
Total	167	4,502	293	1,052	2,017	8,381	10,032	11,266	7,147	5,639
WALES.										
Aberystwyth	20	439	.....	13	144	481	92	573	.....	128
Bangor	.....	273	.....	7	110	293	37	330	.....	.....
Cardiff	.....	463	.....	25	191	543	66	609	.....	398
Total	20	1,175	.....	45	445	1,317	195	1,512	.....	526

REFORM AT OXFORD.

The memorandum on the "Principles and methods of university reform," published by Lord Curzon, as chancellor of Oxford, in April, 1909, which was briefly noticed in the previous report of this series,[a] has been the subject of careful consideration by the hebdomadal council of the university during the intervening time, and the result of their deliberations has just been published in a report, with an introduction by the chancellor.[b] The report embodies a scheme of reform in the directions advised originally by Lord Curzon, so far as these have met the approval of the council. The scheme is now before the legislative authority of Oxford (congregation), where it will undoubtedly be the subject of protracted discussion and much modification; but even if it should be eventually rejected the scheme affords a most significant index of the spirit that is moving in the intellectual center of tradition and conservatism.

In the main the scheme deals with the constitution and administrative machinery, and, so far, its chief interest to the outside world lies in the purpose relating to congregation—namely, "to convert that body into an assemblage consisting of the teaching and administrative elements in the university and the colleges, with due regard to existing interests, and to consider whether it may be desirable to provide for the inclusion of any other elements."

The propositions of general interest to the scholastic world embodied in the scheme are: The abolition of Greek as a compulsory subject for the degree in arts; the introduction of a course of study suited to the requirements of a business career, with the sanction of a special diploma; the admission of women to degrees; and increased provision for poor students.

The grounds for the conclusions of the council are set forth in the introduction to the report by Chancellor Curzon, whose concluding words expressing the prompting motive of the measure are as follows:

> We want Oxford to remain what it is, but to become, if it may be, better; still to keep alive the transmitted flame, but to see that it illumines every corner of the temple of knowledge and is accessible to all sections of the community. Above all, since our university is an imperial training ground for character and intellect, to arrange that the scheme of life, which produces the former, is worthy and sound, and that the scheme of instruction, which develops the latter, is comprehensive and efficient.

CAMBRIDGE.

A report of the council of the senate of Cambridge University recommending certain changes in the constitution and government of the university was the subject of discussion at a called meeting held

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[a] Report of the Commissioner of Education, 1909, Vol. I, pp. 523-525.

[b] Principles and methods of university reform. Report of the Hebdomadal Council, with an introduction submitted on behalf of the council by Lord Curzon, of Kedleston, chancellor of the university. Pp. xli+98. (Oxford: Clarendon Press, 1910.)

April 28 of the present year. The report deals almost entirely with matters special to the university, and is, therefore, of little general moment at this purely tentative stage of the proceedings. The discussion at the meeting referred to, however, disclosed certain points of view, ideals even, in the minds of leading members of the university, full of suggestion for the leaders of higher education in all countries. In a warning against excessive mercenary influences in university administration, uttered by Mr. Glover, of the university, reference was made to our own country, which is interesting, in spite of its exaggerations.

Mr. Glover said, in substance, as reported:

> They lived in very interesting times, when the administrative man was looming very large. One always remembered with comfort what Mr. Cecil Rhodes said about the university administrative man. But he thought there was a real danger here that the teacher would be crowded out, as he was apt to be in the American university. The real enemy of education in America, and to some extent in Canada, was the principal of the university. He was, generally speaking, not selected because he was distinguished in letters or science or research; he was chosen because he was an admirable business man, very much as if Cambridge were to go to Marshall and Snelgrove for a vice-chancellor; and, so far as his observation went, what the American principal looked at primarily was not education, not research, but at the next college, the rival in the next university. Were they getting a larger entry? Would this proposal to raise standards lower the entry? That happened all over, and he thought it regrettable. It seemed to him that businesslike people always thought in that kind of way. This university was a place of sound learning and religious education, at least it was supposed to be, and he should like to see the people who were really most deeply concerned with education and with research kept in the places of responsibility. Professors might not be wishful, he understood, to go on the council of the senate, but he thought they ought to, and that they ought to be kept there.[a]

[a] Cambridge University Reporter, May 7, 1910. Discussion of the report of the Council of the Senate on the Constitution and Government of the University.

CHAPTER XIV.

RECENT EDUCATIONAL DEVELOPMENTS IN SCOTLAND.

[By Principal A. P. Laurie, M. A., D. Sc.]

Scotland, 30,405 square miles; population (estimated, 1908), 4,826,587.

Topical Outline.

The act of 1908.—Nature of the act of 1908; medical inspection of school children; feeding and care of school children and neglected children.

The statutory position.—Post-elementary education; supplementary courses; higher grade schools.

Secondary education.—Leaving certificates; sample post-intermediate courses; Latin optional; continuation classes in counties; continuation classes in cities; number of students; compulsory attendance at continuation classes; day classes for apprentices.

Bursaries.—The bursary system as it is; the bursary system as the department wishes it should be; central institutions; grants to central institutions; relation of central institutions to universities.

Scottish universities.—University ordinances; autonomy for universities; new ordinance for arts degree; subjects and departments of study; imperial grants to universities; universities and state control; Carnegie trust; training of the teacher.

Summary of current educational statistics—Scotland.[a]

[The information in this table relating to universities is taken from the Statesman's Yearbook, 1910, and from current calendars of the institutions. The remaining statistics have been compiled from the reports of the education department.]

Institution.	Date of report.	Registered students or pupils.	Professors or teachers.
Universities and colleges:			
St. Andrews University (3 colleges)	1909	567	86
Aberdeen University	1909	949	81
Glasgow University	1909	2,696	151
Glasgow Technical College			
Anderson Institution	1909	548	124
Edinburgh University	1909	3,322	153
Elementary day schools	1908	812,346	20,064
Training colleges and centers for elementary teachers	1908	3,005	

[a] This summary prepared in the Bureau of Education.

So many changes are taking place at present over the whole field of Scotch education, from the elementary school to the university, that it is very difficult to deal with recent developments in the course of a brief article, and therefore some parts of the subject must remain without adequate treatment.

THE ACT OF 1908.

It will perhaps be easiest to begin by taking the education (Scotland) act of 1908 as the basis of a description of what is going on, although it will be necessary to deal with many matters which are not included within the covers of that act.

Prior to the passing of the act Scotland had been waiting for an education act for many years, and bills had been brought in by more than one government, but had never been passed into law. This was largely due to the fact that there was great division of opinion in Scotland as to the best scheme of organization for dealing with elementary education. One party was in favor of keeping to the existing system, under which each parish or burgh has its school board for dealing with elementary education—a system which has resulted in the small country of Scotland, with its population of some four or five millions, possessing altogether 1,068 school boards. Although this system is doubtless a wasteful one, it is based upon certain traditions linked up with the old Scotch parish school and has certainly many strong advocates among those in high places. There were, again, those who wished to see the control of elementary as well as of secondary education put under education committees of the county councils. These county councils, which have at present to deal with many matters outside the sphere of education, such as roads and bridges, have been intrusted in England by the act passed by Mr. Balfour's government in 1902 with the control of elementary education, and there can be no doubt that, apart from the question of the religious and political quarrels, this act of 1902 has proved a success and has done much to coordinate and develop elementary education in England. Again, there were those who wished to have larger areas than the present school-board areas, but who held the view that the education authority should be a body elected to deal with education only.

We are accustomed in Scotland to fight to the death for our opinions, and consequently this division of opinion as to the best method of organizing the control of elementary education led to lukewarmness on the part of the various governments and to the dropping of the various bills which had been introduced.

In addition there was, and is still, a strong feeling in Scotland in favor of some form of local council for dealing with educational matters. Under the present system there are several Scotch departments with permanent officials dealing entirely with Scotch affairs, and of these the Scotch education department is only one. All these departments are represented in Parliament by the secretary for Scotland. The English system of government, by which each great state department is administered by a body of permanent officials under a temporary chief appointed by the party in power

at the time, works well on the whole, as the public can always attack the administration of any department through its appointed chief; but in the case of Scotland, as there is a representative dealing with all the Scotch departments instead of one representative for each department, it is more difficult for public opinion, through the House of Commons, to be brought directly in touch with the permanent officials; and, further, as the Scotch education department itself is actually located in London, it is in reality an independent and powerful bureaucracy. Moreover, the Scotch members of Parliament have never shown that capacity for united action in defense of Scotch interests which we are so familiar with in the case of the representatives of the sister nation of Ireland. They are usually men of ambition and great ability, and consequently if the membership of the British cabinets is examined it will be found that for many years Scotchmen have played a much larger part in governing the Empire than is actually warranted by the size of the population of Scotland. The best of them are therefore busily engaged in imperial affairs. For all these reasons there has been a strong party in Scotland for many years who are in favor of something of the nature of a council to deal with educational affairs in Scotland and who also urge that this council should sit in Scotland. At the same time the creation of such a council involves great constitutional difficulties, as its relation to the House of Commons, to the secretary for Scotland, and the permanent officials of the education department is difficult to decide. It is rather of the nature of a pious wish than of a well-thought-out scheme.

Under its present chief, the Scotch education department has been administered with such ability and has shown such vitality that there is no immediate necessity of dealing with this question. In fact, it is so much of the nature of the Scottish character to split into small and fiercely fighting groups on every question involving a difference of opinion that a little despotic control by a minister removed 400 miles from Scotland and safely ensconced in an office in Whitehall has no doubt been much to the advantage of Scottish education. But those of us who are connected with the educational matters and see how the beneficent control of the present chief of the Scotch education department is permeating through every branch of Scottish education, tremble to think what the consequences would be if some day we found sitting in the chair in Whitehall, at present so ably occupied, a man of the usual civil-servant type, bound in formality and incapable of ideas.

NATURE OF THE ACT OF 1908.

For these many reasons, then, the passage of a Scotch education act was delayed from year to year, and finally the act of 1908, while a most interesting document, has left severely alone the question of

the organization of the controlling body. The school boards are left where they were, with a considerably increased power, and in place of the technical and secondary education committees of the county councils, new secondary education committees have been created, consisting of representatives of the town councils, the county councils, and of the school boards; and the duty of providing continuation classes for children who have left school, which was in some cases formerly carried out by the education committees of the county councils, has been thrown upon the school boards. While, therefore, practically no changes of great importance have been made in the organization and control of Scotch education, the tendency of the act of 1908 has been to throw more responsibility on the school boards than they had to bear before, and it is therefore rather as dealing with the internal details of education that this act is of such great importance. We shall now proceed to touch upon one or two of the actual sections of the act.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

In the first place, some of the most important sections of the act are those dealing with the medical inspection of school children and with neglected school children.

Clause IV reads as follows:

> A school board may, and where required by the department shall, provide for the medical examination and supervision of the pupils attending schools within their district to such extent and subject to such requirements as may from time to time be prescribed by any code or minute of the department, and for the purposes of this section the school boards may employ medical officers or nurses, or arrange with voluntary agencies for the supply of nurses, and provide appliances or other requisites. * * *

The department has exercised its compulsory powers under this clause, and the medical inspection of school children is introduced into Scotland for the first time, and schemes have been framed all over the country for this purpose. It may perhaps be sufficient to describe one scheme as adopted by a particular county, viz, that of Midlothian, which has some 20,000 school children scattered through small towns and villages, as giving an idea how the clause works out in practice. The new county committees on secondary education, which have been already referred to and which have been appointed on schemes drawn up by the Scotch education department since the passing of the act, have been intrusted in conjunction with the school boards with the drawing up of schemes and have also power to pay half the salary of a medical officer. The Midlothian county committee on secondary education therefore approached the various school boards and suggested the drawing up of a scheme by which the expenses of such medical inspection should be shared, and thus the total cost of the inspection ordered by the Scotch education depart-

ment diminished. The county council already had a medical officer of its own, who had to deal with the various provisions under the acts dealing with public health and sanitation, including the sanitation of schools, and therefore a scheme was drawn up by which the existing chief medical officer for the county was also made responsible for the medical inspection of the school children (receiving an honorarium of £60 from the county committee). Another medical man was appointed to be assistant to the chief medical officer at a salary of £250 per annum, a trained nurse was appointed at £80 per annum, while there is an allowance of £100 for traveling expenses, £50 for apparatus, and £100 for clerical assistance, making a total expenditure in Midlothian on the medical inspection of school children of £640. The county of Peebles, which is a thinly populated county, joined with Midlothian in this scheme. The assistant medical officer has already been engaged in going round the schools inspecting the children and preparing a report on the first results of his work, and it is already evident that more assistance will be required if the work is to be efficiently carried out. It may therefore be roughly estimated that the cost of the medical inspection of school children for a county consisting of scattered villages and small towns and with some 20,000 children will be at least £640 a year and probably more. One of the most interesting and complete reports which has been published in connection with this new movement is by the medical officer of the Carnegie Dunfermline trust.

FEEDING AND CARE OF SCHOOL CHILDREN AND NEGLECTED CHILDREN.

The next clauses of great interest are Clause III, subsection (2), which deals with the provision of accommodation, apparatus, equipment, and service for the preparation and supply of meals to school children, and Clause VI, which deals with neglected children. It is too early yet to say what the full effect of these clauses will be, but they must profoundly influence the future of all children in the country who belong to the more poverty-stricken classes, while their bearing and scope, and the way in which they are being dealt with by the larger school boards, can best, perhaps, be shown by quoting from a report of a committee of the school board of Edinburgh, which has been appointed to deal with the question.

This report begins by dealing with the statutory position in the following terms:

THE STATUTORY POSITION.

The parts of the 1908 act concerned with the question under discussion are as follows:

SECTION 3. It shall be lawful for a school board, if they think fit, * * * to incur expenditure, and to defray the same out of the school fund. * * *

(2) In providing accommodation, apparatus, equipment, and service for the preparation and supply of meals to pupils attending schools within their district, provided

that no expense incurred in the purchase of food prepared and served at such meals shall be defrayed out of the school fund, except as hereinafter provided.

SECTION 6. (1) When as the result of medical inspection or otherwise it is brought to the notice of a school board that a child attending a school within their district is in a filthy or verminous state, or is unable by reason of lack of food or of clothing to take full advantage of the education provided, it shall be the duty of the school board, after due warning, to summon either or both of the parents or the guardian of such child to appear before them to give an explanation of the child's condition, and if the school board shall find that such explanation is not forthcoming or is insufficient or unsatisfactory, and that the condition of the child is due to neglect, they shall transmit a copy of such finding to the parent or parents or guardian of the child and to the procurator-fiscal, and it shall be the duty of the procurator-fiscal to institute a prosecution under the subsection immediately following.

(2) Without prejudice to the general operation of the prevention of cruelty to children act, 1904, or any act amending the same, neglect to exercise due care of a child as aforesaid shall be deemed wilful neglect, likely to cause the child unnecessary suffering within the meaning of such act, punishable summarily as an offense of cruelty in terms of such act and subject to the provisions thereof as to the committal and custody of the child and otherwise: Provided, that if it shall be shown to the satisfaction of the school board, or in the event of a prosecution under such act of the sheriff that such parent or parents or guardian are unable by reason of poverty or ill health to supply sufficient and proper food or clothing for the child or to give the child the necessary personal attention, the school board, if satisfied that the necessities of the case will not be provided for by voluntary agency, shall make such provision for the child out of the school fund as they deem necessary during such period while the child is under obligation to attend school as they may determine. But it is hereby provided that any aid given in terms of this section shall not deprive such parent or guardian of any franchise, right, or privilege, or subject him to any disability: Provided also, that the school board, where they deem it necessary, owing to the condition of the child, shall have power to make temporary provision for the child out of the school fund, pending the completion of the procedure hereby prescribed, and to recover the cost of such provision from such parent or guardian as an alimentary debt, unless it is shown to the satisfaction of the school board that such parent or guardian was unable, by reason of poverty or ill health, to supply sufficient and proper food or clothing for the child, or to give the child the necessary personal attention.

It will be seen that section 3 (2) is permissive, while section 6 is mandatory, if certain conditions are satisfied. The substance of the sections in question may be classified as follows:

(1) The power to supply apparatus, accommodation, equipment, and service, but not food, for children attending schools within the district.

(2) The duty to supply food to pupils attending schools in the district if the board is satisfied (*a*) that the pupil's education is suffering from want of food; (*b*) that the parents are necessitous; and (*c*) that voluntary effort will not provide for the necessities of the case. These three conditions must jointly hold before the board can pay for food. If they do so hold, then the board must provide the food.

(3) The duty to institute, through the fiscal, prosecutions of parents in respect of whose children condition (*a*) above holds, but (*b*) is not satisfied.

(4) The power to feed children shown to be suffering from want of food pending investigation of the circumstances of the parent, and subject to recovery of cost in nonnecessitous cases.

The position of the board is that it has decided to exercise the optional powers referred to in (1). As regards the duties referred

to in (2) and (3), and the power referred to in (4), no action has yet been taken, but it is evident that the operation of medical inspection (now in full swing) and the customary evidence of underfeeding which arises each winter will force the board on the need for carrying out its statutory duties under the act, subject to the limitations as regards the success of voluntary effort stated above.

The report then proceeds to deal with the condition of the problem in Edinburgh, and discusses the best means of carrying out the duties of the board under the act. They have decided in the first place to establish a cooking center for the provision of meals in accordance with the powers conferred upon them under clause III, subsection (2) of the act. With reference to the condition of destitute children in Edinburgh, there has existed for some years a charitable organization known as the Flora Stevenson fund, which provides meals and, if necessary, clothing, in necessitous cases. Under the act it will be noted that the school board is expected to take full advantage of such voluntary agencies and, keeping that condition in view, the following recommendations have been drawn up for the consideration of the school board:

(1) That the board having considered as to its duties in regard to the feeding of necessitous children under the education (Scotland) act, 1908, are of opinion that a central children's care committee as described below would give valuable assistance in carrying out the said duties.

(2) That accordingly such a committee be established for the purpose of (*a*) securing and administering voluntary funds to be used in the payment of the cost of food for necessitous children as prescribed in the act, (*b*) determining as to the need for relief in all cases where prima facie evidence of necessity is submitted, (*c*) unifying the operations of charitable agencies in so far as these deal with the feeding of children in attendance at schools within the district of the board.

(3) That the committee be composed of representatives of the board, of such societies and voluntary agencies as are willing to cooperate with the board in the matter, and of other influential and representative elements of the community.

(4) That a system of local children's care committees be instituted for such groups of schools as the board may hereafter determine, and that the duties of those committees be as follows: (*a*) To make recommendations to the central care committee as to the children who should be regarded as necessitous; (*b*) to manage and supervise, subject to the board's direction, the local arrangements for feeding; (*c*) to take part in and have a general supervision over all the charitable and relief work which is concerned with the schools for which the local committee is responsible.

We have thus had it clearly laid down that, on the one hand it is the duty of the State through its educational organization not only to teach the children, but to take care that they are properly fed and clothed and living in a decent environment, and, on the other hand, it is also the duty of the State to punish the parents or guardians and compel them to fulfill their duties. It is unnecessary to point out to those who have studied social questions what far-reaching results provisions of this kind must necessarily have.

POST-ELEMENTARY EDUCATION.

To pass from these questions to the arrangements for carrying on the education of children after they have passed the elementary stage, many interesting developments are taking place in Scotland. The age for leaving school in Scotland has since 1901 been 14, and this remains the same under the new act, with the exception that a child who has reached the age of 14 during the school session is now required to complete the school term. During the last two years of his school career he is supposed, if he is going on with the ordinary elementary education, to be in what is known as a supplementary class.

SUPPLEMENTARY COURSES.

The idea is that this class, while continuing the general education of the child, should at the same time impart to him a certain amount of specialized instruction in such directions as are likely to be useful in after life. The girls receive instruction in domestic economy, the boys in the country schools get instruction in nature knowledge and in gardening, and the boys in the town schools get instruction in technical and commercial subjects. Here again these supplementary classes are still too new to judge of their possible future development. Their success necessarily involves many other things, for instance, the supply of specially trained teachers qualified to carry out this special instruction, and up to the present time the supply of such teachers is most undoubtedly inadequate. It is probable, however, that we see here the roots that will ultimately grow into some system of trade schools similar to those existing on the Continent.

HIGHER GRADE SCHOOLS.

The child who wishes to receive an education more of the nature of a secondary education, either with a view to becoming a teacher or with a view to ultimately passing on to the university, or merely for educational reasons, goes to certain selected schools known as higher grade schools. To take, for instance, a local example of higher grade schools, we have in the district of Colinton, which is within 3 or 4 miles of Edinburgh, a school board which has under its control five elementary schools, and in connection with one of these schools there is provided what is known as a higher grade department, which has to serve not only for the district of Colinton, with its five elementary schools, but has also to supply the needs of the neighboring school board area of Currie, the geographical position of Currie being such that children from that district can manage to attend the higher grade school of the Colinton district. Here the education of the children is carried on on broad lines, English, mathematics, modern languages, science, and drawing forming part of the curriculum, the final standard aimed at being that known as the

intermediate certificate, of which a full explanation will be given later.

When the large higher grade schools were first opened in the big towns such as Edinburgh, it was feared that they would compete with the existing secondary school system, the children in the secondary schools paying fees, while the children attending the higher grade schools receive their instruction free. This has not proved to be the case. Since the opening of the large higher grade schools in Edinburgh, which are crowded with pupils, there has been no indication that the secondary schools have in any way suffered. This is perhaps best shown by the returns of George Heriot's school in Edinburgh, because among the various secondary schools in the city this school provides a secondary education for the lowest fees, and the lines of the education given have always been—while classical languages have not been neglected—in the direction of modern languages, the teaching of science and workshop instruction. If, therefore, any school in Edinburgh was likely to feel the competition of the higher grade schools it should have been George Heriot's school. As an actual fact, in spite of the newer higher grade schools being overcrowded with pupils, this school has had during the last two years a larger number of applicants seeking admission than it has been possible to accommodate, so that it is evident that the higher grade school in a big city is providing a secondary education to meet a demand which did not exist before these schools were opened.

Secondary Education.

To continue the subject of secondary education the Scotch education department has been encouraging the teaching of modern languages and the development of science teaching in secondary schools and the provision of the necessary equipment, and the result has been a very large development in the teaching of science. The Scotch education department has also made use of its system of grants to secondary schools to require other improvements, more especially the diminution of the number of pupils per teacher, and these schools are regularly inspected by the department's inspectors.

LEAVING CERTIFICATES.

But the most interesting of these developments is in connection with the leaving certificates which are granted by the department. The conditions of the leaving certificate have been gradually undergoing modification, and are still in process of development, but the present position is as follows: The intermediate certificate is awarded to pupils at the age of 15 or 16, who have had at least a three years' course of instruction, beyond the elementary school stage, in English,

a language other than English, mathematics, science, and drawing, and who satisfy the examiners of the department as to their proficiency in these subjects, excellence in one subject compensating in some degree for deficiency in another. The leaving certificate is granted to pupils who have gone through a course of study lasting over two or more years after obtaining the intermediate certificate, and who have reached the age of 17 or 18. Candidates for the leaving certificate must have passed in four subjects on what is known as the higher standard, or in three subjects on the higher standard and two on the lower standard, and among these subjects the pass must include a higher English and either a higher or a lower in mathematics. The remaining subjects may be either science with one or more languages, or languages only, but where two or more languages other than English are taken, the group must include either higher or lower Latin. These are the existing regulations.

The Scotch education department proposes to modify these and has asked the head masters of the secondary schools to draw up schemes for leaving certificates of various kinds, for the consideration of the department. In a recent report made by the general council of the University of Edinburgh there was included a report by a subcommittee on the question of the conditions of entrance to the universities. This subcommittee consisted of some of the leading secondary schoolmasters in Scotland, and they pointed out that the department, having made this proposal regarding various groups for the leaving certificate to be drawn up, they wished to submit the following groups as being such as the department would be likely to accept, and at the same time such as would meet the wishes of the head masters. The subcommittee also suggested that if such groups were accepted by the Scotch education department, they should also be accepted by the university in lieu of the preliminary examination required from those entering on a degree course. In that report it was pointed out that the leaving certificate of the future will not, according to the plan of the department, represent so definitely as the existing certificate a certain standard of attainment in a certain more or less fixed group of subjects, as one pupil may be awarded a leaving certificate on the successful completion of a course in which the main subjects are Latin and Greek; another may be awarded a leaving certificate after a course in modern languages; and another after a course in science, and so on. The report goes on to say, "It may, we think, be assumed that the department will be prepared to award a leaving certificate on the completion of any approved course for a pass on the higher grade standard in three subjects, one of the three subjects being English, and further, that each approved course will make provision for the study of at least four subjects." This means that the schoolmaster will be required to submit to the Scotch education

department the course of study through which the pupil has been, and that that course will have to include four subjects, but that the student will be examined on three of them. The following, then, are samples of such courses of study for the leaving certificate, drawn up by this subcommittee of head masters, and they may be considered as representing on the one hand the views of the leading head masters of the Scotch secondary schools, and, on the other hand, as being probably equally acceptable to the Scotch education department.

SAMPLE POST-INTERMEDIATE COURSES.

[N. B.—The subjects in italics in each course are those in which the pupil specializes.]

A. *Language courses:*
English.
History.
Latin, Greek / *French, German* } Any two.

B. *English and history courses:*
English.
History.
Latin, Greek / French, German } Any one.
One other university (arts) subject.

C. *Mathematical and science courses:*
English.
Mathematics, or *mathematics* and *natural science.*
Physical science.
Another language.

D. *Commercial courses:*
English.
A modern language.
Economics and *economic history.*
One other university (arts) subject.

E. General course (for pupils who do not intend to specialize):
English.
History.
Mathematics or science.
Another language.

LATIN OPTIONAL.

Perhaps the most interesting fact to notice about these groups is, that it is possible in more than one of them, to leave out the study of Latin altogether. The proposal is therefore definitely made that a boy should be able to enter the university not only for a medical, scientific, or technical course without Latin, but also that he should be able to enter upon his course for the degree of M. A. without Latin. We shall have to consider presently the changes that have been made recently in the curriculum for the degree of M. A. at the Scottish universities, but in the meantime it is worth noting the reasons that are given why these head masters have come to this decision. They point out that under the present regulations of the university, it is

possible for a student to take the M. A. degree without including among his subjects the study of Latin, and consequently that the only demand made upon him is that he should pass an examination in Latin at the university preliminary examination of a standard no higher than the pass in Latin required by the Scotch education department for the intermediate certificate. That is to say that the university on the one hand requires from the student for the M. A. degree an amount of Latin that can be easily learned by a boy who ceases to study the subject after the age of 15, and that it requires no more. Under these circumstances, these head masters think it would be far better to make Latin optional. It is unlikely that the universities will accept this suggestion, but it is significant of the general tendencies underlying secondary education in Scotland that such a proposal should be made by those in responsible positions.

It should also be mentioned that in connection with the leaving certificate examinations the opinion of the head master is more and more being taken as to the qualifications of the pupil, while his school record is also taken into account in addition to the actual examination.

CONTINUATION CLASSES IN THE COUNTIES.

To return to the pupil who has attended a supplementary course at the elementary schools, and does not intend to pass on either to the higher grade or the secondary school, it is important to note what provision is made for continuing his education. Let us assume that on leaving school at the age of 14, he goes to work. The provision which is made for his further education has so far, in Scotland, taken the form almost entirely of evening classes. For the administration of these evening classes the Scotch education department has drawn up a special code, known as the continuation classes code, and under the recent education act (Clause X) school boards are required to provide such continuation classes in their respective districts.

To deal first with the country centers, this clause in the act might have given rise to a certain amount of difficulty, as the technical instruction committees of the county councils which formerly existed, and which had certain funds in their hands, had already, in a great many cases, organized in Scotland a fairly complete system of evening continuation classes, with peripatetic teachers, and it is evident that such instruction in country districts is better to be in the hands of some central body, each little country school board being quite unable to deal with this question adequately. Fortunately, the school boards have recognized this fact, and the new secondary education committees of the counties have taken over the former duties, both of the technical and secondary education committees, and have also taken over with them the organizing secretaries who had already

been appointed, and the teaching staffs. It has been found more economical for the local school boards to utilize these teaching staffs, and they have also found it of advantage to keep in touch with the organizing secretaries and get them to inspect the classes. The secondary education committees have also got a special hold upon these classes, owing to the fact that they have the power to grant scholarships to take pupils from these local continuation classes to the central institutions, and that it depends upon the approval by the central institution of the instruction given in these classes that these scholarships are granted. As these central institutions are anxious to see something like a complete and uniform organization at work in the counties, the act has not resulted in the confusion that might have been expected, and practically the old organizing secretaries and the old machinery are at work under the new secondary education committees, developing on satisfactory lines the instruction provided in the evening continuation classes.

CONTINUATION CLASSES IN THE CITIES.

In the large towns, such as Glasgow, Edinburgh, Dundee, and Aberdeen, the school boards have an elaborate system of evening classes, which are directly affiliated to the evening classes held in the central technical institutions, such as the Glasgow and West of Scotland Technical College; the Heriot-Watt College, Edinburgh; Robert Gordon's Technical College, Aberdeen; and the Technical Institute, Dundee. Courses of study have been drawn up by which the students obtain a course lasting over two to three years in the evening continuation classes held by the school board, and thereafter qualified pupils pass on to the more advanced instruction provided in the central institutions. I have not space here to discuss this system in detail, and can only deal with its general results. In Edinburgh, which has a population of about 350,000, there are 8,800 students attending the evening classes under the school board. To this number must be added 3,000 students who are attending the evening classes at the Heriot-Watt College, and 600 attending the evening classes held at the Edinburgh College of Art, making a total of 12,400 lads and girls under instruction. In Glasgow, which has a population, exclusive of suburban burghs, of some 770,000, there were in 1907–8 some 14,900 young people receiving further instruction in continuation classes other than the central institutions, and 5,900 students attending the central institutions, making a total of 20,800 students. At first sight these figures seem gratifying, but on analysis it can be easily shown that these large totals are made up principally of students who are in the more elementary stages, and that the leakage between the elementary stages and more advanced stages is from year to year enormous, while to a great extent the central institu-

tions, such as the Heriot-Watt College and the Edinburgh College of Art, are filled with a new class of students who enter on more advanced and specialized instruction straight from the secondary schools, and do not represent students who have carried on a continuous course of instruction from the elementary classes of the school board to the more advanced classes conducted in the central institution. The following statistics for the whole of Scotland for 1907–8 illustrate this very clearly:

Number of students.

Division II (including first year of Division III)	73,012
Division III:	
Second year	5,389
Third year	2,666
Fourth year	879

The system is, of course, a voluntary one, and has the faults of such a voluntary system, while the fact that the instruction is given in the evening is a serious drawback to its having full value, except in the case of a few exceptional students who have the physique, the determination, and the force of character to take full advantage of evening instruction after they have finished their day's work. There can be no doubt, therefore, that the question of the training of the apprentice on German lines—that is to say, his training in day classes—is coming more and more to the front, and will have to be faced sooner or later in Scotland. As an actual fact provision has already been made for this under the recent act.

COMPULSORY ATTENDANCE AT CONTINUATION CLASSES.

In the first place, the continuation-classes code is drawn up on such elastic lines that it can be utilized either for evening or for day instruction, and, as was pointed out to me some years ago when it was first published by the Scotch education department by that department's able chief, it is not an evening continuation-classes code, but a continuation-classes code, with the word "evening" left out. Under the new act a school board has the power, if it chooses, to make attendance at evening classes compulsory, but only on this condition, that the total number of hours that the young person is employed at work or in receiving instruction shall not be more than the total number of hours of work allowed under the factory acts. The clause referred to [Clause X, subsection (3)] reads as follows:

> It shall be lawful for a school board from time to time to make, vary, and revoke bye-laws for requiring the attendance at continuation classes until such age, not exceeding 17 years, as may be specified in the bye-laws, of young persons above the age of 14 years within their district who are not otherwise receiving a suitable education, or are not specially exempted by the school board from the operation

of the bye-laws, and that at such times and for such periods as may in such bye-laws be specified. Such bye-laws may also require all persons within the district having in regular employment any young person to whom such bye-laws apply to notify the same to the board at times specified in the bye-laws, with particulars as to hours during which the young person is employed by them.

Subsection (5) of the same clause reads as follows:

If any person fails to notify the school board in terms of any such bye-law in regard to young persons employed by him, or knowingly employs a young person at any time when his attendance is by any such bye-law required at a continuation class, or for a number of hours, which when added to the time required under any such bye-law to be spent at a continuation class causes the hours of employment and the time so spent taken together to exceed in any day or week, as the case may be, the period of employment permitted for such young person by any act of Parliament, he shall be liable on summary conviction to a penalty not exceeding twenty shillings, or, in case of a second or subsequent offence, whether relating to the same or to another young person, not exceeding five pounds.

Subsection (6) of the same clause imposes like penalties upon parents who, by willful default or habitual neglect, do not secure the attendance at continuation classes of their young people.

We have here, on the one hand, the power to make continuation classes compulsory, and, on the other hand, a limitation of the hours in which the instruction must be obtained. It is evident that in all cases where lads and girls are now being worked to the full number of hours allowed by the factory acts, it is impossible to establish compulsory attendance at evening classes, but it is allowable, if necessary, to take the time for receiving instruction at continuation classes out of the time spent in the workshop, and in this way young people are safeguarded against overwork either on the part of their employers or by the educational machine.

DAY CLASSES FOR APPRENTICES.

Day classes for apprentices are already developing tentatively in England, and have begun in Scotland, and it is probable that the next few years will see a great development in this direction.

Bursaries.

There is no country in the world that is so well provided as Scotland with bursaries to enable students to attend universities and the secondary schools, and yet, in spite of this, there seems to be always a demand for more bursaries. Among the duties which have been laid upon the new secondary education committees of the county councils under the education (Scotland) act, 1908, is that of providing bursaries to enable students to come from the elementary to the intermediate schools, and again in providing bursaries to enable students to go to the central institutions, or to attend evening classes, or to take them to the universities. They also have to pro-

vide bursaries for those who are teachers in training in the higher grade schools and who will ultimately pass on to the Central Training College for Teachers.

THE BURSARY SYSTEM AS IT IS.

So far the bursary system in Scotland has developed on the lines which obtain elsewhere; that is to say, that money originally designed for the purpose of enabling the poor but ambitious boy to obtain a higher education has finally fallen into the hands of the boy who does not require the money, but has the opportunity of getting such special teaching at the expense of the school or by means of coaching. This is notoriously so in the case of the Oxford and Cambridge scholarships, which in very few cases ever reach the class for which they were originally intended.

THE BURSARY SYSTEM AS THE DEPARTMENT WISHES IT SHOULD BE.

The department has determined to make an heroic effort to break through this as far as bursaries provided out of its moneys are concerned, and therefore they have laid down certain conditions for the granting of these bursaries, and these conditions are of considerable interest.

In the first place the number of bursaries and their value is not fixed beforehand, but applications are invited from lads who wish either to go on with their secondary education or to attend a central institution. These lads are then required to fill up a form on which information is given not only as to their school career, but also as to the financial position of their parents. It is then the duty of the committee to find out in the first place from the headmaster of the school the order of merit of these students in respect of their attainments. After having taken the reports on their attainments and their financial circumstances into full consideration, the committee grants such a number of bursaries and of such an amount as they may think fit out of the funds they have to administer. There is no competitive examination and there is no fixed amount of bursary, as the amount given is to be according to the need, and bursaries are only to be given where the need exists. It is obvious that this is a most interesting experiment and a most striking departure from the traditional system in this country, where everything is given on the results of a competitive examination.

It will require the most careful and sympathetic administration on the part of the various committees concerned, and to some of those who are accustomed to old methods the scheme seems somewhat bewildering. How far it is being administered with the necessary care it is too early to say, but from my own experience of one committee I can certainly testify that the bursaries are being awarded

with great care to those who require them and who can really make use of them.

This experiment, then, of the Scotch education department in trying to make their bursary system really fulfill the purpose for which other bursary systems were designed, will be watched with interest by other countries.

Central Institutions.

In the brief account I have already given of the continuation school work, the central institutions for technical education have already been referred to, but it is necessary to deal with these institutions more completely.

In the first place, the two earliest institutions of the kind in Scotland are the Heriot-Watt College, Edinburgh, and the Glasgow and West of Scotland Technical College, Glasgow; the former was originally known as the Watt Institution and School of Arts and the latter as the Andersonian Institution. These institutions existed for the purpose of providing instruction in evening classes, and were linked up with the system of examinations carried on by the department of science and art. Day departments, in addition to the evening departments, were subsequently gradually developed. It is necessary here to enter into the history of these institutions in more detail, but their present position in relation to technical education should be explained.

GRANTS TO THE CENTRAL INSTITUTIONS.

In the year 1900 the administration of the science and art grants, which had formerly been in the hands of the South Kensington science and art department, was for Scotland handed over to the Scotch education department, and advantage was taken of this to at once get rid of the system which has done so much to injure education in England by paying grants on the results of the examinations conducted by the science and art department. This step has enabled the Scotch education department to gradually develop the policy which it is now pursuing with reference to these central institutions. Besides the grants which are paid to the school boards for evening continuation work—grants based practically on attendance—the department has taken power to itself to treat such institutions as it chooses to select as central institutions, on quite a different basis and under certain conditions. Generally speaking, these conditions are that all appointments made to the staffs must be referred to the department for approval; that the calendar and report of the institution are submitted annually to the department; that the scheme under which the diploma of the institution is granted must receive the approval of the department; that outside assessors are appointed to act

with the staff of the college in the examinations for the diploma, and that these assessors must be approved by the department; and that the institution is open at all times to inspection by the department, either by its own inspecting staff or by a special expert appointed to report on some particular department.

To these central institutions the department makes grants, which, since the passing of the education act of 1908, are practically on the basis of meeting the deficiency in the maintenance expenditure. Under the act various sums and funds were consolidated for educational purposes. These funds, while all of imperial origin, had been partly in the hands of the Scotch education department and partly in the hands of various local authorities. The uses to which these consolidated funds and moneys are to be put are laid down under the act. One of the uses is laid down by Clause XVI, subsection (*c*), which reads as follows:

> To making payment to central institutions in respect of either capital or maintenance expenditure of such sums as the department may determine, being in respect of maintenance sums not less in amount than the sums paid to such institutions respectively for the like purpose in the year ending the thirty-first day of March, one thousand nine hundred and nine, by county councils and town councils from the amounts received by such councils under subsection (iii) (*b*) of section two of the local taxation (customs and excise) act, 1890.

In addition, there is a certain residue from these funds which can be used to make grants toward capital expenditure, such grants amounting to not more than one-half of the total expenditure. Under this clause the Scotch education department has issued a minute which gives it power to make such arrangements with each central institution as it may think fit as to the proportion of the total expenditure which has to be met from fees and local sources of income, so that the practical result is that these central institutions are being financed by the department under the conditions which have already been mentioned. These conditions naturally result in giving these central institutions the greatest possible freedom to develop.

To deal, in the first place, with the Heriot-Watt College and the Glasgow and West of Scotland Technical College, these institutions, while engaged in a large amount of evening-class work—in the case of the Heriot-Watt College in technical, scientific, trade, and commercial teaching, and in the case of the Glasgow Technical College in technical, scientific, and trade subjects—have been growing stronger and stronger as day engineering and technical chemistry schools, the courses of instruction being of university standard and leading up to a stiff diploma, and in some cases developing into highly specialized post-graduate courses attended by students already holding a science degree. There have also been established in Scotland

three agricultural colleges—at Edinburgh, Glasgow, and Aberdeen, respectively—and these colleges also are recognized by the department as central institutions. There are in addition the following other institutions, which are recognized as central institutions, viz: The Edinburgh College of Art (opened two years ago), the Glasgow School of Art, the Glasgow Athenæum Commercial College, the Leith Nautical College, the Edinburgh School of Cookery and Domestic Economy, and the Royal Dick Veterinary College.

RELATION OF CENTRAL INSTITUTIONS TO THE UNIVERSITIES.

The growth of these central institutions and the development of their day work on university lines has gradually caused to emerge a very interesting problem, and that is what their relationship is to be to existing Scottish universities. In some cases the work done in the central institution is quite unrepresented in the university, and in other cases similar departments exist in the universities, the only difference being that while the university gives a degree, the central institution gives a diploma. It is, therefore, one of the most interesting problems of the future to have the relationship between the central institutions and the universities settled upon broad lines, so that they may fully cooperate and work freely together for the development of the higher education in scientific, technical, artistic, and agricultural subjects. So far, certain tentative arrangements have been made here and there, but nothing like a complete scheme has yet been developed, except in the case of one or two of the agricultural colleges. If a scheme is developed on broad lines, it will enormously strengthen the position of Scotland as being able to offer to students coming from various parts of the Empire a complete education of a university standard and in various departments of pure and applied science and art.

The Scottish Universities.

In order to understand the developments which have been taking place in connection with the Scottish universities it is necessary to know something of their recent history. This may be said to start from the universities commission of 1889, which was appointed by the Government with executive powers to deal with the whole internal organization of the universities.

THE UNIVERSITY ORDINANCES.

This commission drew up a most elaborate scheme of ordinances, dealing with the details of the curriculum for every degree and the most minute conditions of university life. This commission also drew up regulations under which these ordinances could be altered or a new ordinance made, the regulations requiring that before any

university made a new ordinance or any alteration in an existing ordinance it was required to submit the proposed new or altered ordinance to the other three universities, and afterwards to a committee of the privy council, this committee of the privy council to consider the objections, if any, raised by the other universities, and finally to decide whether the proposed new or altered ordinance was to be accepted, modified, or referred back. It is unnecessary to point out that machinery of this kind is of the most cumbrous description, and makes it an exceedingly difficult matter to get any change made in an ordinance or to make a new ordinance. The four universities naturally watch each other very closely, and very often raise objections which are not necessarily to the advantage of higher education. In spite of this, however, new ordinances are passed from time to time, and in recent years the tendency has been for the universities to take sufficient powers within the ordinance itself for its modification, so as to avoid the necessity of referring every little proposed change in the curriculum to the consideration of the other universities and of the privy council.

AUTONOMY FOR THE UNIVERSITIES.

By this side door the universities are recovering some of the autonomy which they ought never to have lost, and which other universities possess as a matter of course. There have been several new ordinances passed lately, both in connection with the medical curriculum and with the arts curriculum.

The new ordinance for degrees in medicine, however, is evidently not satisfactory, as there is a strong agitation among those engaged in the teaching of medicine for a new ordinance, the fundamental difficulty being that the course for a medical student is supposed to last for five years, while it is becoming more and more obvious that under modern conditions a period of six years is required to give the student of medicine an adequate training.

NEW ORDINANCE FOR THE ARTS DEGREE.

The ordinance dealing with the arts curriculum is, however, the more important, and its bearing will be shown by certain quotations from it. In order to understand the meaning of the ordinance, however, it is necessary to say something about the history of the arts degree in Scotland. Before the universities commission of 1889 the curriculum for the arts degree consisted of seven subjects—viz, Latin, mathematics, English literature, physics, moral philosophy, metaphysics, and Greek. This course of study was based upon the old mediæval degree, the chair of English being called the chair of rhetoric and English literature, physics being called natural philosophy, while moral philosophy and metaphysics covered the ground

of the old subject of philosophy in mediæval times. The first modification took place under the commission of 1889, by which a considerable number of additional subjects were introduced and more specialization allowed to the student. This policy of increasing the number of subjects required for the degree and allowing of greater specialization has been carried further in the new ordinance we are now considering. In the first place, the ordinance lays down that "before entering on the curriculum each student shall pass a preliminary examination in the following subjects: English, Latin or Greek, mathematics; one of the following: Latin or Greek, if not already taken; French, German, Italian, or such other language as the senatus may approve; dynamics." This is the same preliminary examination as was in force before the ordinance was passed, and in lieu of this preliminary examination the leaving certificates, which have already been discussed, have been accepted in the individual subjects. To quote further from the ordinance, Clause VI reads:

> The curriculum for the ordinary degree shall consist of five subjects, of which two subjects shall each be studied for two academical years, and the degree examinations in these two subjects shall be on a higher standard than the degree examinations in the other three subjects; provided that it shall be in the power of the senatus, with the approval of the university court, to reckon courses in two cognate subjects (and wherever so determined by the senatus and university court, studied in separate academical years) as two courses in one subject, the examinations in the cognate subjects being on the same standard as if each of the subjects had been taken in a single course.
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> * * * * * * *

Clause VIII reads:

> The departments of study for graduation in arts, with or without honors, shall include the following subjects, with such additions as may hereafter be made by the senatus, with the approval of the university court * * * . These are as follows:

1. Language and literature.

Latin.	Spanish.
Greek.	Sanskrit.
English.	Hebrew.
French.	Arabic.
German.	Syriac.
Italian.	Celtic.

2. Mental philosophy.

Logic and metaphysics.	Education (theory, history, and art of).
Moral philosophy.	Philosophy of law.
Political economy.	

3. Science.

Mathematics.	Zoology.
Natural philosophy.	Botany.
Astronomy.	Geology.
Chemistry.	Geography.

4. History and law.

History.
Archæology and art (history of).
Constitutional law and history.
General jurisprudence.
Roman law.
Public international law.
International private law.
Geography.

Clause IX reads as follows:

The senatus, with the approval of the university court, shall have power to make from time to time regulations regarding the definition and grouping of the subjects in each of the departments of study, the selection of subjects for the curriculum, their classification as cognate, and the order in which they are to be studied, and also regarding the standards of the degree examinations and the conditions of admission thereto.

From these clauses it will be at once evident that in the first place, beyond the necessity of what has been defined as intensive study in two subjects, complete freedom is given as to the nature of the M. A. degree, while the choice of subjects in which the degree can be taken is made very wide. In addition, it will be noted that by Clause IX the senatus is given full power to draw up such regulations or schemes as it likes, while under Clause VIII it has power to add additional subjects. By this clause complete autonomy has been given to the universities, in so far as they have to deal with the M. A. degree. The ordinance of course contains many other clauses, but those quoted are of the most significance, and similar ordinances have now been obtained by the universities of Glasgow, St. Andrews, and Aberdeen.

The manner in which the power of the senatus has been used in this respect in the different universities somewhat differs, and it is hardly possible to enter into the details here, but in the case of Edinburgh University, which is after all the most important, the final regulations which have been drawn up by the senatus are as follows. In the first place, under these regulations the list of subjects grouped in the same departments of study are quoted, and the double courses in a single subject to be studied for two separate academical years are recognized under Clause VI of the ordinance; and, in addition, the double courses in cognate subjects to be studied in two separate academical years are recognized under the same clause; that is to say, that where two subjects are recognized as cognate, the student can take a year in each instead of two years in one subject.

II. Subjects and departments of study.

The following are the subjects at present recognized in the four departments of study in which qualifying classes are established:

1. Language and literature.

English.
Latin.
Greek.
Celtic.
French.
German.
Sanskrit.
Hebrew.
Arabic.

2. Mental philosophy.

Logic and metaphysics.
Psychology.
Moral philosophy.
Political economy.
Education (theory, history, and art of).

3. Science.

Mathematics.
Natural philosophy.
Astronomy.
Chemistry.
Zoology.
Botany.
Geology.
Geography.

4. History and law.

History.
Archæology and art (history of).
Constitutional law and history.
Economic history.
Ancient (Greek and Roman) history.
Military history.
Roman law.
Public law.
Mercantile law.
Geography.

III. Double courses.

By a double course is meant the study of a subject for two separate academical years, or the study of two cognate subjects in accordance with Section VI of the foregoing ordinance.

Except in the cases in group (*c*) infra, or in individual cases where the senatus with the approval of the university court has, for cause duly shown, decided otherwise, the two courses in a double course shall not be taken in the same academic year; and except in such cases a student shall not be allowed to attend the second course of the double course before he has passed the M. A. examination in the first course or has satisfied some test recognized by the faculty of arts with the approval of the senatus as equivalent thereto.

The following double courses are recognized:

(*a*) Double courses in a single subject to be studied for two separate academical years:

English.
Latin.
Greek.
Celtic.
French.
German.
Sanskrit.
Hebrew.
Moral philosophy.
Mathematics.
Natural philosophy.
Chemistry.
Botany.
Geology.

(*b*) Double courses in cognate subjects to be studied in two separate academical years:

English, with Latin, Greek, French, German, Celtic, or Sanskrit.
English, with British history.
Latin, with French or Celtic.
Latin, followed by Roman law or classical archæology.
Greek, with Sanskrit or classical archæology.
Latin or Greek, followed by ancient history.
French, with German or Celtic.
Hebrew, followed by Arabic.
Psychology, followed by education.
Political economy, with economic history, geography, or mercantile law.
Mathematics, followed by natural philosophy, chemistry, or astronomy.
Natural philosophy, with chemistry.
Any two of botany, zoology, geology.
Botany, with chemistry or natural philosophy.
Geology, followed by geography.
British history, followed by constitutional, economic, ecclesiastical, or Scottish history or history of art.
Geography, followed by history or economic history.
Geography, with military history.
Ancient history, followed by ecclesiastical history.

(*c*) Double courses in cognate subjects to be studied in the same academical year or in two separate academical years:

Latin, with Greek.
Logic and philosophical introduction, with psychology.
Logic and philosophical introduction, with moral philosophy.
Psychology, with moral philosophy.
Moral philosophy, with political economy.
Ancient history, with British history.
Ancient history, with classical archæology.

The only restrictions put on the curriculum are as follows:

Every curriculum admitted for an ordinary degree must embrace subjects taken from at least three out of the four departments of study, enumerated in No. II of these additional regulations, geography to be reckoned for the present purpose as a subject in the department of history and law.

Every student at the beginning of his first term must submit the subjects which he proposes for his curriculum, and at least a provisional order of study for the approval of the official advisers, who act under the control of the faculty.

Any subsequent alteration of the curriculum must be submitted to the official advisers and the dean.

It is evident from this that a practically unlimited amount of freedom is given to the student in selecting his course of study; in fact he can virtually construct his course for his degree in arts upon almost any lines he chooses. The old idea, therefore, of the degree in arts representing a definite course of education and a definite standard of culture has entirely disappeared. One of the reasons for this policy has been the increasing demand for the M. A. degree on the part of those proposing to enter the teaching profession. These

students wish to qualify themselves more and more in certain subjects which they think will be of value to them afterwards, and so the M. A. degree has ceased to be regarded as a general culture degree and has become a specialized degree to meet the requirements of the teaching profession.

This scheme of the senatus was strenuously opposed by certain members of the general council, but they were defeated, and the scheme as it stands was approved of. Whether it is to be regarded as a real reform is a very different question, and it is looked upon by many with great doubt and hesitation. The passing of an ordinance which gives power to the senatus and the university court to deal with its own curriculum is certainly a step in the right direction, but it is perhaps unfortunate that the first opportunity which a Scotch university has had of exercising such autonomy has resulted in such a complete abandonment of any conception of what a university education means or what should be included in the M. A. degree, and it remains to be seen in the future what the outcome of this policy will be.

Another reform which has recently been carried out in the Scotch universities is the adoption of the three-term system in place of the old system of a long winter session and a summer session devoted to special classes.

IMPERIAL GRANTS TO THE UNIVERSITIES.

The only other matter of special interest to be referred to in connection with the universities is the necessity that has been pressed upon them of obtaining larger grants from imperial sources to meet their growing expenditure. The assistance which has been given to the universities by the Carnegie trust, which will be referred to later, has generally taken the form of capital endowment, and this, while improving their usefulness, has necessarily increased their maintenance expenditure, and the funds are not available at present for meeting this increased expenditure. This demand for additional funds from the imperial treasury has necessarily raised the delicate question of the extent to which the giving of such moneys is to result in governmental control. With our usual want of system in this country, the result of the appeal of the universities for more money from the national purse has been of two kinds. On the one hand, a special committee was appointed by the treasury to inquire into the needs of the universities, and this committee has reported in favor of giving additional grants, amounting to some £40,000 a year, on condition that the schemes for the expenditure of this money should be submitted to the treasury. But in addition to this a clause [Clause XVI, (*b*)] was introduced into the 1908 education (Scotland)

act in that portion of the act dealing with the future expenditure of the consolidated funds which have already been referred to, and by this clause the Scotch education department are enabled to make grants to the universities. The clause is as follows:

> To making payment to the universities of Scotland, in addition to any sums otherwise payable to them under any act, of such sums in respect of yearly maintenance expenditure as the secretary for Scotland, on application by the university courts, or any of them, may determine after consideration of the results of such inquiries as he may from time to time direct to be made by a special committee appointed by him: *Provided*, That each university court shall make an annual report to the secretary for Scotland as to the mode in which it has applied any sum so granted.

If this clause is contrasted with that dealing with the central institutions [Clause XVI, (*c*)], it at once reveals a fear on the part of universities that they might come under the control of the Scotch education department, a fear which has resulted in a proposal that any money granted to the universities out of these funds should be paid through a special committee. This would not be the committee which has been dealing with the application for an increased treasury grant. The universities themselves are, on the one hand, going to draw £40,000 a year from the treasury, submitting their scheme to the treasury direct, a grant over which the Scotch education department will have no control and regarding which it will not be able to exercise any voice, and on the other hand they may be able to get additional grants through the Scotch education department under this other committee appointed by the secretary for Scotland. There is probably no other country in the world except our own where such a scheme could have been passed.

THE UNIVERSITIES AND STATE CONTROL.

It is evident that this matter of additional grants to the universities is of fundamental importance, because the whole question is raised as to what the relations of the State to the universities should be. It is obvious that, as the universities depend ultimately upon the State for part of their endowments, the State in the final resort must have the right to interfere, but it is of the utmost importance, if higher education is to develop and progress, that the universities should be free from state interference. Nevertheless such interference will come, as it has come in the past, through royal commissions if the universities do not get into touch with all the modern movements around them. It is a remarkable fact, as has already been shown, that the universities have no voice in the leaving certificate examinations in connection with the secondary schools, but have allowed the control to get entirely into the hands of the Scotch education department. On the other hand, they are moving very slowly toward a hearty cooperation with the new and vigorous central institutions which are developing at their doors. Serious problems are also

arising in the technical schools, owing to the necessity for reorganizing the relationship of the university to the extramural schools. While they are thus delaying to put themselves into living touch with the educational movements of the time, they are jealously fearing interference on the part of the State. It is hardly necessary to point out that this double policy must ultimately result in the State again intervening, probably in the form of another royal commission.

THE CARNEGIE TRUST.

It is impossible to leave the subject of the universities without saying a few words about the Carnegie trust. This body continues to benefit higher education in Scotland through its three channels of beneficence, namely, the payment of students' fees, the giving of capital grants for founding new chairs and building laboratories, and the encouragement of scientific research by providing grants for the purchase of apparatus, the institution of research fellowships and research scholarships. When the scheme was originally drawn up, it must have been very difficult for the trustees to decide in what way they were going to administer the funds devoted to the payment of fees. Their final decision was to use this money in raising the standard of education in the universities, both for those entering it and those continuing their studies, and it will be found that the regulations are drawn up to this effect and have undoubtedly improved the standard of work throughout. It is unnecessary to say anything of the benefits gained to learning and science by the administration of the other part of the funds in the hands of the trustees. At the same time there is one direction in which, if possible, they might still do a great deal to advance the pursuit of pure science, and that is by arranging to grant research assistants to professors whose staffs are entirely occupied with teaching. In certain cases the Carnegie trust has done this, and has, I believe, found difficulties in carrying out such a scheme in practice, but its value to science would be immense and is worthy of their further consideration.

The Training of the Teacher.

Up to the year 1901 the method of training teachers in Scotland for the elementary schools was by means of the pupil-teacher system, the young student carrying on his or her education and doing a certain amount of teaching at the same time, and finally passing on to one of the training colleges which were in the hands of the various churches. In Edinburgh we had three training colleges for teachers, conducted by the Established Church of Scotland, the Free Church of Scotland, and the Scottish Episcopal Church. In 1901 the Scotch education department began to modify the whole of the scheme, and

the new scheme is now getting into thorough working order on quite a different basis. In the first place, the Scotch education department has, itself, taken over the training colleges from the Established and Free churches, and have created in the four university towns of Edinburgh, Glasgow, Aberdeen, and St. Andrews, four bodies known as provincial committees which are responsible for the training of teachers. These committees were selected to represent varied educational interests. At the same time, the old pupil-teacher system has been abolished and has been replaced by regulations governing the passage of students who wish to become teachers, from the elementary schools into the higher grade schools, and from the higher grade schools to the training colleges, while assistance is provided by a system of scholarships. The education of the primary teacher is given in two stages, the pupil teacher or junior student stage, and the senior student stage. Candidates for the junior studentship must hold the intermediate certificate of the Scotch education department. They must therefore be 15 years of age, and for a period extending normally over three years they undergo instruction in English and another language, history, geography, mathematics, elementary science, drawing, physical exercises, music, and also in some cases, in woodwork or needlework or school gardening. Junior students have also to undergo systematic training in the art of teaching each of the primary school subjects. Those who perform all their work satisfactorily and who pass an examination at the end of their course are awarded a junior student certificate, giving full details regarding their attainments.

The candidate next passes to the senior stage, and there undergoes a further course of education and professional training, which extends generally over not less than two years. The senior student may get further instruction in the subjects of general education enumerated above for junior students, and the training authorities may allow students to attend a university, or a school of art, technical college, agricultural college, or college of domestic science for the further study of subjects for which they are qualified as shown by entries in their junior student certificates. At each training center, a particular study is made of such professional subjects as hygiene (including a course in physical exercises), psychology, logic, ethics, and the history and principles of education. The students in training must undergo a course of instruction in the methods of teaching all the subjects of the primary school curriculum, and must obtain adequate practice in the schools in the district in teaching these subjects under skilled supervision. If the student aims at being a teacher in a secondary or intermediate school, the standard of knowledge required is, speaking generally, that of a university degree with honors in the subject, or proof of attainments in it equivalent to this. The course

of training for secondary school teachers is not definitely prescribed, but generally includes a number of the same subjects as are studied by those who are going to be primary teachers. The training of teachers of special subjects, such as cookery and laundry work, drawing, manual training, etc., is not quite so satisfactorily developed in Scotland yet, as in the case of primary and secondary teachers. This new system has now got thoroughly under way, and the pupils are beginning to enter the training colleges under the new system. The total number of students in the various stages of preparation for teaching in Scotland being for 1908–9, 3,208 junior students and 2,953 senior students. Of the junior students 2,500 were females and 700 were males. Of the 824 students in training in Edinburgh last session 380 were attending university graduating courses, showing how largely university education is now being taken advantage of.

Concluding Remarks.

It will be found from the foregoing account that the whole field of Scotch education is at present alive with fresh movements and developments, and that consequently in the course of a short article, such as this, it is impossible to deal adequately with all these phenomena, while the final result on the reader's mind might be one of confusion. Behind the movements, however, that are taking place in connection with elementary and secondary education, continuation work, the central institutions, and the training of teachers, there can be seen certain guiding principles at work on the part of the Scotch education department. It may be difficult to state these completely, but at any rate, one or two of them are sufficiently obvious. In the first place, it is evidently the desire of the Scotch education department to get rid as far as possible of all external examination tests. This country has suffered almost as much as China has from this system of detecting merit, and as the whole methods of the department are more and more evolved, they show an evident desire to build up the various institutions, whether they be elementary schools, secondary schools, or technical colleges, on broad lines, and then to leave to those responsible for the educational work in these institutions the decision as to the capabilities of the scholars, and their fitness for other work. This may seem to be in the United States an obvious plan, but it has been a slow and difficult battle to persuade those in this country who have got wedded to the examination system that it is one which tends to kill all true education. In this respect, England is years behind Scotland, and its educational system is still bound in the trammels of the external examination idea. It is also quite evident by studying the various developments taking place that the Scotch education department is trying to make all education

an organized whole, in which every part has its place, and in which, while plenty of roads are left open to children of different abilities, yet there is one organized scheme permeated by a central idea.

As has already been pointed out, while the elementary schools, the secondary schools, and the central institutions are all working harmoniously toward these ideals, the difficulty which is looming in the future is the question of their relationship to the universities. This has already been raised in connection with the university preliminary examination. In the past the university has accepted in lieu of that examination the leaving certificate in definite individual subjects, but the leaving certificate of the future is to be a group certificate and a great variety of groups are to be instituted. Is the university, then, to accept these groups, as evidence of a sufficient secondary education for admission to its degrees, and nothing be done to bring the university itself into touch with these leaving certificate examinations, giving it some voice as to the lines on which secondary education is to move? This is one problem; the other is the relationship of the universities to the new and vigorous central institutions growing up around them and the reorganization of the extra mural system. If universities can realize the importance of these central institutions and come forward with a broad and generous policy, Scotland should continue to hold its place as a center of higher education for students from all parts of the Empire.

CHAPTER XV.

EDUCATION IN IRELAND.

By Cloudesley Brereton, M. A., L-ès-Ls.
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Ireland, 32,360 square miles; population (estimated, 1908), 4,363,351.

Topical Outline. Elementary education.—Secondary and technical education: Secondary; technical.—Universities.

Table 1.—*Summary of current educational statistics of Ireland.*

[The information in this table relating to universities is taken from the Statesman's Yearbook, 1910, and from current calendars of the institutions. The remaining statistics have been compiled from the reports of the commissioners of national education.]

Institutions.	Date of report.	Registered students or pupils.	Professors or teachers.
Universities and colleges:			
Dublin University	1909	1,109	105
National University of Ireland:			
University College, Dublin	1909	445	.....
University College, Cork [a]	1909	310	40
University College, Galway [a]	1909	.....	32
Queen's University, Belfast [a]	1909	.....	69
Elementary day schools	1908	708,992	14,941
Training schools for elementary teachers	1908	1,195	.....

[a] Formerly Queen's College.

Elementary.

In Ireland, according to Mr. Graham Balfour, the problem of public education at the beginning of the nineteenth century "seemed almost hopeless." The principal adverse factors were differences of race and of religion between the governed and the governing classes, absence of trade and industry to provide an outlet for the surplus population, and widespread poverty. It was only in 1781 and 1792 that the penal statutes of William and Ann had been repealed which forebade Catholics either to teach in Ireland or send their children abroad to be taught. In fact up to the end of the eighteenth century the majority of schools were founded, apart from the ideal of the

advancement of learning, for the sake of propagating the religion and language of the dominant race. In 1824 what elementary education there was in the country may be summarized as follows: First, there were the lay societies (mostly Protestant) who had taken under their control many of the parish schools founded under an act of Henry VIII. The chief of these, the Kildare Society, had on its books at that date 59,208 pupils out of a total of 106,012 for all the societies. Then there were the Catholic schools with 46,119, the private and other schools with 13,686 pupils, and, lastly, there were no less than 394,732 scholars in the so-called "pay" schools, which were mainly the old Catholic "Hedge schools" where under the old penal laws—

> Still crouching 'neath the sheltering hedge or stretched on mountain fern,
> The teacher and his pupils met feloniously to learn.

The Kildare Place Society mentioned above owed its initial success to the fact that it was composed of persons of various denominations, with the professed object of supporting schools of an undenominational character, but the reading of the Scriptures without note or comment was insisted on in all its schools, and this ultimately rendered it unacceptable to the Catholics, while the state grants, which were its main support, were withdrawn in 1832. In 1829 the Catholic emancipation act, relieving Catholics of nearly all their disabilities, became law, and in the previous year a select committee of the House of Commons had reported in favor of a general scheme of combined literary and *separate* religious education, which, in the words of the chief secretary for Ireland, "should be capable of being adapted to the views of the religious persuasions which prevail in Ireland as to render it in truth a system of national education." It is only fair to add that the real, though unacknowledged, author of this scheme was the famous educationist, Mr. (afterwards Sir) Thomas Wyse.

In 1831 steps were taken to give effect to this policy, which was strongly supported by D. O'Connell, "the liberator," and the Roman Catholic hierarchy. The central control was placed in the hands of a board of commissioners of national education, composed of Protestants and Roman Catholics of high personal character. The commissioners originally numbered 7; subsequently their number was increased, and in 1860 it was limited to 20, 10 of whom were to be Protestants and 10 Roman Catholics. A paid commissioner was added to the board shortly after its foundation under the title of resident commissioner. The principal functions of the board were to have complete control of the schools, to make grants, provided local contributions were forthcoming, to require the schools to be kept open for a certain number of hours for combined moral and literary education, while making provision on one or two days for

separate religious instruction, to exercise control over all school books in use, to allow the local patron (generally a clergyman) or managers to appoint the teachers, subject to the board regulations, which did not, however, allow of a right of appeal to the board in case of dismissal, and, finally, to inspect the schools.

The religious difficulty was not long in showing itself. The Protestants and the Presbyterians objected to the exclusion of the Bible in school hours. On the other hand, the rules were not rigorously applied in all districts, and the Catholics, fearing proselytism, held aloof. In 1834 there were only 789 schools, with 107,042 children, under the board. But in 1866, after some thirty years of trial and experiment, the religious difficulty was settled by reverting to the original rule that no child should be allowed to remain for the religious instruction of a denomination other than its own unless the parent has requested it in writing, while the religious instruction has to be so fixed that no child shall be excluded indirectly or directly from the general advantages of the school.

The principal religious societies which remained outside the control of the board were the Church Education Society and the Christian Brothers. The Church Education Society was a Church of Ireland body. It flourished for many years, and in 1867 it had no less than 1,451 schools and 63,549 scholars; but after the disestablishment of the Church of Ireland its numbers greatly declined, and in 1891 it had only 260 schools and 6,494 pupils.

The Christian Brothers was a "congregation" founded in 1802 in Waterford by Mr. Edmond Rice for the education of poor Catholic boys. It was based to a certain extent on the model of the Christian Brothers of de la Salle in France. The members take the vows of poverty, chastity, and obedience, and also a vow to teach children gratuitously. It grew rapidly. In 1863 it had in Ireland 171 schools of different kinds which were educating some 19,380 children. In 1891 the figures were 130 schools and 21,382 pupils. In many of these schools they are doing work of a higher literary or "vocational" kind, as will be described later. The Christian Brothers have also extended their activities to England and the colonies. As an agency of true democratic education they have performed to a remarkable extent the function of giving many of the brighter boys of the nation the chance of rising in life. In 1903 they were educating some 27,000 elementary children and 3,000 intermediate.

A select committee under Mr. Wyse as chairman, which reported to the House of Commons in 1838, may be mentioned here as anticipating many reforms, some of which have since been adopted. A great feature was made of object lessons. Manual and physical training were recommended, as well as agricultural teaching. Singing and drawing were strongly advocated. The creation of local education authorities with power to strike a rate was also proposed.

The board has founded in all some 32 model schools to promote "united education," to act as schools of experiment and example, and to train teachers. These schools have failed, unfortunately, to secure the full confidence of the Roman Catholics. In spite of this and other drawbacks the number of schools under the board steadily increased. In 1865–69 they numbered 6,586, with an average attendance of 354,853 pupils. A royal commission under Lord Powis was appointed in 1868. Its report in nine volumes was published in 1870, and many of its chief recommendations have since been adopted. The comparatively low state of education is shown by the statement, "We know very well that 45 per cent of the attendance in the national schools are in the first book."

The state of things in 1871 is thus described by Doctor Starkie: "A very large proportion of the schools were wretched thatched cabins, badly lighted, badly and inadequately furnished, and kept in bad repair. * * * The attendance was a negligible quantity. Pupils strolled into school all day and left without any excuse. The rolls were not called until a fair muster was made at 12 o'clock or later. In 1871 there were 1,000,000 children on the rolls, and the average attendance was 350,000—exactly 35 per cent. In some counties the attendance was below 20 per cent—for instance, in Mayo, 11.9. * * * In 1871 only 7.9 were in the senior classes. * * * In Mayo only 15 were in the highest class out of a population of 250,000." These figures are highly significant in the light of subsequent progress.

Teachers' salaries in 1841 ranged from £20 to £12 for males, £15 to £10 for females, special methods being adopted for the payment of teachers belonging to religious bodies. Payment by results was introduced in a modified form in 1871. According to competent witnesses, it produced a beneficial effect at the time in the way of leveling up the teaching, but it reproduced here, as elsewhere, the same injurious effect of making the teaching mechanical, and in 1900 the system was abolished. In 1875 two important acts affecting teachers were passed. One was an attempt to induce local authorities to raise money for education by offering additional treasury grants. Of the boards of guardians interested, not more than 73 out of 163 ever took up the matter. This number sank in 1897 to 25, and in 1900, on the abolition of payment by result, this source of contribution ceased. The total amount from local sources of all kinds only amounts to about 6 per cent. The other important act of 1875 afforded to a certain extent financial facilities for providing residences for teachers—a long-felt want. This act was followed by a similar one in 1879, which also contained provisions for teachers' pensions, a sum of £1,300,000 of the funds of the disestablished church being set aside for that purpose.

The deficit in trained teachers in Ireland was brought out by the statistics of 1883, which showed that only 52 per cent, or 1,412 out of 2,714 Protestant teachers, and 27 per cent, or 2,142 out of 7,907 Roman Catholic teachers, were trained. The schools also were much understaffed. England at that time had three times and Scotland nearly six times as many teachers in proportion as Ireland. The revelation of this disparity led to the creation or recognition of a certain number of voluntary training colleges in addition to the board's own college in Marlborough street, Dublin. Government help was given to such colleges up to 75 per cent of their annual expenditure. As a result of these reforms the number of teachers who had received one or two years' training rose to 53 per cent in 1901.

Compulsory education for Ireland was proposed by the House of Commons in 1883. It was not till 1892, however, that education, which had previously been made free in Scotland and England, was rendered gratuitous in Ireland, and an attempt was made to set up compulsory attendance in the town and townships. The discretion of extending it to the counties was given to the county councils, which were created in 1898. Owing to financial difficulties the principle was adopted slowly, even in the towns. In 1901 only 83 out of 120 townships had adopted the requisite machinery, and 43 rural districts. Taking these districts together, the total attendance after a few years showed an excess of 5 per cent over the rest of Ireland, the improvement being most marked in rural districts.

At the outset the board was very anxious to encourage industrial and agricultural training. The efforts at industrial education did not produce any permanent results. In agriculture they were more fortunate. In 1837 two agricultural schools were established, and in 1838 a model farm and garden were opened at Glasnevin. Subsequently the commissioners began to lease and manage farms. These in 1875 numbered no less than 228. Agriculture was made an obligatory subject. Unfortunately it was largely theoretical, and its value may be gauged by the statement that the highest marks were earned, according to Doctor Starkie, by the town "gamins" of Belfast. By 1900 all the farms belonging to the commissioners had been given up with the exception of Glasnevin and another, which were taken over by the agricultural and technical department, whose duties were twofold, one to encourage agriculture and industry and the other to encourage scientific and technical instruction in the schools. The work of the department, which is mostly concerned with higher and technical education, will be described later.

In 1898 a vice-regal commission, called the Belmore commission, reported in favor of a more practical education being introduced into the schools, thereby confirming many of the recommendations

of the Wyse committee fifty years before, involving an extension of the kindergarten for infants and of woodwork and hand and eye training for the older children. Drawing (taken by only 31 per cent of the children) and singing were to be made compulsory; the bookish agriculture was to be replaced by elementary science. The general verdict of the commission was that while it fitted boys to enter the secondary schools (intermediate), it left them "not fit to enter a technical school, even if they had such a school at their doors." Two years later a body of organizers for instructing and advising teachers was created, and the teaching is every year becoming more and more practical in the schools. Classes also for training national teachers in science and art are carried on by the agricultural and technical education department in the technical schools, such classes being under the joint inspection of the national board and of the department.

The beginning of the twentieth century showed a revived public interest in Irish education, elementary as well as university. The whole system was fiercely attacked by Mr. Macarthy in his "Priests and People," and by Mr. Hugh O'Donnell in his "Ruin of Irish Education." A certain number of outspoken criticisms were also made by Doctor Starkie, the resident commissioner, speaking in his private capacity at the meeting of the British Association in Belfast in September, 1902. Doctor Starkie pointed out that while the revised scheme for teachers' salaries might be expected to do much for improving education, the absence of a strong public opinion in favor of education was a marked feature in Ireland. He also brought out the comparative lack of effective compulsion, attendance in Ireland being only 63 per cent as against 82.4 in England and 82.9 in Scotland. Even the worst Welsh County, Anglesey, had a better average (73.3) than the best Irish county. He dilated on the defective state of the schoolhouses (1,100 described "as scarcely habitable"). He criticised the comparative indifference of the managers, whether Church of Ireland, Presbyterian, or Catholic, and alluded to, but did not advocate, the levying of local rates for education as a means of enlisting and interesting local public opinion.

The parties concerned were not long in composing their replies, and a vigorous pamphlet was published by Rev. M. O'Riordan. The latter was also intended to answer certain criticisms on clerical influences in Sir Horace Plunkett's "Ireland in the New Century." Other brochures of a similar kind were issued by the Rev. J. Malone, P. P. ("Irish Education"), and the Rev. M. Curry.

In the midst of this turmoil of controversy one point seems pretty clear—that if the clerical managers had not always shown all the zeal they might, they were after all the main persons in the country to show any zeal at all, as far as elementary education was concerned.

In 1904 Mr. F. H. Dale, an inspector in the English board of education, was deputed by the lord lieutenant "to inquire and report how typical Irish elementary day schools compare with similarly circumstanced public elementary schools in England as regards premises, equipment, staffing, and instruction; and to what causes differences in economy and efficiency appear to be due." He reported that the Irish school buildings in towns were "markedly inferior" to English of a similar type, and proposed as a remedy the creation of local bodies with rating powers for education. On the other hand, he stated that the majority of country school buildings did not compare unfavorably with the corresponding English ones. The equipment was "tolerably satisfactory," but except in the convent schools the Irish schools were very deficient in attractiveness of appearance and equipment other than in necessaries. Mr. Dale noted that "a much larger proportion" of Irish teachers were trained than English, "a circumstance that creates a strong presumption of greater efficiency." The difference in salaries for head teachers on the whole was, ceteris paribus, not remarkable, while many head mistresses were even better paid than their English colleagues. The salaries of assistants was "distinctly lower," but their chances of promotion to headships were greater. Mr. Dale further pointed out the unnecessary multiplication of small separate schools, which had steadily increased, though the population was diminishing. "The primary cause has been the preference for a strictly denominational system of education. The object of the national school system in Ireland has therefore not been achieved." Less strict control on the part of the central authority than exists in England over the supply and organization of schools was also given as a contributory reason. Mr. Dale likewise indicated that little or no local interest was shown except by the clergy. The convent schools were singled out as at once the least expensive and among the most efficient and best-managed schools. Other points of criticism were the inadequacy and faulty distribution of the staff, especially in the small schools of 40 to 59 pupils; the irregularity of attendance, which in several schools might be improved by the conveyance of the children in covered carts; the inferiority of the discipline and of the methods and aims of instruction. The subjects recently introduced into the code were pronounced a success with the exception of the hand and eye training.

The board at once took cognizance of Mr. Dale's report, and in their annual report for 1903 published some very remarkable statistics of progress during the last century. In 1851 (twenty years after the foundation of the board) the illiterates over 5 years old numbered 47 per cent of the population. In 1901 they had sunk to 14 per cent. In 1871 of the children between 10 to 15 only 59

per cent could read and write; in 1901 the percentage had risen to 94 per cent. They further pointed out that the percentage of trained teachers, 57 per cent, was much higher than that for England and Wales.

Certain of Mr. Dale's recommendations were adopted by the board within a year or two of his report, notably in respect to diminishing the excessive number of small schools, to increasing the salaries of assistants, and making an addition to the staff in the shape of a manual instructress in small schools with an average of 35 to 49.

The rebuilding and remodeling of unsuitable buildings had long been occupying the serious attention of the board. But for several years after 1901 the preparation of new plans hung fire and delay was no doubt also caused by the uncertainty of the political situation. There was, in consequence, an accumulation of arrears in the way of urgent cases. In 1907 an Irish council bill was brought in by the Government. As far as education was concerned, the national board and the intermediate board, which looks after secondary education, were to be replaced by an educational department or committee under the control of the council and organized by it, additional members (not excluding women) to be added by the lord lieutenant. The bill was, however, withdrawn, and subsequently no attempt has been made to coordinate Irish education. One great difficulty of the board was the absence of any local rate or aid toward the cost of education. It has, however, been pointed out that apart from the very large number of children educated free by the Christian Brothers the whole upkeep of the schools, occasionally part of the teacher's salary, and half the rent of the teacher's residence, are provided locally. The latter half is usually, however, paid by the teacher, but in about 5 per cent of the schools the teacher's residence is provided entirely locally. In 1907 a fixed sum was given by the English treasury of £40,000 for three years in order to assist the commissioners in making building grants. Certain sums from the development grants were also provided which did not, however, materialize, and judging from the most recent report much still remains to be done. In 1908 a parliamentary grant of £114,000 was made to improve teachers' salaries. The principle has also been adopted of providing covered carts for the conveyance of children living at a distance.

Special training in horticulture has been arranged for in conjunction with the department of agriculture and technical instruction, but the necessary funds for carrying it out are still lacking. The study of Irish has been fostered with striking results. There were 105 schools taking the subject in 1899; in 1901 the number was 1,198. At the end of December, 1906, the schools numbered 2,072, with 161,740 pupils. In 1908 the number of schools had risen to

3,047. During the same period the bilingual schools rose from 36 to 168. The number of children taking Irish was 195,801. According to a recent report by Mr. D. Mangan to the board, the standard of attainment is rather uneven, but much good work is being done.

The schools themselves are becoming more and more denominational in practice. In 1883 the percentage of schools containing both Roman Catholics and Protestants numbered 53.8 of the whole number. The percentage has progressively declined, and at the end of each quinquennium the percentages were successively 48.4, 45.5, 38.1, 33.1, 30.4, the latter being the figure for 1908. This means, in other words, that more than two-thirds of the children are in schools where the pupils are either exclusively Protestant or exclusively Catholic. This of course is the real cause of the number of small schools. In 1908 out of 8,336 there were 5 with less than 10 on the rolls; 196 with less than 15; 253 with less than 20; 677 with less than 25; and 699 with less than 30; thus, 1,830, or 22 per cent of the whole, have under 30 pupils.

The percentage of average attendance for 1908 is noteworthy as being the highest on record, amounting to 71.1. The total percentage of trained teachers is 64.7.

It would seem that the controversies that arose at the opening of the twentieth century have largely quieted down, not, however, without leading to a substantial increase in efficiency in the ways mentioned above, though much still remains to be done in the way of improving the school buildings and raising the standard of attendance to a higher level. The chief outstanding problems would appear to be better pensions for teachers, further amalgamation of small schools, the establishment of higher grade schools for continuative education, provision of school gardens and improvements in cleaning and heating in the schools, in the cost of which the local managers now appear to be willing to share.

Secondary and Technical Education.

SECONDARY.

During the four centuries after the death of St. Patrick, Ireland became one of the chief centers of European culture, and was known as "insula sanctorum et doctorum." To give only one or two instances, the great college of Mayo, called Mayo of the Saxons, contained no less than 2,000 English students, while Romans, Gauls, Germans, and even Egyptians were to be found among the pupils of the ancient Irish schools. The repeated incursions of the Northmen wrought havoc with the country and its schools, and the Anglo-Norman conquest, which extended over four centuries, completed their ruin. It was not till the reign of Elizabeth and James I that efforts were made to pro-

vide for Irish education by the foundation of the so-called diocesan free schools, which quickly became schools of a classical and grammar-school type, and of the royal free schools which were mainly established within the Ulster "plantation." Although intended to be free to all denominations, these schools were practically attended by Protestants alone, owing to their Protestant "atmosphere." A few more grammar schools were founded during the seventeenth century by private persons, notably the Earl of Cork and Erasmus Smith, an alderman of London. The penal statutes of William III (1631) and of Anne (1692) entirely deprived the mass of Catholic population of all education. Henceforth parents were condemned to send their children abroad secretly to school or have them educated equally surreptitiously at home.

A commission that reported in 1791 found there were 46 grammar schools with 1,214 pupils and an income from endowment of £7,600. Commissioners of charitable donations and bequests were appointed in 1800 to look after charitable endowments. In 1858 they managed an income of £2,461, mainly applicable to education. More important were the board of commissioners of education in Ireland, who were appointed in 1813 to look after all the endowed schools with certain definite exceptions. They do not seem to have had a very successful record in the management either of the estates or of the schools. A select committee, who sat from 1835 to 1838, with Mr. Wyse as chairman, drew up a scheme for secondary education as comprehensive as that they proposed for elementary education (see Elementary). There was to be in every county an academy or provincial college and in each of the four provinces an agricultural college. The types of education were not only to be classical, but commercial and scientific. Local education rates were recommended, and the creation of a chair of education at the university advocated.

The Ursuline nuns were permitted to establish themselves in Ireland in 1771. In 1821 the Loretto nuns, a teaching community, founded their first Irish branch. The foundation of the Christian Brothers was at an earlier date (see Elementary), but for many years their work was almost entirely elementary. Later on they went in largely for higher education and in 1903 they were educating a third of the boys in secondary education.

The Kildare commission, reporting in 1858 on the endowed schools, found there were 52 endowed grammar schools and 2 superior-English schools with an income of £15,452. At the same time they pointed out there were no less than 91 towns with a population of over 2,000 each which had no public secondary schools. The Rosse commission, appointed in 1878 and reporting in 1880, drew special attention to the lack of what we should call to-day "vocational" education. They reported that there were 700 endowed schools, of which 300 were

under the commissioners for elementary education. The total endowments amounted to £85,000, but of this only £8,000 was in Munster and £891 in Connaught. In 1885 the education endowment act was passed which allowed the endowed schools to be reorganized and their endowments as far as possible to be extended to the benefit of both sexes, while the board of commissioners of education was reformed and reconstructed.

In the same year as the Rosse commission was appointed a new body was called into existence to provide for the state organization of secondary education. The need especially from the Catholic point of view was particularly urgent. While out of every 100,000 people in Scotland 371 were receiving a secondary education, in Ireland out of similar numbers of Protestants and Catholics, respectively, there were 199 Protestants and only 2 Catholics. To remedy this glaring deficiency, the intermediate education act was passed. The administration of the act was entrusted to a board composed of representatives of different denominations. Its functions were to carry on a system of public examinations, to grant prizes, exhibitions, and certificates, and to pay managers of schools fees dependent on the results of its public examinations.

As regards income, the board were allotted £1,000,000 out of the funds of the disestablished church, the income of which amounted to £32,000, though it subsequently sank to £27,000. The local taxation act of 1890, which assigned £78,000 to the national board, handed over the available residue, some £50,000 a year, to the intermediate board. The intermediate board was successful from the outset as regards the number who took the examinations, but criticisms were not long in making themselves felt, as was only likely in a system based on payment by results. The board themselves finally recognized "there were grave defects in the system," and on their own petition they were constituted in 1898 into a vice-regal commission to inquire into and report on the system and its working. Judging by the evidence, among the main evils alleged against the system were the excessive competition and cramming it engendered. It was further declared to make the teaching mechanical, to discourage preparation for all other types of continuative education other than university, and to tempt the teacher to concentrate on the clever pupils to the neglect of the rest. It was said to lead to overwork and physical overstrain. It was accused of producing a neglect of voluntary subjects and a direct discouragement of oral teaching in modern languages and of the practical teaching of science. It was stated that not half the intermediate pupils were presented for the examinations and not a third passed them. Many witnesses declared that it encouraged "touting" for distinguished pupils and actually led to bargaining between parents and teachers.

On the other hand its administration was "universally" admitted to be impartial. The examinations had proved their value as an independent and authoritative test of the work of the schools. It had enabled poor pupils of ability to get a better education, stimulated the work of the teachers, and given a great impulse to educational work in general. This was especially clear from the statistics of the number of Catholics receiving secondary education before and twenty years after the establishment of the examination. And finally the system was said to have stimulated parental interest, helped to raise the status and salaries of teachers, and given an enormous impetus to the education of girls.

The board reported in 1899 and said that without legislation they were powerless to carry out their recommendations. Next year Parliament by the intermediate education act gave them the necessary liberty to draw up their own rules subject to the approval of the lord lieutenant and Parliament, and power was given to appoint inspectors, which in the opinion of the board and of the great majority of witnesses before the commission was necessary to supplement examination, inspection being taken in the opinion of the board to include the sanitary conditions of the school, reasonableness of school hours, and proper provision when practical science was taught.

New regulations were issued in 1902, and candidates are able to take, in three out of the four grades, either honors or pass papers. No one is eligible under 13 or over 19, and the first or preparatory grade is only open to pupils under 15. An intermediate roll has to be sent in by each head master containing the names of all pupils eligible by age to compete. The examination was divided into two courses in 1902. They have since been expanded into five—the classical, modern literary I (French or German, with Irish), modern literary II (French and German), mathematics, and experimental science. English and mathematics are compulsory in all courses, and other subjects have to be chosen by the candidates.

In 1901 six temporary inspectors were appointed. Extracts from their reports were published in 1902. They criticised the too exclusive preparation made by the schools for the examination, the imperfect grading of the pupils, and the excessive number of schools in the same districts. They commented on the excellence of the discipline and the high conscientiousness of the teachers, but they spoke unfavorably of the slowness of the teaching and the inaudibility of the pupils. The English teaching, in spite of sundry criticisms, was praised for arousing interest. The history and geography were apparently taught on rather old-fashioned lines. The Latin and Greek were pronounced to be good in the larger schools, but less satisfactory in the smaller. In modern languages the work in grammar,

translation, and composition was commended, but the colloquial side, for which no allowance was made in the examination, was naturally disappointing. In respect to mathematics and experimental science the inspectors stated "We can speak highly of the labor, patience, and care that have been bestowed on these subjects in the great majority of schools." The deficiency in competent science teachers was noted and the need of special supervision in that branch of the school work.

Next year the experiment of sending out inspectors was renewed. Meanwhile the results of their work were so satisfactory that the board unanimously were of the opinion that "inspection should be at once organized on a permanent footing," but owing to the uncertainty of the political situation nothing was done. To insure standardization of the examination from year to year eight permanent examiners were appointed.

The backwardness of science teaching in Ireland, alluded to above, is due to the somewhat checkered career that the teaching of the subject had previously experienced in Ireland. From the outset Ireland shared in the bounty of the science and art department on the same lines as Great Britain. In 1852 out of 20 art schools in the kingdom Ireland had 2. In 1860 out of 87 subsidized schools Ireland had 8. In 1868 these schools had risen in number to 76, as against 16 in Scotland. The high-water mark was reached during the years 1887–1890. In 1889 the number of schools receiving grants was 342 and the total grant £8,836, or more than one-eleventh of the whole grant for the Kingdom. It then fell away, until in 1897 it only amounted to £2,500 out of £172,000, or about one-seventieth of the whole grant, the reason being that while South Kensington gradually ceased to subsidize national and night schools, the rules of the intermediate board hindered the schools in working for the science and art department. In 1899 the English science and art department was replaced by act of Parliament by a department of agriculture and technical instruction, of which the president was the chief secretary for Ireland. The vice-president is a paid official, and the first person to fill the post was Mr. (since Sir) Horace Plunkett, to whom Irish agriculture and Irish technical education owe so much. There is a general council of agriculture and two advisory boards, one of which is for technical education, while for coordinating educational administration there is a small consultative committee, consisting of the vice-president and one representative each from the technical, agricultural, national, and intermediate boards. The fall in science was shown by the fact that in 1891 there were 2,885 candidates in this subject at the intermediate examinations. The number had decreased in 1899 to 673, and in 1901 there were only 6 laboratories in the secondary schools. The recovery was equally rapid, thanks to the efforts of

the new department. By the end of 1902, 101 permanent and 49 provisional laboratories had been established, at a cost of £30,000, and summer courses were started on a large scale for teachers. In 1901–2 no less than 6,412 candidates took the first year in physics. The intermediate board always lend a helping hand to managers by making loans to enable them to provide proper equipment. These loans in 1904 had already amounted to over £16,000, and in and after 1905 science was for some years made compulsory, with certain reservations, on all students save those taking the classical course.

In 1904 Mr. Dale, who had already reported on elementary education, was commissioned, in conjunction with Mr. Stephens, another inspector of the English board of education, to report on the system of intermediate and technical education in Ireland—"the latter so far as it is connected with the former"—and "to ascertain whether any organic or other changes in that system are desirable." They were specially to deal with coordination of intermediate with all forms of education, primary, technical, and university; with the staffing, equipment, and sanitation of intermediate schools; with the methods of allocating the funds of the board and the possibility of making grants to selected schools; and with the possibility of establishing a profession of intermediate teachers. As regards the lack of coordination they pointed out the undue overlapping between primary and intermediate schools, the deficiency in scholarships or other means of helping on the poorer children to higher education, except in the case of the Christian Brothers and one or two other bodies, and the shortage especially in the north of Ireland of intermediate schools. This want of coordination they attributed to the absence of any central department to survey the two systems as a whole. They advocated the creation of scholarships tenable at intermediate schools for elementary and other children and mentioned with approval the scholarships given by eight counties under the agricultural and technical department. They also praised the department for the work it had carried out in cooperation with the intermediate board in erecting laboratories and reforming the teaching of experimental science. The connection of the universities with intermediate education was described as very imperfect. As a remedy for the lack of coordination, they suggested a school-leaving certificate with a consultative committee. The premises and equipment of the schools with over 65 boys and 52 girls were reported as satisfactory, but this was not the case with two-thirds of the smaller schools. They found 55.3 per cent of the men and 30 per cent of the women in Protestant schools had degrees, while the majority of the Catholic teachers were in orders and had been trained at Maynooth or some Catholic institution of university rank. They noted the lowness of the

salaries of assistants, the average in 70 boys' schools being £82 6s. 7d. and in 47 girls' schools, £48 2s. 7d. They commented on the excessive cost of administration and examination, which, however, was swollen in the year under review by the cost of the temporary inspection. It amounted to nearly £15,000, out of a total income of about £85,000. They asserted that a permanent inspectorate would not be a satisfactory remedy for current defects, unless more effective control, which legally seemed doubtful, could be exercised by the board over the schools, and the extent and cost of the examination were lessened at the same time. They recommended, therefore, an amendment of the acts, coupled with a block grant, an internal examination of each recognized school under the general supervision of the inspectors, and external examinations for the leaving certificates conducted by the central authority. They noted the absence of registration and proposed that teachers should avail themselves of the British register (since defunct), pointed out existing institutes for training in Ireland, and suggested that salaries would best be raised by the adoption of registration and inspection.

The abortive attempt has already been described which was made in 1907 to carry into effect by parliamentary enactment the administrative reforms outlined by the report of Mr. Dale for primary education as well as those contained in the above report. It will be remembered that under this Irish council bill it was proposed to dissolve the intermediate board and the commissioners of national education and hand over primary and secondary education to an educational department or committee under the control and organization of the council. The bill was withdrawn, and since then no further effort has been made to coordinate Irish education or create local educational authorities. Next year the board at last received permission to appoint six permanent inspectors, who were appointed in the following year. The result of the experiment will naturally be awaited with great interest. Obviously, if inspection can be found to replace partially the examination, the worst tendencies of the system of payment by results will be neutralized, such as the temptation to neglect the weaker children and voluntary subjects not contained in the examination courses. The adoption of the two leaving certificates as advocated by Messrs. Dale and Stephens and corresponding to the system already obtaining in Scotland seems a more or less possible step. The elimination of the weaker teachers by means of registration would probably enable, as Messrs. Dale and Stephens have suggested, the better teachers to command better salaries. Such is in fact already the case with the teachers of science who are registered by the technical department. It is curious to find that the course of Latin and modern languages, as noted by Doctor Starkie, is still lacking in the list of courses; yet its utility has fully

been proved in France and by the curriculum of the Real Gymnasium in Germany.

A few statistics may be added here to show how fully, except for the condominium in science teaching that it shares with the department of agriculture and technical instruction, the intermediate board has become the authority for secondary education. In 1903, 262 schools, with a school population of 12,135 boys and 7,322 girls, were receiving grants from the board, while in 1901 (the latest census figures available) there were in the 475 so-called superior schools (excluding certain colleges and elementary schools) 26,760 pupils (15,307 boys and 11,453 girls). In 1900, 6,093 boys and 2,194 girls entered for the examination, or 8,287 in all. In 1908 the numbers had risen to 8,283 boys and 3,906 girls, or 12,159 in all. The numbers who passed in 1900 and 1903 were 5,314 and 6,972, respectively, being 59.9 per cent of the boys and 63.9 per cent of the girls, or 61.2 per cent of the whole number. The total school grant was just under £50,000. The board's income amounted to about £86,000.

One word of caution is perhaps necessary to anyone seeking to appraise the work of the intermediate board. The inevitable tendency of all critics, especially among a critically minded people, and of all commissions of inquiry, is to insist on the unsatisfactory rather than on the satisfactory side—on what remains to be carried out rather than on what is already accomplished. It may therefore be advisable to point out that when all has been said and done, the intermediate board in its thirty-odd years of existence may safely be credited with two important services which must together outweigh the sum total of all its defects, real or imaginary. It has practically, if not actually, called into being Catholic secondary education (compare statistics of 1878), and it has given an immense impetus to the intermediate education of girls.

TECHNICAL EDUCATION.

The rôle played by the science and art department in fostering these two subjects in Irish schools has been described elsewhere. As has already been stated, the money available under the local taxation act of 1890, amounting in the case of Ireland to a variable sum of about £128,000 a year, was handed over to the national and intermediate boards instead of being devoted to technical education, as in England and Scotland. The science and art department therefore continued to give grants for the teaching of science and art under the regulations of that department. In 1887–88 the total amount was about £7,000, of which £4,577 odd was contributed by the local authorities. Meanwhile a local, which later became a national, movement was springing up in the country in favor of reviving and extending

Irish agriculture and industries by means of education. A small committee was formed in Dublin to promote technical education in 1886. In 1887 the city of Dublin technical schools were opened. They were supported by voluntary contributions and a grant from the Dublin corporation under the library acts. In 1889 the first technical education act applicable to Ireland was passed, but Dublin, Galway, and Cork were practically the only places to avail themselves of it. The movement received a vigorous impetus from the formation of the recess committee, in 1896, composed of members of all parties, which advocated the formation of a department of agriculture and industries. This, as has already been described, was created in 1899. Salaries and office expenses are provided by annual parliamentary vote. The department was set up with an income of about £166,000 a year, of which £55,000 was reserved for technical instruction; £78,000 of this money represented the local taxation grant of 1890 hitherto paid to the national board, who now received in its place a yearly equivalent sum by House of Commons vote. In 1908–9 the endowment fund had risen to £180,000, of which £72,000 was available for education. The board also received under the act of 1899 capital to the extent of about £205,000; this in 1909 had been augmented by the unexpended cash balances, etc., and amounted to £285,288. Against this, liabilities had been incurred amounting to about £104,000. The department also continued to receive a sum (about £7,000) in lieu of the equivalent grant, a compromise on the science and art grant.

The agricultural side of the department's work touches education at many points. It maintains an agricultural faculty in the Royal College of Science and Art and the Albert Agricultural College, Glasnevin, which gives training in horticulture as well, the Munster Institute, and the Ulster Dairy School. The latter two are open only to women and give instruction in dairy work, feeding and management of cows, poultry keeping, agriculture, and domestic economy. Agriculture is further taught at the agricultural stations at Athenry, Ballyhaise, and Clonakilty. Agriculture and rural domestic economy are also taught at the "aided" agricultural college at Mount Bellew and at the nine schools of rural domestic economy, at Westport, Ramsgrange, Claremorris, etc. And finally there are the classes, lectures, and practical demonstrations carried on by the itinerant instructors in agriculture, horticulture, poultry keeping, and butter making throughout the country. Classes for training qualified teachers of agricultural subjects have also been established at the Royal College of Science, at the Albert College, and the Munster Institute. These trained teachers in 1908–9 numbered 123. The number of itinerant teachers numbered 128. Winter classes in agriculture were formed in 1908–9 in 20 counties. There

were in all 50 classes, and 375 students were admitted. In 1901–2 the agricultural board voted £3,000 for rural industries and technical instruction connected therewith. This in 1908–9 had grown to £9,000. Classes in lace and crochet making, basket making, and other rural industries are also financed by the agricultural board, at a cost in 1908–9 of £3,000.

In 1908–9 the institutions maintained by the department under the annual parliamentary vote were the Royal College of Science, the National Museum of Science and Art, the Metropolitan School of Art, and the Royal Botanical Gardens. The cost of these institutions in 1908–9 was £44,292.

The board of technical instruction is a body composed of the president, the vice-president of the department, fifteen representatives of local authorities, one representative from the intermediate and national boards, respectively, and four persons nominated by the department.

The whole policy of the department is based on the principle of helping those who help themselves and the congested districts were expressly excluded from its purview in 1902, though it has later taken over some of the agricultural work of the congested district board. In accordance with this policy the department was prohibited from applying any of its funds (except in special cases) to schemes in respect of which aid was not given out of money provided by local authorities or from other local sources. Every urban district council and every county council may raise a twopenny rate to be applied to technical institutions in towns and to technical instruction and the fostering of agriculture and rural industries in the country. They may also borrow money for building purposes.

The local authorities formulate schemes for their districts which must be approved by the department. This has allowed of a certain diversity between town and country districts, as well as permitting the erection of purely commercial schools in Rathmines and Cork in addition to the ordinary technical school in the latter city. The £55,000 income was divided into two parts; £25,000 was given to the six county boroughs (Dublin, Belfast, Cork, Limerick, Londonderry, and Waterford), to be applied in aid of technical schemes approved by the department. This has scarcely varied at all (grant in 1909–10 being £26,000). The remaining £30,000 (£29,000 in 1909–10) was expended by the department on technical instruction in urban and country districts, while £4,000 of it is set aside for central purposes (senior scholarships, teachers' classes, etc.). Grants amounting to three-fourths of the approved expenditure are made to special trade preparatory schools in Belfast, Portadown, Pembroke, Kilkenny, and Queenstown. In 1902–3 27 county schemes and 24 urban schemes were more or less fully in operation, together with those of the

6 county boroughs, and in 1903–4 the total raised by rates was estimated at £25,000, of which, roughly, half came from the counties and half from the county boroughs. This amount came to £29,602 odd in 1908–9. Every county in Ireland contributed, and the total included over 70 urban and rural districts. It is interesting to note that in 1902 it was estimated a 1d. rate all over Ireland would produce a little under £60,000.

In 1906 a committee of inquiry was appointed to inquire into the working of the department. The report on the whole was favorable to the department.

The last report, 1908–9, speaks of the work while still extending, having entered on a phase of consolidation. The rapid development of technical education is attributed to the substitution of inspection for examination and the facilities afforded by the department for the training of teachers. The new regulations for technical schools, with their increased grants and demand for higher standard of efficiency, are stated to have been very beneficial. The cooperation of employers has been increasingly secured. The schools of commerce are flourishing, but the question of suitable buildings is a serious one. Hygiene and home nursing have been added during the last two years to the domestic economy in rural districts.

In the secondary schools the teaching of the department's programme is maintained efficiently and harmoniously. Domestic economy as a subject is growing in girls' schools. The summer courses for teachers were attended by 622 teacher-students, and 523 received certificates; 113 national teachers presented themselves for examination in elementary experimental science and 67 received certificates. A large number of scholarships to the intermediate, trade, domestic economy schools, and to the Royal College of Science and to the Metropolitan School of Art were awarded, as well as certain local exhibitions. One of the most promising developments of the department is the encouragement offered during the last three years under its revised regulations to technical schools in technology, handicraft, commerce, applied science, and art. Other interesting departures are the two schools it has established, one for training in domestic economy and one for instructors and domestic servants. The amount allocated for the session 1907–8 to technical schools was £15,805, while the secondary schools for experimental science, drawing, manual instruction, and domestic economy received £26,725, and the primary schools for drawing and manual instruction £1,819. In 1908–9 the grant to the technical schools was £18,952. In the forthcoming year it will be probably over £22,000. These moneys are derived from the science and art grant, which in 1897–98 had sunk to £2,613, but has since been rapidly growing, especially in recent years. In 1906–7 it amounted to £26,400. It was £37,550 in 1907–8, and in 1908–9 it had risen to £43,600.

University.

The early beginnings of Irish university and secondary education have already been described (see secondary section). The total destruction of higher education commenced, as we have seen, by the repeated inroads of the Danes, and, completed by the long drawnout struggle of the Anglo-Norman conquest, left a blank which was not filled up till the foundation of Trinity College in 1591. It is true that Archbishop Leck attempted to found a university in Dublin in 1311, and an act of Parliament was passed in 1465 for establishing a university at Drogheda, while Pope Sixtus IV issued a bull for founding a university in Dublin in 1475. But these attempts bore little fruit, and the Dublin University, such as it was, perished at the time of the confiscation of the monasteries.

Trinity College was founded by charter by Queen Elizabeth. It was built on the site of the old suppressed Augustinian monastery of All Hallows near Dublin and was opened to students in 1593. The college was described in the charter as "Unum Collegium Mater Universitatis," but no other college has ever been established, so that the university and the college became practically identical. It is a moot point whether it was originally intended for the whole population or only for a denominational section, but as things turned out it was exclusively Protestant for two hundred years, except during a brief period in the reign of James II, who appointed a Catholic as provost.

The college was admittedly founded in imitation of Oxford and Cambridge, and, as a matter of fact, the first four provosts were Cambridge men.

Certain confiscated lands in the north and £2,000 collected in money formed the first endowment.

The government consisted of the provost and the fellows (later of the senior fellows only). In 1615 James I gave the college the right to return two members to Parliament. In 1637 Charles I granted a new charter, resuming for the crown the right of making statutes. The statutes then issued, with certain modifications, lasted till the times of modern reform.

The first provision for medical education was made outside Trinity in 1667, when a charter of incorporation was granted to the Royal College of Physicians. It was incorporated under the title of the King's and Queen's College in 1692. Under legislation in 1741 and later, four King's professors of medicine in Trinity were created; their election, however, was placed in the hands of the Royal College of Physicians. There were also faculties of law and medicine, and in 1776 two royal chairs of modern languages were founded. In 1641 the first school of engineering in the Kingdom was established at Trinity.

Up to 1794 the university was closed to Catholics and Dissenters, though the presence of a few was tolerated. After that date the university was thrown open to both. They were not, however, allowed to hold office in the university.

There was an outburst of educational activity during the last two decades of the eighteenth century. The Royal College of Surgeons was incorporated in 1784 and opened as a licensing and teaching institution. The astronomical observatory at Dunsink, created in 1785, was placed in 1791 under the care of the royal astronomer of Ireland. The Apothecaries' Hall was incorporated in 1791 and the Royal Irish Academy in 1786. Barristers are admitted by the King's Inns in concurrence with the law school of Trinity College, a scheme that according to the commission of 1906–7 has worked well.

In 1795, owing to the destruction of the ecclesiastical colleges in France, the Irish Parliament passed an act appointing trustees for endowing an academy for Catholics only and giving an annual grant of £8,000. This was the origin of the celebrated College of Maynooth. A lay college was attached to it in 1800 for boys over 14, but it was discontinued in 1817. Its failure is attributed by Doctor Starkie to the fact that it had no "root fibers in a system of primary and secondary schools." Maynooth was incorporated in 1845, when the annual grant was raised to £26,360 and provision was made for 520 students, a sum of £30,000 being given for building. On the disestablishment of the Irish church Maynooth received a lump sum of £369,040 in lieu of the annual grant.

The Presbyterians received, about the same time as the foundation of Maynooth, a grant for the education of their ministers. In 1814 they opened the Belfast Academical Institute, which later became the General Assembly's Theological College at Belfast. Their grant, which was £1,500 in 1828, was £2,500 in 1849, and at the disestablishment it was commuted to £43,976, and £15,000 was given for buildings.

In 1845 Sir Robert Peel passed an act providing for the establishment of three Queen's colleges "in order to supply the want which had long been felt in Ireland for an improved academical education, equally accessible to all classes of the community without religious distinction." The scheme itself goes back to the report of the select committee of 1838, and was really due to its indefatigable chairman, Mr. Wyse, the moving spirit in all educational reform, whether elementary or secondary, during the first half of the nineteenth century; £100,000 was granted for sites and buildings at Belfast, Cork, and Galway, and each college received £7,000 a year. The colleges were strictly undenominational. Three faculties were established in each, arts, law, and physics. They were opened in 1849, and in 1850 the Queen's University was founded to act as an examining

university for degree students from these colleges. The latter opened in 1849 with 223 matriculated students, 63 being Established Church Protestants, 80 Catholics, and 80 Presbyterians and Dissenters. It was provided by the act that the visitors of the colleges should represent the several religious persuasions, but the Roman Catholic ecclesiasts refused to serve. Next year, at a plenary synod of the Catholic hierarchy held at Thurles, the new Queen's colleges were definitely condemned and it was resolved to found a Catholic university in Ireland at the suggestion of the Pope.

A royal commission on Trinity College was appointed in 1851 which reported that the income amounted to £62,000, while fees in 1850 brought in over £3,000. There were 1,217 undergraduates on the books. The commissioners found the general state of the university satisfactory. Certain internal reforms were proposed, many of which were adopted in 1857.

Meanwhile the proposals of the Thurles synod were realized in 1854 by the foundation of a "Catholic University of Ireland," modeled on the University of Louvain. The first rector was Doctor Newman, afterwards Cardinal Newman. Between 1851–1865, £125,000 was collected and an additional £59,000 by 1874. The fees were almost nominal, salaries came to £5,000 out of a total annual cost of £6,000. In 1879 the funds were nearly exhausted. The refusal of a charter in the opening years seems to have seriously hampered its development.

In 1865 a Mrs. Magee left £20,000 to found and endow a college for Presbyterian ministers, called Magee College, at Londonderry. While primarily a theological college, it has also an arts side attached. In 1866 Alexandra College was founded for the higher education of women, and a residence house opened, and in 1870 the University of Dublin held its first examination for women.

In 1867 the government of the day removed the religious disabilities attached to the holding of certain chairs in Dublin University, and in 1873 all tests were abolished except for the divinity professors and lecturers. Early in 1873 Mr. Gladstone brought in a bill to solve the Irish university difficulty. He described the University of Dublin as being in servitude to a single college. "It means servitude to eight gentlemen who elect the other fellows, who elect also themselves, and who govern both the university and the college." He proposed a new Irish national university composed of Trinity, the Catholic University, Magee College, and the Queen's colleges of Belfast and Cork. The theological faculty in Trinity was to be handed over to the representative body of the disestablished church. The new university was to take no cognizance of metaphysical or moral philosophy or modern history. Both Protestants and Catholics disliked the proposals, the latter because it offered only

recognition without endowment to the Catholic University, and the measure was lost by three votes on the second reading.

In 1879 the Queen's University was replaced by the Royal University of Ireland. In 1883 the annual grant rose from £5,000 to £20,000 a year, the university receiving for the first time its full income from the funds of the disestablished church. The new charter, issued in 1880, gave power to confer degrees in all faculties except theology. No residence or attendance at lectures (except for medical students) was required. The religious difficulty was thus shelved and Catholics readily availed themselves of the examination and accepted office in the new university. In debatable subjects like philosophy, alternative sets of questions were set by examiners chosen respectively from Catholics and Protestants.

The corporation consisted of a chancellor, senate, and graduates. Twenty-nine arts and eight medical fellowships were created, as well as scholarships and prizes. By a tacit understanding half of these fellowships were given to the Queen's colleges, with the exception of one, which was assigned to Magee College, the remaining half being given to the University College, Stephens Green, which took over the buildings of the former Catholic University, the new Catholic University consisting henceforth of the above college, together with Maynooth, Blackrock, Carlow, Clonliffe, and the Catholic Medical School.

In 1882 the classes and scholarships in the Queen's colleges were thrown open to women, while as regards the Royal University women were from the first placed on an equality with men. The attendances at the Queen's colleges fluctuated considerably. Their maximum numbers were reached in the early eighties. Thus at Belfast in 1881–82 there were 567 students, of whom 353 were Presbyterians and 25 Catholics. These in 1899–1900 had sunk to 347, of whom 247 were Presbyterians. Cork had 402 in 1881–82 (with 221 Catholics). In 1900–1901 it had only 171 (98 Catholics). Galway had 208 (87 Catholics) in 1881–82. In 1898–99 there were only 83 (of whom 28 were Catholics). Many of the above students were exhibitioners and scholars. Thus at Galway in 1900–1901 they numbered 56 out of 84 matriculated students.

The Queen's University had 302 candidates for examination in 1870 and 748 in 1880. The Royal examined 2,364 candidates in 1884 and 2,658 in 1900. In 1896–97 the Catholic college, Stephens Green, Dublin, with only 130 pupils obtained 49 first-class distinctions in the examinations, as against 33 for all the Queen's colleges. The number of degrees taken by women was 9 in 1884 and 65 in 1900. In 1901 the number of students at Maynooth was 504, at Magee 70, and at the General Assembly's Theological College 46.

Trinity College is partly a residential and partly an examining university. It was stated that in 1891 less than 20 per cent of the students obtained degrees by examination only. The largest number on its books during the last century was 1,338 in 1881; of these 115 were Roman Catholics. In 1894 there were only 1,063, and in 1901 the numbers had sunk to 976. It is estimated of 1,200 students who matriculated between 1891 and 1895 only 6 per cent were Catholics.

The Catholic position was excellently put by Archbishop Walsh in 1890: "To all Catholics it comes as a fixed principle that every institution such as Trinity College, embodying what is known as the 'mixed system' is from the nature of that system a source of danger to Catholic students if they frequent it; a source of danger to the vigor and even the integrity of their faith; a source of danger also to their constancy in the full and faithful observances of the practical duties by which they are bound as Catholics."

In July, 1901, a royal commission was appointed "to inquire into the present position of higher general and technical education in Ireland, outside of Trinity College, and to report as to what reforms, if necessary, are desirable in order to render that education adequate to the needs of the Irish people." The final report was signed by 11 out of the 12 commissioners, with sundry reservations. The commissioners considered that the present arrangement by which degrees of the Royal University were obtainable by examination alone had lowered the ideal of university life and education in Ireland and should be abolished. It insisted that the Royal University should be converted into a teaching university, in which attendance at lectures should be indispensable for degrees. The Queen's colleges should be the constituent colleges of the university, together with a fourth, Catholic, college in Dublin. Belfast should be liberally endowed and equipped, but Cork and Galway were rather to be reduced.

In December, 1903, Trinity College was thrown open to women, and those who had taken the necessary examinations elsewhere were also admitted to degrees "ad eundum." This latter privilege was only continued till the end of 1907, but no less than 800 women, mainly from Oxford and Cambridge, availed themselves of it, and the fees thus received, some £16,000, were set aside by the college for the promotion of women's education.

Statistics issued by the three Queen's colleges in 1907 showed a steady recovery from the low figures of 1900–1901. Thus in 1907 Belfast had 390 students. Its teaching staff had also been much strengthened, and numbered 40, as against 20 in 1887, and 8 new laboratories had been added. Galway reported 111 students and Cork 265, of whom 179 were Roman Catholics. The principal of

the latter also renewed the claims of Cork to be made a separate university for Munster, and referred to the offer of £50,000 under certain conditions from Mr. W. O'Brien and his wife.

Meanwhile, the report of the commission of 1903, though its general conclusion of a federal university proved inacceptable, made the solution of the university question seem more pressing than ever. In March, 1906, the Government announced its intention to appoint a royal commission on Trinity College. According to the Irish secretary, Mr. James Bryce, it was to "deal with the revenues of the college, with its government and administration, with the teaching staff, with the system of examinations and rewards. A general consideration of the place Trinity College ought to occupy in the higher education of Ireland, so that it might become more useful to the people of Ireland at large than perhaps it was at the moment, could not be excluded." The terms of reference bore out the Irish secretary's prognostications, and the full title of the commission appointed in June, 1906, was Royal Commission on Trinity College, Dublin, and the University of Dublin. The commission was further empowered to take cognizance of the reports and evidence received by the commission of 1901.

The commission issued its final report in 1907. The commissioners reported that Trinity College was a satisfactory organ for Protestant Episcopalian education, but not for Roman Catholic. Four commissioners were in favor of a federal university, composed of Trinity, a suitable Catholic college in Dublin, and the three Queen's colleges. Another favored the solution, but doubted its success from the hostility of the colleges concerned. Three commissioners favored a reconstitution of the Royal as a teaching university, composed of the three Queen's colleges and a new Catholic college in Dublin, and one, the representative of Trinity and a Catholic, was against the creation of any new college. Thus, while the commission was practically equally divided on the question of remodeling Dublin University or not, an overwhelming majority was in favor of the creation of a new college in Dublin acceptable to Catholics. No changes in the constitution of Trinity could be recommended which would make it acceptable to Catholics, but intercollegiate cooperation was recommended between Trinity and the new proposed college, and the offer made by Trinity of special arrangements for Catholics, Presbyterians, and Methodists was to be included in the new statutes.

It was recommended that the governing body of Trinity should be remodeled. The existing governing body was to furnish one-fourth the members, half were to be elected by the fellows and professors from among the fellows, and a fourth from the professors who were not fellows. In place of the council there was to be an academic council

and boards of studies. Hitherto the fellows had been elected by examination, which involved, as a rule, much laborious work for several years after full graduation. As a permissible alternative the commisisoners recommended the presentation of a thesis or other original work. It was reported that the cooperation between the Law School and the King's Inns had been advantageous. More encouragement was to be given to Irish and the prosecution of research work. The office of lady registrar should be made permanent. The right of recognizing lady teachers in any college for women within the 30-mile radius was to be granted to the college.

On March 31, 1908, Mr. Birrell, who had succeeded Mr. Bryce as Irish secretary, introduced a bill giving force to many of these recommendations. Trinity College was left alone. Two new universities were to be founded, one at Belfast, the other to comprise Cork and Galway, with a new college in Dublin. The Royal University was to be dissolved. There were to be no religious tests for professors, lecturers, fellows, or students, no state endowment of theology or for building or maintaining places of worship, the latter to be provided, if desired, by private enterprise. The universities were to be governed by senates, nominated at first provisionally for a term of years, but hereafter to be elected for the most part academically. Women were to be represented upon them. The universities were to have the power of admitting to their examinations and degrees the matriculated students of any "recognized" college. This, as it afterwards appeared, was meant to refer to Magee and Maynooth. No external students were to be admitted to examinations. This latter condition was not to the liking of the national teachers, who saw that they would largely be cut off from taking degrees in the new university.

The bill passed the second reading by an overwhelming majority and was "warmly supported" by the Nationalist members, most of the criticism it received in Parliament coming from the Protestant members for Ulster.

The third reading was passed on July 27, and the bill received royal assent.

In summing up the main features of the measure the Journal of Education says:

"To an outsider situated between the two opposing camps of Irish religious and political beliefs the measure seems to be about as colorless as it is possible to make it. The absence of religious tests, the exclusion of the clergy from ex officio representation on the governing bodies, the fact that provision for theological teaching is left wholly to private endowment, would seem to be the only safeguards against denominational or clerical occupation which lie within the power of anticipatory legislation * * *. If the people either of the north or of the south choose to make their university denomina-

tional, denominational it will be, in spite of all the acts of Parliament in the world."

By the financial clauses of the act Galway was allotted an annual grant of £12,000, Cork of £20,000, Dublin £32,000, and Belfast £18,000. The original endowment of the Royal was divided between the two universities, whose total income (colleges included) was thus £85,000, against £35,000 before the act; £60,000 was given for building to Belfast and £170,000 to Dublin. By letters patent issued December 2, 1908, the new university in Dublin received the title of National University of Ireland, and Queen's College, Belfast, was rechristened Queen's University, Belfast. New statutes were issued on May 24, 1909, for the two universities and the constituent colleges. In the National University the senate elects the vice-chancellor and appoints and dismisses all professors, lecturers, etc. In academic matters it is assisted by boards of studies. Convocation which elects the chancellor comprises the officers and senate of the university and all graduates, including those of the Royal who pay a fee. Women are eligible. There are eight faculties: Arts, philosophy and sociology, Celtic studies, science, law, medicine, engineering and architecture, and commerce. Agriculture is included under science and Irish under arts. There are diplomas in agriculture, journalism, hygiene, etc. The senate may recognize colleges of a university type, provided no secondary education is given in them.

At Belfast, in addition to the senate, there is an academic council to control internal affairs and a general board of studies. The students have a council to represent their interests. Convocation is open to all graduates, including women. There are four faculties: Arts, science (including engineering and architecture), law, and medicine. Scholastic philosophy is included under arts. This has already been attacked in the House of Commons and before the privy council as violating the undenominational character of the university, but the petition against its inclusion was dismissed by the privy council in October, 1909. The matter has been revived and a final settlement has evidently not yet been reached.

Shorty after the passing of the act a strong agitation sprang up with a view of making Irish compulsory for entrance in the National University. Early in 1909 the Episcopal standing committee of the Irish hierarchy issued a statement deprecating compulsory Gaelic as proving not only a hindrance to the language movement but as likely also to drive away students. The Irish Nation declared, on the other hand, that the issue was between a substitute for Oxford and Cambridge and a democratic and national university. The Gaelic League naturally took a very prominent part, as well as many of the urban and district councils and the county councils, and in June,

1909, their demands were indorsed by the general council of the Irish county councils. By October 1, 130 urban and district councils and 23 county councils had pronounced in favor of compulsory Irish. Many of the councils threatened to refuse to strike a rate in support of university education if their demands were not complied with.

Meanwhile, in July, 1909, Magee College, which it was expected would apply for recognition to Belfast, decided to accept affiliation with Trinity College. On November 1 the new universities came into official existence. The fees at the National University were fixed at £10 a year for arts, £12 for engineering, and £14 for science and medicine. On February 23, 1910, St. Patrick's College, Maynooth, was admitted to recognition by the senate of the National University. In the early part of the same year the question of the recognition of the women's colleges also came to the front. But the petition of Alexandra College to Trinity College for recognition of certain of its lectures for university purposes was rejected. A similar request from certain of the women's colleges to the new University College, Dublin, was likewise refused. On the other hand, no provision has been made in the new Dublin College for technological subjects; it seems not improbable that the Royal College of Science will ultimately be recognized for such courses.

On April 6 Mr. Birrell stated in the House of Commons that the number of students in the new University College, Dublin, was 445 (including 39 women).

The agitation in favor of compulsory Irish at the National University continued with unabated vigor through the first six months of 1910. On May 5 the senate decided to make a course in Irish compulsory for those who did not take it at matriculation. This solution proved unacceptable to public opinion, and after a "long suspense," to use Archbishop Walsh's words, the senate finally decided to make Irish compulsory in and after 1913. The decision thus arrived at will insure from the county council alone, an income of £8,000 to £9,000 a year. The adoption of compulsory Irish means that the new university is assured of aid from the county councils alone of something between £8,000 and £9,000 a year. The final decision was arrived at at the end of June, and Archbishop Walsh attributed the long delay in part to the federal nature of the university, which, owing to the distances separating the different colleges, makes the work cumbrous and costly. It seems quite possible that Cork, as Doctor Windle, its president, has lately predicted, may retire from the Federal University and become an independent university for Munster. It has quite recently received a sum of £10,000, and the offer of Mr. W. O'Brien of £50,000 is always available. If this happens the National University will be only following in the footsteps of the Victoria University in England, whose three former members, Manchester, Liverpool, and Leeds. are to-day all independent universities.

CHAPTER XVI.

REPORTS ON INTERNATIONAL CONGRESSES BY AMERICAN DELEGATES.

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[The year was marked by three international congresses pertaining to recent developments in respect to the welfare of the young. Many private agencies have been called into existence in the United States by the rapid spread of interest in the subject to which these congresses relate, and, as already stated in this report, the proposition to hold the Fourth International Congress on Home Education in the United States has been adopted by the organizing committee of the congress. To meet the inquiries which this decision will naturally excite, together with demands for information on the kindred subjects of school hygiene and physical training to which two of the three congresses pertained, the reports of the proceedings, by delegates who represented the United States at the congresses referred to, are here brought together in a form convenient for reference.]

I. REPORT OF THE THIRD INTERNATIONAL CONGRESS ON HOME EDUCATION, HELD AT BRUSSELS AUGUST 21–25, 1910.

By Will S. Monroe, State Normal School, Montclair, N. J., accredited as a National Delegate to the Congress.

Organization of the first congress on home education.—Officers of the recent meeting.—Work of the general and special sessions of the congress.—The study of children.—General questions touching family education.—Instruction in the hygiene of sex.—Improvement of family life in rural communities.—Family education before the school age.—Family education during the school age.—Education of girls.—Manual training.—Family education after the school age and continuation schools.—Social education.—School excursions.—Education of abnormal children.—Other problems.—American officers selected to organize the next meeting of the congress.

The International Congress on Home Education, which held its third meeting at Brussels August the 21st, 22d, 23d, 24th, and 25th, 1910, was organized under the auspices of the Belgian Government in 1905 in connection with the international exposition held that year at Liege. Twelve hundred delegates, representing 20 foreign governments, were in attendance, and 250 persons participated in the deliberations of the congress. The second meeting of the con-

gress was held at Milan in 1906, in connection with the international exposition that celebrated the completion of the Simplon tunnel through the Alps. (For an account of this congress see the Annual Report of the Commissioner of Education for 1906.)

The recent meeting at Brussels was attended by more than 2,000 members, representing practically all the civilized countries of the world. The congress was organized by a commission selected by the Belgian Government, and the officers selected at Milan, in cooperation with international committees appointed by foreign governments. Mrs. Lucie Fèlix-Faure Goyau, of France, was the president of the congress, Mr. Paul De Vuyst, of Brussels, vice-president, and Mr. Louis Pien, of Brussels, secretary. Nineteen foreign governments were represented on the international commission.

In addition to the general meetings of the congress, special sectional meetings were held for the discussion of particular topics. The first section concerned itself with matters touching the study of children (pédologie). Nine topics were selected as the basis of the papers and discussions of the section. The first question touched upon the general mental characteristics of children, their tendencies, and faults. H. Thiselton Mark, of the University of Manchester, England, discussed the instinctive tendencies of children, which lie on the border land between the mental and physical. He pointed out that the child's instincts are his inherited power to grapple with the world and to use its resources; that the instincts being psychophysical organisms, all acquisition must be based upon their use, and that the school must not interrupt normal development of the instincts. Miss Theda Gildemeister, of the State Normal School at Winona, Minn., presented some of the mental traits of children to be developed in instruction in reading. Biography and autobiographical literature were recommended for their wealth of ideals and varied types of character which should be presented to children during the preadolescent period. Professor Clavière, of the Jean-Bart College, Dunkerque, France, presented an interesting genetic study on the faults of children based upon the returns of a questionnaire. Children were asked to name (1) their own chief faults and (2) the faults of their classmates. Their own faults they attribute (1) to thoughtlessness, (2) to timidity, (3) to idleness, (4) to obstinacy, and (5) to impulsiveness. It was interesting to note that 47 per cent of the boys questioned thought their faults due to thoughtlessness, while only 15 per cent of the faults in their fellows were attributed to this cause. Thirty-one per cent of the faults in colleagues were attributed to idleness, while less than 7 per cent of the boys thought idleness a cause of their own misdemeanors.

Five papers were presented on the methods of studying children, the most significant contribution being that of Dr. I. Ioteyko,

director of the psychological laboratory in the University of Brussels. She pointed out the need of standards in testing children, and of the use of instruments and appliances that might give accurate and definite results. The ergograph of Mosso she thought of special value, and she recommended the use of the dynamometer and other instruments that give graphic results. Doctor Ensch, of Brussels, called attention to the need of more definite anthropometric tests of children, and Doctor Herderschêe, of Amsterdam, gave the results of measurement of the cranium of 1,000 school children and the correlation of the results with the mental ability of the pupils. Papers by Mrs. Nadine Koschkine, of the University of Grenoble, France, and Dr. Joseph O. Vertes, of Budapest, dealt with instruments, methods, and results in the study of the memories of children in Russia and Hungary.

Methods of studying mental fatigue were discussed by Doctor Hamelincke, of Ghent; Professor Van Wayenburg, of the University of Amsterdam, and Mr. P. Michaux, of Brussels. The speakers considered the various methods in current use in determining the power of endurance of children; they indicated faults in each of the well-known methods, and urged the development of new methods which might obviate the objections to the extensively used direct and indirect methods of the Germans, French, and Italians.

The problem of child suicide, and its scientific study, occupied one session of the child-study department. It was the judgment of the section that the recent German report on the subject gave undue prominence to the school as a cause of self-destruction among children. The physical condition of the child and his home environment, together with religious training and social relations, it was urged, were not sufficiently considered in the German study.

Mrs. Frederic Schoff, president of the Mothers' Congress in the United States, presented a paper dealing with the causes of crime among normal children. Among the causes, based upon a study of 1,589 juvenile delinquents, the following were enumerated: Drunkenness of parents, disorganized homes (separation of parents), poverty of the family, and habits of truancy. Mrs. Schoff thought the most important step in the reduction of juvenile crime among normal children was the education of the parents. She believed that it was more important that education of parents concerning child development and care be made compulsory than laws for the compulsory attendance of children at school.

General questions touching family education were brought before the second section of the congress. Ten topics had been formulated as the groundwork of the 58 papers and addresses, including "Character and need of parents' associations," "Control of the child's reading in the home," "The family and the peace movement,"

"Moral and civic instruction in the home," "Problem of domestic science," "Modern language study in the home," "The home as a factor in the choice of the child's occupation," "Hygiene and æsthetics of clothing," and "Agriculture and the rural home." A significant paper was that of Mrs. Fannie Fern Andrews, of Boston, on "The union of the school and the family." She gave an account of the Boston Home and School Association and outlined its numerous civic, social, and educational activities. Such associations, she pointed out, composed of the men and women whose children were in the schools, brought about an understanding between parents and teachers that greatly facilitated the work of teaching and furthered progressive reform movements. Among other values of the associations were higher standards in the home, increased responsibility of parents, and the development of a community life that unified all the endeavors for the good of the community.

Miss Winifred Gibbs gave an account of "Home education in proper feeding in New York City," and outlined the methods of social workers in instructing poor women and girls in their own kitchens how to utilize the materials of food at hand so that a maximum of strength might be obtained from a minimum of outlay in the way of money. Mrs. J. Scott Anderson told the congress of the workings of the Philadelphia Home and School League, and Miss Charlotte M. Mason of the Parents' National Educational Union in Great Britain. Both these papers indicated some of the practical means that were being employed in America and England to bring the home and the school into sympathetic cooperation.

The home value of play was the subject of a paper by Miss Alice Ravenhill, of Kings College for Women, England, and the control of the home reading of the child was presented by Miss Pauline Herber, of Boppard, Germany; Charles L. Wesseling, of Haarlem, Holland; Edouard Froidure, of Ypres, Belgium; the Abbé Soulange-Sodin, of Paris, France; D. Tikhomirof, of Moscow, Russia; and A. Merchier, of Lille, France. Several of the speakers deplored the lack of suitable books for young people and the absence of supervision of the book lists of the young. It was clear from the discussion that most of the European countries are distinctly behind the United States in the matter of library facilities for young people.

Prof. C. H. Spence, of Clifton College, England, in presenting the question of the home in relation to civic instruction, maintained that the family was the unit of civic life, and that the discussion of public questions in the family should lay the foundation of civic training and develop such civic virtues as patriotism and public spirit, rigid honesty and a high sense of honor in money matters, a love of fair play and good temper, and respect for the motives and opinions of political opponents. Mr. Charles Rossignol, of Brussels, followed

with a paper on the rôle of the family in propagating doctrines of peace.

Seven papers were devoted to the subject of the family as a factor in the moral education of the child, and here, as in several of the other sections, the question of moral education called forth some of the liveliest discussion of the congress. Gustave Spiller, president of the International Union of Ethical Societies of London, gave the first paper of the series. Moral education in the family he thought should be made more concrete. The Abbé Simon, of Grand-Leez, Belgium, indicated five ways in which the family might influence the moral education of the child—the example of the parents, the formation of good habits in the child, correction for faults and unmoral acts, the selection of the right kind of a school, and the close supervision of the child during the times when he is not in the home. Several of the speakers did not think that the moral education of the child could be separated from religion.

Mrs. Fannie L. Lachmund, of the Teachers' College at St. Louis, Mo., presented a paper on the conservation of the intellectual life of the people through the development of vocational interests and efficiency; George Blondel, of Paris, on the extension of economic knowledge in the home; A. Spreng, of Berne, Switzerland, on the organization of special courses for the study of popular economic questions; M. Boufroy, of Villers-Bretonneux, France, and Walter Rippmann, of England, on the study of modern languages in the home by conversational methods; the study in the home of the children's natural aptitudes and their development with a view to choosing a career, by Henry C. Divine, of England; Dr. L. Sissingh, of Holland, and Mr. Audollent, of France.

The question of family instruction on matters of sex was excellently presented by Prof. Edmond Goblot, of the University of Lyon; Prof. P. Malapert, of the Lycée Louis le Grand, Paris, and Mr. Jules Renault, of Woluwe-Saint-Lambert, Belgium. It was the opinion of the speakers that the home was the proper place to impart instruction concerning matters of sex to children, but it was urged that to accomplish this result satisfactorily scientific courses should be organized for fathers and mothers that they might themselves be properly instructed with reference to the hygiene and pathology of sex and might be given some pedagogic instruction with reference to methods of presenting such knowledge to children. It was pointed out that knowledge of the right sort, and given at the proper time, was the safest guarantee of the purity of the child. Mr. Renault furnished an extended bibliography of works in French calculated to aid parents in the matter of sex instruction. Professor Goblot maintained that instruction in matters of sex was the foundation of moral education, and he deplored the prudery that excluded the functions of the organs

of reproduction from lessons in ethics and religion. The approach to the moral betterment of the race he thought must begin with sexual morality in family education.

The improvement of family life in rural communities was the subject of a half dozen excellent papers. Mr. C. Mallien-Goreux, of Bierwart, Belgium, pointed out the advantages of country life for the education of the child, and he lamented the drift toward the cities. Physically and morally the rural districts furnish the best environment for the child. Statistics show that crime increases and that the race grows physically weaker in consequence of urban residence. He advocated the establishment of agricultural schools throughout the rural districts and the inculcation of doctrines of simpler living. Mr. Paul De Vuyst, vice-president of the congress and inspector of agriculture in the Belgian ministry, presented a thoughtful and forceful paper on the professional education of the farmer and the improvement of conditions of life in rural communities. He traced the economic betterment of Belgian farmers through governmental initiative in agricultural education and he emphasized the importance of ameliorating the social conditions of agricultural communities. John C. Medd, member of the Departmental Committee on Agricultural Education in England, discussed the education of rural children. He called attention to the fact that the rural school has not to educate for the life of the farm only, as many of their pupils migrate to the cities, and he thought that the village communities should supply the towns with good material. He deplored the tendency to give the rural lad less education than the city boy. The country boy, he argued, whether destined to till the fields or not, needs just as thorough an elementary education as the town boy, and is entitled to receive what may enable him to rise to any position in life.

Several papers were presented to this section on the needs and methods of child study in the home, the most significant of which was that by Edmund Schopen, of Stoltzheim, Germany, on the importance of child psychology. The vast movement which had swept over Europe and America, having for its object the better understanding of the mental development of children, he believed, had not sufficiently influenced the home. He called attention in particular to the period of adolescence and the importance of parents comprehending its mental and physical characteristics. A brief paper was presented on the problem of mental effort and mental fatigue, by the writer of this report, and some of the hygienic aspects of special significance to the home, such as sleep, food, and periods of growth.

The third section of the congress considered problems touching family education before school age. The question of the diet of the child was discussed by Doctors Henrotin and Leconte, of Brussels; clothing by Miss Marie Parent, of Genval; sense training by Miss

J. van Doren, of Belgium, and Mrs. Ancelle, of France; play by Mrs. Inna de Kovalevsky, of Russia; the first habits of the child by the Countess of Villermont and Mrs. J. de Meurs, of Belgium; development of the sense of responsibility by Mrs. Louise Van den Plas, of Belgium, Miss Margaret MacMillan, of England, and the Abbé Guilbert, of France; nursery problems by Mrs. C. Gomoete, of Belgium, and Miss Bernard Mole, of England; and questions touching the relation of domestics and governesses to young children by Mrs. Houyoux-Richald, of Belgium, and Pastor H. Brück, of Bochum, Germany.

The fourth section of the congress discussed family education during the school age; and, after section two, it was the largest sectional meeting of the congress. Miss Lempereur, principal of the Lycée Fénelon at Lille, France, presented the opening paper on the question of school age. If conditions are normal and the health of the child good, she thought school instruction in certain studies—gymnastics, manual training, reading, writing, drawing, and number—might begin at the age of 5 years; the more formal study of the maternal language at the age of 7; English, geography, and music at 8; history and the elements of science at 9; German and arithemtic and hygiene at 10, and Latin at 15. Miss L. Baudeuf, of Tourcoing, France, had a paper on the value of the principles of Froebel in the family education of the child, and Mrs. E. L. Franklin, of England, indicated some lines of education that must be carried on in the home during the school age. The home, she urged, must be held responsible for the physical well-being of the child; it must enforce habits of personal hygiene; cultivate a love for physical exercises and fresh air, provide frequent and thorough ablutions and simple and nutritious food. She thought, also, that the home should he held responsible for the training of the conscience of the child, and for moral lessons in purity, truth, honesty, etc.

Professor Merriam, of the School of Education of the University of Missouri, had an important paper on the school's contribution to the home. He pointed out that the home life of boys and girls should consist largely in playing, in seeing and wondering, in doing with the hand what may be useful or ornamental, and in enjoying the printed or related story. In the home is the immediate life of the pupil. Efficiency in immediate life is the best preparation for an effective later life. The viewpoint of the child in his development is more fundamental than that of the adult. The child lives in the present; the adult looks into the future. The school must be productive, not formal. The community may rightly demand of a school a broadly practical education. Thus the school serves as a means of advancing home life. Home life is primarily an end; it is only incidentally a means of education for later life.

The education of girls was the subject of twelve papers by as many different speakers. Doctor Cordier, of Brussels, outlined an elaborate course of semimedical instruction suitable for girls in secondary schools and essential for the duties of wifehood and motherhood, including such topics as dangers of prematurely young marriages, hygiene of pregnancy, conditions attending childbirth, the diet of babies, children's diseases, and infant mortality. Miss C. Hamel, of Munich, Germany, believed that the education of girls should be regarded chiefly from the viewpoints of hygiene, domestic economy, and ethics. Mrs. Van Besien, of Brussels, emphasized the importance of courses of instruction in hygiene, maternity, child study, and dietetics. She pointed out the particular need of such courses in the schools for girls in rural districts. The same topics were recommended in the paper of Mrs. Matilde Garcia del Real, of Madrid; Miss R. Boreux, of Liege, recommended the dropping of many of the so-called literary and artistic studies in girls' schools and substituting laboratory courses in physics, hygiene, and bacteriology. Miss A. Pelseneer, of Ghent, advocated kindergarten training courses, clinical courses in nurseries, and courses in sexual hygiene and child study.

Seven papers presented the problem of nurses, governesses, and domestic servants in their relation to the home education of the child. Most of the speakers emphasized the need of greater training for such posts, and particularly more extended courses in hygiene and child psychology. Several papers were also devoted to the training of teachers. Mr. V. Mirgeut, of Brussels, thought that normal schools and training colleges should devote more time to the psychology of childhood and adolescence, questions touching maternity and paternity, school hygiene, manual training, and social science; and in normal schools for women, domestic science.

The formation of the character of the young was the subject of papers by Mrs. Sophie Bryant, principal of the North London (England) Collegiate School, the Abbé Dejace, principal of St. Paul Institute, at Liege, and Dr. J. van Rees, of Amsterdam. Mrs. Bryant pointed out that a larger share of attention, insight, and skill rather than a larger portion of time was what was most needed in character training, since this kind of educational work can not be measured in hours per week. Steady discipline is what counts most. A well-ordered school life aids most in such virtues as courtesy, fair play, generosity, courage, etc.

The value of manual training in the education of the child was presented by Inspector Marvin, of England; Mrs. Hierta Retzius, of Sweden; Mr. C. Vry, of Holland, and Mr. J. B. Tensi, of Belgium. Mr. Marvin maintained that manual training should be an integral part of the education of every child. The expression of ideas in

manual activities is strong in childhood, and the child's early constructive work contains in germ the adult's artistic and mechanical achievement. Moreover, manual training forms the best basis for character training. Manual training gives keenness, resourcefulness, readiness of mind and hand to turn old things to new uses, and habits of usefulness and economy.

Education in æsthetics was considered from various view points by seven speakers. Mr. J. H. Bradley, head master of the Beadles School, England, argued that modern education was too exclusively intellectual. More attention should be devoted to hand work and art in all their forms as means of intellectual, moral, and æsthetical training. Four important agencies in the cultivation of the æsthetic sense of the child are drawing, music, dancing, and dramatic art. Artistic appreciation can not be put into the child, only drawn out by means of self-expression, and self-expression should at once be the end and the means of training the æsthetic sense. The Abbé Lisin, of Ferriers, Belgium, discussed scenery and country life as factors in the development of the æsthetic sense. We must not only teach the children to love the country, but to love the manual labor in the country fields. Prof. Paul Gautier, of Stanislas College, Paris, presented some of the means of cultivating taste among young people for things artistic. He spoke of the value of the study of artistic buildings, statuary, and paintings through reproductions, supplemented by frequent visits to art museums. Mr. J. Lejeune, of Brussels, gave an account of æsthetic courses in the elementary, secondary, and normal schools of Belgium. Baron Driesen, of Russia, pointed out the value of the theater as an agency in the development of the æsthetic sense of the child.

To the American student of education the small consideration given to coeducation—one brief paper—came as something of a matter of surprise. But it will be recalled that outside of the sparsely settled sections of a few countries in northern Europe, coeducation can scarcely be said to exist in Europe. The paper by Mr. Ernest Contou, of Aquitaine, pointed out the value of coeducation in an outdoor school.

Forty-four papers were presented to section five, which was concerned with family education after the school age, more than a dozen being devoted to the matter of continuation schools for girls. Here, as in the other sections, it was pointed out that elementary and secondary education, as at present administered, fail to give the kinds of training needed for the functions of motherhood, child rearing, and housekeeping. Lady Rücker, of Kings College for Women, England, urged the addition of courses in biology, hygiene, sanitary science, household economics, and child training as requirements for graduation in women's colleges. She also urged the organization of

continuation classes for parents who already have children. Other speakers indicated what was being done in the different European countries in the matter of continuing the education of those who have completed the compulsory school period. In this respect the industrial cities of western Europe seem to surpass the United States.

The same section considered the problem of social education. The paper by Dr. Michael E. Sadler dealt with the problem of supplementary education of young men from the social point of view. He thought that there was a tendency to think too exclusively of the utilitarian and technical side of supplementary education. Such courses should inculcate the love of music, the love of drama, the love of painting, and the other fine arts. Education of character and the training for the duties of the civic life are also of importance. Albert Mansbridge gave an account of the rise of university tutorial classes in England. The purpose of this institution is (1) to arouse among the industrial classes greater interest in higher education and to direct their attention to the facilities already provided; (2) to ascertain the needs and wishes of workers in regard to education; and (3) to provide, either in conjunction with local authorities or otherwise, facilities for studies of interest to workers which have hitherto been overlooked.

School excursions were discussed by Mr. P. Groeninckx, of Belgium, and Professor Desfeuilles, of France. The international exchange of pupils for the purpose of apprehending modern languages was presented from various view points by Mr. H. Mocquillon, of Paris, Mr. François Kemény, of Budapest, and the Abbé Grand, of Cologne. Local organizations in Europe carry on the necessary negotiations for the exchange of pupils.

The sixth section of the congress was devoted to matters concerning the education of abnormal children. Besides the introductory address by Doctor Decroly, of Brussels, on the classification of defective children, the really important address of the section (and of the congress) was that made by Dr. Henry H. Goddard, of Vineland, N. J., on heredity as a factor in mental defectiveness. In his own institution some two hundred family trees have been partially worked out. Forty of them have been studied in detail, giving information as to the mental and physical condition of individuals in from two to five generations. Charts were exhibited which showed much degeneracy running through the families; in several cases where both parents were alcoholic or tuberculous, all the children born to them were feeble-minded. On the other hand, where one parent was tuberculous and the other alcoholic, about half the children were healthy. His chart showed that when both parents were imbecile, most of the children were imbecile. The expert character of Doctor Goddard's work was widely recognized.

The seventh section of the congress dealt with various child-saving agencies such as societies for the prevention of alcoholism and tuberculosis, children's courts, care of abandoned children, etc.; the eighth section considered the various documents and other publications bearing upon family education. In addition to the general and sectional meetings of the congress there were several receptions and visits to various educational institutions.

Three invitations were presented by the United States for the next meeting of the congress. Mrs. Frederic Schoff, on behalf of the Mothers' Congress of America, presented an invitation from the city of Washington; Mrs. J. Scott Anderson, in the name of several organizations, the University of Pennsylvania, and the municipal authorities, presented an invitation from the city of Philadelphia, and Mrs. Fannie Fern Andrews presented an invitation from the city of Boston.

The executive committee decided to accept provisionally the United States as the place of the next meeting, but the matter of city and date, as well as the organization of the next congress, it left to the following American committee: President, Commissioner Elmer E. Brown, of the United States Bureau of Education; vice-president, Prof. M. V. O'Shea, of the University of Wisconsin; secretary, the writer of this report. Other members of the committee: Mrs. Frederic Schoff, of Philadelphia; Mrs. J. Scott Anderson, of Swarthmore; Mrs. Fannie Fern Andrews, of Boston, and Mrs. Ellen M. Henrotin, of Chicago. The next meeting will probably be held during August, 1912 or 1913.

II. REPORT OF THE THIRD INTERNATIONAL CONGRESS ON SCHOOL HYGIENE, HELD AT PARIS AUGUST 2–7, 1910.

By Thomas F. Harrington, M. D., Delegate representing the National Bureau of Education, Washington, D. C.

BOSTON, *September 3, 1910.*

To the COMMISSIONER OF EDUCATION OF THE UNITED STATES.

SIR: I have the honor to respectfully present a report as representative to the Third International Congress on School Hygiene, held at Paris August 2 to 7 of the present year.

The official opening of the congress took place on August 2 at the Sorbonne, Paris. It was a brilliant assembly of more than 1,600 delegates, representing nearly all the countries of the world. Professor Landouzy, dean of the faculty of medicine of Paris, representing the minister of public instruction, presided.

Doctor Landouzy dwelt upon the aims of the congress and stated that there was no greater work than that of moral and physical

hygiene. Hygiene instruction begun at an early age he said meant the moral and the physical health of the individual and of the race. Dr. Albert Mathieu, the president of the congress, replied.

In advocating open-air schools and their extension, Doctor Mathieu said that the time spent and the recreation taken in the open air were of the first importance to the health of the school children. He declared that the education of to-morrow, which will be the natural education, the physiologic education, would be how to improve the intellectual education of the young, while at the same time diminishing the time devoted to study. He made a strong plea for the uniformity of methods in the medical inspection of schools, and showed that the reorganization of the system of school hygiene would result in more air in the schools, in the lungs, and in the programmes.

Short addresses were made by the official representatives of the various governments. The representative of the National Bureau of Education of the United States conveyed to the congress the assurance of widespread interest in this country in the purposes of the congress. The debt which America, as a young country, owes to the Old World, especially to France, in matters of general sciences, education, and art, was duly acknowledged, and the gifts of general anesthesia by etherization, of the amelioration of the ravages of puerperal fever, and the daring and brilliancy of American surgery were offered in part payment for the indebtedness.

The conviction was expressed that educators and physicians in America were awake to the lessons of preventive medicine, and especially to the opportunities here for avoiding many of the conditions now being fought by school hygiene in the older countries.

The hope was expressed that the congress would meet in America in the near future in order that the methods in use here might receive the advantage of review and correction from the leaders in hygiene from the Old World.

The sessions of the congress were held daily at the Grand Palais on August 3, 4, 5, and 6. Each session opened with a general meeting, at which a report upon some particular topic, as "Uniformity of method for physical examination in schools," "Sexual education," "The training and appointment of the school doctor," was presented by special reporters. Discussion continued from 9 to 10.30 o'clock a. m., at which time adjournment took place for the work of the various sections.

In the reports on the uniformity of methods for physical examinations in schools, the French reporters (Doctors Méry and Dufestel) advocated an anthropometric measurement of height, weight, and perimeter of the chest with a record of the respiratory amplitude, and a somatic examination of the chest, of the glandular system, of sight, of hearing, of the skeleton, of the nervous system, as well as

of the scalp and hair. Weighing and measuring without clothing and shoes was advocated; testing hearing by the whispering voice rather than by watch tick was favored; and microscopic examination of the hair in cases of alopecia was thought essential.

The English reporter (Doctor Kerr) divided the duties of the doctor into two groups: (1) For the prevention of infectious diseases; (2) for the improvement of general health and detection of defects requiring amelioration.

The prevention of infectious diseases in large towns and cities was considered futile if limited to efforts in schools alone. "The home and the streets are more promising as a battle ground." "Daily visitation of schools by doctors with a vague preventive aim is waste of time and money." "Inspection for improvement of the general health and the detection of defects must be both scientific and practical. The accumulation of large masses of data is to be discouraged. A preliminary sorting of children on entrance is advocated and after that the recording of *abnormal* children should be employed."

The report on sexual education was presented by Doctor Chotzen, of Breslau, and was the object of much heated controversy, that continued throughout the congress. The necessity of keeing the instruction in the hands of doctors chosen for that purpose was admitted generally, "because for the time being the doctors alone possess the necessary knowledge for this class of teaching." Parents and teachers should be instructed before attempts are made to instruct the pupils. No method presented, by which instruction on sexual hygiene could be given in school to groups of pupils, was considered worthy of approval. Each method suggested had more elements of objection than of approval. No other topic was so fully and earnestly discussed as this topic of the teaching of sexual hygiene.

The third general report, namely, the training and the appointment of the school doctor, was presented by Doctor Lesieur, Lyon, and Doctor Desquin, Antwerp. This report was by far the most important of the congress. Every one realized that upon the proper solution of this problem rested the whole superstructure of school hygiene. Both reporters independently reached the same conclusion, namely, that it is not necessary that the school doctor should be a specialist, but that he should be a man of science and of conscience. Competitive examination, as instituted at Paris by the recent plan of organization, was strongly urged. A general medical knowledge of a superior type, with a special knowledge of problems of infantile medicine, was considered a basis of good preparation. In addition to these, special work in hygiene, in laboratories of bacteriology and chemistry, and a knowledge of sociology and pedagogy with a capacity for teaching both by means of familiar lectures were advocated as

essentials. The necessity for cooperation of doctor, teacher, and the home was accepted as a sine qua non of success.

The programme upon which medical inspection of schools should rest should be without exaggeration of the medical point of view and should give full recognition to the school's aim and purpose. The programme was stated as follows:

> The school, considered, often with reason, to be the source of diseases and divers deformities, ought to serve in preserving the children from those diseases and in repairing the deformities from which they are suffering; to fight against the predisposition which heredity or bad conditions in which they live have placed them; to strengthen their constitutions; in a word to make them suitable, intellectually and physically, in the struggle for life.

The general work of the congress was divided into eleven sections. In each section one or two reporters had been selected to report at the opening of the session upon some particular subject. These reports formed a volume of nearly 500 pages. In addition to these special reports, special communications were admitted at each session of each section. These with the discussions are to be published in book form.

Section 1 was devoted to educational buildings and furnishings. Shower baths were recommended as a part of necessary school equipment. In Norway 27 per cent of the towns have baths in the schools. Some are free, others charge a small price for towels. Swimming baths do not exist in any of their schools, although rescuing the shipwrecked and swimming lessons are given. Children recently at baths are not permitted to go out for recreation on account of danger of catching cold. Objections raised by parents are: Fear of catching vermin in the dressing rooms, the confinement of children in rooms when the air is vitiated by the emanations of linen and dampness, and the direct weakening of power for work in lessons following the bath.

Section 2 was devoted to the hygiene of residential schools. The plan of small dormitories (10 or 12 beds) was favored and the rural, rather than the urban, style of construction advocated. The amateur theatricals and evening parties were condemned as potent factors in causing or aggravating sexual bad habits.

> To warn the boarders of the danger resulting from onanism is a two-edged weapon which slips from the doctor's hands, especially when used prophylactically. It is only in the case where the fault will have been detected that it would be profitable for the guilty to know the dangers to which they are exposed. The explanation can be given by the doctor, the mother, or the teacher (Gozdzicki, Sarsovie).

Section 3 considered medical inspection of schools and individual health records. Practical measures for active application. This section dwelt strongly upon the necessity of cordial relations of doctor,

teacher, home, and the family physician. The differing aspects of medical inspection in rural and in the urban schools were pointed out in well prepared papers. Three examinations during the child's school life were proposed: (1) On admission, as a filter; (2) at about the eighth year of age, a compulsory examination, especially of the mind and special senses; (3) before leaving, preferably in the thirteenth year of age.

Reports were presented from France, Italy, Germany, and England, showing the methods employed in each country. The term "school doctor," or "school physician," expresses more accurately the duties outlined than the term "medical inspector," as understood in America. All reports emphasized the necessity of avoiding interference with the family physician in the care or treatment of school children. The value of school nurses in following up the children inspected was highly indorsed. School clinics had their advocates and their opponents. A most comprehensive and special report on the organization of the medical inspectors of schools in France was presented by Dr. M. L. Guibert.

Physical training was the subject considered in section 4. "Playgrounds are as indispensable for pupils as air and light. These spaces ought to be situated in proximity to schools. It is the absolute duty of authorities who have not dealt with the question of playgrounds to take the subject into consideration" (Converset). The term "physical education" was substituted for the term "gymnastics" "because it rouses an idea of conscious and natural exercise, always adapted to a useful aim and not to a particular system of movements" (Demeny). Physical education should have four qualities—health or strength; dexterity and agility; bodily beauty and initiative; courage, daring, and the persevering will. Each of these is acquired by particular exercises, and physical education is the harmony of the various and different movements which give these qualities physical perfection. Automatic exercises were condemned as being unintelligent, and simple exercises demanding from the pupil a personal effort which develops his will and initiative were advocated. The exercises should be in accordance with age and capacity. In a child the avoidance of violent exercise or overexertion is necessary on account of the overpowering influence of the action of growth. Here games in the open air, liberty, and hygiene are the proper course. The relationship of proper attitudes in manual work and in sloyd was the subject of much discussion. The use of the right and left hands alternately in all possible forms of work was advocated.

Section 5 dealt with the prevention of contagious diseases in school and with illnesses attributable to school attendance. Besides reports

on parasitic diseases of skin and on the prevention of malaria among school children, two special reports were presented on the superintendence of infected children when out of school and the conditions of their readmission to school. The French reporter (Doctor Merklen) advocated isolation periods as follows: Measles, eight days after commencement of eruption; scarlet fever, during peeling, minimum, forty days; smallpox, fifteen days after recovery; chicken pox, during the drying, minimum, fifteen days; rubeola, four or five days after end of the eruption; mumps, twenty-five days after commencement; diphtheria, forty to sixty days; whooping cough, during stage of fits of coughing; vermin, after disappearance of nits. Readmission on certificate of physician *only*. Those exposed are to be excluded as follows: Measles, twenty days; scarlet fever, six weeks; smallpox, fifteen days; rubeola, twenty-five days; diphtheria, while harboring germ; whooping cough, eight days. The American reporter (Dr. Thomas F. Harrington) showed that the greatest danger lies in the mild or unrecognized cases of infectious diseases; that the present state of our knowledge points to the sores, or discharge of lips, mouth, nose, ear, or throat as the probable source of contagion in scarlet fever rather than the peeling or desquamation. The decline in morbidity of school diseases in summer is seasonal and not due to school closure, as statistics for twenty years in Boston show that the decline in the wave of morbidity began three weeks before the opening of the schools in the fall term. School closure not necessary unless there is a room outbreak of diphtheria or scarlet fever. Infection in measles occurs before the rash, hence all not immune are probably infected upon the detection of the first case.

The section voted to adopt the resolution offered by Doctor Harrington that special quarantine nurses were the most effective means of controlling in the home cases that would not accept hospital isolation, and secondly, that the high mortality and morbidity from measles and whooping cough were unnecessary and were due to criminal ignorance on the part of parents. These diseases are more fatal than scarlet fever or smallpox.

The section thought prophylactive doses of antitoxin more effective in controlling diphtheria in schools than the exclusion of "carriers."

The idea was emphasized that parasitic diseases of the skin are all avoidable, and that the liberal use of soap and water is sufficient to accomplish that end. X-ray treatment advocated for favus. Instruction by school nurses was acknowledged to be a most effective method of education in the homes in combating infection.

Open-air schools, vacation colonies, and out-of-school hygiene were the subjects of section 6. The distinction observed in America between open-air "day schools" and the sanatoria was emphasized.

The former rooms or schools are for the weak, anemic, glandular children, and are preventive; the latter form of school—the sanatorium—is for those exhibiting active signs of tuberculosis. In the Lyon open-air school the midday rest is much shorter than in the foreign schools, because the pretubercular do not require so much rest as the tuberculous. The formula "Double rations of air, double rations of food, half rations of work" should be adopted for all open-air instruction. Definite programmes for open-air schools were presented.

In section 7 the teaching staff, their hygiene, their relations with the homes and with the school doctor were given special attention. The physical examination of all candidates for the teaching profession was urged and special examination for signs of tubercular disease, aortic regurgitation, mitral disease with heart failure, Graves's disease (even in its slightest form), marked neurasthenia, chronic Bright's disease, and diabetes mellitus, any one of which should reject the applicant. "Graves's disease is six times more common among females than among males and more common among female teachers than in other individuals" (Williamson). School nurses and the use of schoolrooms by parents were argued as effective agencies in accomplishing happy relationship between masters and parents. "Medical inspectors and hygienists who are interested in the schools ought always to remember that 'once for all school is not a sanatorium; it is for the pupils as for the masters a craft, a profession, and each craft, even the easiest, admits in itself some dangers.' In addition, schoolmasters must not forget that the school rôle does not exclusively consist in accumulating as much knowledge as possible in the pupils' brains, but also in making them clever and healthy men" (Altschul).

Section 8 dealt with the teaching of hygiene to teachers, scholars, and parents. The importance and the necessity of the teaching of infant rearing to mistress and pupils were particularly urged. Also the teaching of temperance in schools. "The master can exercise his trust only if he himself knows general hygiene, and more especially school hygiene. His intelligence and devotion can not supply the place of the knowledge of this delicate science, of which he ought to have a sufficient notion if he desires to have the right of teaching publicly" (Hallé).

Teaching methods and syllabuses in relation to school hygiene was the heading for section 9. Definite time-tables were presented for children of different school ages. These tables were based upon biology, and had in view the recognized fact that young organism, while having a very active cellular activity, soon exhausts itself. Hence the necessity for frequent rest and change.

The subject of inattention was particularly interesting. The causes of inattention given were: (1) Parents' influence; indifferent

to instruction or having need of their children for domestic work; the parents do not impose on them a regular attendance; sometimes they give them a mentality incompatible with fitness for school tasks. (2) Indiscipline, which prevails especially in secondary instruction; also sometimes in a too severe restraint. (3) Insufficiency of acquired knowledge, lack of homogeneity, apathy of character, dull wittedness, exclusive taste for out-of-school tasks; in a word, intellectual weakness. (4) Various physiological causes, e. g., muscular weakness, sensorial infirmities, inequality or insufficiency of age, lymphatism, neuropathic heredity, imperfect nourishment, season, disposition, etc.

Causes of inattention associated with plans and methods of instruction are: (1) The disproportion between some subjects of instruction and the pupils' age; the waste of time. (2) Lack of adaptation of methods, whether intuitive or dialectic, according to the personality of the master or the pupil. (3) With the masters a lack of psychology, which makes them confuse amusement and interest and does not permit them to adapt their process to the pupils' temperaments. The remedies suggested were: All tonics of the mind and body, especially everything that improves and regulates the principal physiological functions; more regularity in school attendance and collaboration with the parents; methods better adapted to pupil's age; programme less full and nearer to life; more concentration in the use of time; a discipline, kind but severe; a better arrangement of material and premises; and, finally, the cultivation by masters of the physiological sense and of intellectual sympathy. The evil effects on attention resulting from imperfect sanitary conditions of the schools, results which are both psychical and physical, were shown.

Another subject of equal importance considered in this section was the advantages and the disadvantages of distributing or concentrating lessons in planning the time-tables. Schreg, of Berne, maintained that too many subjects are taught simultaneously; that there is no unity in the minds of the pupils; and that we aim too exclusively at the training of the memory. Concentration was favored. "If only we succeed in finding an intimate link between the subjects of a certain group, the inadequacy of our present system can be much mitigated."

The subjects were grouped into two classes—the one made up of languages and the other of mathematics and science; the latter subjects to be grouped around one common center—the action of the hand. Lévy-Wogue contended that there was no class type, but pupils only. That what distinguishes pupils from each other are difference of attention, will, and education. He showed that the sensation of fatigue is not measured by the duration of the classes,

but by the nature of the subject; and that every pedagogical problem comes back to the art of keeping the attention. Short lessons and varying exercises were offered as remedies.

The abnormal child was the subject of general discussion in section 10. The distinction between the backward child and the mentally defective was plainly set forth. The advantage of manual work in the time-table was emphasized and the necessity for following the natural sentiments of the child in the order of development, namely, curiosity and attention.

Section 11 was divided into subsections on the hygiene of the eye, of the ear, of the mouth and teeth. Le Prince advocated as a treatment in short-sighted pupils upright writing for the young children, and later slant writing. The manner of holding of the pen by the child has much importance. Dufour corroborated Cohn's rules, viz: (1) In all schools the number of short-sighted pupils increases from class to class. (2) The average degree of short-sightedness increases from class to class. (3) The number of short-sighted pupils increases with the increase of school demands.

Drs. Gellé fils, of Paris, and Hennebert, of Brussels, presented a joint report on how to measure the hearing power of school children. They concluded that all who can not hear a whispered voice at two meters can not profit by stay in the class. Schoolrooms from 8 to 9 meters long for 30 pupils were advocated as best for teacher's voice and pupils' ears. Dental clinics and popular lectures were favored for combating the neglect of oral hygiene.

Each afternoon, demonstrations of physical exercises, games, plays, and folk dances were given by groups of pupils from schools of different nations. Each group demonstrated the strength and the weakness of each type of exercise.

The excursions and social entertainments arranged by the local committees were all well planned and offered to the visitors and delegates very pleasant opportunities for instruction and entertainment.

The concluding meeting of the congress was held at the "Sorbonne" Saturday, August 6. M. Henry Chéron, secretary of the department of marine, presided. Addresses were made by M. Chéron and by Doctor Mathieu, president of the congress. Short addresses were offered by Sir Lauder Brunton, representing England, and Dr. Thomas F. Harrington for the United States. The city of Buffalo, United States of America, extended an invitation to the congress to meet in that city in 1913. The representation from Buffalo agreed that the organization and planning of the scientific, educational, and social parts of the congress should be in the hands of a national committee to be elected later under the auspices of the American School Hygiene Association. With this assurance, Doc-

tor Harrington, as a representative of the executive committee of the American School Hygiene Association, seconded the invitation, and the congress voted unanimously to hold its next meeting at Buffalo in 1913. Sir James Grant pledged the support of Canada.

Respectfully submitted.

THOMAS F. HARRINGTON,
Director of School Hygiene, Boston Public Schools.

III. REPORT OF THE THIRD INTERNATIONAL CONGRESS ON THE PHYSICAL EDUCATION OF THE YOUNG, HELD AT BRUSSELS, AUGUST 10–13, 1910.

BOSTON, *September 7, 1910.*

To the COMMISSIONER OF EDUCATION,
Washington, D. C.

SIR: I have the honor to respectfully present the report of the Third International Congress on the Physical Education of the Young, held at Brussels August 10 to 13 of the present year.

The United States was represented by Drs. H. M. Bracken, Arthur T. Cabot, R. Tait McKenzie, and Thomas F. Harrington. The congress opened August 10 at the Grande Salle des Fates of the Brussels Exposition. Dr. Victor Desquin was president of the congress. In his opening address Doctor Desquin pointed out the extreme importance of physical education and the widespread recognition of this fact to-day. "L'élan est donné déclare t-il, il ne s'arrêtera pas."

M. A. Fosséprez, the secretary-general of the congress, presented a report in which he declared that physical education is a question of progress, of patriotism, and of humanitarianism; that it makes each child a strong unit in the collective humanity; that it is not possible to separate the physical education from general education, for all the biologic phenomena, which are intellectual, moral, or physical, are intimately united. He contended for shorter lessons in schools in order that the pupils might have more time for physical exercises in the open air. Following this report the delegates representing Holland, Austria, Russia, Mexico, Argentine, United States (Doctor McKenzie), Portugal, and France presented the greetings of their respective Governments.

The work of the congress was divided into two general divisions, one devoted to the theory of physical education, the other to the method and application. A series of questions had been prepared and different authorities asked to prepare a report on each. Daily sessions were held on August 11, 12, and 13.

At the opening session the question of preparation of the young for military life was discussed, and out of the discussion the following resolutions were adopted: (1) All grouping recalling the school battalion should be banished from the school. (2) The instruction given in the school and in the societies should not encroach upon the professional military domain. (3) The federation and sporting societies keep their autonomy, and in exchange for certain advantages they offer to the State the result of their work. (4) The gymnastics applied to the school ought to be adequate to the aptitude and to the nature of the child, and directed by educators possessing pedagogical knowledge.

At the second session the question of games, plays, and sports was presented. In this report and discussion the difference between organized games and free play was pointed out, and the danger of prolonged sports, such as football for half an hour, in producing hypertrophy of the heart, was emphasized. There was much difference of opinion on the value and the advantages of football as a school sport, especially for boys under the age of 18 years. Handball was favored in preference to football. All matches, contests, and competition in sports were condemned. Athletics for sport's sake alone were advocated. Here, as in the previous report on preparation for military life, the problem did not have direct bearing upon the conditions in the United States, many of the games and sports discussed, especially football, being different from the American school games.

M. Sluys maintained that the aim of play is the recreation, the development of sociability; that contests and matches destroyed these; that one plays only for the glory. He expressed himself strongly against the publicity given to the "ridiculous and murderous" sporting events.

The congress advocated the adoption of plays and sports better adapted to the physiologic development of the pupils, and recommended a greater preparation of teachers of physical education in point of view of plays and sports. After the age of 18 years interscholastic matches and the giving of prizes of very small value were permitted.

The reports on questions of general methods and on the application of gymnastics were very important and brought out some heated controversies. The discussion at times partook much of the form of personalities between the advocates of rival schools. After much heated discussion it was voted to adopt the conclusion that (1) pedagogic gymnastics ought to comprehend the attitude, the movements, the exercises of which the scientific and experimental studies have verified the physiologic effects as capable of favoring the aim of physical and general education. (2) There is cause for forming laboratories where the physiologic effect of the different gymnastics

should be studied. The results of the labors should be published in a bulletin. The labors should be confined to physiologists possessing the technique of special instructors and accustomed to the practice of gymnastic exercises.

The congress took a decided stand in favor of little or no formal gymnastics in the kindergarten and lower primary grades. At that age the education of the aptitude by means of play with playthings, marches with songs, allegorical plays, and dances were favored. In the upper primary classes, the corrective and analytic gymnastics become most important. "In the first two years of the grammar school and in the classes below those of the atheneum, one should give equal attention to each of the three aims—hygiene, esthetic, economic, but accentuating somewhat corrective gymnastics. He should accustom himself to notice, at that age, in the pupils' bones, an evolution of the organism which it is necessary to watch closely if one wishes to avoid the deformities" (Denéve). In the last year of the grammar school and in the high school, the exercises of application take a prominent place. Games and sports should be recommended to young men.

In the discussion of the application of gymnastics, the following resolutions prevailed: (1) That pedagogic gymnastics should be the basis of the application of gymnastics. (2) The applications under the form of play, of swimming, of dances, of rhythm should appertain to programmes of all degrees of instruction and ought to be in harmony with the fundamental principles of pedagogic gymnastics. (3) The professional application of gymnastics, such as the special exercises of military gymnastics, of those of firemen, of marines, etc. do not form a part of the programme of schools. (4) The school gymnastics should not go to the application, but should tend toward it.

On question No. 6, "Comparative value of the theoretic deduction and the scientific experimentation in the fixation of the bases of the method," M. G. Demény presented the results of his researches. This report was construed as an attack upon present methods of gymnastics, especially the Swedish school. Two sessions were consumed in the discussion, which became very personal at times. Demény contended for movements which, in order to obtain the maximum of useful effect, must be natural and have a practical aim. He deprecated the artificial movements and advocated movements more complete, more varied, more conformable to those connected with the ordinary occupations. He pointed out especially the abuse of the movements of respiration so often associated with an unnecessary expenditure of force preceding the effort.

At the session on August 12 the following resolutions, which had been adopted at the International Congress on School Hygiene at Paris the week previously, were adopted: (1) It is desirable that the physical education of all the boys and of all the girls in all schools,

public and private, shall be obligatory. (2) It would be well that in all the examinations the major points should be reserved for those who prove that they have followed a good course in physical education.

Many of the other questions presented at the congress were similar to those discussed at the Paris Congress on School Hygiene, i. e., medical examination of boarding schools; hygiene of games, plays, and sports; baths, shower baths, and swimming; difference between rural and urban organization of gymnastics; school excursions; plan of gymnastic lessons, etc.

Each day practical demonstrations were given by classes from the various schools of Brussels and vicinity. The congress concluded with a fête of gymnastics comprising about 8,000 gymnasts. This demonstration formed a part of the Brussels general exhibition in session during the Congress on Physical Education.

The delegates representing the United States desire to express their high appreciation of Mr. Bryan, the United States minister at Brussels, for his kind assistance in their mission and to thank him for his homelike hospitality and entertainment during their stay at Brussels.

This report is respectfully submitted on behalf of the delegates, Drs. H. M. Bracken, R. T. McKenzie, and Thomas F. Harrington, who met formally at Brussels and authorized its presentation by the undersigned.

THOMAS F. HARRINGTON,
Director of School Hygiene, Boston Public Schools.

CHAPTER XVII.

EDUCATIONAL PERIODICALS.

LIST OF EDUCATIONAL PERIODICALS CURRENTLY RECEIVED BY THE LIBRARY OF THE BUREAU OF EDUCATION AND OTHER LIBRARIES IN THE DISTRICT OF COLUMBIA.[a]

LIST OF ABBREVIATIONS.

Agr----Department of Agriculture.	bm----bimonthly.
DCT---D. C. Teachers' Library.	ir----irregular.
Ed----Bureau of Education.	m----monthly.
LC----Library of Congress.	q----quarterly.
PL----Public Library.	sm----semimonthly.
	sw----semiweekly.
	w----weekly.

Alabama. *See* Educational exchange; Educator.
Allgemeine deutsche lehrerzeitung. Leipzig. w----Ed.
American college. New York. m----Ed. LC. PL.
American education. Albany. 10 nos----Ed. LC.
American educational review. Chicago, New York. m----Ed. LC.
American journal of religious psychology and education. Worcester (Mass.). ir----Ed. LC.
American physical education review. Springfield (Mass.). 9 nos----Ed. LC.
American primary teacher. Boston. 10 nos----Ed. LC.
American school board journal. Milwaukee. m----Ed. LC.
Amtliches schulblatt des kantons Zürich. Zürich. m----Ed.
Archivos de pedagogía y ciencias afines. La Plata (Argentina). ir----Ed.
Arizona. *See* Arizona journal of education.
Arizona journal of education. Phoenix. 5 nos----Ed.
Arkansas. *See* Arkansas school journal.
Arkansas school journal. Little Rock. m----Ed.
Atlantic educational journal. Baltimore. 10 nos----Ed. LC. PL.
Aus der schule—für die schule. Leipzig. m----Ed.

Blätter für knabenhandarbeit. Leipzig. m----Ed.
Boletín de instrucción primaria. Mexico. m----Ed.
Boletín de instrucción pública. Mexico. m----Ed.
Boletín de la institución libre de enseñanza. Madrid. m----Ed.
Bollettino ufficiale del ministero dell' istruzione pubblica. Roma. w----Ed.

[a] Besides descriptive entry under title, American periodicals are entered by groups under the names of States in which published. Foreign periodicals are entered only under title.

Boston cooking school magazine. Boston. 10 nos.....Ed. LC. Agr.
Bulletin administratif du ministère de l'instruction publique. Paris. w.....Ed.
Bulletin de l'enseignement technique. Paris. sm.....Ed.

California. *See* Sierra educational news; Western journal of education.
Canadian teacher. Toronto. m.....Ed.
Catholic educational review. St. Francis (Wis.). 10 nos.....Ed.
Catholic school journal. Milwaukee. 10 nos.....Ed.
Catholic school work. New York. bm. exc. July.....Ed. LC.
Child-study. London. q.....LC.
Child-welfare magazine. Philadelphia. 10 nos.....Ed. LC.
Christian education. Washington. bm.....Ed.
Christian educator. Cincinnati. q.....LC.
Christian student. New York. q.....Ed.
Colorado. *See* Colorado school journal; Rocky mountain educator.
Colorado school journal. Denver. 10 nos.....Ed.
Corrente. Milan. w.....Ed.
Cuba pedagógica. Habana. sm.....Ed.

Deutsche schule. Leipzig. m.....Ed.
Diritti della scuola. Roma. w.....Ed.
District of Columbia. *See* Christian education; School teacher.

École pratique. Liège. m.....Ed.
École primaire. Bruxelles. sm.....Ed.
Educacion. San Juan. sm.....LC.
Educacion Costarricense. Heredia. m.....Ed. LC.
Éducateur moderne. Paris. 10 nos.....Ed.
Education. Boston. 10 nos.....Ed. LC. PL. DCT.
Éducation. Paris. q.....Ed.
Éducation familiale. Bruxelles. 10 nos.....Ed.
Education gazette. Adelaide (South Australia). m.....Ed.
Education gazette. Cape Town (Africa). ir.....Ed.
Education gazette and teachers' aid. Victoria (Australia). m.....Ed.
Educational bi-monthly. Chicago. bm.....Ed.
Educational exchange. Birmingham (Ala.). m.....Ed.
Educational foundations. New York. 10 nos.....Ed. LC. PL.
Educational news. Edinburgh. w.....Ed.
Educational news bulletin. Madison. m.....Ed.
Educational press bulletin. Springfield (Ill.). m.....Ed.
Educational record. Hobart (Tasmania). m.....Ed.
Educational record. London. 3 nos.....Ed. LC.
Educational record of the province of Quebec. Quebec. m.....Ed. LC.
Educational review. Madras (India). m.....Ed.
Educational review. Rahway (N. J.). 10 nos.....Ed. LC. PL. Agr. DCT.
Educational review. St. John (New Brunswick). m.....Ed.
Educational times. London. m.....Ed. LC.
Educationist. Madras (India). w.....Ed.
Educator. Huntsville (Ala.). m.....Ed.
Educatore. Arezzo (Italy). sm.....Ed.
Educator-journal. Indianapolis. m.....Ed.
Educazione dei bambini. Roma. sm.....Ed.
Elementary school teacher. Chicago. 10 nos.....Ed. LC. PL.

Enseignement mathématique. Paris. bm.----Ed. LC.
Enseignement secondaire. Paris. sm----Ed.
Enseignement secondaire des jeunes filles. Paris. m----Ed.
Enseignement supérieur libre. Bulletin de l'Institut Catholique de Paris. Paris. 10 nos----Ed.
Escuela mexicana. Mexico. w----Ed.
Escuela moderna. Madrid. m----Ed.
Escuela moderna. Suplemento. Madrid. sw----Ed.
Evangelisch-Lutherisches schulblatt. St. Louis. m----Ed.

Florida. *See* Florida school exponent.
Florida school exponent. Miami. 10 nos----Ed. LC.
Folkskolans vän. Göteborg. w----Ed.
Fortbildungsschüler. Solothurn (Switzerland). ir----Ed.

Geographical teacher. London. 3 nos----Ed. LC.
Georgia. *See* School and home.
Gymnastique scolaire. Bruxelles. m----Ed.

History teacher's magazine. Philadelphia. 10 nos----Ed. LC.
Hochschul-nachrichten. München. m----Ed.

Illinois. *See* American educational review; Educational bi-monthly; Educational press bulletin; Elementary school teacher; Manual training magazine; Nature-study review; Progressive journal of education; Religious education; School and home education; School century; School news and practical educator; School reporter; School review; School science and mathematics.
Indiana. *See* Educator-journal; Teacher's journal.
Institución libre de enseñanza. Boletin. Madrid. m----LC.
Instrucción primaria. Habana. m----Ed.
Instructor. Aguascalientes (Mexico). m----Ed. LC.
Inter-mountain educator. Butte (Mont.). 10 nos----Ed.
Internationales archiv für schulhygiene. Leipzig. ir----Ed.
Interstate schoolman. Hutchinson (Kans.). m----Ed.
Iowa. *See* Midland schools; School music.
Irish educational review. Dublin. m----Ed.

Journal d'éducation populaire. Paris. q----Ed.
Journal des instituteurs. Bruxelles. w----Ed.
Journal of education. Boston. w----Ed. LC. Agr. DCT.
Journal of education. Halifax (Nova Scotia). 2 nos----Ed.
Journal of education. London. m----Ed.
Journal of education. Pierre (S. Dak.). 10 nos----Ed.
Journal of educational psychology. Baltimore. 10 nos----Ed. PL.
Journal of geography. Madison. 10 nos----Ed. LC.
Journal of pedagogy. New Rochelle (N. Y.). q----Ed. LC. DCT.
Journal of the minister of public instruction. St. Petersburg. m. (in Russian)----Ed.

Kansas. *See* Interstate schoolman; Western school journal.
Kentucky. *See* Southern school journal.
Kindergarten-primary magazine. Manistee (Mich.). 10 nos----Ed. LC. PL.
Kindergarten review. Springfield (Mass.). 10 nos----Ed. LC. PL.
Körperliche erziehung. Wien. bm----Ed.
Kosmos. Rio de Janeiro. m----LC.

Lehre und mehre. St. Louis (Mo.). m.....LC.
Lehrerin. Leipzig. w.....Ed.
Lehrerin in schule und haus. Leipzig. w.....Ed.
Lehrproben und lehrgänge aus der praxis der höheren lehranstalten. Halle a. S. q.....Ed.
London teacher. London. m.....Ed.
Louisiana. *See* Louisiana school review.
Louisiana school review. Baton Rouge. 10 nos.....Ed.

Magisterio chihuahuense. Chihuahua (Mexico). m.....Ed.
Magisterio español. Madrid. w.....Ed.
Manual training. London. m.....Ed.
Manual training magazine. Peoria (Ill.). bm.....Ed. LC. PL.
Manuel gènèral de l'instruction primaire. Paris. w.....Ed.
Maryland. *See* Atlantic educational journal; Journal of educational psychology.
Massachusetts. *See* American journal of religious psychology and education; American physical education review; American primary teacher; Boston cooking school magazine; Education; Journal of education; Kindergarten review; Pedagogical seminary; Popular educator; Posse gymnasium journal; Primary education; School arts book; Scientific temperance journal.
Mathematical gazette. London. 6 nos.....Ed.
Mathematics teacher. Lancaster (Pa.). q.....Ed.
Michigan. *See* Kindergarten-primary magazine; Moderator-topics; Western journal of education.
Midland schools. Des Moines (Iowa). 10 nos.....Ed.
Mind and body. Milwaukee. m.....Ed. LC.
Minnesota. *See* School education.
Mississippi. *See* Mississippi school journal.
Mississippi school journal. Jackson. m.....Ed.
Missouri. *See* Evangelisch-Lutherisches schulblatt; Lehre und mehre; Missouri school journal.
Missouri school journal. Jefferson City. m.....Ed.
Mitteilungen der Gesellschaft für deutsche erziehungs- und schulgeschichte. Berlin. q.....Ed.
Moderator-topics. Lansing (Mich.). w. exc. July and August.....Ed. LC. Agr.
Modern language teaching. London. 8 nos.....Ed.
Monatshefte der Comenius-gesellschaft. Jena. bm.....Ed.
Monatshefte für den naturwissenschaftlichen unterricht. Leipzig. m.....Ed. LC.
Monatshefte für deutsche sprache und pädagogik. Milwaukee. 10 nos.....Ed.
Monitor de la educación común. Buenos Aires. m.....Ed. LC.
Montana. *See* Inter-mountain educator.
Moral education league quarterly. London. q.....Ed.

Nature-study review. Urbana (Ill.). 9 nos.....Ed. LC. Agr.
Nebraska. *See* Nebraska teacher.
Nebraska teacher. Lincoln. m.....Ed. LC.
Neue bahnen. Zeitschrift für erziehung und unterricht. Leipzig. m.....Ed.
Nevada. *See* Nevada school journal.
Nevada school journal. Reno. 10 nos.....Ed.
New Jersey. *See* Educational review; School exchange.
New Mexico. *See* New Mexico journal of education.
New Mexico journal of education. Santa Fé. 10 nos.....Ed.

New York. *See* American college; American education; American educational review; Catholic school work; Christian student; Educational foundations; Journal of pedagogy; New York teacher's monographs; Normal instructor; Primary plans; School; School bulletin; School journal; School work; Teachers college record; Teachers' magazine.
New York teacher's monographs. New York. q.....LC. PL. DCT.
Normal instructor. Dansville (N. Y.). 10 nos.....Ed. LC.
Norsk skoletidende. Hamar (Norway). w.....Ed.
North Carolina. *See* North Carolina education.
North Carolina education. Raleigh. m.....Ed.
North Dakota. *See* Rotary; Westland educator.
Northwest journal of education. Seattle. 10 nos.....Ed. Agr.
Nuova scuola educatrice. Roma. w.....Ed.
Nuovi doveri. Rivista quindicinale di problemi educativi. Palermo. sm.....Ed.

Oesterreichischer schulbote. Wien. 11 nos.....Ed.
Ohio. *See* Christian educator; Ohio educational monthly; Ohio teacher.
Ohio educational monthly. Columbus. m.....Ed. LC.
Ohio teacher. Columbus. m.....Ed. LC.
Oklahoma. *See* Oklahoma school herald.
Oklahoma school herald. Oklahoma City. 10 nos.....Ed.
Opvoeding. Maaseyck (Belgium). m.....Ed.
Oregon. *See* Oregon teachers' monthly.
Oregon teachers' monthly. Salem. 10 nos.....Ed. LC.
Pädagogische blätter. Gotha. m.....Ed.
Pädagogische studien. Dresden. bm.....Ed.
Pädagogische zeitung. Berlin. w.....Ed.
Pädagogisches archiv. Braunschweig. m.....Ed.
Paidagogikon deltion. Athens. ir.....Ed.
Parents' review. London. m.....Ed. LC.
Pedagogical seminary. Worcester (Mass.). q.....Ed. LC. PL. DCT.
Pennsylvania. *See* Child-welfare magazine; History teacher's magazine; Mathematics teacher; Pennsylvania school journal; Pittsburgh school bulletin; School progress; Teacher.
Pennsylvania school journal. Lancaster. m.....Ed.
Per la scuola e per la classe. Catania (Italy). sm.....Ed.
Pestalozzianum. Zürich. m.....Ed. LC.
Philippine education. Manila. m.....Ed.
Pittsburgh school bulletin. Pittsburgh. 10 nos.....Ed.
Popular education. Boston. 10 nos.....Ed. LC. DCT.
Posse gymnasium journal. Boston. 11 nos.....Ed.
Practical teacher. London. m.....Ed.
Praktische schulmann. Leipzig. 8 nos.....Ed.
Primary education. Boston. 10 nos.....Ed. LC. DCT.
Primary plans. Dansville (N. Y.). 10 nos.....LC.
Progressive journal of education. Chicago. 10 nos.....Ed. LC.
Progressive teacher. Nashville (Tenn.). 10 nos.....Ed. LC.

Queensland education journal. Brisbane. m.....Ed.

Religious education. Chicago. bm.....Ed. LC.
Revista de instrucción primaria. Santiago de Chile. m.....Ed.
Revista de la instrucción publica de Colombia. Bogotá. m.....Ed.
Revue de l'enseignement des langues vivantes. Paris. m.....Ed.
Revue de l'enseignement des sciences. Paris. m.....Ed.

Revue internationale de l'enseignement. Paris. m.....Ed. LC.
Revue pédagogique. Paris. m.....Ed.
Revue universitaire. Paris. 10 nos.....Ed.
Rivista pedagogica. Roma. 10 nos.....Ed.
Rocky mountain educator. Denver. ir.....Ed.
Rotary. Lisbon (N. Dak.). 10 nos.....LC.

School. New York. w. exc. August.....Ed. LC.
School and home. Atlanta (Ga.). 10 nos.....Ed. LC.
School and home education. Bloomington (Ill.). 10 nos.....Ed. LC. DCT.
School arts book. Worcester (Mass.). 10 nos.....Ed. LC. PL.
School bulletin. Syracuse (N. Y.). m.....Ed.
School century. Oak Park (Ill.). 10 nos.....Ed.
School education. Minneapolis. 9 nos.....Ed. LC.
School exchange. Newark (N. J.). bm.....Ed. LC.
School government chronicle. London. w.....Ed.
School guardian. London. w.....Ed. LC.
School hygiene. London. m.....Ed.
School journal. New York. 10 nos.....Ed. LC. PL. DCT.
School journal. Wellington (New Zealand). m.....LC.
School music. Keokuk (Iowa). bm. exc. July.....Ed. LC.
School music review. London. m.....Ed.
School news and practical educator. Taylorville (Ill.). 11 nos.....Ed. LC.
School progress. For teachers, parents, and pupils. Philadelphia. m.....Ed. LC.
School reporter. Chicago. 9 nos.....Ed.
School review. Chicago. 10 nos.....Ed. LC. PL. DCT.
School science and mathematics. Chicago. 9 nos.....Ed. LC. PL.
School teacher. Washington. 10 nos.....Ed. LC. PL.
School work. New York. q.....Ed. LC.
School world. London. m.....Ed.
Schoolbode van Limburg. Peer (Belgium). sm.....Ed.
Schoolgids. Brasschaat (Belgium). w.....Ed.
Schoolmaster. London. w.....Ed.
Schweizerische lehrerzeitung. Zürich. w.....Ed.
Scientific temperance journal. Boston. m.....Ed. LC.
Sierra educational news. San Francisco. m.....Ed.
Skolebladet. Kristiania. w.....Ed.
South Carolina. *See* Southern school news.
South Dakota. *See* Journal of education; South Dakota educator.
South Dakota educator. Mitchell. 10 nos.....Ed.
Southern educational review. Chattanooga (Tenn.). ir.....Ed. LC. PL. Agr.
Southern school journal. Lexington (Ky.). m.....Ed. LC.
Southern school news. Columbia (S. C.). m.....Ed.
Southern workman. Hampton (Va.). m.....Ed. LC. Agr.
Svensk läraretidning. Stockholm. w.....Ed.

Teacher. Philadelphia. 10 nos.....Ed.
Teachers' assembly herald. Baguio (Philippine Islands). d. exc. Mondays, during the period of the vacation assembly.....Ed.
Teachers college record. New York. bm. exc. July.....Ed. LC. PL.
Teachers' guild quarterly. London. q.....Ed.
Teacher's journal. Marion (Ind.). m.....LC.
Teachers' magazine. New York. 10 nos.....Ed. LC. PL.
Tennessee. *See* Progressive teacher; Southern educational review.
Texas. *See* Texas school journal; Texas school magazine.

Texas school journal. Dallas. 10 nos_____Ed. LC. Agr.
Texas school magazine. Dallas. 11 nos_____Ed.
Tribune scolaire. Liège. bm. exc. September_____Ed.

Utah. *See* Utah educational review.
Utah educational review. Salt Lake City. 10 nos_____Ed.

Verdandi. Stockholm. ir_____LC.
Verordnungsblatt des k. k. ministeriums für kultus und unterricht. Wien. sm_____Ed.
Virginia. *See* Southern workman; Virginia journal of education.
Virginia journal of education. Richmond. 10 nos_____Ed. LC.
"Volume." Journal des instituteurs et des institutrices. Paris. w_____Ed.
Vor ungdom. Copenhagen. 10 nos_____Ed. LC.

Washington. *See* Northwest journal of education.
West Virginia. *See* West Virginia educator; West Virginia school journal.
West Virginia educator. Charleston. m_____Ed.
West Virginia school journal. Morgantown. m_____Ed. Agr.
Western journal of education. San Francisco. m_____Ed.
Western journal of education. Ypsilanti (Mich.). 10 nos_____Ed. LC.
Western school journal. Topeka (Kans.). m_____Ed. LC.
Western teacher. Milwaukee. 10 nos_____Ed.
Westland educator. Lisbon (N. Dak.). 10 nos_____LC.
Wisconsin. *See* American school board journal; Catholic educational review; Catholic school journal; Educational news bulletin; Journal of geography; Mind and body; Monatshefte für deutsche sprache und pädagogik; Western teacher; Wisconsin journal of education.
Wisconsin journal of education. Madison. 10 nos_____Ed. Agr.
Wyoming. *See* Wyoming school journal.
Wyoming school journal. Laramie. 10 nos_____Ed. LC.

Zeitschrift für den physikalischen und chemischen unterricht. Berlin. bm_____Ed.
Zeitschrift für experimentelle pädagogik. Münster. ir_____Ed.
Zeitschrift für kinderforschung. Langensalza. m_____Ed.
Zeitschrift für lateinlose höhere schulen. Leipzig. ir_____Ed.
Zeitschrift für lehrmittelwesen und pädagogische literatur. Wien. 10 nos_____Ed.
Zeitschrift für philosophie und pädagogik. Langensalza. m_____Ed.
Zeitschrift für schulgeographie. Wien. m_____Ed.
Zeitschrift für schulgesundheitspflege. Hamburg. m_____Ed.
Zentralblatt für die gesamte unterrichtsverwaltung in Preussen. Berlin. m_____Ed.
Zuid en Noord. Vanderpoorten in Ghent (Belgium). m_____Ed.

CHAPTER XVIII.

EDUCATIONAL DIRECTORY.[a]

I.—Chief State School Officers.

Name.	Address.	Official designation.
Henry J. Willingham	Montgomery, Ala	State superintendent of education.
Kirke T. Moore	Phoenix, Ariz	Territorial superintendent of public instruction.
George B. Cook	Little Rock, Ark	State superintendent of public instruction.
Edward Hyatt	Sacramento, Cal	Do.
Mrs. Helen Marsh Wixson	Denver, Colo	Do.
Charles D. Hine	Hartford, Conn	Secretary of state board of education.
Thomas C. Roe	Dover, Del	Do.
A. T. Stuart	Washington, D. C	Superintendent of District schools.
W. M. Holloway	Tallahassee, Fla	State superintendent of public instruction.
M. L. Brittain	Atlanta, Ga	State school commissioner.
Grace M. Shepherd	Boise, Idaho	State superintendent of public instruction.
Francis G. Blair	Springfield, Ill	Do.
Charles A. Greathouse	Indianapolis, Ind	Do.
A. M. Deyoe	Des Moines, Iowa	Do.
E. T. Fairchild	Topeka, Kans	Do.
Ellsworth Regenstein	Frankfort, Ky	Do.
T. H. Harris	Baton Rouge, La	State superintendent of public education.
Payson Smith	Augusta, Me	State superintendent of public schools.
M. Bates Stephens	Annapolis, Md	State superintendent of public education.
David Snedden	Boston, Mass	State commissioner of education.
Luther L. Wright	Lansing, Mich	State superintendent of public instruction.
C. G. Schulz	St. Paul, Minn	Do.
J. N. Powers	Jackson, Miss	State superintendent of public education.
Howard A. Gass	Jefferson City, Mo	State superintendent of public schools.
W. E. Harmon	Helena, Mont	State superintendent of public instruction.
J. W. Crabtree	Lincoln, Nebr	Do.
John Edwards Bray	Carson, Nev	Do.
H. C. Morrison	Concord, N. H	Do.
Chas. J. Baxter	Trenton, N. J	Do.
J. E. Clark	Santa Fe, N. Mex	Territorial superintendent of public instruction.
Andrew S. Draper	Albany, N. Y	State commissioner of education.
J. Y. Joyner	Raleigh, N. C	State superintendent of public instruction.
Edwin J. Taylor	Bismarck, N. Dak	Do.
Frank W. Miller	Columbus, Ohio	State commissioner of common schools.
Robert H. Wilson	Guthrie, Okla	State superintendent of public instruction.
L. R. Alderman	Salem, Oreg	Do.
Nathan C. Schaeffer	Harrisburg, Pa	Do.
Walter E. Ranger	Providence, R. I	Commissioner of public schools.
J. E. Swearingen	Columbia, S. C	State superintendent of education.
C. G. Lawrence	Pierre, S. Dak	State superintendent of public instruction.
R. L. Jones	Nashville, Tenn	Do.
F. M. Bralley	Austin, Tex	Do.
A. C. Nelson	Salt Lake City, Utah	Do.
Mason S. Stone	Montpelier, Vt	State superintendent of education.
J. D. Eggleston, jr	Richmond, Va	State superintendent of public instruction.
Henry B. Dewey	Olympia, Wash	Do.
M. P. Shawkey	Charleston, W. Va	State superintendent of free schools.
C. P. Cary	Madison, Wis	State superintendent of public schools.
A. D. Cook	Cheyenne, Wyo	State superintendent of public instruction.
Walter E. Clark	Juneau, Alaska	Governor, and ex officio superintendent of education.
Willis T. Pope	Honolulu, Hawaii	Superintendent of public instruction.
Frank R. White	Manila, P. I	Director of education.
E. G. Dexter	San Juan, P. R	Commissioner of education.

[a] Corrected to November, 1910, in so far as changes have been reported to the bureau.

II.—City Superintendents.[a]

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
ALABAMA.					
Anniston	David Rhodin Murphy[b]				
Bessemer	A. A. Persons				
Birmingham	John Herbert Phillips	3	July 1, 1883	July 1, 1911	$4,800
Eufaula	Frank Lee McCoy	3	Apr. —, 1895	May 31, 1911	1,800
Florence	James Bothwell Lockhart	2	June 26, 1907	June 26, 1911	1,320
Gadsden	Walter Evans Striplin	2	Jan. —, 1903	June —, 1912	2,000
Girard	Wilmer C. Hughes	1	—— —, 1910	June 2, 1911	1,000
Huntsville	Robert Ernest Sessions	1	May 25, 1908	May 26, 1911	2,000
Mobile	Samuel S. Murphy	4	Sept. 1, 1900	Sept. 1, 1912	3,000
Montgomery	Charles Lewis Floyd	2	July 1, 1889	June 30, 1911	3,000
New Decatur	William F. Jones	2	June —, 1909	June 30, 1912	1,500
Opelika	Floy Hall	1	July 1, 1910	May 24, 1911	1,500
Phoenix	Horace Greeley Vandiver[b]				
Selma	Arthur Fort Harman	1	Mar. —, 1908	June 30, 1910	2,400
Talladega	Daniel A. McNeill	2	May —, 1906	Sept. —, 1911	1,500
Troy	John P. Selman	3	—— —, 1900	—— —, 1912	1,500
Tuscaloosa	James Henry Foster[b]				
ARIZONA.					
Bisbee	Charles F. Philbrook	1	Aug. —, 1904	July 31, 1910	2,700
Douglas	William E. Lutz	2	Jan. 1, 1906	Aug. 31, 1911	3,000
Phoenix	John D. Loper	1		June 30, 1911	3,000
Prescott	Warren D. Baker	1	Apr. 1, 1909	June 10, 1910	2,100
Tucson	Sidney Carleton Newsom	4	June 1, 1908	June 1, 1912	3,000
ARKANSAS.					
Fayetteville	Frank S. Root	1	June 1, 1907	June 1, 1911	1,000
Fort Smith	James W. Kuykendall	1	May 28, 1905	June 15, 1910	2,640
Helena	Samuel Hamilton Spragins	1	Sept. —, 1901	June 1, 1910	1,800
Hot Springs	Frank Ward Miller	1	July 1, 1908	July 1, 1911	2,400
Jonesboro	Dudley T. Rogers	1	Sept. —, 1893	Sept. 1, 1911	1,500
Little Rock	Robert C. Hall	1	May —, 1909	May —, 1911	2,800
Paragould	H. R. Partlow[b]				
Pine Bluff	Junius Jordon	4	July —, 1906	July —, 1912	2,000
Texarkana	George W. Reid	1	June 1, 1910	May 31, 1911	2,400
CALIFORNIA.					
Alameda	Will C. Wood	4	May —, 1907	May —, 1911	3,000
Bakersfield	David Whitson Nelson	4	July 1, 1896	June 30, 1910	1,725
Berkeley	Frank Forest Bunker	4	July 1, 1908	July 1, 1912	4,000
Eureka	Delmar L. Thornbury	4	Oct. 1, 1906	June 30, 1911	1,800
Fresno	Charles Laurie McLane	4	July —, 1899	June 30, 1913	3,500
Grass Valley	J. S. Hennessy	1	July —, 1900	July —, 1911	2,100
Los Angeles	John H. Francis	4		Aug. 1, 1914	5,000
Napa	John L. Shearer[c]	1	Aug. —, 1879	May 26, 1911	1,600
Oakland	John William McClymonds	4	Apr. —, 1889	Apr. 1, 1913	4,000
Pasadena	Arthur L. Hamilton	4	June —, 1903	June 30, 1911	3,000
Petaluma	Eldridge Bachman Dykes[c]	1	June 1, 1908	June —, 1911	1,650
Pomona	Henry Presley Reynolds	1	June 15, 1909	June —, 1910	1,800
Redlands	Charles Herbert Covell	1	July 1, 1909	June 30, 1910	2,800
Riverside	Arthur Newhall Wheelock	1	July 1, 1902	.....do.....	2,700
Sacramento	Oliver W. Erlewine	4		Dec. 31, 1914	2,700
San Bernardino	F. W. Conrad				
San Diego	Duncan MacKinnon	4	July 1, 1906	July 1, 1914	3,600
San Francisco	Alfred Roncovieri	4	Jan. —, 1906	Jan. —, 1911	4,000
San Jose	Alexander Sheriffs	4	July 1, 1906	July 1, 1914	3,600
San Rafael	Archibald Barron Anderson	4	Feb. 1, 1910	July —, 1912	2,700
Santa Ana	John A. Cranston	4	May —, 1906	July 1, 1910	2,500
Santa Barbara	Francis M. Fultz	4	Aug. 1, 1909	Aug. 1, 1913	2,500
Santa Clara	William John Hayward	2	July —, 1906	July 1, 1912	
Santa Cruz	John William Linscott	1	July 7, 1906	June 30, 1910	2,400
Santa Rosa	A. C. Barker[c]				
Stockton	James A. Barr	4	Oct. 19, 1891	Oct. 19, 1911	3,000
Vallejo	Howard Ford[c]	2	July 1, 1906	June 30, 1910	2,530
Watsonville	Thomas Smith MacQuiddy	1	May —, 1907	.....do.....	1,900
COLORADO.					
Boulder	William V. Casey				
Canon City	Frank W. Shultes[d]	1	June 1, 1909	June 1, 1911	1,600
Colorado Springs	Carlos M. Cole	3	May 16, 1910	Aug. —, 1913	3,500
Cripple Creek	Wilson M. Shafer	1	Sept. —, 1901	Sept. —, 1910	3,000
Denver	Charles Ernest Chadsey	3	Sept. 1, 1907	Sept. 1, 1913	6,000

[a] In cities of 4,000 population and upward.
[b] For 1908–9; no later information.
[c] Supervising principal.
[d] Supervisor of elementary schools.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
COLORADO—continued.					
Florence	Homer H. Adams	1	June 1, 1910	May 31, 1911	$1,500
Grand Junction	John Henry Allen	3	June —, 1904	May —, 1910	2,000
Leadville	Frederick Pasqua Austin	1	Sept. 1, 1903	Aug. 31, 1910	2,200
Pueblo:					
District No. 1	Milton Chase Potter	5	Sept. —, 1908	June —, 1914	3,500
District No. 20	John Francis Keating	3	July 19, 1896	June 30, 1912	4,000
Salida	Edgar Kesner	1	Sept. 1, 1898	Aug. 31, 1910	1,700
Trinidad	Jesse Robert Morgan	1	Mar. —, 1909	Sept. —, 1910	1,800
Victor					
CONNECTICUT.					
Ansonia	Frank M. Buckley	1	July 20, 1908	July 13, 1910	2,000
Bridgeport	Charles Winslow Deane	3	May —, 1893	Aug. 20, 1912	3,900
Bristol	Newell Jennings	1	Feb. 1, 1908	July 15, 1911	1,200
Danbury	George Hussey Tracy	1	Aug. 1, 1906	Aug. 1, 1910	2,400
Derby	John W. Peek	(a)	—— —, 1893		2,000
Hartford	Thomas Snell Weaver	1	June —, 1901	June —, 1911	2,000
Manchester	Alfred Francis Howes	1	June 23, 1910	July 15, 1911	1,600
Meriden	William Powers Kelly	(a)	Aug. 1, 1905		3,000
Middletown	William A. Wheatley	1	Jan. —, 1910	June —, 1911	2,500
Naugatuck	Frank Warren Eaton	1	July —, 1900	July 1, 1910	2,500
New Britain	Stanley H. Holmes	1	Aug. —, 1906	Aug. —, 1910	3,200
New Haven	Frank Herbert Beede	5	—— —, 1900	—— —, 1911	3,800
New London	Charles Bulkeley Jennings	1	May —, 1908	May —, 1911	2,500
Norwalk	William E. Chancellor [b]	(a)	—— —, 1908		2,500
Norwich:					
Central district	William D. Tillson	1	Oct. —, 1909	May —, 1911	2,300
West Chelsea district.	John Byron Stanton	1		July 1, 1910	1,800
Putnam					
Rockville	Harry Brooks Marsh	1	Sept. —, 1906	June —, 1910	2,100
Southington	William Charles Moore	1	Jan. —, 1910	Jan. —, 1911	2,200
South Manchester	Fred A. Verplanck	1	Aug. —, 1893	July 14, 1910	3,000
South Norwalk	(See Norwalk.)				
Stamford	Everett C. Willard	1	July 8, 1891	Sept. —, 1910	3,250
Torrington	Edwin H. Forbes	1	Sept. —, 1886	June 24, 1910	3,750
Wallingford	Alfred B. Morrill	1		Aug. 1, 1911	2,000
Waterbury	Berlin Wright Tinker	2	—— —, 1897	—— —, 1911	3,800
West Haven	Edgar Crane Stiles	1	Sept. —, 1898	July 1, 1911	3,100
Willimantic					
Winsted	Hudson P. Leavenworth	1	July 16, 1909	July 15, 1910	2,000
DELAWARE.					
Wilmington	George Wells Twitmyer	2	July —, 1900	June 30, 1911	2,500
DISTRICT OF COLUMBIA.					
Washington	Alexander T. Stuart		Jan. 6, 1908	June 30, 1911	5,000
FLORIDA.					
Jacksonville	James Q. Palmer [c]	4	Dec. —, 1907	Jan. —, 1913	2,400
Key West	Virgil Scott Lowe [c]	4	Jan. 5, 1909	.....do.....	1,200
Lake City	John William Burns [c]	4	.....do.....	.....do.....	1,200
Live Oak	J. W. O'Hara [d]	4		Jan. 1, 1913	
Ocala	John Hunter Workman [d]	1	—— —, 1903	May —, 1911	1,300
Palatka	George Alan Stephens [d]	1	July —, 1909	June —, 1911	1,400
Pensacola	Nathan Burrel Cook [c]	4	Jan. —, 1885	Jan. 1, 1913	2,100
St. Augustine	R. B. Rutherford [c]	4			
Tampa	Ludwig Wilhelm Buchholz [c]	4	Jan. 5, 1909	Jan. —, 1913	2,400
GEORGIA.					
Albany	Sidney R. de Jarnette	1		July 1, 1910	1,600
Americus	Augustus Griffin Miller	1	July 1, 1904	.....do.....	1,800
Athens	George Glenn Bond	3	July 1, 1891	June 30, 1911	2,300
Atlanta	William Martin Slaton	1	June 8, 1907	June 3, 1911	3,000
Augusta	Lawton Bryan Evans	1	Nov. 11, 1882	Jan. 1, 1911	3,000
Brunswick	Nathaniel Harrison Ballard	3	—— —, 1901	—— —, 1913	2,400
Columbus	Roland Bird Daniel	1	Nov. 1, 1909	May 31, 1911	2,250
Cordele	Jason Scarboro	1	July 1, 1909	July 1, 1911	1,800
Dalton	Thomas Smith Lucas	1	July —, 1908	June 1, 1911	1,500
Dublin	Roland E. Brooks	2	—— —, 1908	June —, 1911	1,700
Elberton	Philip Bird Winn	1	June —, 1909	June 30, 1911	1,800

[a] Indefinite term.
[b] Union district superintendent.
[c] County superintendent.
[d] Principal of high school.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
GEORGIA—continued.					
Gainesville	James Austin Mershon	1	Mar. 1, 1910	May 20, 1911	$1,500
Griffin	Joseph Henry Walker	1	July 1, 1908	July 1, 1910	2,000
La Grange	Clifford Lewis Smith	1	June 1, 1903	May 31, 1910	1,700
Macon	Carleton B. Chapman	1	Aug. 1, 1904	Aug. 1, 1911	2,400
Marietta	William Thomas Dumas	1	—— —, 1904	May 27, 1911	1,575
Milledgeville	William E. Reynolds	1	June —, 1896	June 1, 1911	1,500
Newnan	Charles K. Henderson, jr.[a]				
Rome	James Coffee Harris	1	Oct. 1, 1892	June 1, 1911	2,000
Savannah	Otis Ashmore	1	July —, 1896	July 1, 1910	3,600
Thomasville	John Stephen Allen	1	May 1, 1908	Sept. 1, 1911	1,800
Valdosta	William Otis Roberts	1	Oct. —, 1909	June —, 1911	1,350
Waycross	Edwin Aldine Pound	1	Apr. —, 1895	June 1, 1911	2,520
IDAHO.					
Boise	Charles S. Meek[b]				
Pocatello	Walter Raleigh Siders	1	Aug. 1, 1899	June 1, 1911	2,750
ILLINOIS.					
Alton	Robert Allen Haight	1	Jan. 1, 1881	June 30, 1910	2,500
Aurora:					
East side	Conrad Myron Bardwell	1	July 1, 1896	July 1, 1911	3,000
West side	Carleton Ellsworth Douglass	½	Jan. 17, 1910	June 24, 1910	2,000
Batavia	Hugh Alvin Bone	1	May —, 1909	June —, 1911	2,009
Beardstown	Horace G. Russell	1	May 25, 1910	May 31, 1911	1,700
Belleville	George H. Busick	1	—— —, 1903	July 1, 1911	2,300
Belvidere:					
North side	Eugene D. Merriman	1	Sept. —, 1905	June —, 1911	1,800
South side	C. H. Le Vitt[c]				
Bloomington	John Kay Stableton	1	July —, 1901	June 30, 1911	3,000
Blue Island	J. E. Lemon	1		June 24, 1910	3,000
Cairo	Taylor Clinton Clendenen	1	July —, 1886	May 31, 1911	2,400
Canton	George W. Gayler	1	May —, 1910	June —, 1911	1,800
Centralia	Samuel Hallam Bohn	1		do	1,800
Champaign	William Watson Ernest	1	Mar. 1, 1907	June 30, 1911	2,500
Charleston	De Witt Elwood	1	July 1, 1903	June 30, 1910	1,800
Chicago	Ella Flagg Young	1	July 30, 1909	Dec. 31, 1910	10,000
Chicago Heights	F. M. Richardson	1	—— —, 1901	July 1, 1911	2,700
Clinton	Henry Hugh Edmunds	1	July 1, 1909	June 30, 1910	1,620
Collinsville					
Danville	Lin H. Griffith	1	July 31, 1899	Aug. 1, 1911	2,700
Decatur	Harry Bruce Wilson	1	Sept. 1, 1907	Sept. 1, 1910	3,000
DeKalb	Luther Augustus Hatch	1	July 1, 1907	July 1, 1910	2,000
Dixon:					
North side	H. V. Baldwin	1	—— —, 1898	June —, 1911	1,500
South side	W. R. Snyder[c]				
Duquoin	Charles William Houk	1	May —, 1901	May 29, 1910	1,600
East St. Louis	John Elmer Miller	1	Aug. 1, 1904	July 31, 1911	2,700
Edwardsville	Heywood Coffield	1	June 1, 1907	June 1, 1911	1,650
Effingham	L. W. Chatham	1	May 26, 1910	June 30, 1911	1,200
Elgin	Robert I. White	1	May —, 1907	do	2,800
Evanston:					
District No. 75	Homer Hitchcock Kingsley	1		June 30, 1910	3,500
District No. 76	Fred W. Nichols	1	—— —, 1886	July 1, 1910	3,350
Forest Park	Asa Paul Goddard	1	Sept. —, 1906	June —, 1911	1,350
Freeport	Sigel Elza Raines	1	Feb. 1, 1904	June 30, 1911	2,500
Galena	Benjamin L. Birkbeck[c]				
Galesburg	William L. Steele	1	Sept. —, 1885	June 30, 1911	3,000
Harvey	Frank Lester Miller	1	Sept. —, 1892	June 30, 1910	2,000
Hoopeston	Samuel Kline McDowell	1	Feb. 1, 1909	June 30, 1911	2,000
Jacksonville	William Alexander Furr	1	July —, 1905	May 26, 1910	2,250
Joliet	Edward F. Worst	1	July 1, 1909	July 1, 1910	3,500
Kankakee	Franklin N. Tracy	1	July —, 1881	July 1, 1911	2,100
Kewanee	Robinson Godfrey Jones	1	Sept. —, 1907	June 1, 1911	2,600
La Grange	Frank Elwood Sanford	1	Sept. —, 1890	June 30, 1911	3,000
La Salle	James B. McManus	1	—— —, 1900	June 24, 1910	1,700
Lincoln	Anthony Middleton	1	Feb. —, 1908	June 1, 1911	1,800
Litchfield	Almon S. Anderson	1	—— —, 1908	May 31, 1910	1,600
Macomb	James C. Burns	1	June —, 1907	May 31, 1911	1,600
Mattoon	Gilbert P. Randle	1	—— —, 1902	June 30, 1911	2,400
Maywood	John Porter Adams	1	—— —, 1895	do	2,500
Mendota	E. H. Murray				
Metropolis	F. C. Prowdley	1	Aug. 1, 1906	Aug. 1, 1910	1,200
Moline	Bennett Barron Jackson	1	June 10, 1907	June 30, 1911	3,000

[a] For 1907–8; no later information.
[b] For 1908–9; no later information.
[c] From the Illinois state school directory for 1909–10.

II.—City Superintendents—Continued.

City.	Superintendent	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
ILLINOIS—continued.					
Monmouth	Charles Elsworth Joiner	1	June 17, 1909	June 30, 191]	$2,000
Morris	Edwin D. Martin	1	Sept. 5, 1910	June —, 1911	1,700
Mount Carmel	Walter S. Booth	1	.....	June 1, 1911	1,700
Mount Vernon	William Miner[a]	.....	.....	.....	.....
Murphysboro	Samuel J. Shomaker	1	Apr. 27, 1910	May 15, 1911	1,200
Normal	Exum Woodard Davis	1	Apr. —, 1908	June —, 1910	1,700
Olney	John Alfred Stevenson	1	June 2, 1909	May 31, 1911	1,350
Ottawa	Christopher Joseph Byrne	1	Aug. —, 1905	June 30, 1910	1,800
Pana	George B. Coffman	1	June —, 1908	June —, 1910	1,600
Paris	E. B. Brooks[a]	.....	.....	.....	.....
Pekin	James J. Crosby	1	June —, 1904	July 1, 1911	1,800
Peoria	Gerard T. Smith	1	.....	July 31, 1910	3,300
Peru	James Robert Hart	1	June —, 1907	June 10, 1910	1,600
Pontiac	Arthur Verner	1	—— —, 1908	June —, 1911	2,300
Princeton	Harmon Ebert Waits	1	June 15, 1910	.....	1,600
Quincy	David Benjamin Rawlins	1	June 1, 1903	June 30, 1910	2,200
Rockford	Peleg Remington Walker	1	—— —, 1884	July 1, 1910	2,500
Rock Island	Herbert B. Hayden	1	Aug. 1, 1900	July 31, 1911	2,500
Springfield	Joseph H. Collins	1	June —, 1888	June 30, 1910	3,000
Spring Valley	James Henry Browning	1	Sept. 1, 1909	June 1, 9111	1,400
Sterling:					
District No. 8	Miss Annie Laurie Hill	1	Nov. 1, 1902	June 17, 1911	1,300
District No. 11	H. L. Chaplin[a]	.....	.....	.....	.....
Streator	M. G. Clark	1	July —, 1905	July —, 1910	2,500
Sycamore	Karl Douglas Waldo	1	Apr. 1, 1910	June 20, 1911	1,500
Taylorville:					
East side	Henry L. Fowkes	1	July 1, 1901	July 1, 1911	1,065
West side	Prentice Hoover Deffendall	1	May 6, 1909	May —, 1911	1,063
Urbana	Ananias P. Johnson	1	May 29, 1906	Aug. 1, 1911	2,250
Waukegan	Miriam A. Besley	1	June —, 1901	June —, 1910	2,500
INDIANA.					
Alexandria	Arthur L. Trester	1	Oct. 22, 1909	June 1, 1910	1,500
Anderson	James Buchanan Pearcy	1	June —, 1905	July 31, 1911	2,700
Bedford	Joseph Benjamin Fagan	1	May —, 1906	.....do.....	2,000
Bloomington	Henry Lester Smith	3	Aug. 1, 1909	Aug. 1, 1913	2,500
Bluffton	Philemon A. Allen	2	Dec. —, 1906	June 30, 1911	1,620
Brazil	Charles C. Coleman	3	May —, 1907	June 15, 1911	2,300
Columbus	Thomas F. Fitzgibbon	3	Aug. 1, 1901	July 31, 1910	2,000
Connersville	Guy Mitchell Wilson	1	July 1, 1908	July 1, 1910	1,900
Crawfordsville	Linnaeus Neal Hines	3	July 1, 1908	July 1, 1912	2,100
Decatur	Elmer Ellsworth Rice	1	June —, 1909	June 15, 1911	1,400
East Chicago	Edwin Nelson Canine	1	—— —, 1905	Sept. 1, 1911	2,200
Elkhart	Ellis Herbert Drake	3	July 1, 1906	June 30, 1911	2,400
Elwood	.....	.....	.....	.....	.....
Evansville	James Harney Tomlin	1	Mar. 28, 1910	July 31, 1911	3,600
Fort Wayne	Justin N. Study	3	—— —, 1896	July 1, 1912	3,600
Frankfort	Oscar Morton Pittenger	1	Nov. 1, 1909	June 30, 1910	1,800
Franklin	Paul Van Riper	1	June —, 1910	Sept. 12, 1911	1,800
Garrett	Francis M. Merica	3	June —, 1905	Aug. 1, 1912	1,400
Gas City	James H. Jeffrey	1	Aug. —, 1901	Apr. —, 1910	1,350
Goshen	Lillian E. Michael	2	Oct. 8, 1906	Aug. 1, 1910	2,000
Greenfield	William Chester Goble	3	July 1, 1903	July 1, 1911	1,500
Greensburg	Elmer C. Jerman	1	May 1, 1910	June 30, 1911	1,800
Hammond	Charles May McDaniel	3	—— —, 1905	June —, 1912	3,000
Hartford City	William A. Myers	1	Mar. 16, 1908	Aug. 1, 1910	1,600
Huntington	William Patterson Hart	1	Aug. 31, 1903	Aug. 31, 1911	2,100
Indianapolis	Calvin N. Kendall	4	July 1, 1900	July 1, 1913	5,800
Jeffersonville	C. McHenry Marble	3	Feb. 22, 1904	Aug. 1, 1911	1,800
Kokomo	Robert A. Ogg	1	Aug. 1, 1898	July 31, 1911	1,800
La Fayette	Robert Foster Hight	1	June —, 1904	Aug. 1, 1910	2,500
Laporte	Arthur Deamer	1	Aug. —, 1909	Aug. —, 1911	2,200
Lawrenceburg	Jesse Winfield Riddle	2	—— —, 1904	Aug. 1, 1911	1,800
Lebanon	Henry Grant Brown	2	Apr. 1, 1905	May 30, 1910	1,600
Linton	Joseph Henry Haseman	1	Apr. —, 1905	July 31, 1911	1,500
Logansport	Albert H. Douglass	1	June 1, 1891	July 31, 1910	2,400
Madison	Rolla Milton Tryon	2	May —, 1909	July 31, 1911	1,809
Marion	Joe T. Giles	2	Aug. —, 1908	Aug. —, 1911	2,300
Martinsville	Jeremiah E. Robinson	1	June —, 1901	July 31, 1910	1,500
Michigan City	Louis Ward Keeler	2	Sept. 1, 1904	Sept. 1, 1912	2,500
Mishawaka	John F. Nuner	1	Aug. —, 1903	Aug. 1, 1911	2,000
Montpelier	Luther E. Kelley	1	Sept. 1, 1895	.....do.....	1,200
Mount Vernon	Edward G. Bauman	2	—— —, 1903	June 1, 1911	1,800
Muncie	Benjamin F. Moore	1	Aug. 1, 1908	Aug. 1, 1910	3,000
New Albany	Harry A. Buerk	2	June —, 1907	June —, 1910	2,000

[a] From the Illinois state school directory for 1909–10.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
INDIANA—continued.					
Noblesville	Emmet C. Stopher	1	June —, 1909	July 31, 1910	$1,200
Peru	Edward Everett Hostetler	1	July 1, 1908	July 1, 1911	1,700
Plymouth	Ray Arah Randall	3	Aug. 1, 1903	Aug. 1, 1912	2,000
Portland	Grant E. Derbyshire	1	Dec. —, 1905	Aug. 1, 1911	1,750
Princeton	Marquis D. Webb	1	June 1, 1910	June 1, 1911	1,800
Richmond	Thomas Abbott Mott	3	—— —, 1896	Aug. 1, 1911	2,500
Rushville	Joseph Hiram Sholl	1	May —, 1904	.....do.....	1,600
Seymour	John A. Linke	1	July —, 1909	June 1, 1911	1,500
Shelbyville	Samuel C. Ferrell	2	June 20, 1908	July 31, 1910	2,000
South Bend	John Anderson Wood	1	Aug. 17, 1909	July 31, 1911	3,000
Terre Haute					
Tipton					
Valparaiso	Arthur Abram Hughart	3	June —, 1902	Aug. —, 1910	1,800
Vincennes	Robert Ila Hamilton	1	Mar. —, 1904	June 30, 1911	2,400
Wabash	Adelaide Steele Baylor	3	May —, 1903	July 31, 1912	2,100
Warsaw	Harris S. Kaufman	1	July —, 1908	Sept. —, 1910	1,400
Washington	William Francis Axtell	1	—— —, 1894	Aug. —, 1911	2,000
Whiting	John Calvin Hall	1	July 1, 1900	July 31, 1911	2,700
IOWA.					
Albia	Frank Thomas Vasey	1	May 10, 1910	Sept. 5, 1911	1,600
Atlantic	Charles Emery Blodgett	1	Sept. —, 1907	Sept. —, 1910	1,600
Boone	J. E. Marshall[a]	1	Sept. —, 1908	—— —, 1910	1,600
Burlington	Whittier Lorenz Hanson	1	July 19, 1909	Aug. 1, 1910	2,000
Cedar Falls	Bruce Francis	1	May —, 1909	May 30, 1911	1,900
Cedar Rapids	Joseph Jasper McConnell	1	Aug. 1, 1901	Aug. 1, 1910	3,000
Centerville	C. J. Johnson	3	—— —, 1908	—— —, 1912	1,800
Chariton	Junius Everett Roberts	1	May —, 1909	June —, 1911	1,450
Charles City	Edwin T. Armstrong	1	Apr. 9, 1908	June 10, 1910	1,700
Cherokee	L. H. Maus	1	—— —, 1906	June 1, 1911	.....
Clarinda	Willard E. Salisbury	1	—— —, 1903	June 1, 1910	1,700
Clinton	Ozro P. Bostwick	1	July —, 1899	July 31, 1910	2,500
Council Bluffs	John H. Beveridge	1	Aug. 1, 1903	Aug. 1, 1910	2,400
Creston	Adam Pickett	1	July 1, 1907	June 30, 1911	1,600
Davenport	Frank Leroy Smart	1	.....do.....	June 30, 1910	3,000
Decorah	Jesse Charles Richter	1	May —, 1909	June 10, 1910	1,500
Des Moines	William Otis Riddell	1	Oct. —, 1904	July 1, 1911	5,000
Dubuque	James Hugh Harris	1	Feb. —, 1910	.....do.....	3,200
Fairfield	Eck Crippin Roberts	1	Mar. 19, 1909	June 3, 1910	1,600
Fort Dodge	R. B. Crone	1	July 1, 1908	July 1, 1910	2,300
Fort Madison	E. F. Schall	1	—— —, 1909	—— —, 1911	1,800
Grinnell	Eugene Henely	1	July —, 1906	June —, 1910	1,800
Iowa City	H. E. Blackmar	1	May —, 1907	July 1, 1911	1,950
Keokuk	William Aldrich	1	Mar. —, 1904	July 1, 1910	2,000
Le Mars	Francis Eber Palmer	1	Sept. —, 1908	June —, 1910	2,000
Marion	F. T. Mahannah	1	Aug. —, 1909	June 3, 1910	1,600
Marshalltown	Aaron Palmer	3½	Jan. 1, 1907	July —, 1910	2,100
Mason City	Hugh M. Gilmore	1	—— —, 1910	June —, 1911	2,000
Missouri Valley	Luther Clinton Bryan	1	July —, 1908	July 1, 1911	1,700
Mount Pleasant	Charles M. Cruikshank	1	Sept. 1, 1908	June 1, 1911	1,700
Muscatine	William Franklin Chevalier	1	July 1, 1901	July 1, 1910	1,800
Newton	E. J. H. Beard	1	Sept. 1, 1892	Sept. 1, 1911	1,600
Oelwein	Orris Watson Herr	1	Sept. —, 1906	June 2, 1911	1,700
Oskaloosa	Frank Whittier Else	1	May —, 1905	June 30, 1911	2,000
Ottumwa	Albion Wesley Stuart	1	June —, 1876	July 1, 1911	2,150
Perry	Guy Vernellen Whaley	1	Oct. 1, 1908	June 1, 1910	1,500
Red Oak	W. F. Cramer	2	Sept. —, 1906	June —, 1912	1,900
Sioux City	Frank Dickinson Haddock	1	July —, 1910	Aug. 1, 1911	3,000
Washington	A. C. Fuller, jr	1	Apr. —, 1909	July 1, 1910	1,700
Waterloo:					
East side	Addison W. Chamberlin	1	June 1, 1908	June 30, 1911	2,600
West side	Anson Theodore Hukill	1	—— —, 1899	Aug. 30, 1910	2,200
Webster	Lyman H. Ford[b]				
KANSAS.					
Arkansas City	John Frederick Bender	1	Aug. 1, 1907	July 31, 1910	1,500
Atchison	Nathan Thomas Veatch	1	Aug. —, 1901	Aug. 31, 1910	1,800
Chanute	Homer Davis Ramsey	1	June 15, 1910	June 15, 1911	1,500
Cherryvale	N. A. Baker	1	May —, 1910	July 1, 1911	1,350
Coffeyville	William M. Sinclair	1	—— —, 1889	Aug. —, 1911	2,000
Concordia	Clydus C. Brown	1	Sept. 5, 1910	June 1, 1911	1,600
Emporia	Loyd A. Lowther	1	Nov. —, 1896	June 30, 1911	2,000
Fort Scott	John Barnard Stokesberry	1	July —, 1909	May 20, 1910	1,600
Galena	Lemuel A. Guthridge	1	June —, 1909	June 1, 1911	1,500

[a] Principal of high school and acting superintendent.
[b] For 1908–9; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
KANSAS—continued.					
Horton	A. H. Speer				$1,350
Hutchinson	Justus Otho Hall	(a)	Sept. 1, 1909		2,000
Independence	Charles Sumner Risdon	1	May 1, 1902	June 1, 1910	2,400
Iola	Lawrence W. Mayberry	1	July 1, 1907	July 1, 1911	2,000
Junction City	William Samuel Hensner	1	July 1, 1901	do	2,000
Kansas City	Matthew Edgar Pearson	1	July 1, 1902	do	3,300
Lawrence	Franklin Pierce Smith	1	Nov. —, 1894	Aug. 1, 1910	2,250
Leavenworth	George W. Kendrick	1	Aug. 1, 1902	do	2,400
Manhattan	John E. Edgerton	1	July 1, 1900	July 1, 1911	1,600
Newton	Lathrop James Hall	1	June —, 1908	do	1,800
Osawatomie	Floyd Brown Lee	1	July —, 1907	May 31, 1910	1,125
Ottawa	Arch Lyndon Bell	1	July 1, 1904	July 1, 1910	1,800
Parsons	Frank L. Pinet	1	June 15, 1910	June 15, 1911	1,800
Pittsburg	Allen Hopkins Bushey	1	May —, 1902	May —, 1910	2,100
Rosedale	George E. Rose	1	June —, 1904	June —, 1910	1,000
Salina	John Lofty[b]				
Topeka	Luther Denny Whittemore	1	Apr. —, 1904	Aug. 1, 1911	2,750
Wellington	Edmond G. Kelley	1	May 24, 1909	May 31, 1911	1,500
Wichita	Robert Franklin Knight	1	May —, 1901	Sept. —, 1910	2,500
Winfield	John Wesley Spindler	1	Aug. 1, 1891	July 1, 1911	1,800
KENTUCKY.					
Ashland	Benjamin F. Stanton	4	Apr. —, 1909	June —, 1914	2,400
Bellevue	W. P. King	2	Sept. —, 1909	Aug. —, 1911	1,500
Bowling Green	Thomas Crittenden Cherry	1	June —, 1905	June 30, 1911	1,920
Covington	Homer Oscar Sluss	2	Aug. 1, 1907	Aug. 1, 1911	2,500
Danville	Oscar B. Fallis	1	—— —, 1907	May 25, 1911	1,200
Dayton	James McGinnis[c]				
Frankfort	Hugh C. McKee	1	July —, 1904	June 30, 1910	1,800
Georgetown	Jesse C. Waller	1	June 1, 1910	June 1, 1911	1,200
Henderson	J. W. Welch	1	June —, 1909	June 30, 1911	1,900
Hopkinsville	Barksdale Hamlett	1	June 20, 1905	do	2,400
Lexington	Massillon Alexander Cassidy	4	—— —, 1886	—— —, 1911	2,400
Louisville	Edgar H. Mark	2	Oct. 1, 1894	Sept. —, 1911	5,000
Madisonville	Ralph B. Rubins	1	Apr. 1, 1905	May —, 1911	1,500
Maysville	James Wood Bradner	3	Sept. —, 1909	July 1, 1913	1,600
Middlesboro	M. Oliver Winfrey[c]				
Newport	Charles G. Hammond	(a)	May 2, 1910		2,160
Owensboro	McHenry Rhoads	4	Mar. —, 1900	June 30, 1914	2,400
Paducah	John Albert Carnagey	4	Aug. 1, 1907	July 31, 1910	2,500
Paris	George W. Chapman	4	July 1, 1906	June 30, 1914	1,800
Richmond	Thomas Jackson Coates	2	July 1, 1907	June 30, 1911	1,500
Somerset	J. P. W. Brouse[c]				
Winchester	R. M. Shipp[c]				
LOUISIANA.					
Alexandria	D. B. Showalter[d]				
Baton Rouge	E. Ballard Donnell[e]				
Crowley	J. H. Lewis[d]				
Donaldsonville	Arnold L. Pearce[f]	1		June 17, 1910	1,035
Houma	William Pleasant Tucker[d]	4	Nov. —, 1904	Nov. —, 1912	1,100
Lake Charles	John McNeese[d]				
Monroe	Ernest Long Neville	1	May 25, 1910	May 28, 1911	2,000
New Iberia	L. A. Nalet[f]	1	Aug. 14, 1909	June 17, 1910	1,350
New Orleans	J. M. Gwinn				
Shreveport	C. E. Byrd[d]	4		Nov. —, 1912	3,500
MAINE.					
Auburn	Henry H. Randall	1	July 1, 1907	July 1, 1911	2,100
Augusta	Daniel Wolford LaRue	1	Aug. 1, 1907	Aug. 1, 1910	2,000
Bangor	Charles E. Tilton		Aug. 14, 1900		
Bath	Frederick W. Freeman	1	Aug. —, 1904	July 1, 1910	1,500
Belfast	Alonzo J. Knowlton	2	Aug. 1, 1907	Apr. 1, 1911	1,500
Biddeford	Charles M. Pennell	5	July 24, 1908	Aug. 1, 1913	1,650
Brewer	Charles Norman Perkins	1	Mar 13, 1909	Mar. 17, 1911	1,600
Brunswick	John Albert Cone	1	Aug. 1, 1908	Aug. 1, 1911	1,550
Calais	James Madison Pike	1	Apr. 17, 1909	Apr. 1, 1911	1,400
Eastport	Fred Benson	1	—— —, 1908	July 1, 1911	1,250

[a] Indefinite term.
[b] For 1908–9; no later information.
[c] From Kentucky state educational directory for 1909–10.
[d] Superintendent of parish schools.
[e] Principal.
[f] Principal of high school.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
MAINE—continued.					
Ellsworth	Clara Osgood Hopkins	1	Apr. 6, 1910	Mar. —, 1911	$500
Gardiner	Charles O. Turner	3	July 1, 1907	July 1, 1910	1,300
Houlton	William Frederick Coan	1	Apr. 3, 1909	Apr. 1, 1911	1,800
Lewiston	D. J. Callahan	1	.....	July 31, 1911	2,000
Oldtown	Daniel Lyman Wormwood	1	Apr. —, 1905	Apr. —, 1911	1,750
Portland	Charles Henry Morss	1	Nov. 22, 1909	Dec. 31, 1910	2,500
Rockland	Giles A. Stuart	1	Aug. —, 1909	Mar. —, 1911	1,900
Saco	T. T. Young	1	Sept. 1, 1909	Sept. 1, 1910	1,000
Sanford	David Wilder Colby	1	Sept. —, 1908	Apr. 1, 1911	1,500
Skowhegan	DeForest Henry Perkins	3	July 1, 1908	June 30, 1913	1,700
South Portland	James Otis Kaler	1	Mar. —, 1898	Mar. —, 1911	1,000
Waterville	Herbert Carlyle Libby	.....	.....	.....	.....
Westbrook	Prescott Keyes	1	June 1, 1908	July 1, 1910	1,800
MARYLAND.					
Annapolis	Samuel Garner[a]	2	Sept. 1, 1908	Sept. 1, 1910	1,200
Baltimore	James H. Van Sickle	(b)	July 1, 1900	.....	5,000
Cambridge	William P. Beckwith[a]	.....	.....	.....	.....
Cumberland	Archibald C. Willison[a]	2	Feb. 9, 1905	July 31, 1910	2,100
Frederick	Oscar B. Coblentz[a]	.....	.....	.....	.....
Frostburg	Olin Robson Rice[c]	.....	.....	.....	.....
Hagerstown	John P. Fockler[a]	.....	.....	.....	.....
Salisbury	William James Holloway[a]	2	July —, 1908	July 31, 1912	1,400
MASSACHUSETTS.					
Abington	John E. De Meyer	1	Aug. 1, 1909	Aug. 1, 1911	2,000
Adams	Francis Asbury Bagnall	1	July —, 1901	Sept. 1, 1911	2,500
Amesbury	Charles Everett Fish	1	—— —, 1906	Aug. 1, 1911	2,000
Amherst	Audubon Levi Hardy	1	Sept. 1, 1898	Sept. 1, 1911	2,000
Andover	Sherburn C. Hutchinson	1	May —, 1908	Aug. 31, 1910	1,900
Arlington	John Francis Scully	1	Oct. —, 1905	June 30, 1911	2,600
Athol	Winfield Scott Ward	1	Apr. 1, 1897	Sept. 1, 1910	2,000
Attleboro	Lewis Adams Fales	1	Aug. 15, 1905	Aug. 15, 1911	2,200
Barnstable	George Homer Galger	.....	.....	.....	.....
Belmont	George Peters Armstrong	3	Apr. —, 1897	July 1, 1913	2,650
Beverly	Robert Orange Small	1	Sept. —, 1910	Sept. 1, 1911	2,200
Blackstone	Joseph P. McCovey	.....	.....	.....	.....
Boston	Stratton D. Brooks	6	Mar. 21, 1906	Sept. 1, 1912	6,000
Braintree	Ralph Libby Wiggin	1	Oct. 1, 1909	Oct. 1, 1910	1,800
Bridgewater	(See Abington.)	.....	.....	.....	.....
Brockton	George L. Farley	.....	.....	.....	.....
Brookline	George I. Aldrich	.....	.....	.....	.....
Cambridge	Frank Edson Parlin	1	Sept. 1, 1909	Aug. 31, 1910	4,000
Canton	James S. Perkins	1	June —, 1891	Mar. —, 1911	1,800
Chelmsford	Arthur Palmer Briggs	1	May 20, 1909	July 31, 1910	1,600
Chelsea	Adelbert Leon Safford	1	Sept. 1, 1910	Sept. 1, 1911	2,500
Chicopee	John Cameron Gray	1	Sept. 1, 1901	June 30, 1911	2,250
Clinton	Charles Loraine Hunt	.....	June —, 1889	.....	.....
Concord	Wells Albert Hall	1	Sept. —, 1907	Sept. —, 1911	2,300
Danvers	Henry Coburn Sanborn	1	June —, 1907	July 1, 1910	2,000
Dedham	Roderick W. Hine	1	Aug. —, 1893	July 1, 1911	2,200
Easthampton	William Dana Miller	1	July 1, 1896	June 30, 1911	1,800
Easton	Frederick S. Pope	1	July —, 1905	July 1, 1910	1,700
Everett	Ulysses G. Wheeler	(b)	—— —, 1902	.....	2,800
Fairhaven	Frank M. March	.....	.....	.....	.....
Fall River	Everett Brownell Durfee	1	July —, 1905	Aug 31, 1910	3,000
Fitchburg	Joseph G. Edgerly	1	Sept. —, 1875	July 31, 1910	2,700
Framingham	Samuel F. Blodgett	1	—— —, 1906	Sept. —, 1911	2,200
Franklin	Irving H. Gamwell[d]	.....	.....	.....	.....
Gardner	Judson I. Wood	1	June —, 1899	July —, 1910	2,100
Gloucester	Freeman Putney	1	Mar. —, 1888	July 1, 1911	2,300
Great Barrington	J. Francis Allison	1	Sept. 1, 1907	Sept. 1, 1911	1,800
Greenfield	Herbert Eliot Richardson	1	July 1, 1906	June 30, 1910	2,000
Haverhill	Christie A. Record	1	June —, 1909	Aug. 31, 1911	2,600
Hingham	Nelson George Howard	1	Aug. —, 1898	Mar. —, 1911	2,350
Holyoke	John Lawrence Riley	3	Apr. 5, 1909	Aug. 1, 1912	3,000
Hudson	Cassius Samuel Lyman	3	Sept. 1, 1906	Sept. 1, 1912	2,000
Hyde Park	Horace L. Brittain	1	June 1, 1907	June 1, 1910	2,500
Ipswich	John P. Marston	1	July 1, 1909	July 1, 1911	2,400
Lawrence	Bernard M. Sheridan	1	May 16, 1904	Dec. 31, 1910	3,500
Lee	Bion E. Hicks	1	Sept. 1, 1909	July 1, 1910	1,500

[a] County superintendent.
[b] Indefinite term.
[c] Principal of high school.
[d] For 1907–8; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
MASSACHUSETTS—con.					
Leominster	Thomas Edward Thompson	1	July 1,1895	July 1,1911	$2,200
Lexington	Frank Hardy Damon	1	—— —,1908	June —,1911	2,500
Lowell	Arthur Kincaid Whitcomb	1	Sept. 1,1891	Sept. 1,1910	3,000
Ludlow	Walter E. Gushee	1	June 1,1902	May 31,1911	1,700
Lynn	Frank J. Peaslee	1	July —,1901	Sept. —,1911	3,000
Malden	Henry Dwight Hervey	1	July 1,1903	June 30,1911	2,700
Mansfield	Edward Payson Fitts	1	Apr. 9,1891	Apr. 9,1911	1,500
Marblehead	Almorin Orton Caswell	1	Aug. 1,1907	Aug. 1,1911	1,800
Marlboro	Orion Albion Morton	1	Feb. —,1906	Sept. 1,1910	2,100
Maynard	Francis S. Brick	1	.....	June —,1910	1,700
Medford	Fred Herbert Nickerson	1	July —,1909	Aug. 1,1911	3,000
Melrose	John Clinton Anthony	1	Aug. 15,1909	June —,1910	2,200
Methuen	Charles Albert Breck	1	Apr. 1,1904	July 1,1910	1,500
Middleboro	Charles Henry Bates	1	Oct. —,1901	Aug. 1,1911	2,100
Milford	Charles W. Haley	1	—— —,1896	July —,1910	1,800
Millbury	Ira T. Chapman	1	Aug. 1,1907	Aug. 1,1911	2,100
Milton	Asher Johnson Jacoby	1	Sept. —,1901	June 23,1910	3,000
Monson	Frederick A. Wheeler	1	Aug. —,1902	July 1,1910	1,600
Montague	Frank Prosper Davison	1	Feb. 1,1902	June 30,1911	1,800
Natick	John D. Brooks	1	Sept. 1,1909	July 1,1911	1,800
Needham	Walter Knight Putney	1	Dec. —,1906	May 20,1911	1,500
New Bedford	Allen Phelps Keith	1	June —,1908	June 30,1910	4,000
Newburyport	Edgar Lincoln Willard	(a)	June 25,1906	.....	1,700
Newton	Frank E. Spaulding	1	Sept. 1,1904	Aug. 31,1911	5,000
North Adams	Isaac Freeman Hall	1	Sept. 1,1895	Sept. 1,1911	2,500
Northampton	Fayette K. Congdon	1	June —,1905	Aug. 1,1910	2,200
North Andover	Wallace Edward Mason	1	Sept. 1,1906	Sept. 1,1911	2,200
North Attleboro	Robert Jaquith Fuller	1	Sept. —,1907	Sept. —,1910	1,975
Northbridge	Samuel Appleton Melcher	1	Apr. —,1884	Apr. —,1911	2,350
North Brookfield	Burr J. Merriam	1	July 1,1906	June 30,1911	1,625
Norwood	Austin H. Fitts	1	Apr. 16,1909	Aug. 1,1910	1,800
Orange	Edward Dixon	1	July 1,1901	July 1,1911	1,700
Palmer	Lee Thomas Gray	1	July —,1907	July —,1910	2,000
Peabody	Albert Robinson	1	Sept. —,1903	June —,1910	1,900
Pittsfield	Clarence John Russell	1	Aug. 1,1909	Sept. 1,1910	1,800
Plymouth	Francis J. Heavens	(a)	Apr. —,1895	.....	2,000
Provincetown	Frank Merritt Rich	1	Apr. 1,1910	Aug. 1,1911	1,600
Quincy	Albert R. Barbour	1	Sept. 1,1909	—— —,1911	2,900
Randolph	Watson Clark Lea	1	July 1,1907	June 30,1911	1,500
Reading	Harry Thornton Watkins	1	—— —,1909	Sept. —,1911	3,000
Revere	Clarence H. Dempsey	1	Sept. 1,1908	Aug. 31,1910	2,500
Rockland	William L. Coggins	1	May 13,1905	Sept. 1,1910	1,500
Rockport	William Francis Eidredge	1	Apr. —,1905	June 24,1910	1,200
Salem	John W. Perkins	1	Sept. 1,1894	Sept. 1,1910	2,500
Saugus	Fairfield Whitney	1	July 1,1908	July 1,1911	1,700
Somerville	Charles Shedd Clark	1	June 11,1908	Sept. 1,1910	3,000
Southbridge	Fred E. Corbin	1	—— —,1902	Sept. —,1910	2,250
South Hadley	Frederick Ellsworth Whittemore.	1	Apr. —,1904	Apr. —,1911	1,750
Spencer	Charles F. Adams	1	Aug. —,1903	.....do.....	1,600
Springfield	Wilbur Fish Gordy	1	Sept. 1,1904	.....do.....	4,000
Stoneham	Arthur B. Webber	1	Apr. 1,1910	June —,1911	1,800
Stoughton	Edward P. Fitts	1	—— —,1891	Apr. 9,1911	1,500
Swampscott	William Joseph Pelo	(a)	—— —,1906	.....	1,000
Taunton	Henry W. Harrub	1	May —,1905	Aug. 31,1911	2,400
Wakefield	Jacob H. Carfrey	1	Aug. 15,1905	Sept. 1,1911	2,000
Waltham	William Dwight Parkinson	(a)	June —,1898	.....	2,500
Ware	George Wilbert Cox	1	Aug. —,1902	June 30,1910	2,000
Warren	Parker T. Pearson [b]	.....	.....	.....	.....
Watertown	Wilfred Horace Price	1	Jan. —,1908	Sept. 1,1910	2,200
Webster	Ernest William Robinson	1	—— —,1903	July 31,1910	2,100
Wellesley	William Foye Johnson	1	July 1,1909	June 30,1911	2,200
Westboro	Harry C. Waldron	1	Sept. 1,1895	Sept. 1,1910	1,800
Westfield	Charles L. Simmons	1	Aug. —,1903	.....do.....	2,400
West Springfield	Clarence Elwood Brockway	1	Oct. 1,1899	July 1,1910	1,800
Weymouth	Parker T. Pearson	1	May 1,1909	May 11,1911	2,000
Whitman	George Francis Ellinwood	1	July 10,1908	Dec. 31,1910	1,600
Williamstown	Walter Goodwin Mitchell	1	Apr. —,1896	Apr. —,1911	1,200
Winchendon	Myron J. Willson	1	Aug. —,1909	Sept. 1,1910	2,000
Winchester	Schuyler F. Herron	1	Sept. 1,1907	July 31,1911	2,500
Winthrop	Frank A. Douglas	1	Sept. —,1896	Sept. —,1910	2,400
Woburn	George Irving Clapp	3	—— —,1903	—— —,1911	2,000
Worcester	Homer Pierce Lewis	3	Apr. —,1903	June 1,1912	4,250

[a] Indefinite term. [b] For 1908-9; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
MICHIGAN.					
Adrian	Charles William Mickens	1	May —,1909	Sept. —,1910	$2,200
Albion	William J. McKone	1	Sept. —,1898	June 30,1911	1,700
Alpena	George Alfred Hunt	1	July —,1896	June 24,1910	1,750
Ann Arbor	Herbert Miner Slauson	1	Apr. —,1898	—— —,1911	2,700
Battle Creek	William Gibson Coburn	1	Sept. 1,1895	Sept. 1,1910	2,700
Bay City	John Alexander Stewart	1	May —,1894	July 31,1911	3,000
Benton Harbor	William Robins Wright	1	Sept. —,1905	June —,1910	2,000
Bessemer	Matthew John Walsh	1	May —,1907	.....do	1,700
Big Rapids	Paul Clifford Stetson	1	May 16,1909	July 1,1910	1,500
Cadillac	George A. McGee	.....	.....	Sept. 5,1913	2,050
Calumet	Henry Elton Kratz	1	July 15,1902	July 15,1910	3,500
Charlotte	Charles Howard Carrick	2	Sept. —,1906	June —,1912	1,900
Cheboygan	Archie R. Gilpin	1	Sept. —,1909	June —,1911	1,800
Coldwater	Edward M. McElroy	2	Aug. —,1907	June —,1910	1,800
Detroit	Wales Cumberland Martindale	3	July —,1897	July —,1912	6,000
Dowagiac	Warren E. Conkling	1	June —,1906	June 10,1910	1,600
Escanaba	F. Dayton Davis	2	Sept. —,1904	June —,1910	2,700
Flint	Alvin N. Cody	1	Sept. 1,1904	July 1,1910	2,500
Grand Haven	Lawrence H. van den Berg	3	—— —,1907	June —,1911	1,850
Grand Rapids	William Albert Greeson	1	June —,1906	June 31,1910	3,500
Hancock	Eugene La Rowe	1	Jan. —,1902	July —,1911	2,000
Hillsdale	Samuel Jerome Gier	2	—— —,1900	—— —,1912	1,600
Holland	Willis T. Bishop	1	July —,1905	July 1,1910	1,900
Houghton	John Arnold Doelle	1	Sept. —,1906	June —,1910	2,300
Ionia	William Sherman Lister	3	May —,1908	July —,1912	1,800
Iron Mountain	Lee Earll Amidon	1	July 1,1898	June 30,1910	2,500
Ironwood	John V. Brennan	1	Aug. 10,1909	July 1,1910	2,250
Ishpeming	E. E. Scribner[a]	.....	.....	.....	.....
Jackson	Leroy S. Norton	1	—— —,1896	July —,1910	2,500
Kalamazoo	Shattuck O. Hartwell	1	July 1,1901	June 30,1911	3,000
Lansing	Edward Page Cummings	1	Apr. —,1907	June —,1911	2,350
Ludington	Frank Estes Millar	1	July 1,1908	July 1,1910	1,900
Manistee	Guy D. Smith	1	Sept. —,1908	June 30,1910	2,000
Manistique	Charles C. Root	1	May —,1909	June 24,1910	1,500
Marine City	Philip E. Dennis	1	.....do	June —,1910	1,300
Marquette	Gustav William Gehrand	1	July 1,1908	July 1,1910	2,700
Marshall	A. H. Washburn	1	Nov. —,1908	June 24,1910	1,400
Menominee	E. J. Shives	1	June —,1908	June —,1911	2,700
Monroe	Charles E. White[a]	.....	.....	.....	.....
Mount Clemens	Arthur S. Hudson	1	Sept. —,1909	June 30,1910	1,750
Mount Pleasant	J. W. Kelder	1	Aug. 30,1909	June 16,1911	1,400
Muskegon	Joseph M. Frost	1	Aug. —,1903	July —,1911	3,000
Negaunee	Orr Schurtz	1	May —,1901	.. ..do	2,000
Niles	John Dowling Schiller	1	June —,1887	June —,1910	1,700
Norway	George Gordon Malcolm	1	July 1,1909	July 1,1910	1,600
Owosso	Willis E. Hanson	1	June —,1909	July 1,1911	2,000
Petoskey	Ernest C. Hartwell	1	—— —,1909	—— —,1911	1,600
Pontiac	.....	.....	.....	.....	.....
Port Huron	Walter F. Lewis	1	July 1,1899	June 30,1911	2,250
Saginaw:					
East side	Eugene Clarence Warriner	1	.....do	.....do	3,000
West side	Philipp Huber	1	May —,1903	June 22,1910	2,200
St. Joseph	Ernest P. Clarke	1	July 12,1899	Sept. 6,1911	1,800
Sault Ste. Marie	Edgar E. Ferguson	1	Sept. —,1895	Sept. —,1910	2,800
South Haven	Arthur Douglas Prentice	1	—— —,1890	June 10,1910	1,400
Three Rivers	Leon Lewis Tyler	3	Feb. —,1908	June —,1911	1,700
Traverse City	Isaac Burton Gilbert	2	Mar. —,1901	.....do	2,200
Wyandotte	Hiram Charles Daley	1	Feb. —,1908	July 1,1911	1,700
Ypsilanti	William Benton Arbaugh	3	Jan. 21,1903	July 1,1910	2,000
MINNESOTA.					
Albert Lea	Eugene Marion Phillips	1	Mar. 1,1902	July 1,1910	2,200
Anoka	Freeman Ellsworth Lurton	1	—— —,1909	June —,1910	1,700
Austin	George A. Franklin	1	Mar. 20,1906	June 1,1911	2,400
Brainerd	W. C. Cobb[b]	.....	.....	.....	.....
Crookston	Ezra Elmer McIntire	3	—— —,1903	—— —,1910	2,000
Duluth	Robert Edward Denfeld	3	Aug. 1,1885	Aug. 1,1911	4,000
Ely	C. H. Barnes	3	July 1,1909	June 30,1913	2,600
Eveleth	Burton Otto Greening	1	—— —,1902	June 30,1911	2,800
Faribault	Leslie J. Montgomery	1	—— —,1909	Aug. —,1910	1,800
Fergus Falls	Ray Butts McLean	1	May —,1907	June 10,1911	1,900
Hastings	Leslie Loran Sloniger	1	Apr. —,1910	June 1,1911	1,200
Little Falls	Harry E. White	1	Aug. 1,1903	June 1,1910	1,800
Mankato	Frederick J. Sperry	1	Aug. 1,1909	Aug. 1,1910	1,800
Minneapolis	Charles Morison Jordan	3	—— —,1892	July 1,1913	5,500
Moorhead	Herbert R. Edwards	1	Sept. —,1909	June —,1911	1,850

[a] For 1908-9; no later information.
[b] From Minnesota state educational directory for 1909-10.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
MINNESOTA—cont'd.					
New Ulm	Ernest Thomas Critchett	2	Feb. —, 1894	July 31, 1911	$1,800
Owatonna	Philip J. Kuntz	1	Apr. —, 1899	June 1, 1911	2,000
Red Wing	J. L. Silvernale[a]				
Rochester	Charles Lingle Woodfield	1	May —, 1909	June —, 1910	2,000
St. Cloud	August N. Farmer	3		June —, 1913	2,500
St. Paul	Silvanus Laurabee Heeter	2	July 15, 1906	June 1, 1912	5,000
St. Peter	P. P. Kennedy	1	Sept. 1, 1907	June 1, 1910	1,530
Stillwater	William Harrod Hollands	2	Aug. —, 1908	July 31, 1912	2,300
Virginia	Lafayette Bliss	3	—— —, 1904	—— —, 1911	3,000
Willmar	Peter Christian Tonning	2	Mar. 20, 1903	July 31, 1910	1,900
Winona	John Nichols Adee	1	Aug. 1, 1909	Aug. 1, 1911	2,200
MISSISSIPPI.					
Biloxi	Thomas Kendall Boggan	1	July 1, 1908	July 1, 1910	2,000
Canton	John Calhoun Windham	1	—— —, 1906	May 27, 1910	1,500
Columbus	Joe Cook	3	—— —, 1901	—— —, 1911	2,000
Corinth	William Peyton Dobbins	3	Sept. —, 1898	June —, 1911	1,500
Greenville	E. E. Bass	(b)	—— —, 1884		2,100
Hattiesburg	Friley Benjamin Woodley	1	June —, 1901	Aug. —, 1910	2,000
Jackson	Edward Latta Bailey	1	June —, 1900	Sept. —, 1910	2,500
Laurel	Richard Henry Watkins	1	May 18, 1907	June 1, 1911	2,200
McComb	Henry Preston Hughes	3	June —, 1901	.....do.....	2,000
Meridian	Thomas Percy Scott	1	June 21, 1910	Aug. 15, 1911	2,500
Natchez					
Vicksburg	John Pinckney Carr	1	Sept. —, 1906	Sept. 1, 1911	2,100
Water Valley	J. Morton Consley	1	June 17, 1910	May 26, 1911	1,200
Yazoo City	M. Rose	1	May 11, 1905	June 1, 1911	2,250
MISSOURI.					
Aurora	William Harry Moore	1	May —, 1909	June 30, 1911	1,200
Boonville	M. A. O'Rear	1	May —, 1903	June 30, 1910	1,800
Brookfield	James U. White[c]				
Cape Girardeau	John Laidlaw	1	June 15, 1909	June 30, 1911	1,380
Carterville	Worth James Osburn	2	May 25, 1908	July 1, 1912	1,250
Carthage	Joseph Martin White	1	May —, 1903	June 30, 1910	2,500
Chillicothe	Alexander Royal Coburn	1	July 1, 1908	June 30, 1911	1,800
Clinton	Arthur Lee	1	June 1, 1902	June 1, 1911	1,800
Columbia	William Henry Hays	2	Aug. 1, 1904	Aug. 1, 1912	1,800
De Soto	W. C. Ogier		—— —, 1901	July 1, 1911	1,400
Fulton	Ross Albert Wells	1	July 1, 1909	June 30, 1911	1,500
Hannibal	Livingstone McCartney	2	.....do.....	.....do.....	2,200
Independence	William L. C. Palmer	1	May 28, 1901	Aug. 31, 1910	1,800
Jefferson City	Robert B. D. Simonson	1	Apr. —, 1907	June 30, 1910	1,600
Joplin	George Victor Buchanan	2	June —, 1908	June 30, 1911	3,000
Kansas City	James M. Greenwood	1	June —, 1874	June 30, 1910	4,500
Kirksville	Charles Banks	1	Apr. 22, 1910	June 1, 1911	1,200
Lexington	Melvin Joseph Patterson	1	—— —, 1906	May 31, 1911	1,500
Louisiana	Miss Elizabeth Whitaker	1	June 1, 1901	May 21, 1910	1,350
Macon	Sylvester E. Seaton	1	Aug. 1, 1908	July 31, 1911	1,400
Marshall	Frank F. Thompson	1	May —, 1910	July 1, 1911	1,600
Maryville	Charles A. Hawkins[c]				
Mexico	Lee Byrnes Hawthorne	1	Sept. 1, 1903	June 30, 1911	1,600
Moberly					
Nevada	James Woods Storms[c]				
Poplar Bluff	William Lee Barrett	2	Sept. —, 1905	Sept. —, 1911	2,000
Rich Hill					
St. Charles					
St. Joseph	John A. Whiteford	2	May 20, 1904	June 30, 1910	3,600
St. Louis	Ben Blewett	4	June —, 1908	June —, 1912	7,000
Sedalia	John P. Gass	1	June 11, 1908	July 1, 1911	2,400
Springfield	Johnathan Fairbanks	1	May —, 1875	May 27, 1910	2,250
Trenton	Charles Arthur Greene	1	July 1, 1906	June 30, 1910	1,500
Warrensburg	Edward Beatty	1	July 1, 1909	June 30, 1911	1,260
Webb City	R. S. Nichols	2	Sept. —, 1905	July —, 1911	2,000
MONTANA.					
Anaconda	William Kilian Dwyer	1	—— —, 1906	July 31, 1911	2,700
Bozeman	Risdon J. Cunningham	1	Jan. 1, 1905	.....do.....	2,500
Butte	George F. Downer	1	July —, 1910	Aug. 1, 1911	4,000
Great Falls	Samuel D. Largent	1	May —, 1893	Aug. 31, 1910	3,000
Helena	John Dietrich	1	June 1, 1910	Aug. 1, 1911	3,500
Missoula	J. Ulysses Williams	2	Apr. 1, 1906	Aug. 1, 1912	2,700

[a] From Minnesota state educational directory for 1909–10.
[b] Indefinite term.
[c] For 1908–9; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
NEBRASKA.					
Beatrice	Edwin J. Bodwell	3	Aug. 1,1908	July 31,1912	$2,000
Fremont	Archibald H. Waterhouse	3	Apr. 15,1908	June 30,1911	2,500
Grand Island	Robert J. Barr	3	Aug. —,1882	June —,1912	2,100
Hastings	Samuel Henry Thompson	1	Apr. —,1908	June —,1911	2,200
Kearney	Harry E. Bradford [a]				1,800
Lincoln	William Logan Stephens				
Nebraska City	George Ellsworth Martin	1	June 1,1908	June 1,1911	1,800
Norfolk	Fred M. Hunter	1	....do	....do	1,800
North Platte	Wilson Tout	1	Sept. 1,1908	Sept. 1,1911	1,500
Omaha	William Mehard Davidson	3	Apr. —,1904	—— —,1911	5,000
Plattsmouth	John William Gamble	1	July 17,1907	July 1,1910	1,600
South Omaha	Nathaniel Marks Graham	3	Feb. 7,1907	July 1,1913	3,000
York	Walter Welles Stoner	3	Jan. 25 1903	June —,1911	2,000
NEVADA.					
Reno	Benson Dillon Billinghurst	4	July 1,1903	July 1,1913	3,000
NEW HAMPSHIRE.					
Berlin	George H. Whitcher	2	Jan. 1,1904	Jan. 1,1911	2,200
Claremont	William H. Cummings	1	Aug. 1,1905	July 31,1910	1,950
Concord:					
Union district	Louis John Rundlett	1	July 1,1885	July 1,1910	2,400
Penacook district	George Willis Sumner	1	—— —,1908	July 15,1911	1,400
Dover	Austin Hubert Keyes	1	Feb. —,1904	Feb. —,1911	2,000
Exeter					
Franklin	William Harvey Slayton	1	Aug. —,1907	June —,1911	1,500
Keene	George A. Keith	1	July 1,1905	July 1,1910	1,500
Laconia	Joseph H. Blaisdell	1	Aug. —,1897	June 30,1910	1,300
Littleton	D. F. Carpenter				
Manchester	Charles Wilmot Bickford	2	July 1,1900	June 30,1910	2,300
Nashua	James H. Fassett	1	—— —,1893	....do	2,000
Portsmouth	James A. MacDougall	1	July —,1909	July 31,1911	1,800
Rochester	Andrew Jackson	1	Sept. 12,1907	July 1,1911	1,200
Somersworth	Royal E. Gould [b]				
NEW JERSEY.					
Asbury Park	Fred Strong Shepherd	5	Sept. 1,1899	Sept. 1,1913	3,200
Atlantic City	Charles B. Boyer	3		July —,1910	3,000
Bayonne	John Wesley Carr	3	Jan. 26,1909	Sept. 1,1913	5,000
Bloomfield	George Morris	4	Dec. 1,1904	July 1,1913	3,500
Boonton	Milo Pearson Reagle	1	Sept. —,1903	June —,1910	1,600
Bordentown	Harry Vance Holloway	¼	Apr. 4,1910	....do	1,300
Bridgeton	H. J. Neal				
Burlington	Wilbur Watts				
Camden	James E. Bryan				
Dover	Wildy Victor Singer	1	July 1,1908	June 30,1911	2,000
East Orange	Vernon L. Davey	(c)	July —,1890		4,250
Elizabeth	Richard E. Clement	7	July 1,1907	July 1,1914	3,600
Englewood	Elmer Charles Sherman	3	Sept. 1,1904	July 1,1911	3,300
Garfield	William Henry Steegar [d]	3	July —,1907	July —,1912	1,800
Gloucester City	Wilmer F. Burns				
Hackensack	Albert Emery Merriam	1	June —,1908	Sept. 1,1910	3,000
Hammonton	Newton Clark Holdridge				
Harrison	John Dwyer	2		Mar. 30,1910	2,100
Hoboken	Abraham Jay Demarest	(c)	Apr. 19,1897		3,500
Irvington	Frank H. Morrell	3	Sept. —,1875	July —,1911	2,500
Jersey City	Henry Snyder	(c)	Mar. 19,1892		6,000
Kearney	Herman Dressel, jr		July 31,1907		
Lambertville	Louis E. Boutwell [d]	1	July —,1907	June —,1910	1,600
Long Branch	Christopher Gregory	(c)	Feb. —,1889		3,700
Madison	Marcellus Oakey [d]				
Milville	David L. Hower	1	Aug. 13,1910	June —,1911	1,800
Montclair	Randall Spaulding	(c)	Sept. —,1874		4,250
Morristown	Ira Winthrop Travell [d]	2	June —,1909	June 30,1911	3,250
Newark	Addison Brown Poland	(c)	Mar. 1,1901		6,000
New Brunswick	William Clinton Armstrong	1	—— —,1899	June —,1910	3,500
Newton	J. Burton Wiley [d]	1	Mar. 15,1908	June 30,1910	1,800
North Plainfield	Henry C. Krebs [d]	(c)	June —,1905		2,000
Orange	James Gilbert Riggs	3	Sept. —,1906	June —,1911	3,500
Passaic	Oscar I. Woodley	2	July —,1904	Aug. 31,1912	3,600
Paterson	John R. Wilson	(c)	Sept. 10,1906		3,600

[a] From Nebraska state educational directory for 1909–10.
[b] For 1908–9; no later information.
[c] Indefinite term.
[d] Supervising principal.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
NEW JERSEY—cont'd.					
Perth Amboy	Samuel E. Shull	(a)	Sept. —, 1895		$3,500
Phillipsburg	Lewis O. Beers				
Plainfield	Henry Martin Maxson	(a)	—— —, 1892		4,050
Princeton	Mabel Tilden Vanderbilt b	1	Feb. 1, 1906	July 1, 1911	1,600
Rahway	William James Bicket	(a)	Sept. —, 1906		3,000
Red Bank	J. Burton Wiley	1	—— —, 1909	June —, 1911	2,300
Ridgewood	William T. Whitney	3	June —, 1905	June —, 1913	3,000
Rutherford	Charles J. Majory c	1	Sept. —, 1908	June 30, 1910	2,100
Salem	Oscar O. Barr	1	Aug. 6, 1909	.....do.....	1,600
Somerville	William Alfred Ackerman c	1	May —, 1905	June —, 1910	2,300
South Amboy	Russel Martin Fitch c	1	Nov. 11, 1895	June 30, 1910	1,440
South Orange	Henry Ward Foster c	5	June —, 1909	June 30, 1914	3,200
Summit	Clinton S. Marsh	1	July 1, 1910	July 1, 1911	3,000
Town of Union	Otto Ortel	(a)	Sept. —, 1886		3,000
Trenton	Ebenezer Mackey	(a)	Sept. 1, 1902		3,600
Vineland	Jacob J. Unger c	1	June —, 1897	July 1, 1910	1,705
Westfield					
West Hoboken	Elliott J. Tomlinson	(a)	Sept. 1, 1907		2,800
West New York	Holly Whitford Malson c	1	May —, 1910	July 1, 1911	2,100
West Orange	Allton Harvey Sherman c	3	Sept. —, 1904	Sept. —, 1911	3,200
Woodbury	Henry C. Dixon	3	—— —, 1906	—— —, 1910	1,800
NEW MEXICO.					
Albuquerque	Wellington D. Sterling	1	Dec. —, 1906	May 30, 1911	2,200
Raton	Thomas W. Conway d				1,800
Santa Fe	James Alpheus Wood	1	June —, 1899	—— —, 1911	1,380
NEW YORK.					
Albany	Charles Wadworth Cole	(a)	Feb. 1, 1878		3,000
Albion	Willis G. Carmer	1	Aug. 1, 1899	Aug. 1, 1910	1,800
Amsterdam	Harrison T. Morrow	3	Aug. 1, 1900	Aug. 1, 1912	3,060
Auburn	Henry Dwight Hervey	1	July 20, 1910	Aug. 31, 1911	3,500
Ballston Spa	W. Almon Andrews c	1	Apr. —, 1909	June 23, 1910	1,400
Batavia	John Kennedy	1	Oct. 1, 1890	July 1, 1911	2,000
Bath	Floyd Monroe Fernalld c	1	May —, 1907	—— —, 1910	1,600
Binghamton	Joseph Edward Banta	1	Aug. —, 1905	July 31, 1911	3,060
Buffalo	Henry Pendexter Emerson	4	Jan. 1, 1893	Dec. 31, 1911	5,000
Canandaigua	Luther Norton Steele	1	Aug. —, 1907	Aug. —, 1911	2,400
Catskill	J. T. Peck Calkins	1	Aug. 1, 1904	Aug. 1, 1911	2,200
Cohoes	Edward Hayward	4	July 1, 1901	July 1, 1913	2,000
Corning	Hannibal H. Chapman	1	Sept. —, 1909	June —, 1911	2,500
Cortland	Ferdinand E. Smith	3	July 1, 1896	Aug. 1, 1912	2,400
Dansville	James Wells Reed c	1	Sept. —, 1908	June —, 1911	1,400
Dunkirk	Delmar Elliott Batcheller	1	Aug. —, 1908	July 31, 1911	2,500
Elmira	Don C. Bliss	1	May —, 1910	Aug. 1, 1911	4,000
Fishkill Landing	G. F. Du Bois c	1	Sept. —, 1907	July 1, 1910	1,600
Fredonia	William B. Blaisdell	1	May —, 1906	July 1, 1911	1,200
Fulton	James R. Fairgrieve	2	Jan. 1, 1904	Dec. 31, 1912	2,400
Geneva	William Henry Truesdale	(a)	May —, 1891		2,600
Glens Falls	E. W. Griffith f				
Gloversville	James A. Estee	1	—— —, 1890	July 31, 1910	2,600
Gouverneur	John B. Laidlaw	1	Sept. —, 1906	.....do.....	1,800
Granville	Raymond E. Brown	1	Sept. —, 1893	June —, 1911	1,500
Green Island	James Heatly	1		June 30, 1911	1,800
Haverstraw	Luther O. Markham g				
Hempstead	Adrian Henry Courtenay	1	Sept. 9, 1909	June 22, 1910	2,000
Herkimer	George M. Elmendorf	1	Feb. 1, 1910	June —, 1911	1,600
Hoosick Falls	Clyde L. Harvey	1	June —, 1905	June 21, 1910	1,800
Hornell	Elmer S. Redman	1	Aug. 1, 1898	Sept. 1, 1910	2,500
Hudson	Charles Spencer Williams	1	June —, 1904	Sept. 1, 1911	2,200
Hudson Falls	Francis A. Tefft	(a)	Jan. —, 1908		1,600
Ilion	Frank DeWitt Warren	1	Nov. 1, 1905	June —, 1911	2,000
Ithaca	Frank David Boynton	5	June —, 1900	July 31, 1915	3,600
Jamestown	Rovillus Rollin Rogers	3	—— —, 1890	Aug. 1, 1911	2,500
Johnstown	Erle L. Ackley	3	Feb. —, 1910	July 31, 1913	
Kingston	Myron J. Michael	(a)	Aug. 1, 1910		2,500
Lackawanna	Albert E. Cook	2	Mar. —, 1905	July 1, 1910	1,700
Lancaster	Levi C. Higley	1	Sept. —, 1907	June 24, 1910	1,500
Lansingburg	George Franklin Sawyer	1	Sept. —, 1892	Aug. 31, 1910	1,800

a Indefinite term.
b Principal.
c Supervising principal.
d From educational directory of New Mexico for 1909–10.
e Principal of high school.
f From New York state report for 1909–10.
g For 1908–9; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
NEW YORK—continued.					
Lawrence	Fred DeL. King	1	—— —, 1892	June —, 1910	$2,400
Lestershire	Frank M. Smith	1	—— —, 1903	June 30, 1910	1,800
Little Falls	Eugene Benjamin Callahan	(a)	Sept. —, 1908	.....	2,000
Lockport	Emmet Belknap	1	July —, 1889	Aug. 31, 1910	2,400
Lyons	Worthy Hanks Kinney b	1	—— —, 1888	June —, 1911	1,800
Malone	Lamont F. Hodge	3	Aug. 1, 1908	July 31, 1911	2,000
Mamaroneck	George J. McAndrew	1	—— —, 1892	Aug. 31, 1910	2,400
Matteawan	Seymour B. Everts c	1	Aug. 1, 1910	June 30, 1911	1,500
Mechanicsville	Lyman B. Blakeman	1	Oct. 12, 1897	.....do.....	1,500
Medina	James C. Van Etten	1	Apr. 1, 1906	June 24, 1910	1,800
Middletown	James Frederick Tuthill	1	—— —, 1890	—— —, 1910	2,600
Mount Vernon	Edwin Cornelius Broome	(a)	Mar. 1, 1909	.....	3,800
Newark	William M. Fort	1	Aug. 1, 1907	Aug. 1, 1910	1,800
Newburgh	James M. Crane	1	Mar. —, 1900	Mar. 10, 1911	2,200
New Rochelle	Albert Leonard	(a)	Mar. —, 1907	.....	4,500
New York	William Henry Maxwell	6	Mar. —, 1898	Mar. —, 1910	10,000
Niagara Falls	Reuben A. Taylor	1	Aug. 13, 1901	Aug. 1, 1911	2,000
North Tarrytown	Charles A. Benedict	1	May 28, 1910	June 23, 1911	1,800
North Tonawanda	Richard Addison Searing	(a)	Sept. —, 1904	.....	2,500
Norwich	Stanford Jay Gibson	1	—— —, 1899	June 16, 1911	1,900
Nyack	Edward J. Bonner	1	Sept. —, 1908	June —, 1911	2,400
Ogdensburg	Horace H. Southwick	3	Sept. 1, 1902	Sept. 1, 1911	2,000
Olean	Samuel J. Slawson	1	Feb. 1, 1907	Aug. 1, 1910	2,500
Oneida	George Rowe Staley	3	May —, 1909	Aug. 1, 1913	1,800
Oneonta	George J. Dann	1	Apr. 1, 1910	July 31, 1911	1,800
Ossining	William H. Ryan	4	—— —, 1903	June —, 1913	2,500
Oswego	Charles W. Richards	.....	.....	.....	.....
Owego	Isaac Squire Carroll	1	Aug. 1, 1908	Aug. 1, 1910	1,300
Patchogue	Wellington E. Gordon	1	—— —, 1905	Sept. —, 1910	2,000
Peekskill:					
District No. 7	William John Millar	1	Nov. 1, 1907	Aug. 1, 1910	2,000
District No. 8	Alexander D. Dunbar	1	—— —, 1885	Aug. 10, 1911	2,200
Penn Yan	N. Winton Palmer	1	Jan. 1, 1906	July 31, 1910	1,200
Plattsburg	Frank Keely Watson	1	Oct. 29, 1905	.....do.....	2,000
Port Chester	Edgar G. Lautman	3	Aug. —, 1898	Sept. 1, 1913	3,250
Port Jervis	John Mather Dolph	1	—— —, 1884	July 31, 1911	1,900
Potsdam	Lewis E. Roberts	1	Sept. —, 1905	Sept. —, 1911	1,300
Poughkeepsie	Sylvester R. Shear	(a)	Mar. 29, 1910	.....	3,000
Rensselaer	Austin R. Coulson	2	Feb. 2, 1903	July 31, 1910	1,500
Rochester	Clarence Franklin Carroll	4	Mar. —, 1903	July 15, 1911	5,000
Rome	Daniel James Kelly	1	May —, 1909	June —, 1910	2,000
Rye	Forrest T. Shults	3	Sept. —, 1902	.....do.....	2,100
Salamanca	Thomas Stone Bell	1	—— —, 1895	.....do.....	2,000
Saratoga Springs	Thomas R. Kneil	(a)	Sept. —, 1892	.....	2,250
Schenectady	A. R. Brubacher	(a)	July 1, 1908	.....	3,300
Seneca Falls	Frederick John Medden	1	Oct. —, 1908	Aug. 31, 1911	1,600
Solvay	Charles O. Richards	1	Sept. —, 1886	July 1, 1911	1,800
Syracuse	.....	.....	.....	.....	.....
Tarrytown	Leslie V. Case b	6	May —, 1900	June —, 1911	2,300
Tonawanda	Frank K. Sutley	3	—— —, 1903	—— —, 1911	2,200
Troy	Edward Edwards, jr	(a)	Feb. —, 1908	.....	3,000
Utica	Wilbur B. Sprague	(a)	Aug. 1, 1909	.....	3,500
Waterford	George H. Harten	1	—— —, 1905	Aug. 31, 1911	1,800
Waterloo	Dwight Brewster Williams b	1	Sept. —, 1909	June —, 1911	1,550
Watertown	Frank S. Tisdale	1	July 19, 1900	Aug. 18, 1910	2,500
Watervliet	Hugh H. Lansing	1	July —, 1907	July 31, 1911	2,000
Waverly	E. B. Robbins d	.....	.....	.....	.....
Wellsville	Howard Griffith Burdge	1	Feb. 1, 1907	July 1, 1910	1,800
Whitehall	George S. Ellis	1	July 1, 1907	June 30, 1911	1,700
White Plains	Charles Cornell Ramsay	1	June 20, 1908	June 31, 1911	3,250
Yonkers	Charles Eugene Gorton	(a)	Nov. 1, 1893	.....	5,000
NORTH CAROLINA.					
Asheville	Richard Joseph Tighe	1	Sept. 1, 1909	Aug. 31, 1910	2,200
Burlington	Frank Harrison Curtiss	1	Mar. 16, 1901	June 30, 1910	1,500
Charlotte	Alexander Graham	2	Feb. 20, 1888	June 30, 1911	2,100
Concord	A. S. Webb	1	July 1, 1910	July 1, 1911	1,200
Durham	William Donald Carmichael	1	June 1, 1906	June 6, 1911	2,400
Elizabeth City	Samuel Lloyd Sheep	1	July 1, 1907	July 1, 1911	1,800
Fayetteville	J. A. Jones e	.....	.....	.....	.....
Gastonia	Joe S. Wray	1	Sept. 1, 1901	May 31, 1910	1,500
Goldsboro	Joseph Emery Avent	1	July —, 1909	June 30, 1910	1,500
Greensboro	James Lewis Mann	1	June 5, 1910	June 5, 1911	2,400
High Point	Harry Howell	1	July 7, 1908	June 30, 1910	1,500

a Indefinite term.
b Supervising principal.
c Principal of high school.
d From New York state report for 1909–10.
e For 1907–8; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
NORTH CAROLINA—con.					
Kinston	Bruce Craven	2	June 6,1909	June 6,1911	$1,600
Newbern	Harvey Bernard Craven	1	Sept. —,1904	June 30,1910	1,500
Raleigh	Francis Marion Harper	1	Sept. 1,1907	June 1,1910	2,000
Salem	Wesley Bethel Speas[a]				
Salisbury	N. V. Taylor[b]	1	June —,1909	May —,1910	1,100
Washington	Nathan Carter Newbold	1	July 29,1908	June 30,1911	1,500
Wilmington					
Wilson	Charles Lee Coon	1	July 1,1907	July 1,1911	1,800
Winston	Rowland Hill Latham	1	June 1,1910	June 15,1911	1,750
NORTH DAKOTA.					
Bismarck	Charles C. Root	1	July 14,1910	June —,1911	1,800
Fargo	William E. Hoover	1	Feb. —,1906	July 31,1911	2,800
Grand Forks	J. Nelson Kelly	1	—— —,1894	June 30,1911	3,200
Jamestown	Arthur Griswold Crane	2	—— —,1907	—— —,1912	2,000
Minot	Samuel Henry Wolf	3	May —,1900	June —,1912	2,000
Valley City	George W. Hanna	1	June 5,1899	June 1,1910	2,000
OHIO.					
Akron	H. V. Hotchkiss	5	July —,1900	Aug. 31,1915	4,000
Alliance	John Evans Morris	3	June —,1892	—— —,1911	2,000
Ashland	John A. McDowell[c]				
Ashtabula	Elmer A. Hotchkiss	4	May —,1907	July —,1913	2,400
Barberton	James Montgomery Carr	2	June —,1906	Aug. —,1911	1,900
Barnesville	William R. Butcher	2	—— —,1907	June —,1911	1,600
Bellaire	Wilson Hawkins	3	May —,1907	July 1,1913	2,200
Bellefontaine	J. W. McKinnon[d]				1,700
Bellevue					
Bowling Green	N. D. O. Wilson	3	Aug. —,1903	Sept. —,1912	1,800
Bridgeport	Samuel A. Gillett	2	—— —,1904	—— —,1911	1,800
Bucyrus	William Nelson Bectham	3	July —,1907	July —,1913	1,850
Cambridge	H. Z. Hobson	4		Sept. 1,1911	1,650
Canal Dover	Franklin Paul Geiger	2	—— —,1902	July 1,1912	1,800
Canton	John K. Baxter	4	July —,1905	July —,1912	3,000
Chillicothe	Fred Clair Kirkendall	1	July 1,1908	July 1,1911	2,100
Cincinnati	Frank B. Dyer	5	Aug. 12,1903	—— —,1912	6,000
Circleville	William Elmer Sealock[d]				1,650
Cleveland	William Harris Elson	5	Apr. 30,1906	Jan. 7,1912	6,000
Columbus	Jacob Albright Shawan	2	July 1,1889	June 30,1910	4,000
Conneaut	Calvin T. Northrop	5	July 1,1902	July 1,1910	2,000
Coshocton	Charles E. Bryant	3			1,800
Dayton	Edwin J. Brown	3	Aug. 21,1908	Sept. 1,1911	3,800
Defiance	Henry B. Mullholand	4	Feb. 20,1909	Sept. 1,1913	1,650
Delaware	William McKendree Vance	4	Sept. 1,1906	Aug. 31,1913	2,200
Delphos	Eugene L. Mendenhall	2	June —,1908	May —,1910	1,800
Dennison					
East Liverpool	Fred Henry Warren	4	May —,1908	Sept. 1,1913	2,500
Elyria	William Raymond Comings	5	—— —,1900	—— —,1913	2,500
Findlay	John Franklin Smith	3	Mar. 22,1909	June 1,1912	2,111
Fostoria	Rolland Ward Solomon	3	June —,1908	June —,1912	1,800
Fremont	J. E. Collins	3	—— —,1906	—— —,1913	2,000
Galion	Isaac C. Guinther	3	—— —,1896	Sept. 1,1912	1,850
Gallipolis	Harvey Evan Conard	2	July 1,1905	July 1,1912	1,800
Greenfield	Ezekiel W. Patterson	3	—— —,1906	—— —,1912	1,600
Greenville	James Jamison Martz	1	Apr. 7,1908	July 1,1911	1,800
Hamilton	Darrell Joyce	3	Aug. —,1903	Aug. —,1911	3,000
Hillsboro	William Edward Arter	2	Sept. —,1908	Sept. —,1911	1,500
Ironton	James T. Begg	1	May —,1910	Sept. 1,1911	2,000
Jackson	James Edgar Kinnison	3	June —,1881	June —,1911	1,700
Kent	W. A. Walls	1	June —,1910	June 30,1911	1,650
Kenton	N. E. Hutchinson[d]				1,800
Lancaster	H. Alexander Cassidy	2	July 1,1903	June —,1911	2,000
Lima	John Davison	5	June —,1905	June —,1915	3,000
Lorain	Albert C. Eldredge	5	May —,1905	Aug. 1,1913	2,500
Mansfield	H. H. Helter[d]				2,200
Marietta	Jesse V. McMillan	3	July —,1902	Sept. —,1911	2,400
Marion	Henry A. Hartman	2		June 30,1912	2,100
Martins Ferry	Lewis Edwin York	2	—— —,1907	Sept. —,1911	2,000
Massillon	C. L. Cronebaugh	3	Sept. 1,1904	Aug. 31,1911	2,100
Miamisburg	William Tecumseh Trump	3	June —,1906	June —,1913	2,200
Middletown	Ralph Richard Upton	2	June —,1909	July —,1911	2,350
Mount Vernon	John Sill Alan	3	Jan. —,1907	Sept. 1,1913	2,000

[a] County superintendent.
[b] Acting superintendent.
[c] For 1908–9; no later information.
[d] From Ohio official school directory for 1909–10.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
OHIO—continued.					
Nelsonville	Aaron Grady	1	Jan. 4,1900	Sept. 1,1911	$1,600
Newark	Joshua Dean Simkins	1	Sept. —,1904	Sept. —,1911	2,200
Newburg					
New Philadelphia	George C. Maurer	3	Aug. —,1893	Aug. —,1911	2,000
Niles	Frank J. Roller	2	—— —,1888	Aug. 31,1910	2,220
North Baltimore	Uriah L. Light	1	Apr. 20,1909	June 1,1911	1,150
Norwalk	Alaxander D. Beechy	2	—— —,1891	Aug. 31,1910	2,000
Norwood	W. S. Cadman	1	—— —,1906	.....do	2,600
Oberlin	Howard L. Rawdon	3	June 15,1908	Sept. 1,1911	1,400
Painesville	Franklin H. Kendall	3	July 1,1902	July 1,1913	1,800
Piqua	George C. Dietrich	3	July 1,1909	.....do	2,200
Pomeroy					
Portsmouth	Frank Appel	2	Feb. 15,1908	July 1,1911	2,200
Ravenna	Edward O. Trescott	3	Sept. 1,1906	Aug. 31,1910	1,800
St. Bernard	John La Fayette Trisler	1	—— —,1909	June —,1910	2,000
St. Marys	Charles Curtiss McBroom	3	June 1,1907	June 1,1911	1,500
Salem	Jesse S. Johnson	2	—— —,1900	Aug. 31,1910	2,000
Sandusky	Homer B. Williams	4	—— —,1898	Aug. 31,1913	2,600
Shelby	Samuel H. Maharry	3	Mar. —,1905	Sept. 1,1912	1,710
Sidney	Herbert R. McVay	3	Aug. —,1902	—— —,1912	2,070
Springfield	Carey Boggess	5	May —,1894	Aug. 31,1912	3,000
Steubenville	R. L. Ervin[a]				2,500
Tiffin	Charles Allen Krout	5	Aug. —,1900	Aug. —,1912	2,000
Toledo	William Backus Guitteau	3	Oct. —,1909	.....do	4,000
Toronto	Samuel Kennedy Mardes	2	July —,1903	July 1,1910	1,650
Troy	Charles W. Cookson	3	Aug. 7,1906	Aug. 7,1910	2,000
Uhrichsville	L. E. Everett	3	—— —,1901	—— —,1911	1,350
Urbana	I. N. Keyser	4	Aug. 31,1901	Aug. 31,1912	2,000
Van Wert	J. P. Sharkey	5	—— —,1898	Sept. —,1910	1,800
Wapakoneta	Frank Eugene Reynolds	2	Feb. 6,1909	Aug. 31,1911	2,000
Warren	Charles E. Carey	4		Aug. 1,1911	3,000
Washington C. H	William McClain	3	May —,1909	Sept. —,1913	2,500
Wellston	Clarence Dayton Walden	1	June 15,1910	July 1,1911	1,600
Wellsville	Arthur D. Horton	1	May —,1909	Sept. 1,1910	1,800
Wilmington	Edwin P. West	3	—— —,1909	Sept. 1,1912	1,850
Wooster	James E. Fitzgerald	3	May —,1909	—— —,1912	2,000
Xenia	Edwin Bruce Cox	3	June —,1881	July 1,1911	2,000
Youngstown	Novetus Holland Chaney	4	July 7,1902	July 7,1914	4,000
Zanesville	Willard C. Bowers	2½	Dec. 6,1909	June 1,1912	2,500
OKLAHOMA.					
Ardmore	Charles Evans	2	Apr. —,1905	May 1,1911	2,600
Chickasha	William F. Ramey	1	May 25,1908	July 1,1910	1,800
Durant	Walter Hendricks Echols	1	July 6,1908	July 31,1911	1,600
El Reno	Frederick Noble Howell	1	June —,1900	May 31,1911	2,000
Enid	Thomas Walter Butcher	1	May —,1909	July 1,1911	2,750
Guthrie	William S. Calvert	1	Feb. 1,1909	May —,1911	1,800
Lawton	Thomas Burley Rybolt	1		May 31,1910	1,350
McAlester	L. T. Huffman				
Muskogee	Edwin S. Monroe	1	July 1,1909	July 1,1911	2,700
Oklahoma	W. A. Brandenburg	3	Jan. 1,1910	June —,1913	3,600
Perry	Francis William Wenner	1	—— —,1909	Sept. —,1911	1,200
Ponca	Richard E. Tope	2	—— —,1906	June 30,1910	1,500
Shawnee	Scott Glen	2	July —,1905	July 1,1912	2,250
Tulsa	Joseph G. Masters	1	Mar. —,1906	June 30,1910	1,800
OREGON.					
Astoria	John Gray Imel	1	Aug. 1,1909	Aug. 1,1910	1,700
Baker City	J. A. Churchill	1	—— —,1891	May 27,1911	2,500
Eugene	Guy Cadwallader Stockton	1	Sept. —,1908	June 13,1911	2,000
Pendleton	J. S. Landers	1	Dec. 1,1906	Aug. 31,1910	1,900
Portland	Frank Rigler				
Salem	James M. Powers	3	July 1,1905	July 1,1913	2,250
The Dalles	Arthur C. Strange	1	May —,1908	June —,1910	1,650
PENNSYLVANIA.					
Allegheny					
Allentown	Francis Dimmick Raub	3	—— —,1893	—— —,1911	2,500
Altoona	Henry Houston Baish	3	Aug. 1,1908	June 1,1911	2,400
Archbald	William A. Kelly	3	June —,1904	May 31,1910	1,500
Ashland	William C. Estler	3	—— —,1888	—— —,1911	1,500
Ashley	A. P. Cope[b]	1	July —,1909	June —,1910	1,000
Athens	George Edgar Rogers	1	June —,1905	June 10,1910	1,500
Bangor	John W. Gruver	3	June —,1903	June —,1911	1,500

[a] From Ohio official school directory for 1909–10.

[b] Supervising principal.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
PENNSYLVANIA—cont'd.					
Beaver Falls	Andrew Lester	3	May —, 1908	June 1, 1911	$1,800
Bellefonte	Jonas Elwood Wagner	1	June 25, 1909	June 6, 1910	1,500
Bellevue	W. Espey Albig [a]	1	.....	June —, 1911	2,250
Berwick	James Garfield Sigman [a]	1	Dec. —, 1906	June —, 1910	1,300
Bethlehem	Fred Woods Robbins	3	Aug. 15, 1900	June 1, 1911	2,000
Bloomsburg	Lloyd Parvin Sterner	3	June —, 1891	June —, 1911	1,600
Braddock	Grant Norris	3	June —, 1902	.....do.....	2,400
Bradford	Edward E. Schermerhorn	.....	Dec. —, 1908	.....do.....	2,200
Bristol	Louise Dilworth Boggs	3	June 1, 1897	May 31, 1911	1,000
Butler	John A. Gibson	3	June 1, 1896	June 1, 1911	2,600
Carbondale					
Carlisle	John C. Wagner	3	—— —, 1903	June —, 1911	1,550
Carnegie	William Stewart Bryan	1	Aug. —, 1896	June 1, 1911	1,800
Catasauqua	H. J. Reinhard [a]	3	July 1, 1899	July 1, 1913	1,450
Chambersburg	Samuel Gelwix	3	Aug. —, 1907	June —, 1911	1,200
Charleroi	James G. Pentz	2	June 1, 1909	June 1, 1911	1,700
Chester	Thomas Sessions Cole	3	Oct. 8, 1906	June —, 1911	2,200
Clearfield	Loudon F. Benchoff [a]	1	.....	July 10, 1910	1,500
Coatesville					
Columbia	Daniel Fleisher	3	Dec. —, 1898	June —, 1911	1,600
Connellsville	Walter S. Deffenbaugh	3	June —, 1907	.....do.....	1,800
Conshohocken	Elmer B. Ziegler	3	Feb. —, 1904	May —, 1911	1,800
Corry	Virgil Guilford Curtis	3	—— —, 1905	June —, 1911	1,600
Danville	Daniel N. Dieffenbacher	3	Sept. 1, 1907	—— —, 1911	1,320
Darby	Charles P. Sweeny	3	July —, 1898	June —, 1911	1,500
Dickson City	James P. Wilson [b]	.....	.....	.....	.....
Donora	Ora Ernest Rose [c]	1	June —, 1909	June —, 1910	1,500
Dubois	J. H. Alleman	3	June —, 1902	June —, 1911	2,000
Dunmore	Charles F. Hoban	3	—— —, 1902	—— —, 1911	2,400
Duquesne	Clyde Henry Walford [a]	1	Aug. 13, 1906	June 7, 1911	2,100
Duryea	Frederick J. Regan [a]	3	—— —, 1895	June —, 1910	1,200
Easton	William White Cottingham	3	Aug. —, 1853	June —, 1911	2,000
Edwardsdale (P. O. Edwardsville).	James O. Herman	3	—— —, 1893	—— —, 1911	1,200
Erie	Henry Clay Missimer	3	June —, 1890	June —, 1911	3,600
Etna	J. Q. A. Irvine [b]	.....	.....	.....	.....
Forest City	Floyd H. Taylor	1	Apr. —, 1909	May 27, 1910	1,000
Franklin	Nathan Pearl Kingsley	3	—— —, 1877	June —, 1911	2,000
Freeland					
Galeton	Leon D. Taggart [a]	1	May —, 1909	June —, 1911	1,350
Gilberton					
Greensburg	Thomas S. March	3	Sept. —, 1904	June —, 1911	3,000
Greenville	G. B. Gerberich	3	—— —, 1908	—— —, 1911	1,600
Hanover	Joseph Caldwell Carey	3	July 10, 1905	June 1, 1911	1,500
Harrisburg	Frederick E. Downes	3	May —, 1905	June —, 1911	2,800
Hazleton	David Augustus Harman	3	—— —, 1881	.....do.....	3,000
Homestead	James M. Norris	3	July —, 1903	.....do.....	2,400
Huntingdon	Edward R. Barclay	3	June 1, 1902	June 1, 1911	1,500
Indiana	Frank Ernest Work	1	June —, 1908	June —, 1910	1,350
Jeannette	Theo. B. Shank	3	June —, 1905	June —, 1911	2,150
Jersey Shore	William F. Yoder [a]	1	July 1, 1909	June 30, 1911	1,200
Johnsonburg	George W. Mitchell	3	Sept. —, 1908	Sept. —, 1911	1,600
Johnstown	James Nicol Muir	3	May 5, 1905	June —, 1911	2,500
Kane	Thomas Galbraith McCleary	3	Oct. 26, 1908	.....do.....	2,100
Kingston	J. Richmond Merkel [a]	1	Aug. —, 1909	May 31, 1910	1,600
Kittanning	Frank Wilbur Goodwin	3	Mar. 1, 1906	June 1, 1911	1,700
Knoxville	G. P. Snyder [c]	1	Aug. 23, 1909	June 2, 1910	810
Lancaster	Robert Koch Buehrle	3	—— —, 1880	June 1, 1911	2,000
Lansford	Elmer Ellsworth Kuntz	3	June 1, 1905	.....do.....	1,500
Latrobe	Arthur C. Klock [a]	3	Mar. —, 1905	June —, 1910	2,000
Lebanon	Edgar Reed	3	Aug. 19, 1909	May —, 1911	2,000
Lehighton	Brinton McClellan Shull [a]	1	June —, 1908	May 31, 1910	1,000
Lewistown	T. Latimer Brooks	1	July 5, 1910	June —, 1911	1,400
Lock Haven	Edward Sykes Ling	3	June —, 1908	.....do.....	1,200
Luzerne	Theron G. Osborne [a]	1	Aug. —, 1901	June 1, 1910	1,200
McKeesport	Joseph Burdette Richey	3	June —, 1902	June 1, 1911	3,000
McKees Rocks	Francis Hamilton Powers	3	June 1, 1908	.....do.....	2,250
Mahanoy City	William Nelson Ehrhart	3	May —, 1906	.....do.....	1,650
Mauch Chunk	Halladay R. Jackson [a d]	.....	.....	.....	.....
Meadville	Russell Heacock Bellows	3	July 1, 1908	July 1, 1911	2,100
Meyersdale	William H. Kretchman [a]	3	—— —, 1903	—— —, 1911	1,200
Middletown	Harry J. Wickey	3	June —, 1899	June 1, 1911	1,200
Millvale	John C. R. Johnston [a b]	.....	.....	.....	.....
Milton	William Andrew Wilson	3	June —, 1905	June —, 1911	1,800
Minersville	Wilbur Merrill Yeingst [a]	3	June —, 1908	June —, 1912	1,800
Monessen	Harry E. Gress	1	June 1, 1910	June 1, 1911	1,800

[a] Supervising principal.
[b] For 1908–9; no later information.
[c] Principal.
[d] For 1907–8; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
PENNSYLVANIA—cont'd.					
Monongahela City	Renwick G. Dean [a]	3	Aug. —,1906	June 1,1913	$1,800
Mount Carmel	Samuel Halsey Dean	3	June 2,1892	June 1,1911	1,650
Mount Pleasant	Urie Lee Gordy [b]	1	Sept. —,1907	June 4,1910	1,710
Nanticoke	Alton P. Diffendafer	3	Jan. 1,1909	May —,1911	2,400
New Brighton	Clyde Chapman Green	3	Aug. 16,1906	June 1,1911	2,000
New Castle	Thomas A. Kimes	3	June 1,1905	June —,1911	2,000
New Kensington	M. C. Turrell [a]	1	—— —,1909	—— —,1911	2,400
Norristown	Allen S. Martin	3	Jan. 1,1906	June 1,1911	2,500
Northampton	William David Landis	3	July 29,1905	.....do.....	1,400
North Braddock	John Lloyd Spitler	1	.....	.....do.....	2,100
Oil City	James Joseph Palmer	3	May —,1908	June —,1911	2,500
Old Forge	Francis R. Coyne [c]	.....	.....	.....	.....
Olyphant	Michael W. Cummings	3	June —,1903	June —,1911	1,500
Philadelphia	Martin G. Brumbaugh	1	July 1,1906	Dec. 31,1910	7,500
Phoenixville	Robert Edward Laramy	3	May —,1905	June —,1911	1,800
Pitcairn	Arthur Bates Benn	1	June —,1909	.....do.....	1,375
Pittsburg	Samuel Andrews	3	June 1,1899	June 1,1911	6,000
Pittston	Louis P. Bierly [c]	.....	.....	.....	.....
Plymouth	Sherman Levi Smith [a]	1	Aug. —,1908	May 31,1911	1,600
Pottstown	William W. Rupert	3	June —,1888	June —,1911	1,600
Pottsville	Stephen A. Thurlow	3	July —,1907	May —,1911	1,800
Punxsutawney	Frank S. Jackson	3	Dec. 3,1908	June —,1911	1,500
Rankin	M. E. Thompson [a]	.....	.....	.....	.....
Reading	Charles S. Foos	3	June —,1902	June —,1911	3,000
Renovo	George A. Mincemoyer [a]	1	June 15,1908	—— —,1911	1,200
Ridgway	Walter Merton Peirce	3	June —,1897	July —,1911	2,000
Rochester	William S. Taft	.....	.....	.....	.....
St. Clair		.....	.....	.....	.....
St. Marys	J. J. Lynch	1	Sept. —,1902	May 31,1911	1,620
Sayre	Lewis Edwin De Laney [a]	1	Jan. —,1908	June —,1910	1,400
Scottdale	Landis Tanger [b]	1	June 1,1910	June 1,1911	1,800
Scranton	George Howell	3	—— —,1894	June —,1911	4,000
Sewickley	William E. Borger [b]	1	July 1,1909	July 1,1910	2,400
Shamokin	Joseph Howerth	3	Feb. 1,1902	June —,1911	2,500
Sharon	Samuel H. Hadley	3	June —,1902	.....do.....	2,200
Sharpsburg	C. C. Kelso [b]	3	Apr. 1,1900	May 31,1911	2,000
Shenandoah	J. W. Cooper	3	Apr. 5,1897	June —,1911	2,000
Slatington	James Wilson Snyder [a]	3	Dec. —,1906	.....do	1,500
South Bethlehem	Owen R. Wilt	3	.....	.....do.....	1,500
South Sharon		.....	.....	.....	.....
Steelton	Lemuel E. McGinnis	3	June —,1888	June 1,1911	2,250
Sunbury	Ira C. M. Ellenberger	3	May —,1908	.....do.....	1,800
Tamaqua	J. F. Derr	3	May 2,1908	May 31,1911	1,500
Tarentum	Andrew Doak Endsley	3	June —,1905	June —,1911	2,400
Taylor	Morgan J. Lloyd	3	June —,1903	.....do.....	1,500
Titusville	Henry Pease	3	Apr. —,1897	June 1,1911	2,250
Towanda	John H. Humphries [a]	3	June —,1904	—— —,1912	1,500
Turtle Creek	W. A. Rodgers [a]	.....	.....	.....	.....
Tyrone	Henry Scott Fleck	3	June 1,1908	June 1,1911	1,400
Uniontown	Clifford John Scott	3	Aug. 1,1907	July 1,1911	2,300
Warren	Robert Thompson Adams	3	July —,1909	July 1,1913	2,250
Washington	William Krichbaum	3	July —,1904	June —,1911	2,500
Waynesboro	J. Hassler Reber	3	June —,1899	.....do.....	1,500
West Chester	Addison L. Jones	3	June 1,1889	June 1,1912	2,500
West Pittston	Louis P. Bierly [c]	.....	.....	.....	.....
Wilkes-Barre	James M. Coughlin	3	—— —,1891	June 1,1911	4,000
Wilkinsburg	James L. Allison	3	Aug. 1,1902	.....do.....	2,700
Williamsport	Charles Lose	3	June 1,1896	.....do.....	2,500
Wilmerding	Charles Wilbert Shaffer [b]	3	.....	June 17,1910	1,800
Windber	Eden A. Hower [a]	.....	.....	.....	.....
York	Atreus Wanner	3	—— —, 1890	June —,1911	2,250
RHODE ISLAND.					
Bristol	John Post Reynolds	1	Sept. 1,1884	Sept. 1,1911	1,500
Burrillville	Joseph Cleveland Sweeney	1	Sept. 3,1910	Mar. 8,1911	1,500
Central Falls	Wendell Axtell Mowry	1	June —,1898	Feb. —,1911	2,000
Coventry	Henry M. Walradt	1	—— —,1909	June 30,1911	1,500
Cranston	Valentine Almy	1	—— —,1894	Nov. —,1910	1,900
Cumberland	Charles Carroll Richardson	1	July 1,1903	July 31,1910	1,550
East Providence	Carroll R. Reed	1	Feb. 2,1909	Jan. 1,1911	1,700
Johnston	William Henry Starr	1	June —,1898	Nov. —,1910	1,500
Lincoln	Emerson Leland Adams	1	Sept. 1,1905	June 30,1911	1,500
Newport	Herbert Warren Lull	1	Sept. 1,1900	Dec. 31,1910	3,000

[a] Supervising principal. [b] Principal. [c] For 1908–9; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
RHODE ISLAND—cont'd.					
North Kingston	Frederic Dana Blake	1	Nov. —, 1905	Nov. —, 1910	$400
Pawtucket	Frank O. Draper	1	Mar. 1, 1906	Dec. 31, 1910	3,000
Providence	Randall Judson Condon	1	Mar. 25, 1910	June 1, 1911	4,000
South Kingston					
Warren	Clair G. Persons	1	—— —, 1906	July 1, 1910	1,800
Warwick	Elwood Taylor Wyman	1	Dec. —, 1905	Nov. —, 1910	2,000
Westerly	William H. Holmes	1	July 1, 1903	July 1, 1910	2,500
Woonsocket	Frank Emerson McFee	1	—— —, 1886	Dec. —, 1910	2,000
SOUTH CAROLINA.					
Abbeville	William Renwick Bradley	1	June 20, 1910	June 1, 1911	1,200
Aiken	D. R. Riser	1	June 30, 1910	June —, 1911	1,200
Anderson	Elliott Clayton McCouts	2	June —, 1907	.....do.....	1,500
Beaufort	Lucco Gunter	1	June —, 1909	June 24, 1910	1,200
Charleston	Henry P. Archer	4	Jan. —, 1885	Dec. —, 1911	2,500
Chester	William Herbert McNairy	1	—— —, 1906	—— —, 1910	1,500
Columbia	Ernest Shuler Dreher	1	—— —, 1895	Apr. 20, 1911	2,000
Florence	J. L. Mann[a]				
Gaffney	Will J. Francis	1	May —, 1908	June 2, 1910	1,100
Georgetown	William Clarence Bynum	1	May 20, 1907	June 17, 1910	1,200
Greenville	E. L. Hughes[a]				
Greenwood	William Wardlaw Nickels	1	May —, 1910	July —, 1911	1,900
Laurens	Barney L. Jones		—— —, 1900	June —, 1911	1,500
Newberry	Henry Lee Dean	1	Apr. —, 1910	Apr. —, 1911	1,500
Orangeburg	Albert Jerome Thackston[b]				
Rock Hill	John Coleman Cork	1	—— —, 1898	June 1, 1911	1,600
Spartanburg	Frank Evans	1	Sept. 15, 1895	Sept. 15, 1910	2,000
Sumter	Samuel Henry Edmunds	1	—— —, 1895	—— —, 1910	2,400
Union	Davis Jeffries	1	—— —, 1894	May —, 1911	1,700
SOUTH DAKOTA.					
Aberdeen	Henry Charles Johnson	3	Apr. 1, 1909	—— —, 1913	2,500
Deadwood	Alexander Strachan	1	Aug. —, 1890	—— —, 1910	2,000
Lead	Anson Hardin Bigelow	2	July —, 1904	July 1, 1912	3,000
Mitchell	Freeman Hugh Hoff	1	June —, 1903	June 2, 1911	1,800
Sioux Falls	Archibald Arnott McDonald	1	Sept. 1, 1907	June 10, 1911	2,267
Watertown	Lester Burr Parsons	1	.....do.....	June 1, 1910	1,900
Yankton	Theron Alvin Harmon	1	Sept. 13, 1909	June 10, 1911	1,700
TENNESSEE.					
Bristol	Samuel Garland Anspach	1	May —, 1907	June 30, 1910	1,500
Chattanooga	Sidney Gordon Gilbreath	3	Aug. —, 1903	July —, 1911	2,500
Clarksville	Perry Lee Harned[a]				
Cleveland	Dewitt Clinton Arnold	1	June —, 1885	May 31, 1911	1,500
Columbia	William Eugene Bostick[a]				
Dyersburg	Ralph E. Rice	1	—— —, 1906	June 30, 1911	
Harriman	John Virgil Rymer	1	Sept. 1, 1900	May 28, 1909	1,000
Jackson	Gentry Richard McGee	1	Sept. —, 1903	Aug. —, 1910	1,800
Johnson City	James L. Brooks	1	July —, 1910	July 1, 1911	1,600
Knoxville	Seymour A. Mynders	3	June 1, 1907	June 1, 1912	3,000
Memphis	Wharton Stewart Jones[c]				
Murfreesboro					
Nashville	John Japheth Keyes	3	Aug. 9, 1909	June 27, 1913	3,000
TEXAS.					
Austin	Arthur Newell McCallum	2	May —, 1903	July 1, 1910	2,750
Beaumont	Henry Franklin Triplett	2	July 15, 1903	July 15, 1912	2,500
Belton	Louis H. Hubbard	1	Feb. 26, 1910	June 5, 1911	
Bonham	I. W. Evans	2	May —, 1901	June 2, 1911	2,000
Brenham	Peyton Irving, jr	1	—— —, 1906	Sept. —, 1910	2,000
Brownsville	C. G. Hallmark	1	May 31, 1910	Aug. 1, 1911	1,500
Brownwood	George H. Carpenter	2	Sept. 1, 1903	June —, 1912	2,000
Cleburne	Robert Green Hall	1	Apr. —, 1907	July 1, 1911	2,100
Corpus Christi	Charles Walton Crossley[d]				
Corsicana	John Edward Blair	1	Aug. 1, 1908	Aug. 1, 1911	2,200
Dallas	Arthur Lefevre	2	Aug. 15, 1908	July 1, 1911	3,600
Denison	Frank B. Hughes	1	Sept. —, 1902	July —, 1910	2,000
Denton	John S. Carlisle	2	May —, 1899	May 31, 1912	2,000
El Paso	Norman Robert Crozier	1	Apr. 20, 1910	July 1, 1911	3,000
Ennis	J. D. Coghlan	2		Sept. —, 1910	1,800
Fort Worth	J. W. Cantwell	2	May —, 1908	June —, 1911	3,600

[a] From state school directory for 1909–10.
[b] For 1908–9; no later information.
[c] Assistant superintendent and acting superintendent.
[d] For 1907–8; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
TEXAS—continued.					
Gainesville	John P. Glasgow	1	Feb. 1,1910	May 29,1911	$2,160
Galveston	John William Hopkins	1	June —,1895	June 1,1911	3,000
Gonzales	Miss Rozelle Nicholson	1	May —,1907	May 19,1910	1,200
Greenville	Louis Clyde Gee	1	Aug. 1,1907	July 31,1911	1,800
Hillsboro	Thomas Dudley Brooks	1	Oct. —,1906	....do	1,900
Houston	Paul Whitfield Horn	2	June 12,1904	June 12,1912	3,600
Laredo					
McKinney	J. H. Hill	1		May —,1910	1,125
Marlin	Walter Francis Doughty	1	July 1,1906	July —,1911	2,100
Marshall	W. H. Atteberry	1	May —,1896	Sept. 1,1910	1,800
Navasota	James Thomas Davis	1	Apr. 1,1910	May 31,1911	1,700
Orange	James Evans Binkley	2	May 26,1909	Sept. 1,1912	1,800
Palestine	Walker King	1	Sept. 1,1905	Aug. 31,1911	1,800
Paris	Judge Given Wooten	2	May —,1893	Sept. —,1911	2,500
San Antonio	Charles James Lukin	2	July —,1908	July —,1911	3,000
Sherman	Jay C. Pyle	2	June 1,1907	June —,1912	2,100
Taylor	John Francis O'Shea	2	June 1,1908	June 1,1911	1,650
Temple	Justin F. Kimball	2	May —,1900	July —,1912	2,500
Terrell	Starlin M. N. Marrs	1	July 1,1893	June 30,1911	1,800
Texarkana	William Y. Thornbury	1	Aug. —,1909	Aug. —,1911	2,000
Tyler					
Victoria	Andrew Bennett Cox	1	Aug. —,1908	Sept. 1,1910	1,500
Waco	John Compere Latthmore	2	July —,1899	June 30,1910	2,400
Waxahachie	G. B. Winn	1	Sept. 1,1910	Sept. 1,1911	1,600
Weatherford	Thomas William Stanley	1	Nov. —,1904	May 31,1911	1,500
UTAH.					
Logan	Alma Molyneux	2	June 20,1907	June 30,1912	1,800
Ogden	John Martin Mills	2	Apr. 1,1909	July 1,1910	2,500
Park City	Arthur D. Griffin	1	Apr. —,1908	June —,1910	1,800
Provo	William Senior Rawlings	2	—— —,1894	June 30,1910	1,500
Salt Lake City	David Henry Christensen	2	June 30,1901	June 30,1912	4,800
VERMONT.					
Barre	Ozias Danforth Mathewson	1	—— —,1890	July 1,1910	2,500
Bellows Falls	Orvis K. Collins	1	July 1,1910	June 30,1911	1,800
Bennington	Albert Watson Varney	1	Feb. —,1902	July 1,1911	2,000
Brattleboro	Florence Maude Wellman [a]	1	Sept. —,1908	June —,1910	900
Burlington	Henry Orson Wheeler	1	Apr. —,1880	Apr. 1,1911	2,250
Montpelier	Fred J. Brownscombe [b]				
Rutland	David B. Locke	1	—— —,1905	—— —,1910	1,900
St. Albans	George S. Wright	1	Aug. 1,1909	July 1,1911	1,800
St. Johnsbury	Corwin F. Palmer	1	June —,1908	Aug. 31,1910	1,800
VIRGINIA.					
Alexandria	William H. Sweeny	4	June 18,1909	July 1,1913	1,200
Bristol	Samuel Rhea McChesney	4	—— —,1905	—— —,1913	1,600
Charlottesville	James Gibson Johnson	4	June 17,1909	July 1,1913	1,500
Danville	Ford Henry Wheatley	4	Sept. 17,1908	....do	2,075
Fredericksburg	Arthur Davis Wright	4	July 1,1909	June 30,1913	1,400
Lynchburg					
Newport News	Willis A. Jenkins	4	July 1,1909	July 1,1913	1,760
Norfolk	Richard Augustus Dobie	4	Jan. —,1896	July —,1913	2,830
Petersburg	Robert Randolph Jones	4	Mar. —,1908	June 30,1913	2,000
Portsmouth	Harry A. Hunt	4	July 1,1909	July 1,1913	1,700
Radford	Charles Virgil Shoemaker	3	June 28,1910	....do	1,200
Richmond	J. A. C. Chandler	4	July 1,1909	....do	3,000
Roanoke	Harris Hart	4	May —,1893	....do	2,500
Staunton	John P. Neff	4	June —,1909	....do	1,800
Suffolk	Lee Britt [b]				
Winchester	Maurice M. Lynch	4	Apr. —,1886	June 30,1913	975
WASHINGTON.					
Aberdeen	Arthur Wilson	1	July 1,1908	June 30,1911	2,200
Bellingham	Elmer Lafayette Cave	3	July 1,1909	July 1,1913	3,000
Everett	D. A. Thornburg	3	July 1,1905	July 1,1912	3,000
North Yakima	David Craig Reed	3	Aug. 1,1906	Aug. 1,1910	2,400
Olympia	Chauncey Edwin Beach	2	May —,1909	June 30,1912	2,000
Seattle	Frank B. Cooper	3	—— —,1891	—— —,1912	6,500
Spokane	Bruce M. Watson	1	Mar. —,1909	July 1,1911	3,900
Tacoma	Jacob Grant Collicott	2	July 1,1910	July —,1912	4,000
Vancouver	Charles W. Shumway	1	Sept. —,1895	July 31,1911	1,800
Walla Walla	Orrin S. Jones	2	July —,1904	July 1,1912	2,600

[a] Supervisor of grades.

[b] For 1908–9; no later information.

II.—City Superintendents—Continued.

City.	Superintendent.	Term of office in years.	Date of original appointment.	Expiration of present term.	Salary per annum.
WEST VIRGINIA.					
Benwood	H. L. Pedicord [a]				$1,200
Bluefield	George M. Ford	1	July —, 1907	June 30, 1911	2,500
Charleston	George S. Laidley [a]				3,000
Clarksburg	Frank Lee Burdette	1	July —, 1897	June 30, 1911	1,800
Fairmont	Joseph Rosier	1	June —, 1900	....do....	2,000
Grafton	T. J. Humphrey [a]				1,800
Hinton	William Henry Sasser	1		July —, 1911	1,350
Huntington	Wilson Matthews Foulk	1	June —, 1905	June 30, 1911	2,500
Martinsburg	William C. Morton	3	Aug. 1, 1909	Aug. 1, 1912	1,500
Moundsville	George Emanuel Hubbs	1	July 1, 1909	June 30, 1911	1,500
Parkersburg	Ira Benton Bush	1	July 10, 1910	July 1, 1911	2,000
Wheeling	Hervey Black Work	2	Oct. —, 1904	July —, 1911	2,500
WISCONSIN.					
Antigo	William H. Hikok	1	July 1, 1904	June 30, 1911	2,000
Appleton	Carrie Emma Morgan	3	—— —, 1894	July 1, 1912	950
Ashland	Junius T. Hooper	1	—— —, 1899	July 31, 1910	3,000
Baraboo	Harlem Roy Chamberlain	1	July 1, 1908	June 30, 1911	2,000
Beaver Dam	John Thomas Wilson	1	—— —, 1907	July 1, 1910	1,600
Beloit	Franklin Elmer Converse	1	Aug. —, 1897	Aug. —, 1910	2,360
Berlin	William Tait Anderson	1	May 6, 1909	June 30, 1911	1,000
Chippewa Falls	George W. Swartz [b]				
De Pere:					
East side	Charles C. Bishop	1	June —, 1908	June —, 1910	1,300
West side	A. E. Buresh [c]	1		June 30, 1911	1,080
Eau Claire					
Fond du Lac	Thomas Lloyd Jones	1	July 1, 1909	June 10, 1910	2,400
Grand Rapids	Charles W. Schwede	1	July —, 1909	June 30, 1911	1,700
Green Bay	A. W. Burton	3	—— —, 1900	Aug. —, 1912	2,000
Janesville	Harry C. Buell	1	—— —, 1901	Aug. 1, 1911	2,500
Kaukauna	Leslie Paul Bunker	1	Sept. —, 1906	June —, 1910	1,500
Kenosha	Mrs. Mary Davison Bradford	1	May 10, 1910	June —, 1911	2,000
La Crosse	John P. Bird	1	July —, 1897	July —, 1910	2,500
Madison	Richard B. Dudgeon	1	Sept. 1, 1891	June 30, 1911	2,500
Manitowoc	Charles W. Meisnest	2	Jan. 14, 1909	July —, 1911	1,500
Marinette	George Henry Landgraf	3	July 1, 1903	June 30, 1913	2,800
Marshfield	Carl William Otto	1	May 15, 1910	June —, 1911	1,350
Menasha	John Callahan	1	June —, 1901	July 1, 1911	2,000
Menomonie	George Alan Works	1	Jan. 1, 1909	....do....	1,850
Merrill	William Milne	1	July 1, 1910	....do....	1,600
Milwaukee	Carroll Gardner Pearse	3	Apr. 1, 1904	June 30, 1913	6,000
Monroe	G. B. Haverson [b]				
Neenah	Edward Monroe Beeman	2	July —, 1903	June 30, 1912	2,200
Oconto	M. R. Stanley	1	June —, 1909	June —, 1910	1,700
Oshkosh	Matthew N. McIver	1	July 1, 1905	June 30, 1911	2,500
Platteville	Oliver E. Gray	1	Sept. —, 1899	June 30, 1910	1,600
Portage	W. G. Clough	1	July —, 1876	June 30, 1911	1,700
Racine	Burton E. Nelson	1	Aug. 1, 1904	Aug. 1, 1911	2,700
Rhinelander	Frederick Arthur Harrison	1	May 10, 1908	July 1, 1911	1,800
Sheboygan	Henry F. Leverenz	1	Apr. —, 1899	Apr. 15, 1911	2,200
South Milwaukee	Fred W. Hein	1	Sept. 1, 1909	June 27, 1910	1,500
Stevens Point	John Nicholas Davis	1	Apr. —, 1906	June 30, 1910	1,960
Stoughton	George Orton Banting	3	June —, 1906	June 30, 1912	1,900
Sturgeon Bay	Charles George Stangel	1	July 7, 1902	July 1, 1911	1,800
Superior	William E. Maddock	3	July 1, 1905	July 1, 1912	2,600
Two Rivers	William James Hamilton	1	July 1, 1907	July 1, 1911	1,900
Washburn	Stephen Albert Oscar	1	—— —, 1904	June 1, 1911	1,800
Watertown	W. P. Roseman [d]				
Waukesha	G. F. Loomis	2	Sept. —, 1908	June —, 1911	2,100
Wausau	Silas B. Tobey	1	—— —, 1905	July 1, 1911	2,500
WYOMING.					
Cheyenne	S. S. Stockwell	1	July 10, 1905	July 10, 1910	2,250
Laramie	Charles E. Hudson	1	June 10, 1910	June 10, 1911	1,800
Rock Springs	Lewis C. Tidball, jr.	1	Feb. 8, 1909	June 1, 1910	1,575
Sheridan	John Jacob Early	1	Aug. 1, 1908	Aug. 1, 1910	2,400

[a] From West Virginia State educational directory for 1909–10.
[b] For 1908–9; no later information.
[c] Supervising principal.
[d] For 1907–8; no later information.

III.—University and College Presidents.

1.—*Universities and colleges for men and for both sexes, and schools of technology.*

Location.	University or college.	Name of president.
ALABAMA.		
Auburn	Alabama Polytechnic Institute	Charles C. Thach, LL. D.
Eastlake	Howard College	A. P. Montague, LL. D.
Greensboro	Southern University	Rev. S. M. Hosmer, D. D.
St. Bernard	St. Bernard College	Rev. Bernard Menges, O. S. B.
Spring Hill	Spring Hill College	Rev. Francis X. Twellmeyer, S. J.
University	University of Alabama	John W. Abercrombie, LL. D.
ARIZONA.		
Tucson	University of Arizona	
ARKANSAS.		
Arkadelphia	Henderson College	John H. Hinemon, A. M.
Do	Ouachita College	Henry S. Hartzog, LL. D.
Batesville	Arkansas College	Eugene R. Long, Ph. D.
Clarksville	Arkansas Cumberland College	Rev. G. D. Crawford.
Conway	Hendrix College	Rev. A. C. Millar, D. D.
Fayetteville	University of Arkansas	John N. Tillman, LL. D.
Little Rock	Philander Smith College	Rev. J. M. Cox, D. D.
CALIFORNIA.		
Berkeley	University of California	Benj. Ide Wheeler, LL. D.
Claremont	Pomona College	James A. Blaisdell.
Los Angeles	Occidental College	John W. Baer, LL. D.
Do	St. Vincent's College	Rev. J. S. Glass, C. M., D. D.
Do	University of Southern California	Rev. George F. Bovard, LL. D.
Oakland	St. Mary's College	Rev. Brother Vellesian, F. S. C.
Pasadena	Throop Polytechnic Institute	James A. B. Scherer, LL. D.
San Francisco	St. Ignatius College	Rev. Joseph C. Sasia, S. J.
San Jose	University of the Pacific	Wm. W. Guth, Ph. D.
Santa Clara	Santa Clara College	Rev. James P. Morrissey, S. J.
Stanford University	Leland Stanford Junior University	David Starr Jordan, LL. D.
COLORADO.		
Boulder	University of Colorado	James H. Baker, LL. D.
Colorado Springs	Colorado College	Rev. W. F. Slocum, LL. D.
Denver	College of the Sacred Heart	Rev. J. J. Brown, S. J.
Fort Collins	Colorado Agricultural College	Chas. A. Lory, M. S.
Golden	State School of Mines	Victor C. Alderson, Sc. D.
University Park	University of Denver	Rev. Henry A. Buchtel, LL. D., chancellor.
Westminster	Westminster University	Salem G. Pattison, M. A.
CONNECTICUT.		
Hartford	Trinity College	Flavel S. Luther, LL. D.
Middletown	Wesleyan University	Rev. W. A. Shanklin, LL. D.
New Haven	Yale University	Arthur T. Hadley, LL. D.
Storrs	Connecticut Agricultural College	C. H. Beach, B. S.
DELAWARE.		
Dover	State College for Colored Students	Rev. W. C. Jason, A. M.
Newark	Delaware College	Geo. A. Harter, Ph. D.
DISTRICT OF COLUMBIA.		
Washington	Catholic University of America	Rev. Thomas J. Shahan, S. T. D., rector.
Do	Gallaudet College	Percival Hall.
Do	Georgetown University	Rev. Joseph Himmel, S. J.
Do	George Washington University	Charles H. Stockton, LL. D., acting.
Do	Howard University	Rev. Wilbur P. Thirkield, LL. D.
Do	St. John's College	Rev. Brother F. Andrew, F. S. C.
Do	Washington Christian College	Daniel E. Motley, Ph. D.
FLORIDA.		
Deland	John B. Stetson University	Lincoln Hulley, LL. D.
Gainesville	University of Florida	Albert A. Murphree, LL. D.
Winter Park	Rollins College	Rev. Wm. F. Blackman, LL. D.

III.—University and College Presidents—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
GEORGIA.		
Athens	University of Georgia	David C. Barrow, LL. D., chancellor.
Atlanta	Atlanta Baptist College	John Hope, A. M.
Do	Atlanta University	Edward T. Ware, A. B.
Do	Morris Brown College	Rev. E. W. Lee, D. D.
Do	Georgia School of Technology	Kenneth G. Matheson, LL. D.
Bowdon	Bowdon College	V. D. Whatley.
Dahlonega	North Georgia Agricultural College	G. R. Glenn, LL. D.
Demorest	Piedmont College	Rev. Frank E. Jenkins, D. D.
Macon	Mercer University	Samuel Y. Jameson.
Oxford	Emory College	Rev. J. E. Dickey, D. D.
South Atlanta	Clark University	W. H. Crogman, Litt. D.
Wrightsville	Warthen College	W. E. Lumley.
Young Harris	Young Harris College	Rev. Joseph A. Sharp, A. B.
IDAHO.		
Caldwell	College of Idaho	Rev. William J. Boone, D. D.
Moscow	University of Idaho	James A. MacLean, LL. D
ILLINOIS.		
Abingdon	Hedding College	Rev. Wm. Pitt MacVey, D. D.
Bloomington	Illinois Wesleyan University	Rev. Theodore Kemp, D. D.
Bourbonnais	St. Viateur's College	Rev. John P. O'Mahoney, C. S. V.
Carlinville	Blackburn College	Walter H. Bradley, acting.
Carthage	Carthage College	Rev. H. D. Hoover, Ph. D.
Chicago	Armour Institute of Technology	Rev. Frank W. Gunsaulus, LL. D.
Do	Lewis Institute	George N. Carman, A. M., director.
Do	Loyola University	Rev. Alexander J. Burrowes, S. J.
Do	St. Stanislaus College	Rev. John J. Kosinski, C. R.
Do	University of Chicago	Harry Pratt Judson, LL. D.
Decatur	James Millikin University	A. R. Taylor, LL. D.
Eureka	Eureka College	Alexander C. Gray, A. M., acting.
Evanston	Northwestern University	Abram W. Harris, LL. D.
Ewing	Ewing College	Rev. J. A. Leavitt, LL. D.
Galesburg	Knox College	Rev. Thomas McClelland, D. D.
Do	Lombard College	Rev. Lewis B. Fisher, D. D.
Greenville	Greenville College	Eldon Grant Burritt, A. M.
Jacksonville	Illinois College	Charles H. Rammelkamp, Ph. D.
Lake Forest	Lake Forest College	John S. Nollen, Ph. D.
Lebanon	McKendree College	Rev. John F. Harmon, D. D.
Lincoln	Lincoln College	J. H. McMurray, A. M.
Monmouth	Monmouth College	Rev. Thos. H. McMichael, D. D.
Naperville	Northwestern College	Rev. Thomas Bowman, D. D.
Quincy	St. Francis Solanus College	Rev. Fortunatus Hausser, O. F. M.
Rock Island	Augustana College	Gustav A. Andreen, Ph. D.
Upper Alton	Shurtleff College	
Urbana	University of Illinois	Edmund J. James, LL. D.
Westfield	Westfield College	Rev. Benj. F. Daugherty, D. D.
Wheaton	Wheaton College	Rev. C. A. Blanchard, D. D.
INDIANA.		
Bloomington	Indiana University	William L. Bryan, LL. D.
Collegeville	St. Joseph's College	Rev. Augustine Seifert, C. PP. S.
Crawfordsville	Wabash College	Rev. Geo. Lewes Mackintosh, D. D.
Earlham	Earlham College	Robert L. Kelly, LL. D.
Fort Wayne	Concordia College	Rev. Martin Luecke.
Franklin	Franklin College	Melvin E. Crowell, A. M.
Greencastle	De Pauw University	Rev. Francis J. McConnell, LL. D.
Hanover	Hanover College	William A. Millis, LL. D.
Indianapolis	Butler College	Thomas C. Howe, Ph. D.
Lafayette	Purdue University	W. E. Stone, LL. D.
Merom	Union Christian College	Rev. O. B. Whitaker, D. D.
Moores Hill	Moores Hill College	Rev. Harry A. King, S. T. B.
Notre Dame	University of Notre Dame	Rev. John Cavanaugh, C.S.C., D. D.
Oakland City	Oakland City College	Wm. P. Dearing.
St. Meinrad	St. Meinrad College	Rev. A. Schmitt, O. S. B.
Terre Haute	Rose Polytechnic Institute	Carl L. Mees, Ph. D.
Upland	Taylor University	Rev. Monroe Vayhinger, D. D.
Valparaiso	Valparaiso University	H. B. Brown.
Vincennes	Vincennes University	Horace Ellis, Ph. D.

III.—University and College Presidents—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
IOWA.		
Ames	Iowa State College of Agriculture and Mechanic Arts.	E. W. Stanton, acting.
Cedar Rapids	Coe College	Rev. J. A. Marquis, D. D.
Charles City	Charles City College	Rev. Frank E. Hirsch, LL. D.
Clinton	Wartburg College	John Fritschel.
College Springs	Amity College	Robert A. McConaghay.
Decorah	Luther College	Rev. C. K. Preus.
Des Moines	Des Moines College	Loran D. Osborn, Ph. D.
Do	Drake University	Hill M. Bell, LL. D.
Dubuque	St. Joseph's College	Very Rev. Daniel M. Gorman, LL. D.
Fairfield	Parsons College	Rev. W. E. Parsons, D. D.
Fayette	Upper Iowa University	Richard W. Cooper, Litt. D.
Grinnell	Grinnell College	J. H. T. Main, Ph. D.
Hopkinton	Lenox College	Rev. E. E. Reed, D. D.
Indianola	Simpson College	
Iowa City	State University of Iowa	Geo. E. MacLean, LL. D.
Lamoni	Graceland College	J. A. Gunsolley, B. S., acting.
Legrand	Palmer College	Ercy C. Kerr, A. M.
Mount Pleasant	Iowa Wesleyan University	Rev. Edwin A. Schell, D. D.
Mount Vernon	Cornell College	James E. Harlan, LL. D.
Oskaloosa	Oskaloosa College	Rev. Edwin D. Kizer, Ph. D.
Do	Penn College	David M. Edwards, Ph. D.
Pella	Central University of Iowa	John L. Beyl, Ph. D.
Sioux City	Morningside College	Rev. Luther Freeman, D. D.
Storm Lake	Buena Vista College	Rev. Edward Campbell.
Tabor	Tabor College	Frederick W. Long, A. M.
Toledo	Leander Clark College	Rev. Franklin E. Brooke, D. D.
University Park	Central Holiness University	
KANSAS.		
Atchison	Midland College	Rev. Millard F. Troxell, D. D.
Do	St. Benedict's College	Rt. Rev. I. Wolf, O. S. B., D. D.
Baldwin	Baker University	Rev. L. H. Murlin, D. D.
Emporia	College of Emporia	Rev. Henry Coe Culbertson, D. D.
Highland	Highland College	Wm. C. J. Adams, Ph. D.
Holton	Campbell College	T. D. Crites.
Kansas City	Kansas City University	Rev. D. S. Stephens, D. D., chancellor.
Lawrence	University of Kansas	Frank Strong, LL. D.
Lincoln	Kansas Christian College	George R. Stoner.
Lindsborg	Bethany College	Rev. Ernst F. Pihlblad, D. D.
McPherson	McPherson College	Edward Frantz, A. M.
Manhattan	Kansas State Agricultural College	Henry J. Waters, B. S. A.
Ottawa	Ottawa University	S. E. Price.
St. Marys	St. Mary's College	Rev. Aloysius A. Breen, S. J.
Salina	Kansas Wesleyan University	R. P. Smith.
Sterling	Cooper College	Rev. R. T. Campbell, D. D.
Topeka	Washburn College	Rev. Frank K. Sanders, D. D.
Wichita	Fairmount College	Rev. Henry E. Thayer, D. D.
Do	Friends University	Edmund Stanley, A. M.
Winfield	St. John's Lutheran College	Rev. A. W. Meyer.
Do	Southwest Kansas College	Rev. F. E. Mossman, D. D.
KENTUCKY.		
Berea	Berea College	Rev. Wm. G. Frost, Ph. D.
Bowling Green	Ogden College	Alvin F. Lewis, Ph. D.
Danville	Central University of Kentucky	Frederick W. Hinitt, Ph. D.
Georgetown	Georgetown College	Arthur Yager, LL. D.
Hopkinsville	McLean College	A. C. Kuykendall, A. B.
Lexington	State University	Henry S. Barker.
Do	Transylvania University	Richard H. Crossfield, Ph. D.
Louisville	University of Louisville	John Patterson, LL. D.
Lyndon	Kentucky Military Institute	C. W. Fowler, C. E.
Russellville	Bethel College	Floran D. Perkins.
St. Mary	St. Mary's College	Rev. Michael Jaglowicz, C. R.
Winchester	Kentucky Wesleyan College	John J. Tigert, A. B.
LOUISIANA.		
Baton Rouge	Louisiana State University and Agricultural and Mechanical College.	Thomas D. Boyd, LL. D.
Convent	Jefferson College	Rev. R. H. Smith, S. M.
New Orleans	College of the Immaculate Conception	Rev. E. Mattern, S. J.
Do	Leland University	R. W. Perkins, Ph. D.
Do	New Orleans University	Rev. John Wier, D. D.
Do	Tulane University of Louisiana	E. B. Craighead, LL. D.
Shreveport	Centenary College of Louisiana	Rev. Felix R. Hill, D. D.

III.—University and College Presidents—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
MAINE.		
Brunswick	Bowdoin College	Rev. Wm. De Witt Hyde, LL. D.
Lewiston	Bates College	Rev. G. C. Chase, LL. D.
Orono	University of Maine	Richard J. Aley, LL. D.
Van Buren	Van Buren College (St. Mary's)	Rev. Matthew Thouvenin, S. M.
Waterville	Colby College	Arthur J. Roberts, A. M.
MARYLAND.		
Annapolis	St. John's College	Thomas Fell, LL. D.
Do	United States Naval Academy	Capt. John M. Bowyer, U. S. N., superintendent.
Baltimore	Johns Hopkins University	Ira Remsen, LL. D.
Do	Loyola College	Rev. Francis X. Brady, S. J.
Do	Morgan College	Rev. John O. Spencer, Ph. D.
Do	Mount St. Joseph's College	Brother Norbert, director.
Chestertown	Washington College	James W. Cain, LL. D.
College Park	Maryland Agricultural College	R. W. Silvester, LL. D.
Ellicott City	Rock Hill College	Rev. Brother Maurice, F. S. C.
Do	St. Charles College	Rev. F. X. McKenny, S. J.
Emmitsburg	Mount St. Mary's College	Very Rev. D. J. Flynn, LL. D.
New Windsor	New Windsor College	Rev. James Fraser, LL. D.
Westminster	Western Maryland College	Rev. Thomas H. Lewis, LL. D.
MASSACHUSETTS.		
Amherst	Amherst College	Rev. George Harris, LL. D.
Do	Massachusetts Agricultural College	K. L. Butterfield, A. M.
Boston	Boston College	Rev. Thomas I. Gasson, S. J.
Do	Boston University	Rev. W. E. Huntington, LL. D.
Do	Massachusetts Institute of Technology	Richard C. Maclaurin, LL. D.
Cambridge	Harvard University	Abbott Lawrence Lowell, LL.D.
Springfield	American International College	Rev. R. De Witt Mallary, D. D.
Tufts College	Tufts College	Frederick W. Hamilton, LL.D.
Williamstown	Williams College	Harry A. Garfield, LL.D.
Worcester	Clark University	G. Stanley Hall, LL.D.
Do	Collegiate Department of Clark University	Edmund Clark Sanford, Ph. D.
Do	College of the Holy Cross	Rev. Thomas E. Murphy, S. J.
Do	Worcester Polytechnic Institute	Edmund A. Engler, LL.D.
MICHIGAN.		
Adrian	Adrian College	Rev. B. W. Anthony, LL. D.
Albion	Albion College	Samuel Dickie, LL. D.
Alma	Alma College	Rev. August F. Bruske, D. D.
Ann Arbor	University of Michigan	Harry B. Hutchins, LL. D.
Detroit	Detroit College	Rev. Richard D. Slevin, S. J.
East Lansing	Michigan Agricultural College	J. L. Snyder, Ph. D.
Hillsdale	Hillsdale College	Joseph W. Mauck, LL. D.
Holland	Hope College	Gerrit J. Kollen, LL. D.
Houghton	Michigan College of Mines	F. W. McNair, Sc. D.
Kalamazoo	Kalamazoo College	A. G. Slocum, LL. D.
Olivet	Olivet College	E. G. Lancaster, Ph. D.
MINNESOTA.		
Collegeville	St. John's University	Rev. Peter Engel, O. S. B., Ph. D.
Minneapolis	Augsburg Seminary	Sven Oftedal.
Do	University of Minnesota	Cyrus Northrop, LL. D.
Northfield	Carleton College	Donald J. Cowling, Ph. D.
Do	St. Olaf College	Rev. John N. Kildahl.
St. Paul	Hamline University	Rev. Geo. H. Bridgman, LL. D.
Do	Macalester College	Thomas M. Hodgman, LL. D.
St. Peter	Gustavus Adolphus College	Rev. P. A. Mattson, D. D.
Winnebago	Parker College	Rev. E. W. Van Aken, B. D.
MISSISSIPPI.		
Agricultural College	Mississippi Agricultural and Mechanical College.	J. C. Hardy, LL. D.
Alcorn	Alcorn Agricultural and Mechanical College.	Levi J. Rowan, Ph. D.
Clinton	Mississippi College	Rev. Wm. T. Lowrey, D. D.
Holly Springs	Rust University	Rev. James T. Docking.
Jackson	Millsaps College	David C. Hull, M. S.
Meridian	Meridian Male College	Malcomb A. Beeson, B. S.
University	University of Mississippi	A. A. Kincannon, LL. D., chancellor.

III.—UNIVERSITY AND COLLEGE PRESIDENTS—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
MISSOURI.		
Bowling Green	Pike College	Lula M. Collmis.
Cameron	Missouri Wesleyan College	H. R. De Bra.
Canton	Christian University	Carl Johann, LL. D.
Clarksburg	Clarksburg College	Benj. M. Shacklette, A. M.
Columbia	University of Missouri	Albert Ross Hill, LL. D.
Conception	Conception College	Rt. Rev. Paul Wetzelsberger, O. S. B.
Farmington	Carleton College	James D. Smith, D. D.
Fayette	Central College	William A. Webb, A. B.
Fulton	Westminster College	Rev. D. R. Kerr, Ph. D.
Glasgow	Pritchett College	Uriel S. Hall, A. B.
Lagrange	Lagrange College	Jere T. Muir, LL. D.
Liberty	William Jewell College	Rev. J. P. Greene, LL. D.
Marshall	Missouri Valley College	Rev. Wm. H. Black, LL. D.
Morrisville	Scarritt-Morrisville College	Rev. Louis C. Perry, A. M.
Odessa	Western Bible and Literary College	R. N. Gardner, B. S.
Parkville	Park College	L. M. McAfee, LL. D.
St. Louis	Christian Brothers College	Rev. Brother Justin, LL. D.
Do	St. Louis University	Rev. John P. Frieden, S. J.
Do	Washington University	David F. Houston, LL. D., chancellor.
Springfield	Drury College	Rev. Joseph H. George, D. D.
Tarkio	Tarkio College	Rev. J. A. Thompson, D. D.
Warrenton	Central Wesleyan College	Rev. Otto E. Kriege, D. D.
MONTANA.		
Bozeman	Montana College of Agriculture and Mechanic Arts.	James M. Hamilton, M. S.
Butte	Montana State School of Mines	Charles H. Bowman.
Missoula	University of Montana	C. A. Duniway, Ph. D.
NEBRASKA.		
Bellevue	Bellevue College	Stephen W. Stookey, LL. D.
Bethany	Cotner University	W. P. Aylsworth, LL. D.
College View	Union College	Frederick Griggs.
Crete	Doane College	Rev. David B. Perry, D. D.
Grand Island	Grand Island College	Rev. Geo. Sutherland, D. D.
Hastings	Hastings College	Archelaus E Turner, LL. D.
Lincoln	University of Nebraska	Samuel Avery, LL. D., chancellor.
Omaha	Creighton University	Rev. M. P. Dowling, S. J.
University Place	Nebraska Wesleyan University	Wm. J. Davidson, B. S.
York	York College	Rev. Wm. E. Schell, D. D.
NEVADA.		
Reno	State University of Nevada	Rev. J. E. Stubbs, LL. D.
NEW HAMPSHIRE.		
Durham	New Hampshire College of Agriculture and Mechanic Arts.	W. D. Gibbs, Sc. D.
Hanover	Dartmouth College	E. F. Nichols, LL. D.
Manchester	St. Anselm's College	Rt. Rev. Abbot Ernest, O. S. B.
NEW JERSEY.		
Hoboken	Stevens Institute of Technology	Alexander C. Humphreys, LL. D.
Jersey City	St. Peter's College	Rev. Edward J. Magrath, S. J.
Kenilworth	Upsala College	Rev. L. H. Beck, Ph. D.
New Brunswick	Rutgers College	Rev. Wm. H. S. Demarest, LL. D.
Princeton	Princeton University	John A. Stewart, A. M., acting.
South Orange	Seton Hall College	Ver. Rev. Jas. F. Mooney, LL. D.
NEW MEXICO.		
Agricultural College	New Mexico College of Agriculture and Mechanic Arts.	W. E. Garrison, Ph. D.
Albuquerque	University of New Mexico	Edward McQueen Gray, Ph. D.
Socorro	New Mexico School of Mines	Emmet A. Drake, A. M.
NEW YORK.		
Alfred	Alfred University	Rev. B. C. Davis, D. D.
Annandale	St. Stephen's College	Rev. Wm. C. Rodgers, D. D.
Brooklyn	Adelphi College	C. H. Levermore, Ph. D.

III.—University and College Presidents—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
NEW YORK—continued.		
Brooklyn	Polytechnic Institute of Brooklyn	F. W. Atkinson, Ph. D.
Do	St. Francis College	Brother Vincent, O. S. F.
Do	St. John's College	Very Rev. John W. Moore, C. M.
Buffalo	Canisius College	Rev. Augustine A. Miller, S. J.
Canton	St. Lawrence University	Rev. Almon Gunnison, LL. D.
Clinton	Hamilton College	Rev. M. W. Stryker, LL. D.
Geneva	Hobart College	Rev. L. C. Stewardson, LL. D.
Hamilton	Colgate University	Elmer B. Bryan, LL. D.
Ithaca	Cornell University	J. G. Schurman, LL. D.
Keuka Park	Keuka College	Rev. Joseph A. Serena.
New York	College of St. Francis Xavier	Rev. Thomas J. McCluskey, S. J.
Do	College of the City of New York	John H. Finley, LL. D.
Do	Columbia University	Nicholas M. Butler, LL. D.
Do	Manhattan College	Rev. Brother Jerome, F. S. C.
Do	Fordham University	Rev. David J. Quinn, S. J.
Do	New York University	Rev. H. M. MacCracken, LL. D., chancellor.
Niagara University	Niagara University	Very Rev. Edward J. Walsh, C. M.
Potsdam	Clarkson School of Technology	W. S. Aldrich, M. E., director.
Rochester	University of Rochester	Rev. Rush Rhees, LL. D.
St. Bonaventure	St. Bonaventure's College	Very Rev. Jos. F. Butler, O. F. M.
Schenectady	Union College	Rev. Charles A. Richmond, D. D.
Syracuse	Syracuse University	Rev. J. R. Day, LL. D., chancellor.
Troy	Rensselaer Polytechnic Institute	Palmer C. Ricketts, C. E.
West Point	United States Military Academy	Maj.-Gen. Thomas H. Barry, supt.
NORTH CAROLINA.		
Belmont	St. Mary's College	Rev. Leo Haid, D. D., O. S. B.
Chapel Hill	University of North Carolina	F. P. Venable, LL. D.
Charlotte	Biddle University	H. L. McCrorey.
Davidson	Davidson College	Henry L. Smith, Ph. D.
Durham	Trinity College	Wm. P. Few, Ph. D.
Elon College	Elon College	E. L. Moffitt, LL. D.
Greensboro	Agricultural and Mechanical College for the Colored Race.	J. B. Dudley.
Guilford College	Guilford College	L. Lyndon Hobbs, A. M.
Hickory	Lenoir College	Rev. R. L. Fritz, A. M.
Newton	Catawba College	John F. Buchheit, A. M.
Raleigh	Shaw University	Chas. F. Meserve, LL.D.
Salisbury	Livingstone College	Rev. William H. Goler, LL. D.
Wake Forest	Wake Forest College	Wm. L. Poteat, LL. D.
Weaverville	Weaverville College	Rev. L. B. Abernethy.
West Raleigh	North Carolina College of Agriculture and Mechanic Arts.	Daniel H. Hill, LL. D.
NORTH DAKOTA.		
Agricultural College	North Dakota Agricultural College	J. H. Worst, LL. D.
Fargo	Fargo College	Charles C. Creegan.
Grand Forks	Wesley College	Rev. Edward P. Robertson, D. D.
University	University of North Dakota	Frank L. McVey, Ph. D.
OHIO.		
Ada	Ohio Northern University	Rev. Albert E. Smith, D. D.
Akron	Buchtel College	Rev. A. B. Church, LL. D.
Alliance	Mount Union College	Rev. W. H. McMaster, A. M.
Ashland	Ashland College	J. L. Gillin, Ph. D.
Athens	Ohio University	Alston Ellis, LL. D.
Berea	Baldwin University	Rev. Robert L. Waggoner, D. D.
Do	German Wallace College	Rev. E. S. Havighorst, D. D.
Cedarville	Cedarville College	Rev. David McKinney, LL. D.
Cincinnati	St. Xavier College	Rev. Joseph Grimmelsman, S. J.
Do	University of Cincinnati	Chas. W. Dabney, LL. D.
Cleveland	Case School of Applied Science	Charles S. Howe, Ph. D.
Do	St. Ignatius College	Rev. Geo. J. Pickel, S. J.
Do	Western Reserve University	Rev. C. F. Thwing, LL. D.
Columbus	Capital University	Rev. L. H. Schuh, Ph. D.
Do	Ohio State University	Rev. W. O. Thompson, LL. D.
Dayton	St. Mary's Institute	Rev. Bernard P. O'Reilly, S. M.
Defiance	Defiance College	P. W. McReynolds, A. M.
Delaware	Ohio Wesleyan University	Rev. Herbert Welch, LL. D.
Findlay	Findlay College	Rev. C. I. Brown, D. D.
Gambier	Kenyon College	Rev. Wm. F. Peirce, L. H. D.
Granville	Denison University	Rev. Emory W. Hunt, LL. D.
Hiram	Hiram College	Miner Lee Bates, A. M.
Marietta	Marietta College	Rev. Alfred T. Perry, D. D.

III.—University and College Presidents—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
OHIO—continued.		
New Athens	Franklin College	A. M. Campbell.
New Concord	Muskingum College	Rev. J. K. Montgomery, D. D.
Oberlin	Oberlin College	Rev. Henry C. King, D. D.
Oxford	Miami University	Rev. Guy P. Benton, LL. D.
Richmond	Richmond College	Rev. G. W. MacMillan, Ph. D.
Rio Grande	Rio Grande College	Rev. J. M. Davis, D. D.
Scio	Scio College	Rev. R. Emory Beetham, D. D.
Springfield	Wittenberg College	Rev. Charles G. Heckert, D. D.
Tiffin	Heidelberg University	Rev. Charles E. Miller, D. D.
Toledo	St. John's University	Rev. Francis Heiermann, S. J.
Do	Toledo University	Jerome H. Raymond.
Westerville	Otterbein University	Walter G. Clippinger, B. D.
West Lafayette	West Lafayette College	Rev. Charles H. Beck, D. D.
Wilberforce	Wilberforce University	Wm. S. Scarborough, LL. D.
Wilmington	Wilmington College	Rev. Albert J. Brown, D. D.
Wooster	University of Wooster	Rev. Louis E. Holden, LL. D.
Yellowsprings	Antioch College	S. D. Fess, LL. D.
OKLAHOMA.		
Bacone	Bacone College	E. N. Collette.
Kingfisher	Kingfisher College	Rev. Calvin B. Moody, D. D.
Norman	University of Oklahoma	Rev. Arthur G. Evans, D. D.
Oklahoma City	Epworth University	Rev. Geo. H. Bradford, D. D., chancellor.
Stillwater	Oklahoma Agricultural and Mechanical College.	J. H. Connell, M. S.
Tulsa	Henry Kendall College	Rev. Seth R. Gordon, LL. D.
OREGON.		
Albany	Albany College	H. M. Crooks, A. B.
Corvallis	Oregon Agricultural College	W. J. Kerr, Sc. D.
Dallas	Dallas College	Rev. Charles A. Mock, Ph. D.
Eugene	University of Oregon	Prince L. Campbell, A. B.
Forest Grove	Pacific University	Wm. N. Ferrin, LL. D.
McMinnville	McMinnville College	Leonard W. Riley, D. D.
Newberg	Pacific College	W. J. Reagan, acting.
Philomath	Philomath College	M. R. Drury.
Portland	Reed College	Wm. T. Foster, A. M.
Salem	Willamette University	Rev. Fletcher Homan, D. D.
PENNSYLVANIA.		
Allentown	Muhlenberg College	Rev. J. W. A. Haas, D. D.
Annville	Lebanon Valley College	Rev. Lawrence Keister, S. T. B.
Beatty	St. Vincent College	Rev. Leander Schnerr, O. S. B.
Beaver Falls	Geneva College	Rev. William H. George, A. M.
Bethlehem	Moravian College	Rev. Aug. Schultze, L. H. D.
Carlisle	Dickinson College	Rev. G. E. Reed, LL. D.
Chester	Pennsylvania Military College	Col. C. E. Hyatt, C. E.
Collegeville	Ursinus College	Rev. A. Edwin Keigwin, D. D.
Easton	Lafayette College	Rev. E. D. Warfield, LL. D.
Gettysburg	Pennsylvania College	William A. Granville.
Greenville	Thiel College	Rev. C. Theodore Benze, D. D.
Grove City	Grove City College	Rev. I. C. Ketler, LL. D.
Haverford	Haverford College	Isaac Sharpless, LL. D.
Huntingdon	Juniata College	Martin G. Brumbaugh, LL. D.
Lancaster	Franklin and Marshall College	Rev. Henry H. Appel, D. D.
Lewisburg	Bucknell University	John H. Harris, LL. D.
Lincoln University	Lincoln University	Rev. John B. Rendall, D. D.
Meadville	Allegheny College	Rev. Wm. H. Crawford, LL. D.
Myerstown	Albright College	John Francis Dunlap.
New Wilmington	Westminster College	Rev. Robert M. Russell, LL. D.
Philadelphia	Central High School	Rev. R. E. Thompson, S. T. D.
Do	La Salle College	Brother Wolfred.
Do	Temple University	Russell H. Conwell, LL. D.
Do	University of Pennsylvania	Edgar Fahs Smith, LL. D., provost.
Pittsburg	Pittsburg College of the Holy Ghost	Rev. M. A. Henir, LL. D.
Do	University of Pittsburg	Rev. S. B. McCormick, LL. D., chancellor.
Selinsgrove	Susquehanna University	Rev. Charles T. Aikens, D. D.
South Bethlehem	Lehigh University	Henry S. Drinker, LL. D.
State College	Pennsylvania State College	Edwin E. Sparks, LL. D.
Swarthmore	Swarthmore College	Joseph Swain, LL. D.
Villanova	Villanova College	Rev. L. A. Delurey, O. S. A., D. D.
Volant	Volant College	C. F. Ball, A. M.
Washington	Washington and Jefferson College	Rev. J. D. Moffat, LL. D.
Waynesburg	Waynesburg College	Rev. Wm. M. Hudson, D. D.

III.—University and College Presidents—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
RHODE ISLAND.		
Kingston	Rhode Island State College	Howard Edwards, LL. D.
Providence	Brown University	Rev. W. H. P. Faunce, LL. D.
SOUTH CAROLINA.		
Charleston	College of Charleston	Harrison Randolph, LL. D.
Do	South Carolina Military Academy	Col. O. J. Bond, A. M., supt.
Clemson College	Clemson Agricultural College	Walter M. Riggs, B. S., acting.
Clinton	Presbyterian College of South Carolina	Rev. Robert Adams, D. D.
Columbia	Allen University	Rev. Wm. D. Chappelle, D. D.
Do	Benedict College	Rev. A. C. Osborn, LL. D.
Do	University of South Carolina	S. C. Mitchell, LL. D.
Due West	Erskine College	James Strong Moffatt, D. D.
Greenville	Furman University	Rev. Edwin McNeil Poteat, LL. D.
Newberry	Newberry College	Rev. John H. Harms, D. D.
Orangeburg	Claflin University	Rev. L. M. Dunton, LL. D.
Spartanburg	Wofford College	Henry N. Snyder, A. M.
SOUTH DAKOTA.		
Brookings	South Dakota Agricultural College	Robert L. Slagle, Ph. D.
Huron	Huron College	Rev. C. H. French, D. D.
Mitchell	Dakota Wesleyan University	Rev. Samuel F. Kerfoot, D. D.
Rapid City	State School of Mines	Charles H. Fulton, E. M.
Redfield	Redfield College	Noah C. Hirschy, Ph. D.
Vermillion	University of South Dakota	Franklin B. Gault, Ph. D.
Yankton	Yankton College	Rev. H. K. Warren, LL. D.
TENNESSEE.		
Bristol	King College	B. R. Smith.
Chattanooga	Chattanooga University	Rev. J. H. Race, D. D.
Clarksville	Southwestern Presbyterian University	Wm. Dinwiddie, A. M., chancellor.
Cumberland Gap	Lincoln Memorial University	George A. Hubbell, Ph. D.
Greeneville	Washington and Tusculum College	Rev. Chas. O. Gray, D. D.
Jackson	Union University	Isaac B. Tigrett, B. S., acting.
Jefferson City	Carson and Newman College	Rev. M. D. Jeffries, D. D.
Knoxville	Knoxville College	Rev. R. W. McGranahan, D. D.
Do	University of Tennessee	Brown Ayres, LL. D.
Lebanon	Cumberland University	Winstead P. Bone, D. D.
McKenzie	Bethel College	N. J. Finney, A. M.
Maryville	Maryville College	Rev. Samuel T. Wilson, D. D.
Memphis	Christian Brothers College	Rev. Brother Edward, F. S. C.
Milligan	Milligan College	Frederick D. Kershner, A. M.
Nashville	Fisk University	Geo. A. Gates, LL. D.
Do	University of Nashville	John I. D. Hinds, LL. D., acting.
Do	Vanderbilt University	James H. Kirkland, LL. D., chancellor.
Do	Walden University	Rev. John A. Kumler, D. D.
Sewanee	University of the South	Wm. B. Hall, M. A., vice-chancellor.
Spencer	Burritt College	W. N. Billingsley, A. M.
Sweetwater	Hiwassee College	Rev. Eugene Blake, D. D.
TEXAS.		
Abilene	Simmons College	J. D. Sandefer.
Austin	St. Edward's College	Rev. John T. Boland, C. S. C.
Do	University of Texas	Sidney E. Mezes, Ph. D.
Brownwood	Howard Payne College	Robert H. Hamilton, A. M.
College Station	Agricultural and Mechanical College of Texas.	Robert T. Milner.
Fort Worth	Fort Worth University	Rev. William Fielder, D. D.
Do	Polytechnic College	Rev. H. A. Boaz, D. D.
Galveston	St. Mary's University	Rev. A. E. Otis, S. J.
Georgetown	Southwestern University	Robert S. Hyer, LL. D.
North Waco	Texas Christian University	Clinton Lockhart, LL. D.
San Antonio	St. Louis College	Rev. Louis A. Tragesser, S. M.
Sherman	Austin College	Rev. Thomas S. Clyce, D. D.
Tehuacana	Westminster College	Harry H. Price, A. M.
Waco	Baylor University	Samuel P. Brooks, LL. D.
Do	Paul Quinn College	Rev. William J. Laws, D. D.
Waxahachie	Trinity University	Samuel Lee Hornbeak, LL. D.
UTAH.		
Logan	Agricultural College of Utah	John A. Widtsoe, Ph. D.
Salt Lake City	University of Utah	Joseph T. Kingsbury, Sc. D.
Do	Westminster College	Rev. M. H. Stevenson.

III.—University and College Presidents—Continued.

1.—*Universities and colleges for men and for both sexes, and schools of technology*—Con.

Location.	University or college.	Name of president.
VERMONT.		
Burlington	University of Vermont	Rev. M. H. Buckham, LL. D.
Middlebury	Middlebury College	Rev. John Martin Thomas, D. D.
Northfield	Norwich University	Charles H. Spooner, LL. D.
VIRGINIA.		
Ashland	Randolph-Macon College	Robert E. Blackwell, LL. D.
Blacksburg	Virginia Agricultural and Mechanical College and Polytechnic Institute.	P. B. Barringer, LL. D.
Bridgewater	Bridgewater College	John S. Flory, Ph. D.
Emory	Emory and Henry College	Chas. C. Weaver.
Fredericksburg	Fredericksburg College	Rev. J. W. Rosebro, D. D., acting.
Hampden-Sidney	Hampden-Sidney College	Rev. Henry T. Graham.
Lexington	Virginia Military Institute	Edward W. Nichols, supt.
Do	Washington and Lee University	George H. Denny, LL. D.
Lynchburg	Virginia Christian College	Joseph Hopwood, A. M.
Manassas	Eastern College	Hervin U. Roop, LL. D.
Richmond	Richmond College	F. W. Boatwright, LL. D.
Do	Virginia Union University	Rev. George R. Hovey, D. D.
Salem	Roanoke College	Rev. John A. Morehead, D. D.
University	University of Virginia	E. A. Alderman, LL. D.
Williamsburg	College of William and Mary	L. G. Tyler, LL. D.
WASHINGTON.		
Pullman	State College of Washington	E. A. Bryan, LL. D.
Seattle	University of Washington	Thomas F. Kane, Ph. D.
Spokane	Gonzaga College	Rev. Louis Taelman, S. J.
Tacoma	University of Puget Sound	J. C. Zeller, D. C. L.
Do	Whitworth College	
Walla Walla	Whitman College	Rev. S. B. L. Penrose, D. D.
WEST VIRGINIA.		
Barboursville	Morris Harvey College	D. W. Shaw, A. M.
Bethany	Bethany College	T. E. Cramblet, LL. D.
Buckhannon	Wesleyan University	Carl G. Doney, Ph. D.
Elkins	Davis and Elkins College	James E. Allen, A. B.
Morgantown	West Virginia University	D. B. Purinton, LL. D.
WISCONSIN.		
Appleton	Lawrence College	Rev. S. Plantz, LL. D.
Beloit	Beloit College	Rev. Edward D. Eaton, LL. D.
Madison	University of Wisconsin	Charles R. Van Hise, Ph. D.
Milton	Milton College	Rev. Wm. C. Daland, D. D.
Milwaukee	Concordia College	Rev. M. J. F. Albrecht.
Do	Marquette College	Rev. James McCabe, S. J.
Plymouth	Mission House	H. A. Meier, D. D., acting inspector.
Ripon	Ripon College	Silas Evans.
Watertown	Northwestern University	Rev. A. F. Ernst.
Waukesha	Carroll College	Rev. W. O. Carrier, D. D.
WYOMING.		
Laramie	University of Wyoming	Charles O. Merica, LL. D.

2.—*Colleges for women.*

Location.	College.	Name of president.
ALABAMA.		
Athens	Athens Female College	Miss Mary N. Moore.
Eufaula	Alabama Brenau College	Thos. G. Wilkinson.
Marion	Judson College	Rev. Robert G. Patrick, D. D.
Do	Marion Female Seminary	Rev. Junius M. Batte.
Montgomery	Woman's College of Alabama	William E. Martin, Ph. D.
Talladega	Alabama Synodical College for Women	Rev. T. Peyton Walton.
Tuscaloosa	Central Female College	Rev. B. F. Giles, A. M.
Do	Tuscaloosa Female College	R. J. Holston, A. M.

III.—University and College Presidents—Continued.

2.—*Colleges for women*—Continued.

Location.	College.	Name of president.
ARKANSAS.		
Conway	Central Baptist College	W. W. Rivers, A. M.
CALIFORNIA.		
Mills College	Mills College	Luella Clay Carson, LL. D.
San Jose	College of Notre Dame	Sister Mary Bernardine.
COLORADO.		
Montelair	Colorado Woman's College	J. P. Treat, A. M.
DISTRICT OF COLUMBIA.		
Washington	Trinity College	Sister Julia, S. N. D.
FLORIDA.		
Tallahassee	Florida State College for Women	Edward Cornradi.
GEORGIA.		
Athens	Lucy Cobb Institute	Susan G. Gerdine.
College Park	Cox College	John W. Gaines.
Cuthbert	Andrew College	J. W. Malone, A. M.
Decatur	Agnes Scott College	Rev. F. H. Gaines, D. D.
Forsyth	Bessie Tift College	C. H. S. Jaekson, A. M.
Gainesville	Brenau College	H. J. Pearce, Ph. D.
Lagrange	Lagrange Female College	Rufus W. Smith, A. M.
Do	Southern Female College	M. W. Hatton, A. M.
Macon	Wesleyan Female College	Rev. Wm. N. Ainsworth, D. D.
Rome	Shorter College	A. W. Van Hoose.
ILLINOIS.		
Jaeksonville	Illinois Woman's College	Rev. Joseph R. Harker, Ph. D.
Knoxville	St. Mary's School	Rev.C.W.Leffingwell, D. D., rector
Roekford	Rockford College	Julia H. Gulliver, Ph. D.
INDIANA.		
Notre Dame	St. Mary's College and Academy	Mother M. Pauline.
KANSAS.		
Topeka	College of the Sisters of Bethany	Rev. F. R. Millspaugh, D. D.
KENTUCKY.		
Bowling Green	Potter College	Rev. Benj. F. Cabell, D. D.
Danville	Caldwell College	John C. Acheson, A. M.
Glasgow	Liberty College	Robert E. Hatton, Ph. D.
Harrodsburg	Beaumont College	Thomas Smith, A. M.
Hopkinsville	Bethel Female College	Harry G. Brownell, B. S.
Lexington	Hamilton College for Women	H. G. Shearin, Ph. D.
Do	Sayre Female Institute	Rev. J. M. Spencer.
Millersburg	Millersburg Female College	Rev. C. C. Fisher, A. M.
Owensboro	Owensboro Female College	J. Byron La Rue.
Russellville	Logan Female College	J. L. Whiteside, Ph. D.
Versailles	Margaret College	Rev. James M. Maxon.
LOUISIANA.		
Clinton	Silliman Collegiate Institute	Rev. H. H. Brownlee.
Mansfield	Mansfield Female College	T. S. Sligh, A. M.
New Orleans	H. Sophie Newcomb Memorial College	Brandt V. B. Dixon, LL. D.
MARYLAND.		
Baltimore	Goucher College	Rev. Eugene A. Noble, D. D.
Frederick	Woman's College	J. H. Apple, A. M.
Hagerstown	Kee Mar College	Rev. S. M. Newman, D. D.
Lutherville	Maryland College for Young Ladies	Rev. Chas. W. Gallagher, D. D.
MASSACHUSETTS.		
Auburndale	Lasell Seminary for Young Women	G. M. Winslow, Ph. D., prineipal.
Boston	Simmons College	Henry Lefavour, LL. D.
Cambridge	Radcliffe College	Le Baron R. Briggs, LL. D.

III.—University and College Presidents—Continued.

2.—*Colleges for women*—Continued.

Location.	College.	Name of president.
MASSACHUSETTS—con.		
Northampton	Smith College	Rev. Marion Le Roy Burton, Ph. D.
South Hadley	Mount Holyoke College	Mary E. Woolley, L. H. D.
Wellesley	Wellesley College	Ellen F. Pendleton, M. A., acting.
MINNESOTA.		
Albert Lea	Albert Lea College	Anna B. Kiermeier, acting dean.
MISSISSIPPI.		
Blue Mountain	Blue Mountain Female College	B. G. Lowrey, A. M.
Brookhaven	Whitworth Female College	Rev. I. W. Cooper, D. D.
Clinton	Hillman College	W. J. Lowrey.
Columbus	Industrial Institute and College	Henry L. Whitfield.
French Camp	Central Mississippi Institute	J. A. Sanderson, principal.
Jackson	Belhaven College for Young Ladies	J. R. Preston.
Meridian	Meridian Woman's College	J. W. Beeson, A. M.
Natchez	Stanton College for Young Ladies	H. P. Todd.
Pontotoc	Chickasaw Female College	Miss Katherine E. Crawford.
Port Gibson	Port Gibson Female College	Henry G. Hawkins, A. B.
MISSOURI.		
Columbia	Christian College	Mrs. W. T. Moore.
Do	Stephens College	Rev. T. E. Quisenberry.
Fayette	Howard Payne College	Rev. Henry E. Stout.
Fulton	Synodical Female College	Mary Lee Allison.
Lexington	Central Female College	G. M. Gibson, A. M.
Do	Lexington College for Young Women	Edward W. White, A. M.
Liberty	Liberty Ladies' College	C. M. Williams, A. M.
Mexico	Hardin College	J. W. Million, A. M.
Nevada	Cottey College for Young Ladies	Mrs. V. A. C. Stockard.
St. Charles	Lindenwood College for Women	Rev. George F. Ayres, Ph. D.
St. Louis	Forest Park University	Mrs. Anna Snead Cairns.
NEW JERSEY.		
Convent Station	College of St. Elizabeth	Sister M. Pauline Kelligher.
NEW YORK.		
Aurora	Wells College	Rev. George M. Ward, LL. D.
Elmira	Elmira College	Rev. A. C. Mackenzie, LL. D.
Geneva	Wm. Smith College	Rev. L. C. Stewardson, LL. D.
New Rochelle	College of St. Angela	Rev. M. C. O'Farrell.
New York	Barnard College	Wm. T. Brewster, A. M., provost.
Poughkeepsie	Vassar College	Rev. J. M. Taylor, LL. D.
NORTH CAROLINA.		
Charlotte	Elizabeth College	Rev. C. B. King, D. D.
Greensboro	Greensboro Female College	Mrs. Lucy H. Robertson.
Hickory	Claremont Female College	Joseph L. Murphy.
Louisburg	Louisburg Female College	Mrs. Ivey Allen.
Murfreesboro	Chowan College	James D. Bruner, Ph. D.
Oxford	Oxford Female Seminary	F. P. Hobgood, A. M.
Raleigh	Meredith College	Rev. R. T. Vann, D. D.
Red Springs	Southern Presbyterian College	Rev. C. G. Vardell, D. D.
Salem	Salem Female Academy and College	Rev. Howard E. Rondthaler, A. M.
Statesville	Statesville Female College	Rev. John A. Scott, D. D.
OHIO.		
Oxford	Oxford College for Women	Jane Sherzer, Ph. D.
Do	Western College for Women	Rev. John D. Newman, D. D.
Painesville	Lake Erie College	Miss Vivian Blanche Small.
PENNSYLVANIA.		
Allentown	Allentown College for Women	Rev. Wm. F. Curtis.
Beaver	Beaver College	Rev. Wm. W. Foster, jr., D. D.
Blairsville	Blairsville College	Magnus C. Ihlseng, Ph. D.
Bryn Mawr	Bryn Mawr College	Miss M. Carey Thomas, LL. D.
Chambersburg	Wilson College	M. H. Reaser, Ph. D.
Mechanicsburg	Irving Female College	E. E. Campbell, Ph. D.
Pittsburg	Pennsylvania College for Women	Rev. Henry D. Lindsay, D. D.

III.—University and College Presidents—Continued.

2.—*Colleges for women*—Continued.

Location.	College.	Name of president.
SOUTH CAROLINA.		
Columbia	Columbia Female College	Rev. W. W. Daniel, D. D.
Do	College for Women	Miss Euphemia McClintock, A. B.
Due West	Due West Female College	Rev. R. L. Robinson.
Greenville	Chicora College	Rev. S. C. Byrd, D. D.
Do	Greenville Female College	Edward C. James, Litt. D.
Greenwood	Lander Female College	Rev. John O. Willson, D. D.
Spartanburg	Converse College	Robert P. Pell, Litt. D.
Union	Clifford Seminary	Rev. B. G. Clifford, Ph. D.
TENNESSEE.		
Bristol	Sullins College	W. S. Neighbors.
Gallatin	Howard Female College	Walter A. Ingram.
Jackson	Memphis Conference Female Institute	Rev. A. B. Jones, LL. D.
Murfreesboro	Tennessee College	Geo. J. Burnett, A. M.
Nashville	Belmont College for Young Women	Rev. Ira Landrith, LL. D.
Do	Boscobel College	Mrs. J. O. Rust, principal.
Pulaski	Martin College	W. T. Wynn, A. B.
Rogersville	Synodical Female College	Lawrence Rolfe, A. B.
TEXAS.		
Belton	Baylor Female College	W. A. Wilson, D. D.
Bonham	Carlton College	Rev. C. T. Carlton, A. B.
San Antonio	San Antonio Female College	Rev. J. E. Harrison, A. B.
Sherman	North Texas Female College	Mrs. Lucy A. Kidd-Key.
South Houston	Asgard College	Rev. J. L. Dickens, LL. D.
VIRGINIA.		
Abingdon	Martha Washington College	S. D. Long.
Do	Stonewall Jackson Institute	Mrs. M. M. Davis.
Bristol	Bristol Institute	J. T. Henderson, A. M.
Danville	Roanoke College of Danville	John B. Brewer, A. M.
Hollins	Hollins Institute	Miss Matty L. Cocke.
Lynchburg	Randolph-Macon Woman's College	W. W. Smith, LL. D.
Marion	Marion College	Rev. J. J. Scherer, D. D.
Petersburg	Southern Female College	Arthur K. Davis, A. M.
Richmond	Woman's College	Rev. James Nelson, LL. D.
Roanoke	Virginia College for Young Ladies	Miss Mattie P. Harris.
WEST VIRGINIA.		
Charlestown	Powhatan College	Stewart P. Hatton, LL. D.
Lewisburg	Lewisburg Female Institute	Rev. R. L. Telford, D. D.
WISCONSIN.		
Milwaukee	Milwaukee-Downer College	Miss Ellen C. Sabin, A. M.

IV.—Professors of Pedagogy and Heads of Departments of Pedagogy in Universities and Colleges.

Location.	University or college.	Name of professor or head of department.
University, Ala	University of Alabama	Fletcher B. Dresslar, Ph. D.
Fayetteville, Ark	University of Arkansas	Wm. S. Johnson, Ph. D.
Berkeley, Cal	University of California	A. F. Lange, Ph. D.
Los Angeles, Cal	University of Southern California	Thomas B. Stowell, LL. D.
Do	Occidental College	George F. Cook, Ph. D.
Pasadena, Cal	Throop Polytechnic Institute	A. H. Chamberlain, A. M.
Stanford University, Cal.	Leland Stanford Junior University	Ellwood P. Cubberley, Ph. D.
Boulder, Colo	University of Colorado	Frank E. Thompson, B. A.
Colorado Springs, Colo	Colorado College	J. V. Breitwieser, A. M.
University Park, Colo	University of Denver	D. E. Phillips, Ph. D.
Washington, D. C	George Washington University	Williston S. Hough, Ph. M.
Do	Howard University	Lewis B. Moore, Ph. D.
De Land, Fla	John B. Stetson University	Lincoln Hulley, Ph. D., president.
Gainesville, Fla	University of Florida	John A. Thackston, Ph. D.
Athens, Ga	University of Georgia	T. J. Woofter, Ph. D.
Atlanta, Ga	Atlanta University	George A. Towns, A. M.
Dahlonega, Ga	North Georgia Agricultural College	Gustavus R. Glenn, LL. D., pres.
South Atlanta, Ga	Clark University	
Moscow, Idaho	University of Idaho	Philip Soulen, A. M.

IV.—Professors of Pedagogy and Heads of Departments of Pedagogy in Universities and Colleges—Continued.

Location.	University or college.	Name of professor or head of department.
Chicago, Ill.	University of Chicago	Chas. H. Judd, Ph. D.
Decatur, Ill.	James Millikin University	A. R. Taylor, Ph. D., president.
Eureka, Ill.	Eureka College	Elizabeth Baxter, A. B.
Evanston, Ill.	Northwestern University	Herbert F. Fisk, LL. D.
Greenville, Ill.	Greenville College	Wm. E. White.
Urbana, Ill.	University of Illinois	W. C. Bagley, Ph. D.
Bloomington, Ind.	Indiana University	Wm. W. Black, A. M.
Crawfordsville, Ind.	Wabash College	George H. Tapy, A. B.
Earlham, Ind.	Earlham College	J. H. Coffin, Ph. D.
Greeneastle, Ind.	De Pauw University	Rufus B. Von Kleinsmid, A. M.
Hanover, Ind.	Hanover College	Wm. A. Millis, LL. D., president.
Indianapolis, Ind.	Butler College	Arthur K. Rogers, Ph. D.
Moores Hill, Ind.	Moores Hill College	Zenos E. Scott.
Cedar Rapids, Iowa.	Coe College	Alex. C. Robbie, B. A.
Charles City, Iowa.	Charles City College	Frederick Schaub, A. M.
Des Moines, Iowa.	Des Moines College	James P. Stephenson, Ph. D.
Do.	Drake University	William F. Barr, A. M.
Fairfield, Iowa.	Parsons College	Ward W. Silver, A. M.
Fayette, Iowa.	Upper Iowa University	A. E. Bennett, A. M.
Hopkinton, Iowa.	Lenox College	F. B. Taylor, Ph. D.
Indianola, Iowa.	Simpson College	Charels E. Shelton, LL. D., pres.
Iowa City, Iowa.	State University of Iowa	F. E. Bolton, Ph. D.
Lamoni, Iowa.	Graceland College	R. M. Stewart, A. B.
Mount Pleasant, Iowa.	Iowa Wesleyan University	Elmer E. Lymer, B. S.
Mount Vernon, Iowa.	Cornell College	George H. Betts, Ph. M.
Sioux City, Iowa.	Morningside College	E. A. Brown, A. M.
Tabor, Iowa.	Tabor College	J. F. Crawford, A. M.
Atchison, Kans.	Midland College	
Baldwin, Kans.	Baker University	Lilian Scott, Ph. B.
Emporia, Kans.	Emporia College	Mary A. Ludlum, A. M.
Holton, Kans.	Campbell College	W. S. Reese, Ph. M.
Lawrence, Kans.	University of Kansas	A. S. Olin, A. M.
Lindsborg, Kans.	Bethany College	Anna A. Carlson.
McPherson, Kans.	McPherson College	John A. Clement, A. M.
Ottawa, Kans.	Ottawa University	Herbert H. Foster, Ph. D.
Salina, Kans.	Kansas Wesleyan University	Albert H. King, M. Pd.
Sterling, Kans.	Cooper College	Oma Crawley, B. Pd.
Topeka, Kans.	Washburn College	Emil C. Wilm, Ph. D.
Wichita, Kans.	Fairmount College	Herbert L. Wilbur, A. M.
Do.	Friends University	B. W. Truesdell, A. B.
Winfield, Kans.	Southwest Kansas College	Henrietta V. Race, A. M.
Berea, Ky.	Berea College	John W. Dinsmore, A. M.
Danville, Ky.	Central University of Kentueky	Geo. J. Ramsey, LL. D.
Lexington, Ky.	State University	James T. Noe, A. M.
Baton Rouge, La.	Louisiana State University and Agricultural and Mechanical College.	Alexander B. Coffey, Ph. D., dean.
New Orleans, La.	H. Sophie Newcomb Memorial College	Margaret E. Cross.
Do.	Leland University	R. W. Perkins, Ph. D., president.
Do.	Tulane University of Louisiana	Joseph M. Gwinn, A. M.
Brunswick, Me.	Bowdoin College	
Orono, Me.	University of Maine	Chas. Davidson, Ph. D.
Baltimore, Md.	Johns Hopkins University	Edward F. Buehner, Ph. D.
Do.	Morgan College	Chas. A. Johnson, A. B.
Westminster, Md.	Western Maryland College	James Widdowson, A. M.
Boston, Mass.	Simmons College	Mary E. Parker, A. M.
Cambridge, Mass.	Harvard University	Paul H. Hanus, LL. D.
South Hadley, Mass.	Mount Holyoke College	Wm. C. Moore, A. M.
Wellesley, Mass.	Wellesley College	Anna J. McKeag, Ph. D.
Worcester, Mass.	Clark University	W. H. Burnham, Ph. D.
Do.	Collegiate Department, Clark University	
Adrian, Mich.	Adrian College	Sarah J. Knott, M. S.
Alma, Mich.	Alma College	Albert P. Cook.
Ann Arbor, Mich.	University of Michigan	Allen S. Whitney, A. B.
Hillsdale, Mich.	Hillsdale College	Charles H. Gurney, A. M.
Holland, Mich.	Hope College	Edwin N. Brown, Ph. D.
Kalamazoo, Mich.	Kalamazoo College	Herbert L. Stetson, LL. D.
Olivet, Mich.	Olivet College	E. G. Lancaster, Ph. D., president.
Minneapolis, Minn.	University of Minnesota	George F. James, Ph. D.
St. Paul, Minn.	Macalester College	Andrew W. Anderson, A. M.
Winnebago, Minn.	Parker College	Elbert Wayland Van Aken, A. M., president.
University, Miss.	University of Mississippi	Robert Torrey.
Columbia, Mo.	University of Missouri	J. L. Meriam, Ph. D.
St. Louis, Mo.	Washington University	Werrett W. Charters, Ph. D.
Springfield, Mo.	Drury College	Wm. Orville Allen, Ph. D.
Missoula, Mont.	University of Montana	Wm. F. Book, Ph. D.
Bellevue, Nebr.	Bellevue College	Wm. C. T. Adams, Ph. D.
Bethany, Nebr.	Cotner University	Jas. A. Beattie, LL. D.
College View, Nebr.	Union College	Frederick Griggs, president.
Grand Island, Nebr.	Grand Island College	J. B. Shouse, A. B.
Hastings, Nebr.	Hastings College	Albert G. Owen, A. M.

IV.—Professors of Pedagogy and Heads of Departments of Pedagogy in Universities and Colleges—Continued.

Location.	University or college.	Name of professor or head of department.
Lincoln, Nebr	University of Nebraska	Charles Fordyce, Ph. D., dean.
University Place, Nebr	Nebraska Wesleyan University	Wm. R. Jackson, A. M.
York, Nebr	York College	Bessie Casebeer, A. B.
Reno, Nev	University of Nevada	Romanzo Adams, Ph. M.
Hanover, N. H	Dartmouth College	Wilmon Henry Sheldon, Ph. D.
New Brunswick, N. J	Rutgers College	E. R. Payson, Ph. D.
Albuquerque, N. Mex	University of New Mexico	Charles E. Hodgin, B. Pd.
Alfred, N. Y	Alfred University	Clarence L. Clarke, Ph. B.
Brooklyn, N. Y	Adelphi College	E. N. Henderson, A. M.
Do	Polytechnic Institute of Brooklyn	Fred W. Atkinson, Ph. D.
Canton, N. Y	St. Lawrence University	Robt. D. Ford, M. S.
Clinton, N. Y	Hamilton College	W. H. Squires, Ph. D.
Elmira, N. Y	Elmira College	Vida F. Moore, Ph. D.
Hamilton, N. Y	Colgate University	M. S. Read, Ph. D.
Ithaca, N. Y	Cornell University	Charles De Garmo, Ph. D.
New York, N. Y	College of the City of New York	Stephen P. Duggan Ph. D.
Do	Columbia University (Teachers College)	James E. Russell, LL. D., dean.
Do	New York University	T. M. Balliet, Ph. D.
Rochester, N. Y	University of Rochester	George M. Forbes, A. M.
Syracuse, N. Y	Syracuse University	J. R. Street, Ph. D.
Chapel Hill, N. C	University of North Carolina	Marcus C. S. Noble.
Durham, N. C	Trinity College	Eugene C. Brooks, A. B.
Salisbury, N. C	Livingstone College	W. R. Connors, A. B.
Wake Forest, N. C	Wake Forest College	J. Henry Highsmith.
Agricultural College, N. Dak.	North Dakota Agricultural College	Arland D. Weeks, M. A.
University, N. Dak	University of North Dakota	Joseph Kennedy, A. M.
Ada, Ohio	Ohio Northern University	H. L. Frank, A. M.
Alliance, Ohio	Mount Union College	John B. Bowman, A. M.
Ashland, Ohio	Ashland College	L. Leedy Garber, A. M.
Berea, Ohio	Baldwin University	Fletcher D. Ward, B. S.
Cincinnati, Ohio	University of Cincinnati	Wm. P. Burris, A. M., dean.
Columbus, Ohio	Ohio State University	Wm. W. Boyd, A. M.
Oberlin, Ohio	Oberlin College	Edward A. Miller, A. B.
Tiffin, Ohio	Heidelberg University	Henry L. Beam, A. M.
Westerville, Ohio	Otterbein University	Thomas J. Sanders, Ph. D.
Wilberforce, Ohio	Wilberforce University	Sarah C. B. Scarborough, M. Pd.
Yellow Springs, Ohio	Antioch College	W. W. Weaver, A. M.
Oklahoma City, Okla	Epworth University	Benj. F. Nihart, B. S.
Eugene, Oreg	University of Oregon	H. D. Shelden, Ph. D.
Salem, Oreg	Willamette University	Mary E. Reynolds, B. S.
Allentown, Pa	Muhlenberg College	G. T. Ettinger, Ph. D.
Carlisle, Pa	Dickinson College	Wm. L. Gooding, Ph. D.
Collegeville, Pa	Ursinus College	Geo. L. Omwake, A. M., dean.
Bryn Mawr, Pa	Bryn Mawr College	James H. Leuba, Ph. D.
Huntingdon, Pa	Juniata College	J. H. Brumbaugh.
Lewisburg, Pa	Bucknell University	Thomas A. Edwards, A. M.
Philadelphia, Pa	Central High School	Francis B. Brandt, Ph. D.
Do	Temple University	Herbert Stotesbury, Ph. D.
Do	University of Pennsylvania	A. D. Yocum, Ph. D.
Pittsburg, Pa	University of Pittsburg	Will G. C. Chambers, M. S.
Selinsgrove, Pa	Susquehanna University	William Noetling, A. M.
Villanova, Pa	Villanova College	John C. Fisher, A. M.
Providence, R. I	Brown University	W. B. Jacobs, A. M.
Columbia, S. C	University of South Carolina	Patterson Wardlaw, LL. D.
Orangeburg, S. C	Claflin University	G. LeRoy Noyes, A. M.
Brookings, S. Dak	South Dakota Agricultural College	Joseph N. Rodeheaver, Ph. D.
Mitchell, S. Dak	Dakota Wesleyan University	Samuel Weir, Ph. D.
Vermilion, S. Dak	University of South Dakota	A. W. Trettien, Ph. D.
Yankton, S. Dak	Yankton College	Henry K. Warren, LL. D.
Knoxville, Tenn	University of Tennessee	P. P. Claxton, A. M.
Austin, Tex	University of Texas	W. S. Sutton, LL. D.
North Waco, Tex	Texas Christian University	John W. Kinsey, A. B.
Waco, Tex	Baylor University	Frederick Eby, Ph. D.
Salt Lake City, Utah	University of Utah	Wm. M. Stewart, M. Di.
Burlington, Vt	University of Vermont and State Agricultural College.	James Franklin Messenger, Ph. D.
Middlebury, Vt	Middlebury College	Edward D. Collins, Ph. D.
Emory, Va	Emory and Henry College	J. P. McConnell, Ph. D., acting.
Lynchburg, Va	Randolph-Macon Woman's College	Wilmot B. Lane, Ph. D.
Salem, Va	Roanoke College	F. V. N. Painter, A. M.
University, Va	University of Virginia	Wm. H. Heck, A. M.
Williamsburg, Va	College of William and Mary	Henry E. Bennett, A. B.
Pullman, Wash	State College of Washington	Alfred A. Cleveland, Ph. D., acting.
Seattle, Wash	University of Washington	Edward O. Sisson, Ph. D.
Morgantown, W. Va	West Virginia University	Jasper N. Deahl, A. M.
Beloit, Wis	Beloit College	Almon W. Burr, A. M.
Madison, Wis	University of Wisconsin	M. Vincent O'Shea, B. L.
Ripon, Wis	Ripon College	Wm. J. Mutch, Ph. D.
Waukesha, Wis	Carroll College	James E. Rogers, Ph. D.
Laramie, Wyo	University of Wyoming	C. F. Buckle, Ph. D.

V.—Principals of Normal Schools.

1.—*Public normal schools.*

Location.	Name of institution.	Principal.
ALABAMA.		
Daphne	Daphne State Normal School	B. B. Baker.
Florence	State Normal College	Marshall C. Wilson.
Jacksonville	do	C. W. Daugette.
Livingston	Alabama Normal College for Girls	Miss Julia S. Tutwiler.
Montgomery	State Colored Normal School	Wm. B. Patterson.
Normal	Agricultural and Mechanical College for Negroes.	Walter S. Buchanan.
Troy	State Normal College	E. M. Shackelford.
ARIZONA.		
Flagstaff	Northern Arizona Normal School	R. H. H. Blome.
Tempe	Tempe Normal School of Arizona	A. J. Matthews.
ARKANSAS.		
Conway	Arkansas State Normal School	J. J. Doyne.
Pine Bluff	Branch Normal College (colored)	Isaac Fisher.
CALIFORNIA.		
Chico	California State Normal School	Chas. C. Van Liew.
Los Angeles	State Normal School	Jesse F. Millspaugh.
San Diego	do	Samuel T. Black.
San Francisco	do	Frederic Burk.
San Jose	do	Morris Elmer Dailey.
COLORADO.		
Greeley	Colorado State Normal School	Z. X. Snyder.
CONNECTICUT.		
Bridgeport	Bridgeport Training School	Besse E. Howes.
Danbury	State Normal School	John R. Perkins.
New Britain	Normal Training School	Marcus White.
New Haven	State Normal Training School	Arthur B. Morrill.
Willimantic	do	Henry T. Burr.
DISTRICT OF COLUMBIA.		
Washington	Washington Normal School No. 1	Anne M. Goding.
Do	Washington Normal School No. 2 (colored).	Lucy E. Moten.
FLORIDA.		
Tallahassee	Florida Agricultural and Mechanical College (colored).	Nathan B. Young.
GEORGIA.		
Athens	State Normal School	E. C. Branson.
Douglas	Southern Normal Institute	J. Walter Hendricks.
Milledgeville	Georgia Normal and Industrial College	M. M. Parks.
IDAHO.		
Albion	State Normal School	G. A. Axline.
Lewiston	do	Geo. H. Black.
ILLINOIS.		
Carbondale	Southern Illinois State Normal University.	D. B. Parkinson.
Charleston	Eastern Illinois State Normal School	L. C. Lord.
Chicago, Station O	Chicago Normal School	Wm. B. Owen.
De Kalb	Northern Illinois State Normal School	John W. Cook.
Macomb	Western Illinois State Normal School	Alfred Bayliss.
Normal	Illinois State Normal University	David Felmley.
INDIANA.		
Indianapolis	Indianapolis Normal School	E. R. Ray.
Terre Haute	Indiana State Normal School	William W. Parsons.
IOWA.		
Cedar Falls	Iowa State Teachers College	Homer H. Seerley.

V.—Principals of Normal Schools—Continued.

1.—*Public normal schools*—Continued.

Location.	Name of institution.	Principal.
KANSAS.		
Emporia	State Normal School	Joseph H. Hill.
Hays	Western Branch State Normal School	William S. Picken.
Pittsburg	State Manual Training Normal School	R. S. Russ.
KENTUCKY.		
Bowling Green	Western Kentucky State Normal School	H. H. Cherry.
Frankfort	State Normal and Industrial Institute for Colored Persons.	Ernest E. Reed, acting.
Louisville	Louisville Normal School	W. J. McConathy.
Richmond	Eastern Kentucky State Normal School	J. G. Crabbe.
LOUISIANA.		
Natchitoches	Louisiana State Normal School	James B. Aswell.
New Orleans	New Orleans Normal School	Miss Margaret C. Hanson.
MAINE.		
Castine	Eastern State Normal School	Albert F. Richardson.
Farmington	Farmington State Normal School	Wilbert G. Mallett, A. B.
Fort Kent	Madawaska Training School	Mary P. Nowland.
Gorham	Western State Normal School	Walter E. Russell.
Lee	Lee Normal Academy	Elmer R. Verrill.
Presque Isle	Aroostook State Normal School	San Lorenzo Merriman.
Springfield	Springfield Normal School	Walter J. Rideout.
MARYLAND.		
Baltimore	Baltimore Teachers Training School	Sarah C. Brooks.
Do	Maryland State Normal School	Sarah E. Richmond.
Do	Maryland State Normal School for Colored Teachers.	Geo. Harrison.
Frostburg	Maryland State Normal School No. 2	Reginald H. Ridgely.
MASSACHUSETTS.		
Boston	Boston Normal School	Wallace C. Boyden.
Do	Massachusetts Normal Art School	George H. Bartlett.
Bridgewater	State Normal School	Albert G. Boyden.
Fitchburg	....do	John G. Thompson.
Framingham	....do	Henry Whittemore.
Hyannis	....do	Wm. A. Baldwin.
Lowell	....do	Cyrus A. Durgin.
Do	Training School for Teachers	Gertrude Edmund.
North Adams	State Normal School	F. F. Murdock.
Salem	....do	Joseph Asbury Pitman.
Westfield	....do	Clarence A. Brodeur.
Worcester	....do	Francis R. Lane.
MICHIGAN.		
Detroit	Washington Normal School	J. F. Thomas.
Kalamazoo	Western State Normal School	Dwight B. Waldo.
Marquette	State Normal School	James H. B. Kaye.
Mount Pleasant	Central State Normal School	Chas. T. Grawn.
Ypsilanti	Michigan State Normal School	Lewis H. Jones.
MINNESOTA.		
Duluth	State Normal School	E. W. Bohannon.
Mankato	....do	Chas. H. Cooper.
Moorhead	....do	Frank A. Weld.
St. Cloud	....do	W. A. Shoemaker.
St. Paul	Teachers Training School	L. L. Everly.
Winona	State Normal School	G. E. Maxwell.
MISSISSIPPI.		
Shelby	Shelby Normal Institute	J. M. Williamson.
Sherman	Mississippi Normal Institute	John B. Thompson.
Walnut Grove	Mississippi Central Normal School	A. S. McClendon.
MISSOURI.		
Cape Girardeau	State Normal School	W. S. Dearmont.
Jefferson City	Lincoln Institute	Benjamin F. Allen.
Kirksville	State Normal School (first district)	John R. Kirk.
Maryville	State Normal School	H. K. Taylor.

V.—Principals of Normal Schools—Continued.

1.—*Public normal schools*—Continued.

Location.	Name of institution.	Principal.
MISSOURI—continued.		
St. Louis	Teachers College	John W. Withers.
Springfield	State Normal School (fourth district)	W. T. Carrington.
Warrensburg	State Normal School (second district)	W. J. Hawkins.
MONTANA.		
Dillon	Montana State Normal School	Henry H. Swain.
NEBRASKA.		
Kearney	State Normal School	A. O. Thomas.
Peru	Nebraska State Normal School	D. W. Hayes.
NEW HAMPSHIRE.		
Plymouth	State Normal School	J. E. Klock.
NEW JERSEY.		
Elizabeth	Elizabeth Normal and Training School	Wm. F. Robinson.
Jersey City	Teachers Training School	Joseph H. Brensinger.
Montclair	New Jersey State Normal School	Chas. S. Chapin.
Newark	Newark Normal and Training School	W. S. Willis.
Paterson	Paterson Normal Training School	Frank W. Smith.
Trenton	New Jersey State Normal School	James M. Green.
NEW MEXICO.		
Las Vegas	New Mexico Normal University	B. S. Gowen.
Silver City	Normal School of New Mexico	C. M. Light.
NEW YORK.		
Albany	New York State Normal College	Wm. J. Milne.
Do	Teachers Training School	J. D. Burks.
Brockport	State Normal and Training School	Alfred C. Thompson.
Brooklyn	Training School for Teachers	Emma L. Johnston.
Buffalo	State Normal School	Daniel Upton.
Cohoes	Cohoes Training School	Evelyne A. Feek.
Cortland	State Normal and Training School	Francis J. Cheney.
Fredonia	....do	Myron T. Dana.
Geneseo	Geneseo State Normal School	James V. Sturges.
New Paltz	State Normal School	John C. Bliss.
New York	New York Training School for Teachers	E. N. Jones.
Do	Normal College of the City of New York	George S. Davis.
Oneonta	State Normal School	Percy I. Bugbee.
Oswego	Oswego State Normal and Training School	Isaac D. Poucher.
Plattsburg	State Normal School	Geo. K. Hawkins.
Potsdam	State Normal and Training School	Thomas B. Stowell.
Rochester	Rochester Training School	Edith A. Scott.
Syracuse	Syracuse High School, Normal Department.	G. A. Lewis.
NORTH CAROLINA.		
Elizabeth City	State Colored Normal School	P. W. Moore.
Fayetteville	....do	E. E. Smith.
Greenville	East Carolina Teachers Training School	Robt. H. Wright.
Greensboro	State Normal and Industrial College	J. I. Foust.
Painter	Cullowhee Normal and Industrial School	R. L. Madison.
Pembroke	Croaton Normal College (Indian)	H. L. Edens.
Winston	Slater Industrial and State Normal School (colored).	C. G. O'Kelly.
NORTH DAKOTA.		
Mayville	State Normal School	Thos. A. Hillyer.
Valley City	....do	Geo. A. McFarland.
OHIO.		
Akron	Perkins Normal School	Lee R. Knight.
Athens	State Normal School	Henry G. Williams.
Cleveland	Cleveland Normal Training School	James W. McLane.
Columbus	Columbus Normal School	Margaret W. Sutherland.
Dayton	Dayton Normal School	Grace A. Greene.
Oxford	State Normal School	H. C. Minnich.
Toledo	Toledo Normal Training School	Mrs. Ella M. R. Baird.

V.—Principals of Normal Schools—Continued.

1.—*Public normal schools*—Continued.

Location.	Name of institution.	Principal.
OKLAHOMA.		
Ada	East Central State Normal School	Chas. W. Briles.
Alva	Northwestern State Normal School	Walter L. Ross.
Durant	Southeastern State Normal School	M. E. Moore.
Edmond	Central State Normal School	J. A. McLauchlin.
Langston	Colored Agricultural and Normal University.	Inman E. Page.
Weatherford	Southwestern State Normal School	J. F. Sharp.
OREGON.		
Ashland	Southern Oregon State Normal School	Clyde A. Payne, acting.
Drain	Central Oregon State Normal School	A. L. Briggs.
Monmouth	State Normal School	Edwin De Vore Ressler.
Weston	Eastern State Normal School	Robert Carver French.
PENNSYLVANIA.		
Bloomsburg	State Normal School	D. J. Waller, jr.
California	Southwestern State Normal School	Herbert B. Davis.
Clarion	Clarion State Normal School	J. George Becht.
East Stroudsburg	East Stroudsburg State Normal School	E. L. Kemp.
Edinboro	State Normal School	John F. Bigler.
Indiana	Indiana Normal School of Pennsylvania	James E. Ament.
Kutztown	Keystone State Normal School	A. C. Rothermel.
Lock Haven	Central State Normal School	J. R. Flickinger.
Mansfield	Mansfield State Normal School	Andrew T. Smith.
Millersville	First Pennsylvania State Normal School	E. Oram Lyte.
Muncy	Lycoming County Normal School	H. A. Spotts.
Philadelphia	Philadelphia Normal School for Girls	J. M. Willard.
Pittsburg	Pittsburg High School, Normal Department.	Jane Ralston.
Reading	Normal and Training School for Girls	Martha R. Seiders.
Shippensburg	Cumberland Valley State Normal School	Samuel A. Martin.
Slippery Rock	Slippery Rock State Normal School	Albert E. Maltby.
West Chester	State Normal School	George M. Philips.
RHODE ISLAND.		
Providence	Rhode Island State Normal School	John L. Alger.
SOUTH CAROLINA.		
Orangeburg	Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina.	Thos. E. Miller.
Rockhill	Winthrop Normal College	D. B. Johnson.
SOUTH DAKOTA.		
Aberdeen	Northern Normal and Industrial School	Geo. W. Nash.
Madison	State Normal School	J. W. Heston.
Spearfish	do	F. L. Cook.
Springfield	do	G. G. Wenzlaff.
TEXAS.		
Canyon City	West Texas State Normal School	R. B. Cousins.
Denton	North Texas Normal School	W. H. Bruce.
Huntsville	Sam Houston Normal Institute	H. F. Estill.
Prairie View	Prairie View State Normal and Industrial College (colored).	Ed. L. Blackshear.
UTAH.		
Cedar City	Southern Branch of the State Normal School.	G. W. Decker.
VERMONT.		
Castleton	State Normal School	Philip R. Leavenworth.
Johnson	do	Lyman R. Allen.
VIRGINIA.		
Farmville	State Female Normal School	J. L. Jarman.
Hampton	Hampton Normal and Agricultural Institute (colored).	H. B. Frissell.
Harrisonburg	State Normal and Industrial School for Women.	Julian A. Burruss.
Petersburg	Virginia Normal and Industrial Institute (colored).	J. H. Johnston.

V.—Principals of Normal Schools—Continued.

1.—*Public normal schools*—Continued.

Location.	Name of institution.	Principal.
WASHINGTON.		
Bellingham	State Normal School	Edward T. Mathes.
Cheney	do	Hiram C. Sampson.
Ellensburg	do	W. E. Wilson.
WEST VIRGINIA.		
Athens	State Normal School	C. L. Bemis.
Fairmount	do	C. J. C. Bennett.
Glenville	do	E. C. Rohrbough.
Huntington	Marshall College, State Normal School	Lawrence J. Corbly.
Institute	West Virginia Colored Institute	Byrd Prillerman.
Shepherdstown	Shepherd College, State Normal School	Thomas C. Miller.
West Liberty	West Liberty State Normal School	John C. Shaw.
WISCONSIN.		
Berlin	Green Lake County Normal School	Edgar Packard.
Gays Mills	Crawford County Training School	G. E. Pratt.
La Crosse	State Normal School	F. A. Cotton.
Ladysmith	Rusk County Normal School	R. H. Burns.
Manitowoc	Manitowoc County Teachers Training School.	Fred Christiansen.
Menomonie	Dunn County Teachers Training School	G. L. Bowman.
Milwaukee	State Normal School	Charles McKenney.
Oshkosh	do	John A. H. Keith.
Platteville	do	W. J. Southerland.
Rice Lake	Barron County Training School for Teachers.	John E. Hale.
River Falls	State Normal School	H. L. Wilson.
Stevens Point	do	John F. Sims.
Superior	Superior State Normal School	V. E. McCaskill.
Wausau	Marathon County Training School	O. E. Wells.
Whitewater	State Normal School	Albert Salisbury.

2.—*Private normal schools.*

Location.	Name of institution.	Principal.
ALABAMA.		
Mobile	Emerson Normal Institute (colored)	Wm. Barnard Smith.
Snow Hill	Snow Hill Normal and Industrial Institute (colored).	W. J. Edwards.
Tuskegee	Tuskegee Normal and Industrial Institute (colored).	B. T. Washington.
ARKANSAS.		
Pea Ridge	Pea Ridge Masonic College	S. C. Parish.
CALIFORNIA.		
Berkeley	Oakland Kindergarten Training Class	Grace E. Barnard.
Stockton	Western Normal School	J. R. Humphreys.
COLORADO.		
Denver	Denver Normal and Preparatory School	R. A. Le Doux.
DISTRICT OF COLUMBIA.		
Washington	Kindergarten Normal Training School	Miss Susan P. Pollock.
FLORIDA.		
Jasper	Jasper Normal Institute	Geo. M. Lynch.
Madison	Florida Normal Institute	W. B. Cate.
Orange Park	Orange Park Normal and Manual Training School (colored).	Mrs. L. St. J. Hitchcock.
GEORGIA.		
Social Circle	Negro Normal and Industrial School	James A. Love.

V.—Principals of Normal Schools—Continued.

2.—*Private normal schools*—Continued.

Location.	Name of institution.	Principal.
ILLINOIS.		
Addison	German Evangelical Lutheran Teachers Seminary.	Theo. Brohm.
Chicago	Chicago Kindergarten College	Elizabeth Harrison.
Do	Pestalozzi Froebel Kindergarten Training School.	Bertha H. Hegner.
Dixon	Dixon College and Normal School	Frederick B. Virden.
Hoopeston	Greer College	E. L. Bailey.
Oregon	Wells School for Teachers	H. W. Sullivan.
Rushville	Rushville Normal and Business College	Maxwell Kennedy.
INDIANA.		
Angola	Tri-State College	J. J. Bryant.
Danville	Central Normal College	J. W. Laird.
Indianapolis	Teachers College of Indianapolis	Eliza A. Blaker.
Marion	Marion Normal College	C. W. Boucher.
Rochester	Rochester Normal University	F. A. Herrington.
IOWA.		
Bloomfield	Southern Iowa Normal School	H. C. Brown.
Denison	Denison Normal School	W. C. Van Ness.
Mason City	Memorial University, Normal Department	Fred D. Cram.
Perry	Perry Normal School	C. D. Jones.
Shenandoah	Western Normal College, Shenandoah Commercial Institute and Musical Conservatory.	J. M. Hussey.
KANSAS.		
Nickerson	Nickerson College	E. B. Smith.
KENTUCKY.		
Lexington	Chandler Normal School (colored)	Fannie J. Webster.
Louisa	Kentucky Normal College	Walter M. Byington.
Morehead	Morehead Normal School	F. C. Button.
LOUISIANA.		
New Orleans	Luther College (colored)	F. Wenger.
MASSACHUSETTS.		
Boston (1069 Boylston)	Froebel School, Kindergarten Normal Classes.	Annie C. Rust.
Do	Kindergarten Training School	Lucy Wheelock.
Do	Perry Kindergarten Normal School	Annie M. Perry.
Do	Symonds Kindergarten Training School	Lucy H. Symonds.
MICHIGAN.		
Detroit	Thomas Normal Training School	Jennie L. Thomas.
Grand Rapids	Grand Rapids Kindergarten Training School.	Clara Wheeler.
Petoskey	Graves Normal Academy	E. L. Warren.
MINNESOTA.		
Madison	Lutheran Normal School	K. Lokensgard.
New Ulm	Dr. Martin Luther College	A. Ackermann.
MISSISSIPPI.		
Tougaloo	Normal Department, Tougaloo University (colored).	Frank G. Woodworth.
Utica	Utica Normal and Industrial Institute (colored).	W. H. Holtzclaw.
MISSOURI.		
Chillicothe	Chillicothe Normal Business and Shorthand College.	Allen Moore.
NEBRASKA.		
Fremont	Fremont Normal School	W. H. Clemmons.
Santee	Santee Normal Training School	Alfred L. Riggs.
Wayne	Nebraska Normal College	Fred M. Pile.

V.—Principals of Normal Schools—Continued.

2.—*Private normal schools*—Continued.

Location.	Name of institution.	Principal.
NEW YORK.		
New York	The Jenny Hunter Kindergarten Training School.	Jenny Hunter.
NORTH CAROLINA.		
Albemarle	Albemarle Normal and Collegiate Institute.	Rev. Geo. H. Atkinson.
Asheville	Normal and Collegiate Institute	Edward F. Childs.
Charlotte	Rowan Normal Industrial Institute	C. S. Somerville.
Franklinton	Albion Academy (colored)	John A. Savage.
Henderson	Henderson Normal Institute	J. A. Cotton.
Raleigh	St. Augustine School (colored)	Rev. A. B. Hunter.
Winton	Waters Normal Institute (colored)	C. S. Brown.
OHIO.		
Canfield	Northeastern Ohio Normal College	J. Freeman Guy.
Cleveland	Cleveland Kindergarten Training School	Netta Faris.
Dayton	St. Mary's Institute	Brother George Deek.
Ewing	Ohio Southern Normal College	H. W. Woodruff.
Lebanon	National Normal University	Rev. Floyd Poe.
Toledo	Law Froebel Kindergarten Training School.	Mary E. Law.
Woodville	Woodville Lutheran Normal School	K. Hemminghaus.
PENNSYLVANIA.		
Cheney	Institute for Colored Youth	Hugh M. Browne.
Philadelphia	Froebellian Training School for Women	Emily D. Wright.
Do	Miss Hart's Training School for Kindergartners.	Miss C. M. C. Hart.
Pittsburg	Pittsburg and Allegheny Kindergarten College.	Mrs. James I. Buchanan.
SOUTH CAROLINA.		
Charleston	Avery Normal Institute	Morrison A. Holmes.
Gaffney	Cherokee Normal and Industrial Institute.	A. A. Sims.
Greenwood	Brewer Normal School	Rev. J. M. Robinson.
Lancaster	Lancaster Normal and Industrial Institute.	Robert J. Crockette.
SOUTH DAKOTA.		
Sioux Falls	Lutheran Normal School	Rev. Z. J. Ordal.
TENNESSEE.		
Dickson	Dickson College	T. B. Loggins.
Huntingdon	Southern Normal University	J. A. Baber.
Memphis	Le Moyne Normal Institute (colored)	Ludwig T. Larsen.
Morristown	Morristown Normal Academy (colored)	Judson S. Hill.
Nashville	George Peabody College for Teachers	J. J. D. Hinds.
TEXAS.		
Commerce	East Texas Normal College	W. L. Mayo.
Dallas	Dallas Free Kindergarten Training School and Industrial Association.	Mary K. Drew.
VIRGINIA.		
Keysville	Keysville Mission Industrial School (colored).	Wm. H. Hayes.
Lawrenceville	St. Paul Normal and Industrial School (colored).	Rev. James S. Russell.
WEST VIRGINIA.		
Harpers Ferry	Storer College (colored)	Henry T. McDonald.
WISCONSIN.		
Menomonie	Stout Institute	L. D. Harvey.
Milwaukee	National German-American Teachers Seminary.	Max Griebsch.
St. Francis	Catholic Normal School of the Holy Family.	Rev. M. J. Lochemes.

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