MASSACHUSETTS INSTITUTE OF TECHNOLOGY,

BOSTON.

ANNUAL CATALOGUE.

1901–1902.

PUBLICATIONS

OF THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

ANNUAL CATALOGUE, issued in December, containing lists of Officers and Students; a full statement of the Courses of Instruction; a Register of Graduates, with their professional positions; and an account of the Massachusetts School of Design.

PROGRAMME, identical with the Catalogue, but not containing the Schedule of Topics, and the Registers of Students and of Graduates.

PRESIDENT'S REPORT and Treasurer's Report presented at the December meeting of the Corporation.

The Educated Man and the State: Inaugural Address of the President of the Institute.

SPECIAL DESCRIPTIVE CIRCULARS.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY: an illustrated pamphlet, giving a general account of the laboratories and equipment.

Circulars on the Departments of *Civil Engineering; Mechanical Engineering; Mining Engineering; Physics and Electrical Engineering; Architecture; Chemistry and Chemical Engineering; Biology; General Studies;* and *Naval Architecture.*

Circulars on *Opportunities for Teachers; Opportunities for College Graduates; The Massachusetts School of Design;* and *Summer Courses.*

Any of the above publications will be sent free upon application to

H. W. TYLER, *Secretary,*
491 *Boylston Street, Boston, Mass.*

THE TECHNOLOGY QUARTERLY AND PROCEEDINGS OF THE SOCIETY OF ARTS.

PUBLISHED BY THE SOCIETY OF ARTS.

Containing the results of scientific investigations in the different departments of the Institute, and the principal papers read before the Society of Arts. Subscription price, $3.00 per annum. Address

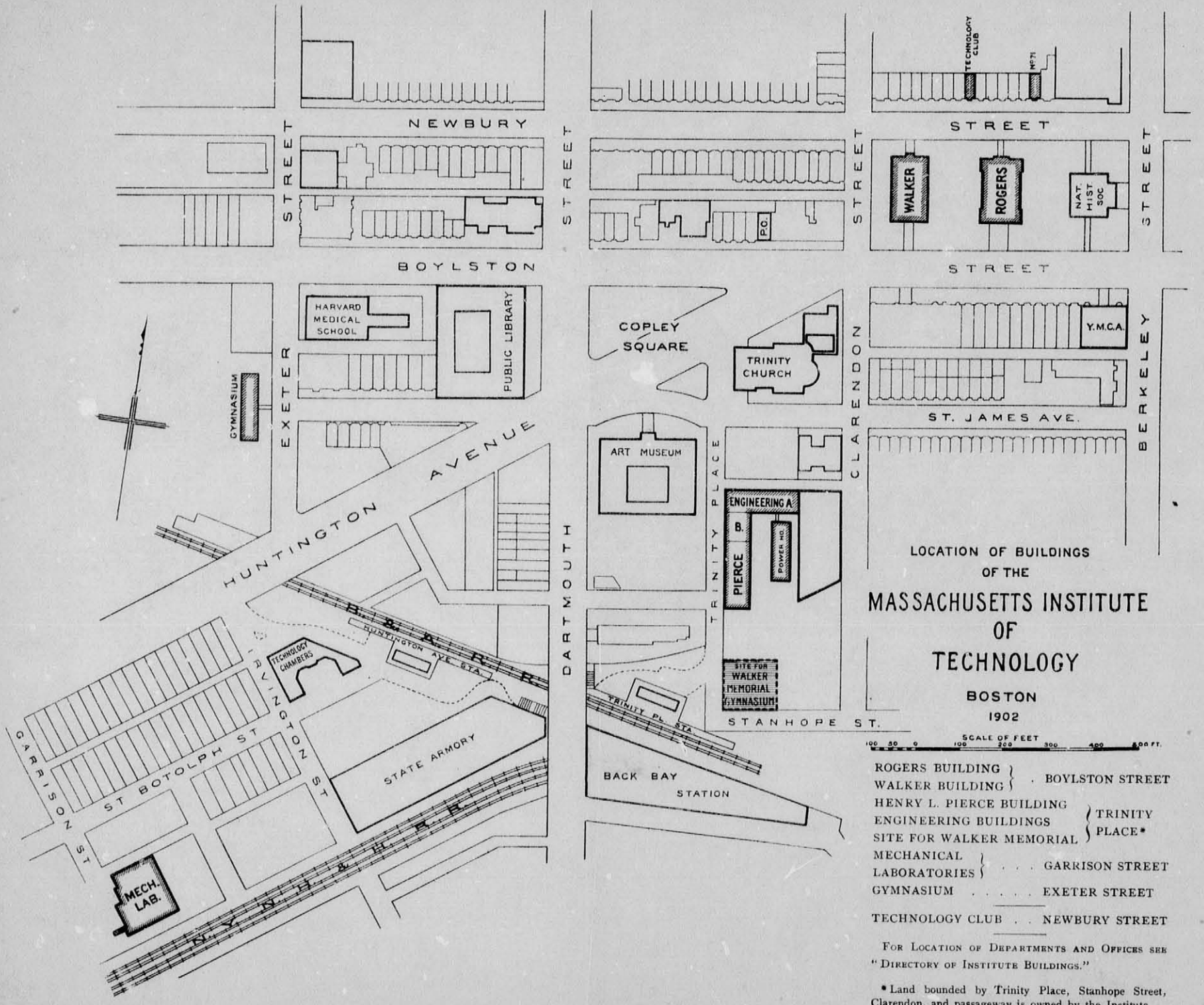
TECHNOLOGY QUARTERLY,
Massachusetts Institute of Technology.

THE TECHNOLOGY REVIEW.

PUBLISHED BY THE ASSOCIATION OF CLASS SECRETARIES.

A graduates' magazine, published quarterly, containing educational and other papers; news from the Institute; from the graduates; and from the undergraduates. Subscription price, $1.00 per year. Address

THE TECHNOLOGY REVIEW,
71 *Newbury Street, Boston.*



LOCATION OF BUILDINGS
OF THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

BOSTON
1902

ROGERS BUILDING } . BOYLSTON STREET
WALKER BUILDING }

HENRY L. PIERCE BUILDING } TRINITY
ENGINEERING BUILDINGS } PLACE*
SITE FOR WALKER MEMORIAL }

MECHANICAL LABORATORIES } . . . GARRISON STREET

GYMNASIUM . . . . . EXETER STREET

TECHNOLOGY CLUB . . NEWBURY STREET

For Location of Departments and Offices see "Directory of Institute Buildings."

* Land bounded by Trinity Place, Stanhope Street, Clarendon, and passageway is owned by the Institute.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, BOSTON.

THIRTY-SEVENTH

ANNUAL CATALOGUE

OF THE

Officers and Students,

WITH

A STATEMENT OF THE COURSES OF INSTRUCTION AND A REGISTER OF THE ALUMNI.

1901–1902.

BOSTON:
GEO. H. ELLIS CO., PRINTERS, 272 CONGRESS STREET.
1902.

CALENDAR FOR 1901-1902.

School Year began	Wednesday, Oct. 2, 1901.
Semi-annual Examinations begin	Tuesday, Jan. 21, 1902.
Second Term begins	Tuesday, Feb. 11, 1902.
Annual Examinations begin	Tuesday, May 27, 1902.
Degrees conferred.— School Year ends	Tuesday, June 10, 1902.
First Entrance Examinations	Thursday, June 26, 1902, and Friday, June 27, 1902.
Examinations for Advanced Standing begin	Monday, Sept. 22, 1902.
Second Entrance Examinations[1]	Tuesday, Sept. 23, 1902, and Wednesday, Sept. 24, 1902.
School Year of 1902–1903 begins	Wednesday, Oct. 1, 1902.

CALENDAR FOR 1902-1903.

School Year begins	Wednesday, Oct. 1, 1902.
Semi-annual Examinations begin	Tuesday, Jan. 20, 1903.
Second Term begins	Tuesday, Feb. 10, 1903.
Annual Examinations begin	Tuesday, May 26, 1903.
Degrees conferred.— School Year ends	Tuesday, June 9, 1903.
First Entrance Examinations	Thursday, June 25, 1903, and Friday, June 26, 1903.
Examinations for Advanced Standing begin	Monday, Sept. 21, 1903.
Second Entrance Examinations[1]	Tuesday, Sept. 22, 1903, and Wednesday, Sept. 23, 1903.
School Year of 1903–1904 begins	Wednesday, Sept. 30, 1903.

Stated Meetings of the Corporation for 1902	March 12, June 6, October 8, December 10.
Stated Meetings of the Executive Committee of the Corporation	First and third Tuesdays of every month.

[1] See page 83.

YEARLY CALENDAR

1902

JANUARY—1902.

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APRIL—1902.

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JUNE—1902.

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JULY—1902.

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OCTOBER—1902.

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DECEMBER—1902.

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1903

JANUARY—1903.

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MARCH—1903.

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APRIL—1903.

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JUNE—1903.

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JULY—1903.

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AUGUST—1903.

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SEPTEMBER—1903.

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OCTOBER—1903.

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NOVEMBER—1903.

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DECEMBER—1903.

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Massachusetts Institute of Technology.

GENERAL INFORMATION.

Historical Sketch. — The foundation of the Massachusetts Institute of Technology was laid in a "Memorial" prepared in 1859 by Professor William Barton Rogers, and presented, by a Committee, to the Legislature of 1860. In this Memorial "reference is made to the expected early establishment of a comprehensive Polytechnic College, furnishing a complete system of industrial education supplementary to the general training of other institutions, and fitted to equip its students with every scientific and technical principle applicable to the industrial pursuits of the age."

On May 28, 1860, a sub-committee, consisting of Professor Rogers and Messrs. E. B. Bigelow and J. M. Beebe, was appointed to "mature a plan for a polytechnic institution." To this sub-committee Messrs. M. D. Ross and C. H. Dalton were subsequently added, and for it Professor Rogers, during the summer of 1860, prepared an elaborate report entitled, "OBJECTS AND PLAN OF AN INSTITUTE OF TECHNOLOGY."

On Jan. 11, 1861, a public meeting of persons interested in the proposed institution was held in Mercantile Hall, and a preliminary organization was effected. Professor Rogers was chairman of this meeting, and John D. Runkle secretary. The first meeting of the Institute for organization was held April 8, 1862. The civil war led to the postponement of the opening of the School of Industrial Science until 1865; but the Society of Arts was organized, began its meetings on Dec. 17, 1862, and has maintained them ever since. A preliminary session of the School of Industrial Science was opened, fifteen students attending, on Feb. 20, 1865. The regular courses of instruction began Oct. 2, 1865.

Charter and Government. — On April 10, 1861, a legislative act was passed to incorporate the Massachusetts Institute of Technology, and to grant aid to said Institute and to the Boston Society of Natural History. William B. Rogers, together with twenty other members, were named in the act. They, with their associates and successors, were made a body corporate under the above title, "for the purpose of instituting and maintaining a society of arts, a museum of arts, and a school of industrial science, and aiding generally by suitable means the advancement, development, and practical application of science in connection with arts, agriculture, manufactures, and commerce."

A square of State land on Back Bay in Boston was set apart as an open space, and the corporation was allowed upon certain conditions to erect buildings covering not more than one-third part of the westerly two-thirds of this square.

The corporation was authorized to hold property to an amount not exceeding two hundred thousand dollars.

May 30, 1865, an additional act authorized holding property yielding an annual income of thirty thousand dollars.

Feb. 29, 1888, an additional act raised the limit to property yielding an income of one hundred thousand dollars.

April 27, 1863, an additional act allotted to the Institute one-third of the interest received by the State from the United States Land Grant, to support colleges of agriculture and the mechanic arts, under the condition that instruction in military tactics should be provided, and that the Governor, the Chief Justice of the Supreme Court, and the Secretary of the State Board of Education should be each a member *ex-officio* of the government of the Institute.

The control of the Institute was exercised by a body called the Government, elected from among its members. The form of the Government at first constituted proved inconvenient, a change was made in the mode of selection of the governing body, and the present Government of the Institute derives its powers from the following charter, of March 20, 1869:

AN ACT IN ADDITION TO THE SEVERAL ACTS INCORPORATING THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

Be it enacted, etc., as follows :

SECTION 1. All the powers and privileges now vested by law in the Massachusetts Institute of Technology shall hereafter be exercised and enjoyed by the government of said Institute, as the same is now constituted; *provided, however,* that the governor of the Commonwealth, the chief justice of the Supreme Judicial Court, and the secretary of the Board of Education shall continue to be members of said government, as is now provided by law.

SECT. 2. Said government shall have power to establish any by-laws which they may deem expedient for the regulation of the affairs of said corporation; *provided,* the same are not repugnant to the general laws of this Commonwealth.

SECT. 3. All persons who are now associate members of said Institute, or who hereafter shall become such, shall be entitled to be members of the Society of Arts, with the rights and privileges thereof, as the same are or hereafter may be established by the by-laws.

SECT. 4. This act shall take effect upon its passage.

The Corporation. — The government of the school is vested under this charter in the Corporation. Its by-laws prescribe that the Corporation shall consist of not more than fifty members, to hold office for life, and to be chosen by votes of the Corporation by ballot. The *ex officiis* members are included in the total number.

The Corporation confirms appointments, confers degrees, authorizes the purchase and sale of land and the erection of buildings. It receives reports from the President, the Treasurer, and the Visiting Committees, and acts upon them. The President of the Institute presides at its meetings, as well as at those of the Society of Arts.

The Executive Committee of the Corporation consists of the President and Treasurer and of five members, who are chosen by the Corporation from among its members for a term of five years. This Committee has power to appoint the

President and Treasurer, also the professors and teachers and all other persons to be employed in any department of the Institute, subject to confirmation by the Corporation. It fixes the salaries and prescribes the duties of all officers so appointed, and has power to remove them. It has charge of the buildings and other property of the Institute, exercises control over the Faculty, and has the general superintendence of all matters relating to the school of industrial science. The Corporation appoints other committees whose functions and membership are stated on pages 16 and 17.

The School of Industrial Science has become the prominent feature of the Institute; and, indeed, nearly all persons know this, and this alone, as the Institute. It is devoted to investigation and the teaching of science as applied to the various engineering professions; namely, civil, mechanical, mining, electrical, chemical, and sanitary engineering, and naval architecture, as well as to architecture, chemistry, metallurgy, biology, physics, and geology. A course of a less technical nature, designed as a preparation for business callings, is also provided.

A subsidiary school, known as the MASSACHUSETTS SCHOOL OF DESIGN, is maintained by the Corporation of the Institute. A statement of its scope and organization will be found in the Catalogue.

The Society of Arts aims to awaken and maintain an interest in the practical applications of the sciences, and to aid in their advancement. Meetings are held semi-monthly from October to May, at which reports of inventions, discoveries, and matters of scientific and technical interest are presented.

Graduates of the Institute and other persons interested in the aims of the Society are eligible to membership, and its meetings are open to students.

The "Technology Quarterly" contains the proceedings of the Society of Arts and papers presented at its meetings. It is

issued at regular intervals, and affords a medium for the publication of the results of original investigation carried on in the laboratories of the Institute. It has recently added a review of American chemical research, including abstracts of all important articles on pure or industrial chemistry published in this country.

All communications concerning the Society of Arts, or the "Technology Quarterly," should be addressed to the Secretary of the Society of Arts, Massachusetts Institute of Technology.

Location. — The buildings of the Institute are not only favorably located for accessibility and convenience of students and instructors, but are in close proximity to the chief collections and libraries of Boston, in particular to the Museum of Fine Arts, the new Public Library, and the Museum of the Boston Society of Natural History. The free lecture courses of the Lowell Institute are held in the main buildings of the school. Several railroad stations and many street-car lines afford convenient access from the southern and western suburbs. Moreover, the advantages of location in a great manufacturing district, with which the school maintains close relations, are of the greatest value to technological students. Frequent short excursions enable them to make immediate connection between what they learn in the school and what they observe in industrial establishments. The relations between principles and their applications are much better appreciated than if such excursions were reserved for vacation or some subsequent period. The location in a large city brings the school into close contact with men of various professions. The architectural student, for example, not only has at his hand conspicuous examples of the best design and construction, but regularly receives suggestive criticism from eminent men in active practice. To the student in economics and political science the various State and city institutions afford ample opportunities for individual investigation.

Buildings.— The buildings now occupied are the Rogers Building, on Boylston Street, devoted to instruction in mathematics, literature, history, and political science, and containing the administrative offices and the general library; the Walker Building, on Boylston and Clarendon Streets, devoted to the Departments of Chemistry, Physics, and Electrical Engineering, and Modern Languages; the Engineering Buildings, on Trinity Place, devoted to the engineering laboratories, to instruction in applied mechanics and hydraulics, and to the Departments of Civil and Mechanical Engineering and Naval Architecture; the Henry L. Pierce Building, also on Trinity Place, occupied by the Departments of Architecture, Biology, Geology, and by the laboratories of industrial chemistry and textile coloring; a series of Mechanical Laboratories on Garrison Street; and a Gymnasium on Exeter Street.

Equipment.— The foundation of all sound technological education requires not only thorough theoretical training, but also prolonged, well-directed laboratory drill which shall first give the student the power of close and accurate observation, and then bring him into direct contact with the material problems of his future profession.

The laboratories of the Institute are numerous and extensive; their equipment is correspondingly ample, and is kept well up to the rapid advances in technical practice. Provision is made for exact general training in the problems of physics and chemistry, for highly specialized work in these and other sciences, and for engineering tests and processes on a practical scale. Descriptions of the different laboratories and some account of their equipment, as well as of the libraries of the Institute, will be found on pages 87 to 143.

New Laboratories for Electrical Engineering and Physics.— The number of students, no less than the increasing demands of modern scientific education, have made necessary new laboratories for the Departments of Electrical Engineering and Physics. Buildings of a most complete sort have been planned for these purposes, and their erection will be begun early in the spring of 1902. They will cost, with their equipment, between $400,000 and $500,000, and will represent the results of the latest practice in these subjects.

Walker Memorial Building.— A gymnasium and student clubhouse which shall minister to the social side of student life has been for some years much needed. The money for the erection of such a building has been secured; and it is expected that the building will be begun in April, 1902, and that it will be completed before the beginning of the next school year. It will be open to all students of the Institute, and will afford shelter, not only for the athletic and social activities of the students, but for the department of physical instruction as well.

Members of the Corporation.

President.
HENRY S. PRITCHETT.

Secretary.[1]
FRANCIS H. WILLIAMS.

Treasurer.
GEORGE WIGGLESWORTH.

JOHN D. RUNKLE.
WILLIAM ENDICOTT.
HOWARD A. CARSON.
CHARLES J. PAINE.
CHARLES FAIRCHILD.
DAVID R. WHITNEY.
ALEXANDER S. WHEELER.
JAMES [illegible]. TOLMAN.
HOWARD STOCKTON.
ELIOT C. CLARKE.
NATHANIEL THAYER.
CHARLES F. CHOATE.
HIRAM F. MILLS.
PERCIVAL LOWELL.
ARTHUR T. LYMAN.
CHARLES MERRIAM.
THORNTON K. LOTHROP
CHARLES C. JACKSON.
SAMUEL M. FELTON.
DESMOND FITZGERALD.
SAMUEL CABOT.
FRANCIS BLAKE.
CHARLES W. HUBBARD.
THOMAS L. LIVERMORE.
A. LAWRENCE ROTCH.
JOHN R. FREEMAN.
GEORGE A. GARDNER.
WILLIAM H. LINCOLN.
J. B. SEWALL.
CHARLES L. LOVERING.
A. LAWRENCE LOWELL.
JAMES P. MUNROE.
WILLIAM L. PUTNAM.
CHARLES G. WELD.
EBEN S. DRAPER.
ROBERT S. PEABODY.
ELIHU THOMSON.
ELLIOT C. LEE.
JAMES P. STEARNS.
LUCIUS TUTTLE.

On the Part of the Commonwealth.

His Excellency Hon. W. MURRAY CRANE, *Governor.*
Hon. OLIVER W. HOLMES, *Chief Justice of the Supreme Court.*
Hon. FRANK A. HILL, *Secretary of the Board of Education.*

[1] Communications should be addressed to the Secretary of the Institute. (See page 18.)

Committees of the Corporation.

Executive Committee.

HENRY S. PRITCHETT.
GEORGE WIGGLESWORTH. } *Ex Officiis.*
HOWARD STOCKTON. THOMAS L. LIVERMORE.
FRANCIS H. WILLIAMS. A. LAWRENCE LOWELL.
ALEXANDER S. WHEELER.

Finance Committee.

WILLIAM ENDICOTT. NATHANIEL THAYER.
DAVID R. WHITNEY. CHARLES F. CHOATE.
CHARLES C. JACKSON. JAMES P. STEARNS.

Committee on the Society of Arts.

HOWARD A. CARSON. GEORGE A. GARDNER.
HIRAM F. MILLS.

Auditing Committee.

CHARLES C. JACKSON. JAMES P. TOLMAN.
WILLIAM L. PUTNAM.

Committee on Nominations.

THORNTON K. LOTHROP. GEORGE A. GARDNER.
DAVID R. WHITNEY. HOWARD A. CARSON.
FRANCIS H. WILLIAMS.

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[1] The numbers of the usual offices or lecture-rooms relate to the following buildings: Rogers Building, 491 Boylston Street; Walker Building, 525 Boylston Street; Engineering Buildings A and B; and Henry L. Pierce Building, 18, 24, and 30, Trinity Place, respectively.

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The fundamental elements in the curriculum of the school are mathematics, chemistry, and physics. The general t aining acquired in these introductory courses prepares the student, on the one hand, for more advanced and specialized scientific work, and it constitutes, on the other hand, the foundation for the technical courses in engineering, chemistry, and architecture. Instruction in technical methods is subordinated to the acquisition of principles, and these principles are studied with the predominant purpose to exercise the powers and train the faculties.

The Institute offers thirteen distinct courses, each of four years' duration, as follows:

I. CIVIL ENGINEERING.
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III. MINING ENGINEERING AND METALLURGY.
IV. ARCHITECTURE.
V. CHEMISTRY.
VI. ELECTRICAL ENGINEERING.
VII. BIOLOGY.
VIII. PHYSICS.
IX. GENERAL STUDIES.
X. CHEMICAL ENGINEERING.
XI. SANITARY ENGINEERING.
XII. GEOLOGY.
XIII. NAVAL ARCHITECTURE.

For the satisfactory completion of any one of these courses the degree of Bachelor of Science is conferred. Of the thirteen courses, eight give their students scientific and practical training for the various engineering professions; four others, namely, those in Chemistry, Physics, Biology, and Geology, with a larger proportion of pure science, afford preparation either for professional practice, for teaching, or for scientific investigation. The Course in General Studies combines thorough general scientific training with a wide range of philosophic studies. While the Institute of Technology is primarily and essentially a school of applied science, its curriculum has always comprised a considerable amount of literary, historical, and economic study. There has been no time since the foundation of the Institute when its degree could be attained without studies in these lines carried through at least three years. The growing appreciation of the value to technological students of a broader training than can be obtained from purely technical courses has led the Faculty to require of regular students, in addition to the general studies of the course, a substantial amount of reading during the summer vacation.

Women may be admitted to any of the courses of the school.

Descriptions and Schedules of the Professional Courses — The following pages, 32 to 63, contain schedules showing the distribution of studies throughout each of the regular four-year courses. Each schedule is preceded by a brief description of the course as a whole, while more detailed information is given for each department of instruction in the following pages, 87 to 141.

Choice of Courses.[1] — At the end of the first half-year, which is the same for all courses, the student selects, subject to the approval of the Faculty, the course which he will thenceforth pursue, and his work becomes more specialized thereafter as it progresses.

[1] A special circular in regard to choice of courses will be sent on application.

An idea of the nature and amount of the work to be done in any one of the regular courses may be obtained by considering, in connection with the schedule of that course (pages 32 to 63), the statements made in regard to the various branches of study (for example, Mathematics, Language, Chemistry, Physics, etc.) in the paragraphs descriptive of the "Subjects and Methods of Instruction," pages 87 to 141.

Options. — Within most of the regular courses the student is given, by means of options, a considerable latitude in the selection of the branch of his intended profession to which he shall specially devote his energies in the later years of his study. Thus in Civil Engineering (page 35) he may elect sanitary and hydraulic engineering, geodesy, or an advanced course in railroad engineering and management; in Mechanical Engineering (page 37) he may choose either marine engineering, locomotive construction, mill engineering, or heating and ventilation; and similarly for other courses. Inspection of the descriptions and schedules of the courses (pages 32 to 63) will show the nature and effect of the options. In cases where numbers are prefixed the selection of later options is positively determined by that of earlier ones, owing to the requirement of certain subjects as preparation for the former; in others, a wide choice is offered throughout all the years, the difference in this respect arising chiefly from the nature of the topics involved.

Graduate Courses of study may be pursued, either with or without reference to advanced degrees, by graduates of the Institute or by other persons of equivalent training. (See pages 67 to 70.)

Five-Year Courses. — Students purposing to take the degree of the Institute, but for sufficient reasons finding it advantageous to take at once fewer studies than are prescribed

in the schedules for the regular four-year courses, may arrange to distribute the entire work over five instead of four years.

Such an arrangement will often be of advantage. It makes possible a more thorough mastery of the subjects of the regular course, or, if preferred, the accomplishment of certain valuable work which is necessarily omitted from the four-year courses. Moreover, considerations of health, lack of thorough preparation, or other causes, may in certain cases render it advisable to extend the work over five years. The five-year courses, which have been arranged, in most departments, to meet such demands, contain the same subjects as the corresponding four-year courses, and differ from them only in the time over which the work is distributed, and, to a slight extent, in the sequence of studies. They lead respectively to the same degrees as the corresponding four-year courses. The standard of scholarship required of the student is in every way the same, and he is classed as a regular student as long as he maintains his standing in the course which he is pursuing.

A special circular regarding five-year courses will be sent on application. Applicants for five-year courses not shown in the circular should consult the chairman of the Faculty Committee on Five-Year Courses as early as possible.

Alternative Studies.— In view of the increasing number of applicants taking examinations for advanced standing, the Faculty offer alternative studies to students able to pass off some of their first-year subjects; thus, for example, applicants passing more than the required work in modern languages may arrange to complete these at an earlier stage in their courses; those passing advanced algebra may substitute second-year European history or mechanic arts, or special work in English or chemistry; those anticipating mechanical drawing may do the same, or, if prepared, may take second-year descriptive geometry. Graduates of Manual

Training Schools may often be excused from the first-term work in mechanical drawing,[1] and the mechanic arts required in some of the engineering courses.

A special circular giving detailed information in regard to such alternative studies will be mailed on application.

Subjects and Methods of Instruction.— The statements on pages 87 to 141 supply a general outline of the character and methods of instruction given, and of the equipment of the laboratories, museums, and libraries, which form conspicuous features in the work of the Institute.

[1] Subject to passing an examination on "Projections."

SCHEDULES OF THE FIRST-YEAR COURSES.

FIRST TERM.

(Common to all Courses.)

Algebra 20	Freehand Drawing 115
Plane Trigonometry 22	French [1] (or German [2]) . . 191 (201)
Inorganic Chemistry; Chemical Laboratory 290	Rhetoric and English Composition 160
Mechanical Drawing 100	Military Science.

SECOND TERM.

Courses I. and XI.	Courses II., III. (2), VI., VIII. (3), X., XIII.
Analytic Geometry 27	Analytic Geometry 27
Spherical Trigonometry . . . 29	Theory of Equations 28
Inorganic Chemistry; Qualitative Analysis; Chemical Laboratory 291	Inorganic Chemistry; Qualitative Analysis; Chemical Laboratory 291
Mechanical Drawing and Descriptive Geometry 101, 102	Mechanical Drawing and Descriptive Geometry 101, 102
Freehand Drawing 116	Freehand Drawing 116
French [1] (or German [2]) . . 191 (201)	French [1] (or German [2]) . . 191 (201)
United States History 220	United States History 220
Military Science.	Military Science.

SCHEDULES OF THE FIRST-YEAR COURSES.

SECOND TERM *(Continued)*.

COURSES III. (1), XII.

Analytic Geometry [3]	27
Theory of Equations	28
Inorganic Chemistry; Qualitative Analysis; Chemical Laboratory	291
Mechanical Drawing	104
Freehand Drawing	116
French [1] (or German [2])	191 (201)
United States History	220
Military Science.	

COURSE IV.

Materials of Architecture (Opt. 1, 2)	612
Shades and Shadows (Opt. 3)	611
Analytic Geometry	27
Theory of Equations	28
Mechanical Drawing and Descriptive Geometry	101, 103
Freehand Drawing	117
French [1] (or German [2])	191 (201)
United States History	220
Military Science.	

COURSE V.

Inorganic Chemistry; Qualitative Analysis; Chemical Laboratory	291
Elements of Plane Analytic Geometry; Theory of Equations	23, 28
Mechanical Drawing [4]	104
Freehand Drawing	116
Wood and Metal Turning	136
French [1] (or German [2])	191 (201)
United States History	220
Military Science.	

COURSE VII.

Inorganic Chemistry; Qualitative Analysis; Chemical Laboratory	291
Industrial Microscopy	710
Elements of Plane Analytic Geometry; Theory of Equations	23, 28
Mechanical Drawing	105
Freehand Drawing	116
French [1] (or German [2])	191 (201)
United States History	220
Military Science.	

COURSE VIII. (1, 2).

Analytic Geometry	27
Theory of Equations	28
Inorganic Chemistry; Qualitative Analysis; Chemical Laboratory	291
Mechanical Drawing	105
Freehand Drawing	116
Wood and Metal Turning	136
French [1] (or German [2])	191 (201)
United States History	220
Military Science.	

COURSE IX.

United States History	220
Logic and Argumentative Composition	161
French [1] (or German [2])	191 (201)
French [1] sight-reading	192
Elements of Plane Analytic Geometry; Theory of Equations	23, 28
Graphic Statistics	238
Freehand Drawing	116
Military Science.	

For descriptions of the methods, etc., used in the above instruction, see the corresponding pages under Subjects and Methods of Instruction, pages 87 to 141. Numbers at the right refer to the first column of the Schedule of Topics (of the Catalogue), where details are given as to the methods of instruction, etc.

[1] Students entering on French take German in their second and third years.
[2] Students entering on German take French in their second and third years.
[3] For XII., briefer course, 23.
[4] For Option 1, Mechanical Drawing, 101, and Descriptive Geometry, 102.

I.— CIVIL ENGINEERING.

The Course in Civil Engineering is designed to give the student sound training, both theoretical and practical, in the sciences and principles upon which professional practice is based. Particular care is taken to enforce the application of the principles taught, and the student is made familiar with the use of engineering instruments and with the usual problems of practice.

Civil engineering is the broadest in scope of the engineering professions, being the parent stem from which have diverged all the other branches; but, even though these have become recognized as distinct professions, the field of civil engineering still remains so large that no one can become expert in its whole extent. It covers topographical engineering; the building of railroads, harbors, docks, and other works serving the purposes of commerce and transportation; municipal engineering, including the construction of sewers, waterworks, roads, and streets; structural engineering, including the construction of bridges, buildings, walls, foundations, and all fixed structures; hydraulics, the development of water power and other branches. All of these branches of engineering rest, however, upon a relatively compact body of principles, and in these principles the students are trained by practice in the class-room, the drawing-room, the field, and the testing laboratory.

In the comparatively advanced work of the fourth year, the student is offered a choice between three options or lines of study; namely, a general option in civil engineering, an option in which more than usual attention is devoted to highways, railroads, and railroad management, and an option giving special attention to geodesy and topography.

In the summer vacation following the third year four weeks are devoted to a course of field-work in geodetic and topographic surveying, including hydraulic measurements and geological field-work. This course is open to all students, and is required of those taking the geodetic option. (See pages 104 to 109.)

I.—CIVIL ENGINEERING.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Surveying and Plotting	440	Surveying and Plotting	440
Topographical Drawing	442	Mechanism	520
Elements of Astronomy	443	Dynamical Geology	665
Differential Calculus	33	Integral Calculus	38
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Physics: Electricity, Optics (lectures)	360
Descriptive Geometry	110	German (or French)	200 (190)
German (or French)	200 (190)	English Literature and Composition	165
English Literature	165		
European History	221		

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Railroad Engineering; Field-work and Drawing	452, 453	Railroad & Highway Engineering; Field-work & Drawing	452, 453, 454
Advanced Surveying	450	Advanced Surveying	450
Stereotomy	455	Theory of Structures	460
Structural Geology	670	Stratigraphic Geology	675
Physics: Heat	370	Physical Laboratory	373
Physical Laboratory	373	Strength of Materials; Kinematics and Dynamics; Theory of Elasticity	70
General Statics; Stresses in Frames; Strength of Materials	70	German (or French)	201 (191)
German (or French)	201 (191)	Political Economy and Industrial History	245
Political Economy	245	Business Law	275

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Theory of Structures: Bridges and Similar Structures	474	Theory of Structures: Bridges and Similar Structures	474
Hydraulics	470	Thesis.	
Industrial Electricity	379	*Options.*	
Options.		1. Advanced Structures	475
1. Sanitary and Hydraulic Eng.	472	Hydraulic Engineering	491
Bridge Design	478	Elements of Geodesy	497
Foundations	499	Bridge & Sanitary Design	478, 494
Hydraulic Measurements	473	Sanitary Science and Public Health	750
Practical Astronomy	468	Steam Engineering	541
Steam Engineering	541	Engineering Laboratory	480
Metallurgy of Iron	587	2. Advanced Structures	475
2. Railroad Engineering	403, 465	Railroad Engineering	465
Railroad & Highway Design	493	Railroad & Highway Design	493
Railroad Management	466	Bridge Design	478
Bridge Design	478	Building Construction	649
Foundations	499	Steam Engineering	541
Steam Engineering	541	Engineering Laboratory	480
Metallurgy of Iron	587	3. Hydraulic Engineering	491
3. Bridge Design	479	Geodesy	467
Geodesy and Astronomy	467, 468	Geodetic Laboratory	467
Hydraulic Measurements	473	Physical Laboratory	397
Method of Least Squares	57		
Physical Laboratory	397		

II.— MECHANICAL ENGINEERING.

The Course in Mechanical Engineering aims to equip the student with such training in pure and applied mathematics as shall qualify him to deal with the engineering problems of his profession from the most favorable standpoint. It attempts by instruction, both theoretical and practical, to acquaint him with engineering practice, and to give him a proper groundwork upon which to base a professional career. The more strictly professional work of the course may be classified as follows.

Mathematics, physics, and applied mechanics are given outside the department, the last including the study of the strength of materials, with practice in testing.

Recitation-room work of the department proper begins with the study of mechanism, the construction of gear-teeth, etc., and is continued by courses on machine tools and cotton machinery. Courses are given on valve-gears, thermodynamics, steam-boilers, and the theory of the steam-engine. The fourth-year instruction includes applied dynamics, further study of steam engineering, hydraulics and hydraulic motors, foundations, and industrial management, and a course in machine design, combining study and drawing. The option is given of courses in locomotive construction, mill engineering, marine engineering, and heating and ventilation.

Drawing-room work begins in the second year. The students make working drawings from measurements, and the drawings necessary in connection with the course in mechanism and gear-construction. In the third year they make detail and assembly drawings from machinery, and this is followed by mechanism designs and boiler drawings.

Instruction in mechanic arts includes carpentry, pattern-making, forging, chipping, filing, and machine-tool work.

Engineering laboratory work begins with drill in steam-engine tests in the second term of the third year, and is continued throughout the fourth year, including tests of boilers, pumps, power, etc., and a large amount of investigation.
(See pages 105 to 107 and 109 to 116.)

II.—MECHANICAL ENGINEERING.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Principles of Mechanism	510	Mechanism: Gear-teeth; Machine-tools; Cotton Machinery	517
Drawing	512	Drawing	515
Carpentry and Wood-turning	138	Pattern Work	141
Differential Calculus	33	Foundry (elective)	140
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Integral Calculus	38
Descriptive Geometry	110	Physics: Electricity, Optics (lectures)	360
German (or French)	200 (190)	German (or French)	200 (190)
English Literature	165	English Literature and Composition	165
European History	221		

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Steam Engineering: Valve-gears; Thermodynamics	525	Steam Engineering; Boilers	525
Drawing	526	Drawing, Design, and use of Surveying Instruments	526, 451
Industrial Electricity	379	Engineering Laboratory	530
Dynamo-electric Measurements	380	Forging; Chipping and Filing	142, 144
Forging	142	Physical Laboratory	373
Elements of Differential Equations	46	Strength of Materials; Kinematics and Dynamics	75
Physics: Heat	370	German (or French)	201 (191)
Physical Laboratory	373	Political Economy and Industrial History	245
General Statics	71	Business Law	275
German (or French)	201 (191)		
Political Economy	245		

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Steam Engineering	540	Hydraulic Motors	490
Machine Design	544	Engineering Laboratory	545
Hydraulics	471	Machine-tool Work	146
Dynamics of Machines	542	Strength and Stability of Structures; Theory of Elasticity	88
Engineering Laboratory	545	Foundations	555
Chipping and Filing; Machine-tool Work	144, 146	Industrial Management	556
Strength of Materials; Friction	86	Thesis.	
Heating and Ventilation[1]	396	*Options.*	
Metallurgy of Iron	587	1. Marine Engineering	551
Options.		2. Locomotive Construction	550
1. Marine Engineering	551	3. Mill Engineering	552
2. Locomotive Construction	550	4. Heating and Ventilation	553
3. Mill Engineering	552	4. Dynamo-electric Machinery	401
4. Heating and Ventilation	553	4. Hygiene of Ventilation	744
4. Dynamo-electric Machinery	401		
4. Hygiene of Ventilation	744		

[1] Not taken by Option 4.

III.—MINING ENGINEERING AND METALLURGY.

The mining and metallurgical engineer has of necessity demands made upon him in a great variety of lines. The policy of the school is to give him the underlying principles of mathematics, physics, chemistry, mineralogy, geology, mining engineering, and metallurgy, as well as some practical knowledge of mechanical, civil, and electrical engineering. Thus equipped, he can after graduation take up specialized work, with the expectation of carrying it on successfully.

With the studies included under the first option the course is a general one, adapted to the needs of students who prefer not to make an immediate choice between professional specialties. Those who have not a serious reason for doing otherwise are advised to take this option.

The second group of optional studies is arranged with reference to mechanism and the steam-engine, the time necessary being taken from surveying, geology, and mining engineering. This course is adapted especially for the iron and steel metallurgist.

Valuable opportunities are offered for observation and field-work in the summer schools of mining and metallurgy, and in mineralogical excursions, as well as in the ample laboratories of the Institute. (See pages 120 to 124.)

For students able to devote an additional year to professional study a definite graduate course of one year, which may lead to the degree of Master of Sciences, has been arranged. (See page 69.) In view of the exceedingly varied demands likely to be made upon the professional mining engineer, such an extension of the course offers peculiar advantages, even if taken without the intention of obtaining a higher degree.

III.—MINING ENGINEERING AND METALLURGY.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Mineralogy and Blowpipe Analysis[1]	661, 662	Blowpipe Silver Assay[1]	580
Differential Calculus	33	Integral Calculus	38
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Physics: Electricity, Optics (lectures)	360
German (or French)	200 (190)	German (or French)	200 (190)
English Literature	165	English Literature and Composition	165
European History	221		
Options.		*Options.*	
1. Surveying and Plotting	440	1. Surveying and Plotting	440
1. Topographical Drawing	442	1. Structural and Chemical Geology	668
2. Descriptive Geometry	110	1. Dynamical Geology	665
2. Principles of Mechanism	510	2. Mechanism: Gear-teeth; Machine-tools	518
		2. Theoretical Chemistry	295
		2. Drawing	515

SUMMER COURSE IN PRACTICAL MINING OR METALLURGY (ELECTIVE).
FIELD-WORK IN MINERALOGY (ELECTIVE).

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Assaying	582	Quantitative Analysis (lectures and laboratory)	305
Qualitative Analysis (lectures and laboratory)	300	Physical Laboratory	373
Physics: Heat	370	Strength of Materials; Kinematics and Dynamics	75
Physical Laboratory	373	German (or French)	201 (191)
General Statics	71	Political Economy and Industrial History	245
German (or French)	201 (191)	Business Law	275
Political Economy	245	*Options.*	
Options.		1. Mining Engineering	581
1. Mining Engineering	581	1. Theoretical Chemistry	295
1. Historical Geology	669	2. Steam Engineering; Boilers	525
1. Industrial Electricity	379	2. Engineering Laboratory	530
1. Dynamo-electric Measurements	380		
2. Steam Engineering; Thermodynamics; Valve-gears	525		
2. Drawing	526		

SUMMER COURSE IN PRACTICAL METALLURGY OR MINING (ELECTIVE).

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Mining Engineering: Ore-dressing	593	Mining Engineering: Mining and Metallurgical Machinery	590, 591, 593
Memoirs, Laboratory Reports	595, 596	Memoirs, Laboratory Reports	595, 596
Metallurgy (non-ferrous)	588	Metallurgy (non-ferrous)	599
Metallurgy of Iron	587	Metallurgical Laboratory	592
Metallurgical Laboratory	592	Quantitative Analysis (lectures and laboratory)	319, 320
Quantitative Analysis (lectures and laboratory)	319, 320	Thesis.	
Heat Measurements	398	*Options.*	
Hydraulics	471	1. Quantitative Analysis (additional)	320
Strength of Materials; Friction	86	2. Engineering Laboratory	559

[1] Students in Option 2 are required to take *either* Blowpipe Analysis or Blowpipe Silver Assay.

IV — ARCHITECTURE.

The architectural course aims to prepare its members not only for their years of work as subordinates, when accuracy, rapidity, and taste in drawing and design, with knowledge of detail, will be the most useful qualifications, but also for their subsequent independent career, when the value of technical knowledge will become most important.

Opportunities are offered for one or two years of graduate professional work. The value of such continuous and uninterrupted study at a period when the students are best fitted for it cannot be overestimated. The time may be devoted to advanced design in continuation of either Option 1 or Option 2.

To Option 1, the general course in architecture, have been recently added Option 2, Architectural Engineering, and Option 3, Landscape Architecture.

Options 1 and 2 are identical to the middle of the third year. The professional work of these options begins in the second year, with the study of the five orders and their applications. The student is made familiar with the materials and principles of construction by lectures and visits to buildings.

In the third year the time devoted to architectural history is much increased, specifications are discussed, and sufficient practice in working drawings is given to enable the student to be of immediate service on entering an architect's office.

A technical course in heating and ventilation is given in the third year, illustrated by the study of important public buildings in the city. In the fourth year applied mechanics and graphical statics are applied to general practice, and exercise is given in designing trusses and in the various problems occurring in modern construction.

Practice in architectural design is continued throughout the course, and also instruction in drawing from the cast and from life. Facility in rendering is gained by a course in water-color and pen-and-ink drawing.

Option 2 includes, in the second term of the third year and the whole of the fourth year, extended courses in structures and structural design, in place of the purely architectural design and allied work of Option 1.

IV.—ARCHITECTURE.—(*Options 1 and 2.*)

(See also page 43.)

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Elementary Design	610	Design	618
Architectural History [1]	624	Architectural History [1]	624
Materials [2]	612	Perspective [2]	619
Shades and Shadows	611	Stereotomy	620
Freehand Drawing	118	Freehand Drawing	118
Differential Calculus	33	Integral Calculus	38
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Physics: Electricity, Optics (lectures)	360
German (or French)	200 (190)	German (or French)	200 (190)
English Literature	165	English Literature and Composition	165
European History	221		

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Design	625	Architectural History	626
Architectural History	626	Freehand Drawing	119
Perspective [1]	619	Pen-and-ink	628
Specifications and Working Drawings	627	Strength of Materials	76
Freehand Drawing	119	German (or French)	201 (191)
Heating and Ventilation	372	Political Economy and Industrial History	245
General Statics	71	Business Law	275
German (or French)	201 (191)		
Political Economy	245		

Options.

1.	Design	630
	Building Stones	676
2.	Structures	461
	Structural Design	629
	Heating and Ventilation	372

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
History of Construction	636	Business Relations	647
European Civilization and Art	228	European Civilization and Art	228
Pen-and-ink	639	Sanitary Science and Public Health	750
		Design; Thesis	634 or 635

Options.

1.	Design	635
	Constructive Design	638
	History of Ornament	637
	Life Class	641
	Water-color	640
	Strength of Materials	87
	Acoustics	388
2.	Structures	500
	Structural Design	634
	Strength of Materials	89

1.	History of Ornament	637
	Life Class	641
	Modelling	648
	Pen-and-ink	639
	Water-color	640
	Color	389
2.	Structures	500
	Building Stones	676
	Laboratory Tests of Building Materials	90

[1] For students entering after 1901.

[2] For students entering before 1902.

Option 3, Landscape Architecture.— This option meets the demand for trained landscape architects, due to the steadily increasing attention now paid to all questions concerning the designing of public and private grounds. The profession is most closely allied with architecture and civil engineering; and these two departments are largely drawn on for instruction. The fundamental biological, botanical, and geological subjects are taught in their several departments.

The professional work of this option begins in the second year with elementary architectural design. Under horticulture are comprised not only the study at the Arnold Arboretum of all that relates to planting, and the use of plants and trees, but also the lectures on the history of landscape architecture.

In the third year an extension of the same general line of work is followed, with the addition of architectural history.

In the fourth year, landscape design, lectures on practical work, and horticulture are the main features.

Freehand drawing, pen-and-ink, and water-color extend through the three years, nearly as in the general course, with the usual requirements in physics, languages, and history.

Not only as a profession in itself does this option offer unusual opportunities, but it gives to both the architect and the civil engineer a chance for special studies which cannot fail to be of the greatest value.

Persons applying for admission as special students in architecture must be college graduates, or twenty-one years of age, with not less than two years' office experience. They will be required to pass, before entrance, examinations[1] in plane and solid geometry and freehand and mechanical drawing (including projections, isometric drawing, and the elements of descriptive geometry); and must include in their work at the Institute the regular courses in freehand drawing and descriptive geometry, unless already proficient in these subjects. (See pages 125 to 127.)

[1] See "Advanced Standing Examinations," Calendar, page 2.

IV.—ARCHITECTURE.—(*Landscape Option.*)

(See also page 41.)

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Elementary Design	610	Design	618
Architectural History[1]	624	Architectural History[1]	624
Shades and Shadows[2]	611	Perspective[2]	619
Horticulture	719	Horticulture	719
Biology	714	Elements of Botany	720
Surveying	440	Dynamical Geology	665
Topographical Drawing	442	Surveying	440
Freehand Drawing	118	Freehand Drawing	118
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Physics: Electricity, Optics (lectures)	360
German (or French)	200 (190)	German (or French)	200 (190)
English Literature	165	English Literature and Composition	165
European History	221		

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Design	625	Landscape Design	631
Architectural History	626	Horticulture	724
Horticulture	724	Highway Engineering: Field-work and Drawing	454, 457
Perspective[1]		Advanced Surveying (Plane Table)	450
Natural Landscape, Elements of	674	Architectural History	626
Curves and Earthwork	448	Freehand Drawing	119
Advanced Surveying (Stadia)	450	Pen-and-ink	628
Geology (Structural)	670	Economic Geology	695
Freehand Drawing	119	German (or French)	201 (191)
German (or French)	201 (191)	Political Economy and Industrial History	245
Political Economy	245	Business Law	275

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Landscape Architecture	643	Landscape Architecture	643
Landscape Design	644	Landscape Design Thesis	644
Horticulture	746	Horticulture	746
Specifications and Working Drawings: Landscape Gardening	646	History of Ornament	637
Sanitary Engineering and Drainage: Masonry	481	Business Relations	647
History of Ornament	637	Life Class	641
Life Class	641	Modelling	648
Pen-and-ink	639	Pen-and-ink	639
Water-color	640	Water-color	640
European Civilization and Art	228	Sanitary Science and Public Health	750
		Photography	410
		European Civilization and Art	228

[1] For students entering after 1901.

[2] For students entering before 1902.

V.—CHEMISTRY.

The Course in Chemistry is designed to prepare students to conduct manufacturing operations based on chemical principles, to act as consulting chemists, to become teachers of chemistry, or to engage in scientific research.

Five series of optional studies, including respectively engineering, analytical, sanitary, metallurgical, and physico-chemical subjects, and extending throughout the course, have been established in order to allow students to prepare themselves more thoroughly for these special lines of chemical work. This specialization does not, however, preclude a thorough general training in all the important branches of chemistry.

The class-room work consists of courses of lectures on inorganic chemistry, and on theoretical, analytical, industrial, and organic chemistry. The non-chemical studies, such as mathematics, mechanical drawing, physics, biology, mineralogy, English, history, political economy, and language, are selected with reference to their bearing on chemical work, or for their general educational value.

The student spends a large part of the four years in the laboratories, the work being arranged as follows: in the first year there is general laboratory practice, in which the student is taught the nature of chemical processes and the use of chemical apparatus, and is drilled in accurate habits of observation. Qualitative chemical analysis is begun in the second term of the first year, and is continued through the first term of the second year. Quantitative analysis follows in the second term of the second year, and continues throughout the course. Practice in the industrial, sanitary, organic, and physico-chemical laboratories follows in the third and fourth years. Effort is made to develop self-reliance in the student, so that he may be fitted to make his way without assistance. To this end he is required to make investigations, involving an original research and reference to chemical literature in English, French, and German.

The details of instruction in this course, for both regular and special students, and the description of the Kidder Laboratories, are given on pages 92 to 97. For the schedule of a graduate course in chemistry see page 69.

V.—CHEMISTRY.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.

Qualitative Analysis (lectures and laboratory) 300
Mineralogy[1] 661
Blow-pipe Analysis[1] 662
Physics: Mechanics, Wave-motion, Electricity (lectures) . . 360
German (or French) . . . 200 (190)
English Literature 165
European History 221

Options.

1, 5. Differential Calculus 33
1. Descriptive Geometry 110
2, 3, 4. Elements of Differential and Integral Calculus 34

SECOND TERM.

Quantitative Analysis (lectures and laboratory) 305
Physics: Electricity, Optics (lectures) 360
Physical Laboratory 366
Physical Measurements (lectures), 365
German (or French) . . . 200 (190)
English Literature and Composition 165

Options.

1, 5. Integral Calculus 38
2, 3, 4. Dynamical Geology 665
or Chemical Geology 668
General Biology 715
Industrial Microscopy 710

THIRD YEAR.

FIRST TERM.

Quantitative Analysis (lectures and laboratory) . . . 319, 320
Industrial Chemistry 312
Physics: Heat 370
Physical Laboratory 374
Industrial Electricity 379
German (or French) . . 201 (191)
Political Economy 245

Options.

1. Mechanism and Drawing . . 511, 512
2, 3. Air, Water, and Food Analysis . . 316
Sugar Analysis 311
Industrial Chemical Laboratory . . 314
4. Sugar Analysis 311
5. Differential Equations 45

SECOND TERM.

Quantitative Analysis (lectures and laboratory) . . . 319, 320
Theoretical Chemistry 303
Organic Chemistry (brief course) 315
Industrial Chemistry 312
Assaying 583
German (or French) . . . 201 (191)
Political Economy and Industrial History 245
Business Law 275

Options.

1, 2. Industrial Chemical Laboratory . . 314
3. Bacteriology 729
4. Assaying (additional) 583
Quantitative Analysis (additional). 320
5. Water Analysis 317
Electrical and Heat Measurements 421

FOURTH YEAR.

FIRST TERM.

Organic Chemistry (lectures) . 332
Organic Analysis 329
Organic Preparations & Reactions 335
Molecular Weight Determinations[3] 328
Theoretical Chemistry 313
Elements of Non-ferrous Metallurgy[3] 589
Metallurgy of Iron 587
Testing of Oils 336

Options.

1. Valve-gears and Drawing 547
2. Proximate Technical Analysis . . . 337
or Textile Coloring 338
3. Bacteriology of Water and Sewage 749
Industrial Biology 740
4. Non-ferrous Metallurgy 588
Ore-dressing 593
Laboratory Reports 596
Metallurgical Laboratory 592
5. Electro-chemistry 411
Kinetic Theory of Gases 394

SECOND TERM.

Organic Chemistry (lectures) . 332
Gas Analysis 340
Chemical Equilibrium 322
Thermo- and Electro-chemistry . 321
Electrical and Heat Measurements[2] 421
History of Chemistry 342
Thesis Reports 344
Thesis.

Options.

1. Engines and Machines 557
2. Physico-chemical Laboratory . . . 384
3. Sanitary Science and Public Health 750
Microscopical Analysis of Water and Sewage 751
4. Non-ferrous Metallurgy 599
Mining Machinery 593
5. Energetics 393
Physico-chemical Laboratory . . 384

[1] Students in Option 1 take a shorter course in Mineralogy, and omit Blow-pipe Analysis.
[2] Omitted by students in Option 5.
[3] Omitted by students in Option 4.

VI.— ELECTRICAL ENGINEERING.

The Course in Electrical Engineering is designed to meet the needs of young men desirous of entering upon the practice of any of the various applications of electricity in the arts. Its leading studies are physics, especially theoretical and applied electricity, mechanical engineering, and mathematics.

The work in engineering runs parallel with the electrical subjects, since in all branches of electrical engineering a sound knowledge of mechanics and motors, of measurements of power, and of the means of its transmission, etc., is essential. Thus the second year includes the studies of mechanism, mechanic arts, and drawing, and the third year, applied mechanics, steam engineering, and hydraulics. Certain of these subjects are also continued in the fourth year.

An extended course in physics begins with the second year, and is continued, by lectures, recitations, and laboratory work, to the end of the third year. A portion of this is devoted to electricity; and at the middle of the second year special lectures, readings, and recitations on this topic are begun, by which the study of the theory of electricity is continued until the end of the fourth year. Work in the physical laboratory begins at the middle of the second year, and continues into the fourth year, leading up to general electrical measurements and testing. Throughout the fourth year, in the laboratory of electrical engineering, the student pursues courses in the practical study of dynamo-electric machinery. Extended courses on the technical applications of electricity to the telegraph, the telephone, electric lighting, and the electrical generation, transmission, and utilization of power, etc., are given in the third and fourth years, the latter year being chiefly occupied with electrical study and research.

A series of advanced mathematical topics also forms an important part of the work. (See pages 101 and 104.)

A graduate course in electrical engineering, one year in duration, and leading to the degree of Master of Science, has recently been instituted. For a schedule of the course, see page 70.

VI.—ELECTRICAL ENGINEERING.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.

Physics: Mechanics, Wave-motion, Electricity (lectures) . . 360
Acoustics 362
Principles of Mechanism . . . 510
Differential Calculus 33
Descriptive Geometry 110
Carpentry and Metal-turning 137, 139
German (or French) . . . 200 (190)
English Literature 165
European History 221

SECOND TERM.

Physics: Electricity, Optics (lectures) 360
Physical Laboratory: Mechanics, Optics 366
Physical Measurements (lectures) 365
Theoretical Electricity 363
Mechanism: Gear-teeth; Machine-tools 518
Drawing 515
Integral Calculus 38
Carpentry and Wood-turning . 137
German (or French) . . . 200 (190)
English Literature and Composition 165

THIRD YEAR.

FIRST TERM.

Physics: Heat (lectures) . . . 370
Physical Laboratory: Heat . . 374
Theoretical Electricity 377
Methods of Telegraphy . . . 378
Elements of Industrial Electricity 379
Steam Engineering: Valve-gears; Thermodynamics 525
Drawing 526
Differential Equations 45
General Statics 71
German (or French) . . . 201 (191)
Political Economy 245

SECOND TERM.

General Electrical Measurements (laboratory) 376
Theoretical Electricity 377
Periodic Currents 381
Electrical Measuring Instruments and Methods (lectures) . . . 383
Steam Engineering: Boilers . . 525
Engineering Laboratory . . . 530
Drawing 526
Strength of Materials; Kinematics and Dynamics 75
German (or French) . . . 201 (191)
Political Economy and Industrial History 245
Business Law 275

FOURTH YEAR.

FIRST TERM.

Technical Applications of Electricity to Telephony, Electric Lighting, Electrical Generation of Power 400
Methods of Dynamo Testing (lectures) 402
General Electrical Testing . . 405
Electrical Engineering Laboratory; Testing of Dynamos . . 420
Electrical Measuring Instruments and Methods (lectures) . . . 406
Theory of Periodic Currents . . 404
Photometry 392
Steam Engineering 540
Dynamics of Machines 543
Hydraulics 471
Engineering Laboratory . . . 545
Strength of Materials; Friction . 86

Options.

Railroad Signals 403
Propagation of Electric Waves . . . 390

SECOND TERM.

Technical Applications of Electricity; Telephony; Direct Current Practice; Alternating Current Practice . . 400, 416, 417
Methods of Dynamo Testing (lectures) 402
Principles of Dynamo Design . 418
Telephone Engineering . . . 419
Electrical Engineering Laboratory; Measurements of Dynamo-electric Machinery; Special Methods 420
Theory of Alternating Current Machinery 409
Engineering Laboratory . . . 545
Economics of Corporations . . 261
Thesis.

VII. — BIOLOGY.

The Course in Biology affords especially a training in those sciences which pertain to living things. Those who take it usually intend to become physicians or teachers, to fill positions connected with public works or the civil service, or to engage in some of the various fermentation industries as experts in bacteriology or microscopy.

Some of the best medical schools are already requiring for admission special training such as this course affords, and it is believed that for the scientific or professional study of medicine no preparation can be superior to a liberal education in which the prominent features are chemistry, physics, and biology, comparative anatomy and embryology, comparative physiology and microscopic anatomy, bacteriology, and sanitary science.

The need for thoroughly trained teachers of the natural sciences was never greater than to-day, and for several years many teachers in actual service have resorted to the Institute for instruction in biology. There is good reason to believe that the public-school service now offers an inviting career to educated teachers, and that the Course in Biology, owing to its broad and comprehensive character, affords a sound preparation for persons intending eventually to teach, or to direct teaching, in the natural sciences.

The Course in Biology is adapted for those also who desire to enter the civil service with boards of health, water boards, or sewer departments on the sanitary side, as bacteriologists or microscopists, as well as for those who intend to devote themselves to processes connected with dairying, vinegar-making, pickling, canning, cold-storage, or other food-making, fermentation, or food-preserving industries.

The subjects of study and their sequence are shown on the opposite page. Abundant facilities for the regular practical work of the course are provided in the various laboratories of the Institute, especially those of chemistry, physics, physiology, and bacteriology.

Opportunities are provided also for special advanced work in general bacteriology, industrial biology, and sanitary science; in physiology and hygiene; and, to some extent, in zoölogy and botany. (For more detailed information see pages 127 to 131, and the special circular on Biology.)

VII.—BIOLOGY.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
General Biology	711	Cryptogamic Botany	718
Qualitative Analysis (lectures and laboratory)	300	General Zoölogy	716
Mineralogy and Blow-pipe Analysis	661, 662	Quantitative Analysis (lectures and laboratory)	305
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Dynamical Geology	665
German (or French)	200 (190)	Physics: Electricity, Optics (lect.)	360
English Literature	165	German (or French)	200 (190)
European History	221	English Literature and Composition	165

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Comparative Anatomy	723	General Bacteriology	729
Anthropology	722	Microscopic Anatomy	730
Organic Chemistry (brief course)	302	Comparative Anatomy and Embryology	723
Sanitary Chemistry	316	Theoretical Chemistry	295
Historical Geology	669	Physical Laboratory	373
Physics: Heat	370	German (or French)	201 (191)
Physical Laboratory	373	Political Economy and Industrial History	245
German (or French)	201 (191)	Business Law	275
Political Economy	245		

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Comparative Physiology	735	Sanitary Science and Public Health	750
Physiological Laboratory	736	Theoretical Biology	738
Theoretical Biology	738	Comparative Physiology	735
Microscopic Anatomy	730	Journals	739
Bacteriology of Water and Sewage	749	Vital Statistics	263
Industrial Biology	740	Thesis.	
History of the Inductive Sciences	742	*Options.*	
Journals	739	1. Microscopical Analysis of Water and Sewage	751
Options.		1. Municipal Sanitation	752
1. Organic Chemistry	332, 333	2. Descriptive Sociology	256
2. Mammalian Anatomy	745	2. or Structural and Chemical Geology	668
2. Palæontology	672		
2. Climatology	685		

VIII.—PHYSICS.

As distinguished from the professional or technical courses in engineering, architecture, etc., the Institute offers certain courses of a distinctly scientific nature. The Course in Physics contains a series of studies adapted to the needs of those who wish to become teachers of physics, or who desire to enter upon a course in pure science, whether with a view to its further continuance, or wholly as a matter of training. Its leading features are a thorough and continuous study of the various branches of physics and a treatment of mathematics advanced considerably beyond the requirements of any of the technical courses. Inorganic, theoretical, analytical, and organic chemistry occupy a position next in prominence to mathematics, and of hardly less importance. Options are so arranged that the student may select more advanced work in either mathematics or chemistry.

Historical and other allied subjects and the modern languages are continued throughout the first three years; and the latter may be further prolonged, if desired. Chemistry may be continued to the end of the course; and mathematics, pure and applied, is required throughout the whole four years. Physics begins with the second year and, in lectures, readings, recitations, and laboratory exercises, extends to the close of the course. A large amount of experimental work is performed, and an experimental investigation is undertaken during the fourth year in connection with the preparation of the thesis. At all times it is sought to encourage the spirit of original research, and to impart an understanding of the principles upon which scientific investigation, especially in quantitative measurement, should be conducted. (See pages 97 to 101.)

Beyond the particular alternative studies set forth in the course scheme, a certain further liberty of substitution may be allowed by the Faculty in the case of students in Course VIII. who are fitting themselves for some special line of work.

VIII.— PHYSICS.— (*Options 1, 2.*) (See also page 53.)

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.

Physics: Mechanics, Wave-motion, Electricity (lectures) . . 360
Acoustics 362
Qualitative Analysis (lectures and laboratory) 300
Descriptive Astronomy . . . 361
Microscopy 713
Differential Calculus 33
German (or French) . . 200 (190)
English Literature 165
European History 221

Options.

1. Qualitative Analysis (additional) . . 300
2. Determinants 35

SECOND TERM.

Physics: Electricity, Optics (lectures) 360
Physical Laboratory: Mechanics, Optics 366
Physical Measurements (lectures) 365
Theoretical Electricity 363
Quantitative Analysis (lectures and laboratory) 305
Theoretical Chemistry 303
Integral Calculus 38
German (or French) . . 200 (190)
English Literature and Composition 165

THIRD YEAR.

FIRST TERM.

Physics: Heat (lectures) . . . 370
Physical Laboratory: Heat . . 374
Theoretical Electricity 377
Elements of Industrial Electricity 379
Photometry 371
Organic Chemistry (brief course) 302
Chemistry of Solutions and Molecular-weight Determinations 313, 328
Differential Equations 45
Method of Least Squares . . . 57
German (or French) . . 201 (191)
Political Economy 245

Options.

1. Quantitative Analysis 319, 320
2. Quaternions 47

SECOND TERM.

Physical Laboratory: Optics or Heat and Electrical Measurements 375, 376
Electrical Measuring Instruments and Methods (lectures) . . . 383
Physico-chemical Laboratory . 384
Theoretical Electricity 377
Periodic Currents 381
Chemical Equilibrium 322
Thermo-chemistry 321
Analytical Mechanics 77
German (or French) . . 201 (191)
Political Economy and Industrial History 245
Business Law 275

Options.

1. Quantitative Analysis 319, 320
2. { Theory of Surfaces 49
   { Advanced Calculus and Definite Integrals 50

FOURTH YEAR.

FIRST TERM.

Electrical Testing: Heat Measurements 405, 398
Theory of Periodic Currents . . 404
Electrical Measuring Instruments and Methods (lectures) . . . 406
General Theory of Light . . . 390
Kinetic Theory of Gases . . . 394
Electro-chemistry 411
Physical Colloquium 395
Fourier's Series; Laplace's Coefficients 56
History of Science 742

Options.

1. Organic Chemistry 333
2. Analytical Mechanics 85

SECOND TERM.

Theory of Potential or Theory of Alternating Current Machinery 409, 412
General Theory of Light . . . 390
Energetics 393
Fourier's Series; Laplace's Coefficients 56
Principles of Scientific Investigation 414
Physical Colloquium 395
Physical Research: Thesis.

Options.

1. Special Work; Chemistry or Physics 415
2. Analytical Mechanics 85

VIII.— PHYSICS (*continued*).

Option in Electro-Chemistry.— The rapid advances now being made in the applications of electricity in chemical and metallurgical industries call for a training which has not hitherto been fully provided in the Courses in Electrical Engineering, Physics, or Chemistry as given at the Institute or elsewhere. The problems arising in these arts require for their solution the combined training of the physicist, the chemist, and, to less degree, of the engineer.

To meet the wants of students desiring to prepare themselves for entrance into the various electro-chemical industries, the Institute has decided to establish a course of study leading particularly to this end.

The Course in Physics has for a number of years furnished opportunity for such study to a considerable extent, and the new group of subjects is laid out as an option in this course.

It comprehends, first, an extended consideration of electricity and electrical testing, together with those portions of electrical engineering which are especially related to machinery employed in electro-chemical work; second, a thorough course in chemistry, including analytical, industrial, organic, and theoretical chemistry; and, third, a detailed study of the theory of electro-chemistry and its industrial applications.

The option in electro-chemistry aims to provide the education necessary for the investigation of the many new problems which the development of novel processes is certain to bring forth, and also to impart the professional skill requisite for the installation, testing, and operation of apparatus and machinery by which electrical energy is applied in chemical, metallurgical, and allied processes. The instruction given, moreover, is of such a broad character, particularly in electricity and chemistry, that a student completing this option should be well prepared to undertake various lines of electrical or chemical work other than electro-chemistry.

VIII.— PHYSICS.— (*Option 3.*)

ELECTRO-CHEMISTRY.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Physics: Optics (lectures)	360
Qualitative Analysis (lectures and laboratory)	300	Physical Laboratory: Mechanics, Optics	366
Differential Calculus	33	Physical Measurements (lectures)	365
Descriptive Geometry	110	Theoretical Electricity	363
Carpentry and Metal-turning,	137, 139	Quantitative Analysis (lectures and laboratory)	305
German (or French)	200 (190)	Integral Calculus	38
English Literature	165	Mechanical Engineering Drawing	522
European History	221	German (or French)	200 (190)
		English Literature and Composition	165

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Physics: Heat (lectures)	370	General Electrical Measurements, (laboratory)	376
Physical Laboratory: Heat	374	Electrical Measuring Instruments and Methods (lectures)	383
Theoretical Electricity	377	Theoretical Electricity	377
Industrial Electricity	379	Periodic Currents	381
Analytical Chemistry	319, 320	Theoretical Chemistry	303
Industrial Chemistry	312	Industrial Chemistry	312
Differential Equations	45	Organic Chemistry	315
Mechanism	511	Assaying	583
Mechanical Engineering Drawing	512	Valve-gears; Drawing	528
German (or French)	201 (191)	German (or French)	201 (191)
Political Economy	245	Political Economy and Industrial History	245
		Business Law	275

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Electro-chemistry (lectures)	411	Applied Electro-chemistry (lectures)	411
Electro-chemical Laboratory	408	Electro-chemical Laboratory	408
Electrical Engineering: Electrical Generation of Power; Dynamo Testing (lectures)	402, 400	Electro-metallurgy	598
Electrical Testing; Electrical Engineering Laboratory	405, 420	Electrical Engineering: Direct Current Practice; Alternating Current Practice; Transmission of Power (lectures)	400, 416, 417
Electrical Measuring Instruments and Methods (lectures)	406	Electrical Engineering Laboratory	420
Theory of Periodic Currents	404	Engines and Machines	557
Heat Measurements	398	Energetics (Thermodynamics)	393
Theoretical Chemistry	313	Chemical Equilibrium	322
Gas Analysis	340	Thermo-chemistry	321
Non-ferrous Metallurgy	589	Physical Colloquium	395
Physical Colloquium	395	Thesis.	
Options.			
Metallurgical Laboratory	592		
Organic Chemistry (Laboratory)	333		

IX.—GENERAL STUDIES.

The Course in General Studies is designed especially for students who wish to secure an education based upon scientific study and experiment, but including a larger amount of history, economics, language, and literature than is possible in technical courses. It is adapted to the needs of those who expect to engage in trade, banking, manufacturing, or journalism, or in the teaching of social or political science. For administrative positions in business, a careful knowledge of political and social relations is essential; and it is believed that the origin, growth, and laws of political and industrial society can best be approached through the methods used in natural science. The uniform requirement of the Institute in physics and a considerable share of the general training in chemistry are preserved in this course. From the study of biology, including botany and zoölogy, as a basis, the student is prepared to proceed to the study of man in society, and to consider the history and significance of social institutions, such as the family, the state, and the church. Physical science, biology, anthropology, social science and history, political and industrial history, and international law thus present, throughout the course, a definite, progressive relationship.

This course keeps in view the fact that in practical life, as in intellectual, success must depend largely upon breadth and flexibility of mind; and that intelligent and appreciative study of literature contributes to the fullest development of these qualities. The study of the history and development of the English language is made to lead the way to a careful survey of English literature, the effort being to make the work not mechanical, but sympathetic and vital.

Other especial features of the department of General Studies are more extended study of modern languages; a continuous course of historical study, directed especially toward the political and social history of England and the United States; drill in the essential principles of English composition; and an orderly study of economics, including its theory and history, with courses in industrial and commercial history and geography, finance, and statistics. The student may be permitted to substitute certain subjects in other courses, as biology or mathematics, provided his individual aptitudes justify such a liberty. (See pages 135 to 140.)

IX.—GENERAL STUDIES.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
European History since 1815	221	History of England	222
History of England	222	English Literature and Composition	165
Political Economy	240	French [2]; German	193, 200
Economic Problems	241	Zoölogy and Botany	716, 717
English Literature	165	Dynamical Geology	665
French [2]; German	193, 200	Physics: Electricity, Optics (lectures)	360
General Biology	712	Physical Laboratory	367
Physics: Mechanics, Wave-motion, Electricity (lectures)	360		

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
European Civilization and Art	228	European Civilization and Art	228
English Composition (advanced course)	167	History of Commerce [1]	252
Financial History of United States [1]	250	Descriptive Sociology	256
Statistics	246	Geology	678
Commercial Geography [1]	251	Business Law	275
Anthropology	722	German, with sight-reading	201, 202
German, with sight-reading	201, 202	*Options.*	
Physics: Heat or Industrial Electricity	370, 379	History of England in the 16th and 17th Centuries	227
Options.		Theories and Methods of Social Reform	247
History of England in the 16th and 17th Centuries	227	English Literature: 1560–1660	169
Theories and Methods of Social Reform	247	French	195
English Literature to 1560	169		

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Comparative Politics	266	Comparative Politics	266
International Law	258	History of Industry [1]	253
Taxation and Administration [1]	255	History and Elements of Philosophy	234
English Literature: 1660–1780	175	English Literature: 1780–1860	177
Physiology and Personal Hygiene	741	Sanitary Science and Public Health	750
Climatology	685	Thesis.	
Options.		*Options.*	
History of Era of French Revolution	230	History of Era of French Revolution	230
Municipal Government and Administration	231	Municipal Government and Administration	231
Statistics of Sociology	257	Banking and Finance	270
Argumentation	176	History of Economic Theory	260
Language: Special Work in French or German, or Elements of Spanish or Italian	203, 208	Contemporary Literature	178
		Journalism	179
		Langauge: First Term continued	203, 208

[1] Alternating studies. [2] The course in French Literature also is recommended.

X.—CHEMICAL ENGINEERING.

The Course in Chemical Engineering is adapted to meet the needs of students of mechanical engineering who wish to devote a portion of their time to the study of the application of chemistry to the arts, thus enabling them to take positions as engineers having to deal with problems of construction and administration in connection with manufactures involving chemical principles.

The general engineering studies in the Course in Chemical Engineering coincide for the most part with those of the Course in Mechanical Engineering, a portion of the mechanic arts and drawing of the latter course being replaced, however, by chemical subjects. A course of instruction in the fourth year is devoted to a discussion of the machinery used in manufacturing and applied chemistry, including the methods of transportation, evaporation and distillation, refrigeration, and other similar topics.

The instruction in industrial and applied chemistry is arranged with reference to the needs of this course, and attention is directed to the methods of conducting the mechanical operations in various manufacturing processes; and at the same time the chemical principles upon which the operations rest are thoroughly taught. (See pages 93, 94.)

The instruction in the fourth year has been so arranged that the student can exercise a certain choice as to the topics to which he wishes to devote special attention. Thus, he may receive instruction in textile coloring, in case he expects to find employment in the textile industries; in heat measurements, to fit him for operations involving the use of furnaces; in organic chemistry, if he intends to engage in the manufacture of dyes or other organic products; and in machine design or theoretical chemistry, as supplementing the general mechanical and chemical training of the course.

X. — CHEMICAL ENGINEERING.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.

Qualitative Analysis (lectures and laboratory)	300
Principles of Mechanism	510
Differential Calculus	33
Physics: Mechanics, Wave-motion, Electricity (lectures)	360
Descriptive Geometry	110
German (or French)	200 (190)

SECOND TERM.

Quantitative Analysis (lectures and laboratory)	305
Mechanism; Cotton Machinery; Machine-tools; Gear-teeth	517
Drawing	515
Integral Calculus	38
Physics: Electricity, Optics (lectures)	360
German (or French)	200 (190)

THIRD YEAR.

FIRST TERM.

Industrial Chemistry	312
Organic Chemistry (brief course)	302
Steam Engineering; Thermodynamics; Valve-gears	525
Drawing	526
Elements of Differential Equations	46
Industrial Electricity	379
Physics: Heat	370
Physical Laboratory	373
General Statics	71
German (or French)	201 (191)
English Literature	165
European History	221

SECOND TERM.

Industrial Chemistry	312
Industrial Chemical Laboratory	314
Steam Engineering: Boilers	525
Drawing	526
Engineering Laboratory	530
Physical Laboratory	373
Strength of Materials; Kinematics and Dynamics	75
German (or French)	201 (191)
English Literature and Composition	165

FOURTH YEAR.

FIRST TERM.

Applied Chemistry	339
Testing of Oils	336
Gas Analysis	340
Steam Engineering	540
Engineering Laboratory	545
Metallurgy	587, 589
Strength of Materials; Friction	86
Dynamics of Machines	543
Carpentry and Wood Turning	138
Political Economy	245

Options.

Textile Coloring	338
Heat Measurements	398
Organic Chemistry	332
Hydraulics and Hydraulic Measurements	471, 473
Machine Design	544

SECOND TERM.

Applied Chemistry: Memoirs	339
Technical Machinery	554
Engineering Laboratory	545
Strength and Stability of Structures; Theory of Elasticity	88
Forging and Metal Turning	143, 147
Political Economy and Industrial History	245
Business Law	275
Thesis.	

Options.

Organic Chemistry	332
Hydraulic Motors	490
Applied Chemistry (additional)	339
Theoretical Chemistry	295

XI.— SANITARY ENGINEERING.

The Course in Sanitary Engineering is essentially one in civil engineering, but is designed for students who wish to pay particular attention to those engineering branches which are concerned with problems of the public health, and who, therefore, desire to gain a better knowledge of the subjects of chemistry and biology, and of their relations to engineering problems, than can be obtained in the Course in Civil Engineering.

The line of study offered differs from the regular Course in Civil Engineering, page 35, in the following particulars.

There is a reduction in the time devoted to railroads and bridges, and an entire omission of the mechanical engineering subjects of mechanism and steam engineering, and of astronomy and historical geology.

The time thus gained is devoted principally to courses in chemistry and biology. In these it is designed to give the students such training as shall fit them to interpret properly the results of researches in sanitary chemistry and sanitary biology, and to coöperate with chemists and biologists in professional work. Practice is given in the chemical and biological laboratories, and the student is instructed in the methods of water and air analysis, and is taught to observe and identify the various animal and vegetable organisms present in natural waters and sewage. The course devotes particular attention to the sanitary side of questions of water supply and drainage, and discusses, among other things, the principles of filtration and the methods of purifying water and sewage, the relation between drinking waters and disease, the methods of disposing of sewage, and other questions relating to the health of communities. In the fourth year, courses of instruction are given also in heating and ventilation and in hydraulic machinery.

The entire instruction in sanitary and hydraulic engineering now given in the Course in Civil Engineering, a portion of which is there optional, is required in the Course in Sanitary Engineering. (See page 106.)

XI.—SANITARY ENGINEERING.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR

FIRST TERM.		SECOND TERM.	
Surveying and Plotting	440	Surveying and Plotting	440
Topographical Drawing	442	Qualitative Analysis (lectures and laboratory)	300
Organic Chemistry (brief course)	302	Biology, General	715
Differential Calculus	33	Dynamical Geology	665
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Integral Calculus	38
Descriptive Geometry	110	Physics: Electricity, Optics (lectures)	360
German (or French)	200 (190)	German (or French)	200 (190)
English Literature	165	English Literature and Composition	165
European History	221		

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Railroad Engineering; Field-work and Drawing	452, 453	Railroad & Highway Engineering: Field-work & Drawing	452, 453, 454
Stereotomy	455	Advanced Surveying	450
Advanced Surveying	450	Theory of Structures	460
Quantitative Analysis (lectures and laboratory)	305	General Bacteriology	729
Micro-Organisms	726	Physical Laboratory	373
Structural Geology	670	Strength of Materials: Kinematics and Dynamics; Theory of Elasticity	70
Physics: Heat	370	German (or French)	201 (191)
Physical Laboratory	373	Political Economy and Industrial History	245
General Statics; Stresses in Frames; Strength of Materials	70	Business Law	275
German (or French)	201 (191)		
Political Economy	245		

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Theory of Structures; Bridges and Similar Structures	474	Theory of Structures; Bridges and Similar Structures	474
Hydraulics	470	Hydraulic Engineering	491
Hydraulic Measurements	473	Hydraulic Machinery	495
Sanitary and Hydraulic Engineering	472	Sanitary and Hydraulic Design	494
Bridge Design	479	Municipal Sanitation	752
Water Analysis	334	Air Analysis	341
Bacteriology of Water and Sewage	749	Sanitary Science and Public Health	750
Chemistry of Water and Sewage	331	Microscopical Analysis of Water and Sewage	751
Metallurgy of Iron	587	Building Construction	649
Industrial Electricity	379	Engineering Laboratory	480
Heating and Ventilation	396	Thesis.	
Pipe-fitting	149		

XII.— GEOLOGY.

The Course in Geology aims to give a general education in natural science with special training in geological work and studies. The occupations which its students may naturally have in view include employment in responsible positions upon local, state, or national surveys, and practice as professional geologists in any of the economic or technical relations of the science, or in connection with collegiate or other institutions.

The demand for men who have united topographic with physiographic and geologic studies has been increased by the modern methods of conducting governmental and other surveys. That the students may be better prepared for such work, the amount of topographic, geodetic, and hydrographic surveying is larger than has been common in geological courses. The students are further qualified by the addition of physiographic geology and hydrography with field-practice, and by the construction of geologic maps and sections.

Option 1 provides a training for those who may wish to apply geological science in connection with the examination or the development of any of the various mineral resources of a country. To the studies of chemistry and assaying they may add mining and metallurgy if they so elect, while the schedule of the course provides for economic geology and the study of ore-deposits.

Option 2 of the course affords an opportunity for students to extend their studies in chemistry, to add comparative anatomy, and in the fourth year to work in experimental geology.

Option 3 gives a larger proportion of time to topographic and other surveying studies, and is offered for the benefit of those who desire to be prepared for work in physiographic geology.

It is recognized that some students, especially those who contemplate teaching, may for good reasons wish for a different selection of studies, for example, the substitution of natural history subjects for those in civil engineering. Applications for such substitution may be submitted to the Faculty. For details of instruction and equipment see pages 131 to 135.

XII.—GEOLOGY.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.

Physiography 660
Mineralogy and Blow-pipe Analysis 661, 662
General Biology 711
Physics: Mechanics, Wave-motion, Electricity (lectures) . . 360
German (or French) . . . 200 (190)
English Literature 165
European History 221

Options.

1, 2. Qualitative Analysis (lectures and laboratory) . 300
3. { Surveying and Plotting . . 440 / Topographical Drawing . . 442

SECOND TERM.

Structural and Chemical Geology 668
Geological Field-work and Laboratory 666
Dynamical Geology 665
Zoölogy and Botany . . . 716, 717
Physics: Electricity, Optics (lectures) 360
German (or French) . . . 200 (190)
English Literature and Composition 165

Options.

1, 2. Quantitative Analysis (lectures and laboratory) . 305
3. Surveying and Plotting . . 440

FIELD-WORK IN MINERALOGY (ELECTIVE).

THIRD YEAR.

FIRST TERM.

Historical Geology 669
Geological Maps and Sections . 671
Structural Palæontology . . . 672
Geological Field-work 673
Anthropology 722
Physics: Heat 370
Physical Laboratory 373
German (or French) . . . 201 (191)
Political Economy 245

Options

1. Quantitative Analysis (lectures and laboratory) . 319, 320
2. Comparative Anatomy . . 720
3. { Advanced Surveying . . . 450 / Experimental Geology . . 692

SECOND TERM.

Mineralogy 677
Stratigraphic Palæontology . . 680
Glacial Geology 679
Assaying 583
Physical Laboratory 373
German (or French) . . . 201 (191)
Political Economy and Industrial History 245
Business Law 275

Options.

1. { Quantitative Analysis (lectures and laboratory) . 319, 320 / Theoretical Chemistry . . 295
2. { Comparative Anatomy . . 720 / Freehand Drawing . . . 120
3. { Advanced Surveying . . . 450 / Applied Geology . . . . 681 / Freehand Drawing 120

SUMMER COURSE IN GEOLOGY AND TOPOGRAPHY.

FOURTH YEAR.

FIRST TERM.

Physiographic Geology 687
Ore-deposits 691
Micro-Lithology 690
Geological Field-work and Laboratory 686
Geological Memoirs 688
Climatology 685
Stratigraphic Correlation . . . 689

Options.

1. Mining Engineering and Metallurgy 581, 587, 589
2. Experimental Geology . . 692
3. { Mining Engineering . . . 581 / Hydraulic Measurements . 473

SECOND TERM.

Economic Geology 695
Micro-Lithology 690
Geological Field-work and Laboratory 686
Geological Memoirs 688
Hydrography 696
Thesis.

XIII.—NAVAL ARCHITECTURE.

The Course in Naval Architecture provides a thorough training in the theory and methods of designing and building ships, together with a study of the properties requisite for safety and steadiness at sea. It aims to furnish a well-rounded preparation, appropriate for those who expect to enter the regular work of the profession as ship-builders, ship-designers, ship-managers, or marine engine builders. Like all the courses at the Institute, it gives, in addition to a professional and technical training, a good scientific and liberal education.

In addition to the literary, mathematical, and general scientific studies requisite for a well-rounded education and for proper preparation for the special work of the course, thorough training is given in mechanism, thermodynamics, applied mechanics, hydraulics, steam engineering, and marine engineering. It is believed that the best coördination of the design of a steamship and its propelling machinery is attained by a naval constructor who is familiar with both branches of his profession.

In the third year of the course, lectures are given on the methods of building ships of wood and of steel, on the general properties of floating bodies, on statical and dynamical stability of ships, and on such special problems as launching and docking. In the fourth year the lectures treat of the strength of ships, resistance and propulsion, the rolling of ships, the theory of oscillating waves and of waves of translation, and the steering and manœuvring of ships; also of ventilation and drainage and of adjustment of compasses. The lectures are accompanied by two or three exercises a week in drawing, in which the students make the calculations and constructions described in the lectures, and thus gain a proper appreciation of the principles learned and facility in applying them.

The work in applied mechanics and steam engineering is accompanied by a full course in the laboratories of engineering and applied mechanics. Instruction is given in the mechanical laboratories, in forging, chipping and filing, and machine-tool work. (See also pages 111 to 116.)

XIII.—NAVAL ARCHITECTURE.

FIRST YEAR. SEE PAGE 33.

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Principles of Mechanism	510	Mechanism: Gear-teeth; Machine-tools	518
Drawing	512	Drawing	515
Forging	142	Forging, Chipping and Filing	142, 144
Differential Calculus	33	Integral Calculus	38
Physics: Mechanics, Wave-motion, Electricity (lectures)	360	Physics: Electricity, Optics (lectures)	360
Descriptive Geometry	110	German (or French)	200 (190)
German (or French)	200 (190)	English Literature and Composition	165
English Literature	165		
European History	221		

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Naval Architecture	570	Naval Architecture	570
Naval Architectural Drawing	571	Naval Architectural Drawing	571
Mechanism Design	526	Steam Engineering; Boilers	525
Steam Engineering; Valve-gears; Thermodynamics	525	Engineering Laboratory	530
Elements of Differential Equations	46	Physical Laboratory	373
Physics: Heat	370	Strength of Materials: Kinematics and Dynamics	75
Physical Laboratory	373	German (or French)	201 (191)
General Statics	71	Political Economy and Industrial History	245
German (or French)	201 (191)	Business Law	275
Political Economy	245		

FOURTH YEAR.

FIRST TERM.		SECOND TERM.	
Naval Architecture	572	Naval Architecture	572
Naval Architectural Drawing	573	Naval Architectural Drawing	573
Marine Engineering	551	Marine Engineering	551
Steam Engineering	540	Engineering Laboratory	545
Hydraulics	471	Strength and Stability of Structures; Theory of Elasticity	88
Engineering Laboratory	545	Machine-tool Work	146
Dynamics of Machines	542	Thesis.	
Strength of Materials; Friction	86		
Chipping and Filing; Machine-tool Work	144, 146		
Metallurgy of Iron	587		

XIII. A.—NAVAL ARCHITECTURE.—(*Continued.*)

The Massachusetts Institute of Technology has been selected by the United States Naval Department to give professional instruction to officers designated for the corps of naval constructors. For the satisfactory completion of this course the degree of Master of Science is given.

In arranging this course the objects sought are the addition to the training already obtained at the Naval Academy of those subjects which are peculiar to naval architecture, and such an extension and rounding out of that training as will best enable a naval constructor to meet the varied and exacting demands of his official position. The course includes all the lectures and drawing of the regular four-year course, and one additional year of advanced work, having special reference to the military requirements of naval vessels. Other subjects selected from the regular course are marine engineering, steam engineering, and applied mechanics. The course is broadened and strengthened by courses on sanitation, heating and ventilation, foundations, metallurgy, and metallography. A thorough course is given in electrical engineering, with adequate training in physical and electrical engineering laboratories. Lectures and laboratory work are given on paints, oils, and other organic materials used on ships. Lectures will be given from time to time by naval constructors and other eminent specialists on subjects pertaining to the practice of ship-building.

The first and second years of the following schedule of the Course for Naval Constructors correspond respectively to the third and fourth years of Course XIII.; the third year corresponds to graduate work in other departments, and leads to the degree of Master of Science.

XIII. A.—NAVAL ARCHITECTURE.—(*Continued.*)

COURSE FOR NAVAL CONSTRUCTORS.

FIRST YEAR.

FIRST TERM.		SECOND TERM.	
Naval Architecture	570	Naval Architecture	570
Naval Architectural Drawing	571	Naval Architectural Drawing	571
Mechanism	523	Advanced Calculus	50
Differential Equations	45	Strength of Materials: Kinematics and Dynamics	75
Least Squares	57	Organic Chemistry	315
Machine Drawing	524	Physical Measurements (lectures)	365
Qualitative Analysis (lectures and laboratory)	300	Physical Laboratory	373
Spanish	203	Theoretical Electricity	363
		Hydraulics	471
		Sanitation of Ships	728
		Spanish	203

SECOND YEAR.

FIRST TERM.		SECOND TERM.	
Naval Architecture	572	Naval Architecture	572
Naval Architectural Drawing	573	Naval Architectural Drawing	573
Steam Engineering	525	Steam Engineering	525
Drawing	531	Engineering Laboratory	530
Strength of Materials: Friction	86	Strength and Stability of Structures: Theory of Elasticity	88
Theoretical Electricity	377	Periodic Currents	381
Heating and Ventilation	396	Electrical Measuring Instruments	383
Spanish	207	Physical Laboratory	366
Chipping and Filing; Machine-tool Work	144, 146	Spanish	207
		Machine-tool Work	146

THIRD YEAR.

FIRST TERM.		SECOND TERM.	
Naval Architecture	575	Naval Architecture	575
Ship Design	576	Marine Engineering	551
Marine Engineering	551	Ship Design	576
Steam Engineering	540	Electrical Engineering	400
Dynamics of Machines	542	Electrical Engineering Laboratory	422
Engineering Laboratory	545	Foundations	555
Metallurgy of Iron	587	Engineering Laboratory	545
Metallography	590	Thesis.	
Theory of Structures	460		
Electrical Engineering	400		
Electrical Testing	405		
Electrical Measuring Instruments	406		
Periodic Currents	404		

Requirements for Graduation.

The degree of Bachelor of Science, in the course pursued, is given for the satisfactory completion of any of the regular courses of study.

To be entitled to a degree, the student must have attended the Institute for not less than one year next preceding his graduation, must have completed the prescribed studies and exercises of the four years, and must, in addition, pass final examinations, if required, on subjects relating particularly to his course. He must, moreover, prepare a dissertation on some subject included in his course of study; or an account of some research made by himself; or an original report upon some machine, work of engineering, industrial works, mine or mineral survey; or an original design accompanied by an explanatory memoir. This thesis or design must be approved by the Faculty. Theses are to be written on one side only of paper of good quality, 8 × 10½ inches in size, with an inch margin on the inner edge, and a half-inch margin on the outer edges. Theses must be handed to the Secretary of the Faculty, not later than the first annual examination.

An applicant for the degree of Bachelor of Science in two courses at the same time must have made application for such candidacy not later than November 1 next preceding his graduation. Such applications will be granted only in the case of students who have previously anticipated fourth-year subjects in one or both of the courses in question to such an extent that they have ample time for the work proposed.

For requirements for higher degrees, see pages 67 to 70.

No degree can be conferred until all dues to the Institute are discharged.

Students leaving the Institute of their own motion before graduation are entitled to receive a statement of attendance from the Secretary.

Graduate Courses.

MASTER OF SCIENCE.

The degree of Master of Science is awarded for proficiency in complete graduate courses of study of at least one year's duration. Except in cases of unusual attainment the applicant for the degree of Master of Science must have taken his first degree in science in some science school, college, or university of good standing; and his attainments must in general be equivalent to those required for the corresponding Bachelor's degree of the Institute. He must file with the Secretary, before being accepted as a candidate, a statement of his previous work and present attainments, and of the advanced work which he purposes to do at the Institute. The candidate, if a graduate of the Institute, may offer either more advanced work in his own department or undergraduate professional work of an allied department; but, in general, the subjects must not be all of the latter class, and the thesis must be of higher grade than is required for the Bachelor's degree. He must pursue his course of study continuously under the direction and oversight of the Faculty for at least one full school year after filing his application, exhibiting during that time ability to conduct original investigations, and passing creditable examinations at such times and on such subjects as may be designated, and must finally present an acceptable thesis.

In connection with such advanced courses of study, it should be remembered that the continually increasing specialization of the various engineering professions and the upward tendency of the standards of professional attainment render it difficult in a four-year course to give much more

than a thorough training in the student's chosen specialty. Hence it is frequently of great advantage to a graduate from one of the engineering courses to devote an additional year to the professional work of another closely related course, with or without reference to obtaining the Master's degree. For example, a student who has received a degree in Mechanical Engineering may, by devoting a year to the study of theoretical and practical electricity, complete the professional subjects of the Course in Electrical Engineering; a graduate in Chemical Engineering may do the same; or a graduate in Electrical Engineering or Chemical Engineering, by a year of additional study, may complete the professional work of Mechanical Engineering. The student who completes such a double course has obtained a broader scientific and professional education, is enabled to investigate a given problem on more than a single side, and is thus more efficient and independent in engineering practice.

A candidate for the Master's degree following a plan of this kind will not in general be required to complete all the prescribed studies of the second department; for example, a graduate in Electrical Engineering desiring to spend an additional year in the Department of Mechanical Engineering may be excused from a certain amount of mechanic arts and drawing.

Advanced courses in chosen lines of study, without reference to degrees, may be pursued by graduates of the Institute without preliminary examination, or by graduates of other institutions who satisfy the Faculty that they are qualified to take with advantage the courses proposed.

The following definite schedules of graduate courses have been adopted by the Faculty, but are presented as typical, and not as prescribed courses. Course XIII. A also leads to the Master's degree, as stated on page 64.

III. G.— MINING ENGINEERING AND METALLURGY.

GRADUATE COURSE.—(*Option 1*).

FIRST TERM.

Mechanism [1]	510
Steam Engineering	525
Drawing	512, 526
Electrical Measurements	421
Electrical Engineering (lectures)	407
Electrical Engineering (laboratory)	422
Option A.	
Surveying	450
Railroad Drawing and Field-work	452
Structures [2]	474
Ore-dressing (reading)	600
Option B.	
Electro-chemistry	411
Electro-chemical Laboratory	408
Metallography (lectures; laboratory)	601, 602
Heat Measurement (laboratory)	421

SECOND TERM.

Mechanism	518
Steam Engineering	525
Drawing	515, 526
Option A.	
Surveying	450
Railroad Drawing and Field-work	452
Structures	474
Ore-dressing Laboratory; Thesis	605
Option B.	
Electro-metallurgy	598
Metallurgical and Chemical Laboratory; Thesis	603
Gas Analysis	340
Distillation of Fuels	606
Forging	143

[1] Descriptive Geometry must have been completed.
[2] Structures (460) must have been completed.

V. G.— CHEMISTRY.

GRADUATE COURSE.

FIRST TERM.

Advanced Inorganic Chemistry	351
Advanced Theoretical Chemistry	350
Chemical Research.	
Option A.	
Electrical Engineering (lectures)	407
Electrical Engineering (laboratory)	422
Mechanism	510
General Statics [1]	71
Descriptive Geometry [2]	110
or { Steam Engineering [1 2]	525
or { Drawing [1 2]	526
Option B.	
Electro-chemistry (lectures)	411
Electro-chemistry (laboratory)	408
Kinetic Theory of Gases [1]	394
Differential Equations [1]	45
Least Squares [1]	57

SECOND TERM.

Advanced Inorganic Chemistry	351
Qualitative Analysis of Rare Metals	356
Chemical Research.	
Option A.	
Advanced Industrial Chemistry	355
Mechanism	517
Drawing	515
Strength of Materials [1]	75
Steam Engineering [1 2]	525
Drawing [1 2]	526
Engineering Laboratory [1 2]	530
Option B.	
Electricity	435
Polarized Light	425
Energetics [1]	393
Advanced Calculus [1]	50

[1] Differential Calculus (33) and Integral Calculus (38) must have been completed.
[2] Students are required to satisfy the instructor in charge of this subject as to their preparation in Descriptive Geometry (102).

Students who have not previously taken the subjects required as preparation are advised to prepare themselves in them during the summer preceding their graduate course.

VI. G.— ELECTRICAL ENGINEERING.

GRADUATE COURSE.

FIRST TERM.		SECOND TERM.	
Theoretical Electricity: Advanced Theory of Polyphase Transmission Lines	430	Theoretical Electricity: Advanced Theory of Polyphase Transmission Lines	430
Laboratory of Electrical Measurements: Advanced Work in Electrical Testing	431	Laboratory of Electrical Engineering: Advanced Polyphase Work	432
Laboratory of Electrical Engineering: Advanced Direct and Alternating Current Work . .	432	Design of Stations and Distribution Systems	433
Design of Stations and Distribution Systems	433	Specifications and Contracts . .	436
Advanced Dynamo Design . .	434	Machine Design	560
Heat Measurements	398	Fourier's Series	56
Strength of Materials	95	Thesis.	
Drawing and Machine Design .	560		
Electro-chemistry	411		
Fourier's Series	56		

DOCTOR OF PHILOSOPHY.

The degree of Doctor of Philosophy certifies to high attainment of a grade which qualifies the recipient as a scientific investigator and teacher.

The course of study leading to the degree of Doctor of Philosophy is mainly one of experiment and research, accompanied by such studies as may serve to promote a broad and thorough knowledge of the science which the student has chosen for his specialty. The candidate must pursue his studies and researches under the direction and oversight of the Faculty for at least two school years, furnishing from time to time such evidences of progress as the Faculty may require. His attendance must be continuous, except in cases of absence previously approved by the Faculty, for the purpose of conducting researches and investigations in the field.

He must present a thesis embracing the results of an extended original investigation, and must pass such examinations as the Faculty may require.

Summer Courses.

During the summer vacation, after the close of the school year, formal instruction in a considerable range of studies is given in the lecture-rooms and laboratories of the Institute by members of the instructing staff. The courses offered in the summer of 1901 included mechanical drawing and descriptive geometry; analytic geometry; shades and shadows; elementary design and stereotomy; analytical and organic chemistry; physics, including mechanics, light, electricity, heat and physical laboratory; surveying; mechanism and mechanical engineering drawing; mechanic arts; French and German; biology; and English composition. Applications for other (non-technical) courses will be entertained. The work offered is planned with particular reference to subsequent study at the Institute. Students taking these courses have an opportunity to anticipate portions of the work of the succeeding year, and thus to include a wider range of subjects, or to make greater advancement along a particular line. Again, students who through sickness or other cause have failed to complete the work of the previous year at the proper time are enabled to obtain clear records before the opening of the fall term. Finally, persons desiring to enter with advanced standing — in particular, college graduates — may make up, in the summer courses, deficiencies which might otherwise cause serious embarrassment in their choice of studies and arrangement of hours for the year.

A special circular giving full details in regard to dates and subjects will be sent on application after March 1.

Professional summer schools devoted mainly to field-work in mining engineering, surveying, geology, hydraulic engineering, and architecture have been for a long time maintained by the Institute with valuable results to the departments concerned. For further information regarding these schools see pages 108, 123, 127, and 135.

Requirements for Admission.

Applicants for admission to the Massachusetts Institute of Technology are, in general, required to pass entrance examinations. Application for exception will be entertained by the Faculty, however, in the case of persons who present satisfactory certificates of the College Examination Board of the Middle States and Maryland or of entrance examinations passed at another college. Such certificates must cover not less than three of the subjects required by the Institute. Persons who are past the usual age or who are engaged in teaching or technical pursuits, and applicants who for satisfactory reasons desire only special courses requiring no previous training — as, for example, mechanic arts and drawing — may be admitted also, at the discretion of the Faculty, without entrance examinations.

ADMISSION TO THE FIRST YEAR.

The student purposing to enter the Institute should bear in mind that the broader his intellectual training in any direction, and the more extensive his general acquirements, the greater will be the advantages he may expect to gain. The importance of thorough preparation in the subjects set for examination also is great; for the character and the amount of instruction given in the Institute from the outset leave little opportunity for one imperfectly fitted to make up deficiencies, and render it impossible for him to derive the full benefit from his course, or, perhaps, even to maintain his standing. The training given in the best high schools, manual training high schools and academies will, in general, afford suitable preparation.

The requirements of age and scholarship specified are regarded as a minimum in all ordinary cases, and only excep-

tional circumstances will justify any relaxation. Parents and guardians are advised that it is generally for the ultimate advantage of the student not to enter under the age of eighteen years, unless in the five-year courses.

Time of Examinations for Admission.— Examinations for admission to the first-year class are held on the first Thursday and Friday after June 24 in the Rogers Building, 491 Boylston Street, Boston. A second series of examinations for admission, and for applicants conditioned at the first examinations, is held on the first Tuesday and Wednesday after September 17. (See Calendar, page 2.) Attendance on both days, either in June or in September, is required.

Students are advised to attend the June entrance examinations, if practicable, in order that any deficiencies then existing may be made up before entrance.

Applicants who intend to take their entrance examinations in September are requested to notify the Secretary of such intention not later than September 10.

Applications for admission at other times will be received only when some good cause, such as illness, has prevented attendance on the days prescribed. A fee of five dollars, payable to the Bursar, may be charged for special examinations, if required in such cases.

Order of Examinations.— The order of examinations for June, 1902, will be as follows: —

JUNE 26, 1902.

8.45 A.M. to 9.00 A.M. . . .	*Registration of Applicants.*
9.00 A.M. to 11.00 A.M. . . .	Solid Geometry.
11.15 A.M. to 1.00 P.M. . . .	English.
2.00 P.M. to 3.30 P.M. . . .	History.

JUNE 27, 1902.

9.00 A.M. to 11.00 A.M. . . .	Algebra.
11.15 A.M. to 1.00 P.M. . . .	Plane Geometry.
2.00 P.M. to 4.00 P.M. . . .	French or German.

JUNE 28, 1902.

9.00 A.M. to 11.00 A.M. . . .	French or German for advanced standing.

A programme of September examinations will be mailed on application after June 1.

Place of Examinations. — Entrance examinations are held *in June only* in New York, Philadelphia, Chicago, and other important cities of the United States, as well as in London, England. A circular giving times and places is issued in April, and will be mailed on application.

Candidates who intend to be examined in any place other than Boston are requested to send their names to the Secretary in time for him to receive them by June 15. A fee of five dollars is to be paid in advance by every candidate who is examined at any place other than Boston. The whole fee of a candidate who purposes to divide his examination between two years is payable in the year when he begins his examination, but an applicant not accepted at his preliminary examinations is required to pay a second fee if he repeats them. The fee should be sent by check, postal order, or registered letter to Albert M. Knight, Bursar, when the candidate sends his name to the Secretary.

Certificates. — The Institute accepts no certificates of preparatory schools in place of entrance examinations. The value of the opinion of previous teachers is, however, fully recognized, and great weight will be attached to statements from them. It is accordingly requested that every applicant present from the principal of the school last attended a statement of the duration and extent of his work there. For statements in regard to elective certificates see page 80. For the required certificates for preliminary applicants see page 84.

Conditions. — A candidate failing in only one or two of the examination subjects may be admitted with "conditions." Conditions incurred in June must be made up in September; those incurred in September must be made up in January.

SUBJECTS FOR EXAMINATION.

To be admitted as a regular student in the first-year class, the applicant must have attained the age of seventeen years, and must have passed satisfactory examinations in the following subjects: —

Algebra.	**French I. or German I.**
Plane Geometry.	**English.**
Solid Geometry.	**History.**

He must also present satisfactory evidence of preparation in **one** of the following **Electives**: —

French or German (additional).	**Physics.**
Latin.	**Chemistry.**
English (additional).	**Mechanical Drawing** and **Mechanic Arts.**
History (additional).	

Applicants for admission in 1903 and thereafter will be required to present both French and German. Any who cannot meet this requirement, but are otherwise fully prepared, are invited to correspond with the Secretary.

The detailed requirements in the various subjects are as follows: —

Algebra.— Definitions; fundamental operations; use of parentheses; factoring; highest common factor; lowest common multiple; fractions, simple and complex; simple equations, with one or more unknown quantities; involution of monomials and polynomials; evolution of monomials and polynomials and the square root of numbers; the theory of exponents, with applications; radicals, including rationalization, imaginary quantities, properties of quadratic surds, square root of a binomial surd, and solution of equations containing radicals; quadratic equations; equations in the quadratic form; simultaneous quadratic equations; ratio and proportion; arithmetical progression; geometrical progres-

sion. A satisfactory treatment of the topics in algebra may be found in any of the following text-books: Wells's Essentials of Algebra, Wentworth's School Algebra, or Bradbury and Emery's Academic Algebra.

Plane Geometry. — As much as is contained in the first five books of Wells's Essentials of Geometry, of Chauvenet's or of Wentworth's Geometry. Much importance will be attached to the applicant's ability to demonstrate original exercises.

Solid Geometry. — The usual theorems contained in text-books on solid geometry, with the exception of theorems relating to similar polyedrons and regular polyedrons; the application of the above to numerical examples in mensuration as follows: lateral areas and volumes of regular prisms; surfaces and volumes of rectangular parallelopipeds; lateral edges, lateral areas, and volumes of regular pyramids, and of frustums of regular pyramids; volumes of truncated triangular prisms; areas of spherical polygons; volumes of spherical pyramids; lateral areas, total areas, and volumes of cylinders, cones, and frustums of cones; areas of zones; volumes of spherical sectors; areas and volumes of spheres; volumes of spherical segments. The applicant should also be able to solve original exercises of moderate difficulty.

Importance will be attached to accuracy in the numerical work of the papers in algebra and geometry. Familiarity with the Metric System is essential.

The attention of teachers and applicants is particularly called to the necessity of thorough preparation in mathematics, not merely as to the extent and amount of work done, but as to its quality. Candidates should be thoroughly grounded in fundamental principles, operations, and definitions, and should be carefully guarded against the tendency to become mechanical in their algebraic work from giving disproportionate attention to mere dexterity in the solution of problems.

French I. — 1. Proficiency in elementary grammar, to be tested by translation of easy English into French, or by

direct questioning on the following topics: inflection of nouns and adjectives for gender and number, excepting unusual cases; "pronominal adjectives"; the forms and positions of pronouns, especially the personals; the partitive constructions; the inflection of the regular and of the more usual irregular verbs, such as *aller*, *dire*, *faire*, and of the classes represented by *ouvrir*, *sentir*, *venir*, *paraître*, *conduire*, and *craindre*.

2. Ability to translate simple prose at sight, to be acquired by the reading of not less than two hundred and fifty duodecimo pages from at least two works of dissimilar character. (See remark for teachers on page 80.)

The above requirement corresponds with the course in French taken in the second year by students who have passed German I. at entrance.

German I.— 1. Proficiency, to be tested as for French, in the following topics of elementary grammar: declension of readily classified nouns, of adjectives, and of pronouns; conjugation of the weak and of the more usual strong verbs; simple cases of word-order.

2. Ability to translate simple prose, to be acquired by the reading of not less than two hundred duodecimo pages from at least two works of dissimilar character. A portion of this should be selected with a view to imparting some knowledge of a scientific vocabulary. (See remark for teachers on page 80.)

The above requirement corresponds with the course in German taken in the second year by students who have passed French I. at entrance.

NOTE. — It is highly desirable that students should be trained early in the correct pronunciation of modern languages, and that teachers in preparatory schools should give this important subject all due attention.

Candidates prepared to pass both French I. and German I. at the entrance examination will find it advantageous for their subsequent work at the Institute to do so. Provision will be made in June as well as in September for applicants prepared

to pass examinations for advanced standing in French and German.

English.[1] — The examination in English is based on the requirements adopted by the Commission of Colleges in New England.

1. The candidate will be required to write upon subjects familiar to him. His composition should be correct in spelling, punctuation, grammar, idiom, and division into paragraphs, and should be plain and natural in style. He will be judged by how well he writes rather than by how much he writes.

2. The candidate is required to have some acquaintance with good literature. The following works will serve as a basis both for the examination in this and for the test in the writing of English. With these books the applicant must be familiar.[2] They are, however, divided into two classes. Those marked (*a*) are to be read, and the candidate will be required to show a general knowledge of their subject-matter and of the lives of the authors. Those marked (*b*) are to be thoroughly studied, so that the candidate shall be able to pass an examination upon their subject-matter and structure.

For 1902: (*a*) Shakespeare's The Merchant of Venice; Pope's Iliad, Books I., VI., XXII., and XXIV.; the Sir Roger de Coverley Papers in The Spectator; Goldsmith's The Vicar of Wakefield; Coleridge's The Ancient Mariner; Scott's Ivanhoe; Cooper's The Last of the Mohicans; Tennyson's The Princess; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

(*b*) Shakespeare's Macbeth; Milton's Lycidas, Comus, L' Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

For 1903, 1904, 1905: (*a*) Shakespeare's The Merchant of Venice and Julius Cæsar; the Sir Roger de Coverley

[1] For alternative requirement in English see page 79.

[2] These books may all be had in an inexpensive form. A list of publishers and prices will be sent upon application to the Secretary of the Institute.

Papers in The Spectator; Goldsmith's The Vicar of Wakefield; Coleridge's The Ancient Mariner; Scott's Ivanhoe; Tennyson's The Princess; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner; Carlyle's Essay on Burns.

(*b*) Shakespeare's Macbeth; Milton's Lycidas, Comus, L' Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

As an alternative in English there may be offered any systematic course in combined rhetoric and literature which in amount is practically equivalent to the requirement specified. Such an alternative, however, will be accepted only upon special application in each case not less than two weeks prior to the examination.

NOTE.— The standing in English may be determined not solely by the rank attained in the examination in that subject; but, in addition to this, it is expected that the paper in history and the translations from French and German be written in correct and expressive English.

History.— Preparation in either United States history or ancient history may be offered. In the former subject a thorough acquaintance with the history of the Thirteen Colonies and of the United States down to the present time is required. In the latter subject the requirement covers the history of Greece and Rome down to the fall of the Roman Empire in the West.

For United States history, either (1) Johnston's High School History of the United States or (2) McLaughlin's History of the American Nation will suggest a satisfactory amount of preparation; for ancient history, either (1) Botsford's History of Greece and Allen's History of the Roman People or (2) Myers's Ancient History may serve to indicate the ground covered by the examination.

It is not enough for the candidate merely to know the facts of history: he must show an understanding of the meaning of the facts, and some knowledge of the relation of cause and effect in historical events.

Candidates expecting to take the Course in Architecture

are advised, should it be equally convenient, to prepare in ancient history.

ELECTIVE SUBJECTS.

The object of the elective requirements is to secure greater breadth of preparatory training.

These requirements are to be met by the presentation of certificates made out on forms supplied by the Institute; but an applicant passing an examination for advanced standing in any subject included in the list of electives need not present a certificate.

Examinations are in general required in the case of applicants desiring excuse from work in the Institute on the ground of electives offered at entrance. The subjects in which such excuse may be granted are French, German, drawing, and mechanic arts. Applicants offering chemistry may take a course more advanced than otherwise during their first year. Further information in regard to substitutes for work thus anticipated may be found in the special circular on Alternative Studies, which will be mailed on application to the Secretary of the Institute.

Elective French and German.[1]— An applicant taking the examination in French I. may offer: (*a*) Additional French: translation from English into French; review of grammar, with special reference to the syntax of verbs (modes and tenses); additional and more varied reading; or (*b*) German I. (see page 77).

An applicant taking the examination in German I. may offer: (*a*) Additional German: translation from English into German; review of grammar; additional and more varied reading; or (*b*) French I. (see page 76).

The elementary and additional reading in French and German may be selected from the list of works read in the Institute classes, but no requirement of particular text-books is intended. Lists may be obtained on application to the Secretary of the Faculty. Preparation in the elementary require-

[1] In addition to the uniform requirements stated on pages 76, 77.

ments of both languages is advised rather than in the more advanced work in one.

Elective Latin. — Satisfactory evidence should be presented that the applicant has acquired the elements of Latin grammar and that he has read four books of Cæsar or an equivalent.

The study of Latin is strongly recommended to persons who purpose to enter the Institute, since in addition to its disciplinary value it gives a better understanding of the various terms used in science, and greatly facilitates the acquisition of the modern languages.

Elective English and History.[1] — The work of secondary schools differs so much in these branches that no definite requirement is formulated at present. Any applicant who has carried work in English or history materially beyond the requirement stated on pages 78 and 79 may present for approval as his elective a statement of the amount and kind of work done. Such a course can be considered, however, only when the amount of work done in excess of the ordinary requirement has been in time equivalent to the requirement in Latin.

Elective Physics. — Applicants may come prepared in either class-room or laboratory work in physics. Only the latter will be accepted after 1902.

It is important that the student should have learned the fundamental facts of physics. A knowledge of hypotheses is not material at this stage of his training. If his preparation has been solely in the class-room, he should have completed some one of the text-books in physics ordinarily used in high-school instruction of this kind. If laboratory work is presented, the course should be substantially equivalent to that laid out in such manuals as Hall and Bergen's Text-book of Physics or Chute's Physical Laboratory Manual. In this case the applicant will be expected to present his original notes for examination. It is desired that the teacher's approval be shown for each experiment.

[1] In addition to the uniform requirements stated on page 78, 79.

Elective Chemistry.— Applicants must present evidence of familiarity with the rudiments of chemistry. More importance is attached to experience in laboratory practice which has made the student apt in manipulation and in critical observation, and to a practical knowledge of the composition, methods of preparation, and reactions of the common chemical substances, than to a knowledge of theoretical conceptions, such as the determination of atomic and molecular weights, molecular structure, valence, etc.

The subject should be attempted only in schools having adequate equipment; and the laboratory work should be carried out with great care and attention, on the part of the teacher, to manipulation and note-writing, special emphasis being laid upon exhaustive observation and correct inference.

The applicant should present for examination his original, uncopied notes, with any annotations which may have been made by the instructor.

Applicants who satisfy the Chemical Department as to their proficiency in general chemistry and elementary qualitative analysis may substitute more advanced work for the chemistry of the first year. The examination will include both written questions and laboratory work; and in the laboratory examination special attention will be given to delicacy of manipulation and consequent accuracy, as well as to an intelligent understanding of the subject on the part of the applicant.

Elective Mechanical Drawing and Mechanic Arts.— The applicant must be familiar with the projections of points, lines, planes, and simple solids. Special attention is called to the importance of neatness and accuracy in making the drawings, and considerable practice in securing these qualities is advised. Plates should be presented, showing the ground covered. (Faunce's Mechanical Drawing, chapters 1 to 4, represents the requirement.)

In **Mechanic Arts** the applicant should be thoroughly familiar with the different tools and materials, and know when and

how to use them. He should be able to adjust and to sharpen all edge-tools, and capable of executing work from "working drawings." The main object of preparatory exercises should not be construction simply, but rather systematic instruction in the correct use of various tools.

Carpentry: The exercises should include systematic instruction in sawing; planing; chiselling, including chamfering, grooving, and plain moulding work; framing, including tenoning, mortising, and fitting in braces; use of the ordinary moulding-planes and the making of simple mouldings; the making and use of the mitre-box in fitting mouldings; nailing; dovetailing; gluing, and the proper use of sand-paper.

At least seventy-five hours should be allowed, exclusive of any time that may be used in making working drawings.

Wood-turning: The applicant should have had systematic instruction and experience in the use of the wood-lathe; should understand the adjustment of speeds for the work in hand, and how to use properly the turning tools, such as gouges, turning chisels, nosing tools, right and left side tools, parting tool, calipers, and dividers. The exercises should also include systematic instruction in center and chuck turning, particular attention being paid to the production of smooth work by the cutting action of the tools, and not by the excessive use of sand-paper.

At least forty-five hours should be allowed, exclusive of any time that may be used in making drawings.

DIVISION OF ENTRANCE EXAMINATIONS.

Candidates for admission are allowed, at their option, to divide their entrance examinations into "preliminary" and "final," to be taken in two successive years. The preliminary examination may be taken *only in June;* the final, in either June or September of the *following* year, at the dates named on page 2. To be admitted to the preliminary examination, the candidate must be at least sixteen years of age.

For the preliminary examination the candidate will be

allowed the choice of any of the following five subjects, but he will not be entitled to credit for any unless he presents a certificate from his teacher stating that he is qualified in the subjects in which he has been examined, and unless he passes at least three of the five (or two in addition to the elective). At the final examination those subjects not passed at the preliminary must be taken, as well as the solid geometry.

Algebra. Plane Geometry. French (or German). English. History.

Solid geometry may be taken by a preliminary applicant, but he will be required before entrance to present evidence that he has continued mathematical study during the intervening year.

Details of the above requirements are given on pages 75 to 79.

No provision is made for the division of entrance examinations between June and September of the same year, and the effect of omitting examinations in June is the same as that of failure in them.

ADMISSION TO ADVANCED STANDING.

To be admitted as a regular student in the second, third, or fourth year, the applicant must have attained the age of eighteen, nineteen, or twenty years, respectively, and must in general pass satisfactorily the examination for admission to the first-year class, and examinations on all subjects given in the earlier years of the course which he desires to enter. The examinations for advanced standing are held at the time stated on page 2. (See pages 75 to 83 and pages 32 to 63.)

Graduates of colleges are admitted to the Institute without the usual entrance examination, and will be permitted to enter any of the courses at such a point as their previous range of studies will allow. If prepared to enter upon most of the studies of a certain year, they may be afforded opportunity to make up any studies of the earlier years in which they are deficient. They will, in general, be credited with all subjects

in earlier or later years in which they can show, by examination or otherwise, a standing satisfactory to the Faculty, and may be received provisionally as regular students. The attention of such applicants is particularly called to the schedules of courses on pages 32 to 63, and to the Schedule of Topics of the Catalogue. It is highly desirable that students contemplating professional courses after graduation from college should arrange their college electives to cover the earlier subjects of the courses chosen, in order that the number of deficiencies to be made up may be as small as possible. Such students are advised to communicate with the Secretary of the Faculty, from whom detailed information may be obtained as to the requirements for entering a particular year of any course. In order to enter any of the engineering courses in the second year, it is essential for applicants to have preparation in analytic geometry. For admission to third-year engineering work, they must be prepared in mathematics through the calculus. It is important that students applying for advanced standing in these courses shall have had considerable practice in mechanical drawing and be familiar with the elements, at least, of descriptive geometry. Summer courses of appropriate scope are offered in these subjects. (See page 71.) Applicants desiring excuse from mechanical or freehand drawing should present their plates. A special circular in regard to Opportunities for College Graduates will be mailed on application.

ADMISSION OF SPECIAL STUDENTS.

To be admitted to one or more selected subjects in any of the regular courses,— that is, to a partial or special course,— the applicant must have attained the age of seventeen years, and must give satisfactory evidence, by examination or otherwise, that he is qualified to pursue to advantage the subjects chosen.

By means of the Schedule of Topics of the Catalogue the applicant may ascertain what the various subjects of study

are, how, when, and by whom they are given, in what regular courses they are included, and the preparation required for each; but admission to special courses is dependent in all cases upon the approval of the Faculty. In general, no student will be allowed to take any one of these subjects until he has proved his satisfactory knowledge of all subjects required as preparation for it.

For requirements regarding special students in architecture, see page 42. All special students desiring to take chemistry of the first year must pass the full entrance examinations, except that an equivalent in some other subject may be substituted for geometry.

To Teachers and to Persons of Mature Age engaged in Technical Pursuits, and wishing to devote some time to scientific study, the Institute desires to offer the amplest opportunities in its lecture-rooms and laboratories. Such persons may in general be admitted without formal examination, on satisfying the Faculty that they are qualified to undertake the work proposed. They will be expected after admission to attend the same exercises and examinations as other students.

The attention of teachers is called to the opportunities which are offered at the Institute for afternoon and Saturday laboratory work. The Faculty will take every occasion consistent with the general conduct of the school to arrange for such special students courses which shall suit their individual needs, both as to days and hours and as to the nature of the work to be done. Persons having but a few hours a week at their disposal can find opportunities at the Institute to extend and perfect their knowledge, especially in the Departments of Chemistry, Physics, Biology, Geology, Drawing, and Mathematics.

A special circular in regard to Opportunities for Teachers will be mailed on application to the Secretary of the Faculty.

Subjects and Methods of Instruction.

INSTRUCTION is given by lectures and recitations, and by practical exercises in the field, the laboratories, and the drawing-rooms. A high value is set upon the educational effect of these exercises, and they form the foundation of each of the thirteen courses. Text-books are used in many subjects, but not in all. In many branches the instruction given differs widely from available text-books; and, in such cases, notes on the lectures and laboratory work have been printed, either privately or by the Institute, and are furnished to the students at cost. Besides oral examinations in connection with the ordinary exercises, written examinations are held from time to time. Near the close of the months of January and May general examinations are held. After the examinations the standing of the student in each distinct subject is reported to his parent or guardian. Reports of standing are based to a very large extent upon the quality of daily class-work. The January and May reports form the basis of admonition or advice from the Faculty in the case of students who are not profiting sufficiently by their connection with the school.

Mathematics.— Great importance is attached to the study of mathematics, both as a means of mental discipline and as a necessary basis for further instruction in the engineering and other courses.

The three topics following are taken by all regular students: advanced algebra; plane trigonometry; and plane and

solid analytic geometry,[1] including the equations and properties of the point, right line, and circle; of the parabola, ellipse, and hyperbola; and of the plane, sphere, cylinder, cone, paraboloids, ellipsoids, and hyperboloids.

Students in all the engineering courses receive instruction also in the elements of the theory of equations; and in the differential and integral calculus, including the following topics: the expansion of functions; the evaluation of indeterminate forms; maxima and minima; the general properties of plane curves; and the application of both single and double integration to the rectification and quadrature of curves, and to the determination of volumes and moments of inertia.

In addition to the above, the following topics are given in some courses: spherical trigonometry; differential equations, with applications to problems in geometry, mechanics, and physics; the theory of probability and method of least squares, including the adjustment of observations and precision of measurements; and Fourier's series, spherical harmonics, and Bessel's functions, with a study of their properties and their application to the solution of such problems in physics as can be expressed by certain partial differential equations.

As elective work, opportunities are afforded for the study of higher algebra and trigonometry, including De Moivre's theorem and its applications; the general theory of equations, with the solution of higher equations by methods of approximation; determinants; the theory of surfaces; an advanced course in the calculus, including the theory of definite integrals; quaternions, being an introduction to the fundamental principles of vector addition, subtraction, division, and multiplication, and their application to problems of plane and solid geometry;[2] and the general theory of functions.

The Runkle Mathematical Library contains a carefully

[1] A shorter course in plane analytic geometry is given to students in certain non-mathematical courses.

[2] Upon application a second course treating the surfaces of the second degree by quaternion methods may be given.

selected collection of works in all branches of mathematics, and new publications of value are added as soon as issued. In addition, the more important journals devoted to the subject of mathematics are regularly received.

The department is also in possession of an extensive collection of models, which are of special interest and value in connection with the courses on analytic geometry of three dimensions, the theory of surfaces, and the theory of functions.

Theoretical and Applied Mechanics.— In applied mechanics the subjects first treated are the composition and resolution of forces, the general laws of kinematics and dynamics mathematically discussed, the principles governing the determination of the stresses in the different members of trusses, center of gravity, moment of inertia, and the ordinary principles of the strength of materials.

The more advanced instruction in this subject aims to familiarize the students with such data on the strength of materials used in construction as have been obtained by means of experiments, especially those made on a practical scale, in different parts of the world. Pains is taken to keep this work well up to date. This is followed in particular courses by the study of friction and lubrication, of continuous girders, of stone and iron arches, and of the theory of elasticity. Besides the above, the students have made during the school year 1900–1901 the following tests in the laboratory:[1]

A test to determine the modulus of elasticity, the limit of elasticity, and tensile strength of a cast-iron, a wrought-iron, or a steel rod or bar.

A test of the deflections and of the transverse strength of a full-size iron or steel I-beam, or of a wooden beam subjected to a transverse load.

A test to determine the modulus of elasticity and the tensile strength of annealed or bright iron wire.

A test to determine the shearing modulus of elasticity and torsional strength of 2-inch iron or steel bars.

[1] See page 116.

Tests of the tensile strength of hydraulic cement.

Tests of the compressive strength of hydraulic cement.

Tests of tensile strength of compositions.

Torsional tests of iron and of steel rods less than ½ inch in diameter.

Tests of the strength of different kinds and sizes of ropes and of different knots used in fastening ropes.

Tests to determine the ratio of the modulus of rupture to the tensile strength in bars of Bessemer steel of different sections.

Crushing strength of building bricks.

Crushing strength of wrought-iron and of steel pipe columns.

The instruction in analytical mechanics includes an advanced mathematical treatment of analytical statics, the dynamics of a particle, the dynamics of rigid bodies, etc., and requires acquaintance with considerable pure mathematics beyond the general courses in calculus.

Drawing and Descriptive Geometry. — Instruction is given to all regular students in the principles of geometrical, mechanical, and freehand drawing; and a large amount of time is devoted to practice in the drawing-room, to enable the student to acquire the skill necessary for his future work. Drawing is continued also in connection with professional studies.

All engineering students learn the elements of descriptive geometry in connection with their mechanical drawing, the exercises including recitations by small sections. The later exercises in descriptive geometry are of two kinds: in the lecture-room instruction is given by means of models and diagrams, and also by the use of text-books; in the drawing-room the student is drilled in the solution of problems designed to illustrate the work of the class-room, and to make him thoroughly familiar with the subject.

The instruction in freehand drawing includes an elementary course in lettering and object-drawing, taken by all regular students, and more advanced work in the Departments of Architecture and Geology. For students in architecture, the course includes the study of ornament and the human figure from the cast and from life. Studies in charcoal are

usually required, and opportunity is afforded for those who have made satisfactory progress to sketch in pencil, pen-and-ink, and with the brush. Importance is attached to drawing from memory and to rapidity of execution. For students in geology, freehand drawing is taught with special reference to the representation of physical features and structure in field-work, and to the description of the specimens collected.

Besides the large and well-equipped freehand-drawing rooms of the Institute, the Museum of Fine Arts offers excellent opportunities for drawing from the cast, and regular exercises for advanced students are held in its galleries.

Mechanic Arts.— Practical instruction in the nature of the materials of construction, and in the typical operations involved in the arts, is considered a very valuable adjunct to the theoretical treatment of professional subjects. Mechanical laboratories have been provided, with the more important hand and machine tools, so that the student may acquire a direct knowledge of the nature of metals and woods, some manual skill in the use of tools, and a thorough knowledge of what can be accomplished with them. The laboratories are located on Garrison Street, and are equipped as described below.

The carpentry, wood-turning, and pattern-making departments contain forty carpenter's benches, two circular-saw benches, a swing-saw, two jig-saws, a buzz-planer, thirty-six wood-lathes, a large pattern-maker's lathe, and thirty-six pattern-maker's benches. The foundry contains a cupola furnace for melting iron, two brass furnaces, a core oven, and thirty-two moulder's benches. The forging department contains a power-hammer, thirty-two forges, seven blacksmith's vises, one blacksmith's hand-drill, and a power-shear. The machine department contains twenty-three engine-lathes and seventeen hand-lathes of approved patterns, a twenty-four-inch turret-lathe, two machine-drills, three planers, a shaping-machine, two universal milling-machines furnished with spiral

and gear-cutting attachments, a universal grinding-machine, a cutter and reamer grinder, thirty-two vise benches arranged for instruction in vise-work, a twenty-four-inch standard measuring-machine, special apparatus for hardening and tempering, and a fully equipped tool-room.

Chemistry. — All regular students attend a course of sixty lectures on inorganic chemistry, illustrated by experiments, and also perform experimental work in the chemical laboratory. The lectures are intended to prepare the student for his work in the laboratory, and to emphasize and coördinate the facts which he there learns. In the laboratory the student receives instruction in chemical manipulation, and performs a series of experiments designed to illustrate the properties of the more important elements and compounds and the laws of chemical action. In connection with the lectures on inorganic chemistry, the elements of qualitative analysis and of theoretical chemistry are taught, and the student is given practice in the solution of chemical problems. The study of theoretical chemistry is continued in the chemical and other related courses by more advanced lectures and recitations, in which are presented the general laws and theories relating to the constitution of chemical compounds and their transformations. A laboratory course in molecular weight determinations and one in physico-chemical measurements also form a part of the instruction in theoretical chemistry.

Instruction in analytical chemistry extends through two or three years of the chemical or other allied courses. Each student is assigned a desk in the laboratory for his sole use, and is allowed to supplement the regular work of his course by additional practice, so far as he may desire. General directions relating to the laboratory practice are given in the lecture-room, and these are supplemented by personal instruction at the student's desk. The assignment of work is made with due regard to the course which the student is pursuing, and is designed to combine skill in manipulation and a reason-

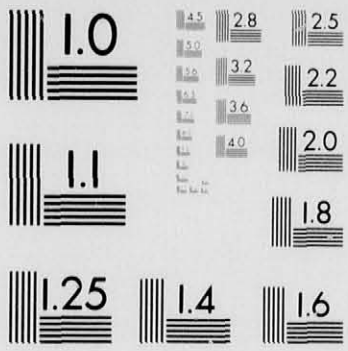
able breadth of knowledge of special methods with such general training as shall enable him to deal with technical problems intelligently and successfully. Special attention is given to instruction in volumetric analysis, including the graduation and calibration of measuring instruments.

In addition to the lectures upon methods of analysis and manipulation, the current chemical literature in English, French, and German is reviewed by the students, and subsequently discussed in the class-room under the direction of an instructor.

The facilities for gas analysis have recently been increased by the enlargement of the rooms devoted to this work and by the addition of much new apparatus. New laboratories have also been equipped for the chemical and physical testing of oils and for the optical and chemical examination of sugars, starches, etc. The carefully arranged course of instruction in each of these subjects is designed to familiarize the student with the best methods of analysis and to enable him to interpret intelligently the results of these analyses in their technical bearings.

The instruction in water, air, and food analysis consists mainly of laboratory work, supplemented by occasional lectures, and special laboratories have been equipped for the purpose. The scheme of work includes practice in the methods commonly used in the chemical examination of air and water, of milk, and of butter. For those who wish to extend the course, opportunity is afforded for the critical study of methods of analysis and for the investigation of a variety of sanitary problems in which chemical questions are involved.

Industrial chemistry is taught by a course of lectures and recitations, and by work in the laboratory of industrial chemistry. A full description of the operations and machinery employed in general manufacturing chemistry precedes an extended course of lectures upon the more important technical processes. Some of these lectures are delivered by per-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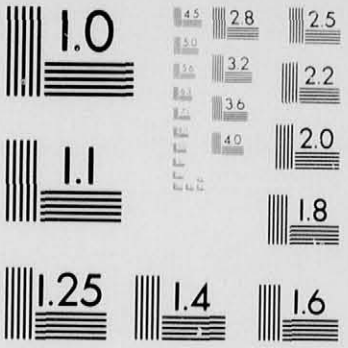
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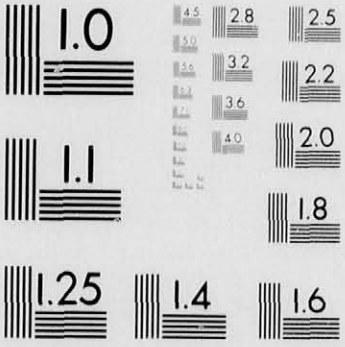
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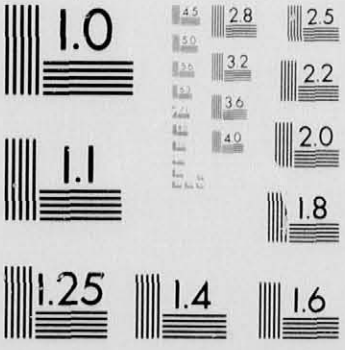
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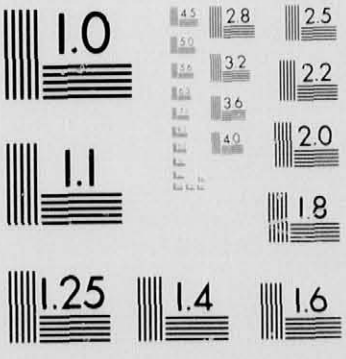
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sons who are actively employed in carrying out the processes which they describe, or are recognized as authorities upon the special subjects which they treat. During the past year such instruction has been given by the persons named below.

Mr. John Alden, chemist of the Pacific Mills, upon Textile Printing; Dr. Henry Carmichael, consulting chemist, upon Electrolysis; Mr. Charles D. Jenkins, State Inspector of Gas and Gas Meters, upon the Manufacture of Illuminating Gas; Mr. Arthur D. Little, consulting chemist, upon the Manufacture of Paper; Mr. James W. Loveland, superintendent with Curtis Davis & Co., upon the Manufacture of Soap and Glycerine; Mr. S. W. Wilder, Jr., General Manager of the Merrimac Chemical Company, upon Alumina and Alumina Compounds; Mr. W. E. Piper, assistant superintendent with Boston Rubber Shoe Company, upon Rubber.

In the industrial laboratory the students prepare chemical products from raw materials, and also undertake the preparation of pure chemicals upon a semi-industrial scale. In this connection the attention of the student is carefully directed to importance of economy of time, labor, and material. The processes of distillation and fractionation are taught, with their applications, and particular attention is paid to the preparation of dyes and mordants. The laboratory instruction in industrial chemistry is supplemented by frequent excursions to manufacturing establishments, where the practical working of chemical industries can be examined.

The course of instruction in dyeing and coloring, for which a special laboratory with complete equipment for experimental work is provided, includes the bleaching and dyeing of silk, cotton, and wool, the last both in piece and in yarn. The students are made acquainted with the use of mordants, and the common operations of the dyehouse, and are also taught the principles involved in cotton-printing and color-mixing, as well as the methods employed to distinguish and identify the dyestuffs when present upon fibres.

The instruction in applied chemistry includes the use of text- and reference-books, in both French and German, whereby the student gains command of a vocabulary of technical terms which enables him to consult literature in these languages relating to patents, or other kindred subjects.

There are two courses in organic chemistry,— an elementary course of fifteen lectures given in the third year, preparatory to an extended one of ninety lectures in the fourth year. This later course treats of the properties, composition, and mode of formation of the more important organic compounds, and also of the modern theories of chemical composition and structure. It is fully illustrated in the lecture-room by experiments.

The laboratory work in organic chemistry comprises practice in the methods of ultimate analysis, exercises in the preparation of a variety of typical organic substances, and a series of experiments illustrating the characteristic reactions of the different classes of substances and their identification and separation. In connection with their laboratory work students are required to consult original articles bearing upon the subjects they are studying, and thus to acquire familiarity with chemical literature. Ample opportunities are afforded for the prosecution of original investigations in both pure and applied chemistry.

The instruction in chemistry is designed primarily for those who are candidates for the several degrees of the Institute, and for such special students as are looking to chemistry as a profession, and are following, in the main, the courses laid out for regular students. In order to secure the necessary command of chemical literature, these special students are required to study French and German.

For further details, see the circular on Chemistry and Chemical Engineering.

The Kidder Laboratories of Chemistry afford accommodations for more than six hundred students. The Chemical Department occupies twenty-two laboratories, three lecture-rooms, a reading-room and library, two balance-rooms, offices, and supply-rooms,— in all forty rooms. Five new laboratories have been recently added for advanced work and research. The laboratory for inorganic chemistry has places for four hundred students, and is completely equipped for instruction in elementary chemistry. The analytical laboratories can accommodate one hundred and fifty students, and possess every convenience for accurate and rapid analytical work. The main organic laboratory has places for thirty-six students and is provided with appliances for vacuum, steam and fractional distillation, with suction pumps for filtration, with electrolysis circuits, filter-presses, etc. Adjoining it is a laboratory arranged for organic combustions, and on the roof is an enclosed room, in which chemical operations of a dangerous or noxious character can be performed. The laboratory of water, air, and food analysis contains places for sixteen students, and possesses a complete outfit for the analysis of air and water, and for the investigation of sanitary problems. The laboratories of industrial chemistry accommodate forty-eight students. They comprise a series of rooms in the Pierce Building fitted with the needful apparatus for the preparation of chemicals on a considerable scale. The main laboratory contains kettles of various patterns, stills, presses, tanks, centrifugal dryers, crystal dryers, a filter-press, a furnace, and a variety of other forms of apparatus. The laboratory devoted to textile coloring contains numerous jacketed kettles, baths, and dye-tubs, squeeze-rolls, a steamer, an ager, and a dryer. The laboratory for oil and gas analysis accommodates thirty-six students and is equipped, for the examination of gases, with thirty-three sets of gas-absorption and explosion apparatus, with sampling apparatus, flue thermometers, a photometer, and a gas calorimeter. For the analysis of oils, the laboratory is provided with viscosimeters,

testing machines, different sorts of flash-point apparatus, and other instruments employed in this special line of work. There are also special laboratories for instruction in proximate technical analysis, in molecular weight determinations, and in sugar analysis. Kidder Hall has a seating capacity of two hundred and twenty, and is arranged with special reference to the delivery of lectures illustrated by experiment. In addition there are two lecture-rooms, seating respectively forty-eight and one hundred and twenty-five students. The lecture-rooms contain valuable cabinets of specimens for purposes of illustration. The balance-rooms are supplied with twenty-five analytical balances

The William Ripley Nichols Chemical Library, numbering more than nine thousand volumes and fifteen hundred pamphlets, is kept in the reading-room of the department. This library, which is open to all students, contains complete sets of most of the important chemical periodicals and a noteworthy collection of works upon sanitary science. The number of periodicals currently received is one hundred and seventy-five.

Physics. — The instruction in the principles of physics begins with an extended series of lectures common to all courses, in which the subject of physics as a whole is discussed. The various branches are treated both mathematically and experimentally. Recitations are held in connection with the lectures. The student begins this course on entering the second year and continues it until the middle of the first term of the third year. The topics treated are the mechanics of solids, liquids, and gases, molecular mechanics, wave-motion, electricity, optics, and heat.

It is the purpose of the course to lay a thorough foundation for subsequent study of theoretical, experimental, and technical physics. Hence it is planned with immediate reference to familiarizing the pupil with the fundamental principles of the science. The practical applications of the subject, however,

are considered with care and to as great an extent as is compatible with the main end sought for. The lectures are very fully illustrated by suitable experiments.

Regular students, excepting those in architecture, enter upon a general course of experimental work in the Rogers Laboratory of Physics, either upon the conclusion of the lecture course in physics or earlier. This work is from the beginning almost exclusively quantitative in character. It is laid out primarily to teach the student to make accurate measurements, to impart training in the manipulation of the various instruments of precision employed in physical investigation, and to give practice in properly recording, interpreting, and reducing experimental data. At the same time he obtains a better understanding of the principles of physics with which he has already become acquainted in the lecture-room. The earlier and simpler work serves chiefly to train the student in the use of methods or instruments which are employed as accessories later. This is succeeded by experiments on the mechanics of solids, liquids, and gases, each illustrating a method by which some physical law or constant is determined. Work in optics follows, and heat and electrical measurements occupy the remaining and more difficult part of the course.

Accurate work is required throughout ; and in connection with the use of instruments of precision, especially in the more advanced measurements, the student's attention is particularly directed to the study of possible sources of error, and to the discussion of the effects of these upon the results obtained. A short lecture course also is devoted to this subject. An optional course upon calculating machines has been introduced.

The particular line of work assigned to each person is determined, to some extent, by his department in the Institute; and the instruments which he studies are often such as he will be called upon to use in later technical work. In a number of Courses, such as Physics, Chemistry, and Electri-

cal, Civil, Mechanical, Chemical, and Mining Engineering, work of a more advanced scientific or technical nature is undertaken. In such work, laboratory and lecture instruction are usually combined.

An extended course is provided in general electrical measurements and testing, and also one in the testing of dynamo-electric machinery. Lecture and laboratory instruction are given in heat measurements, including accurate thermometry, pyrometry, and fuel tests. A course has been instituted also in modern physico-chemical methods, in which particular attention is given to the application of these methods to the various novel and important scientific problems of the present day in physical and electro-chemistry. A special laboratory is devoted to this purpose. Additional courses in electro-chemistry will be given to students pursuing the option in that subject. Facilities are provided for original investigation in these branches of physics. Instruction is provided also in photography and its applications, in photometry, and in the use of the lantern as an instrument of demonstration in the lecture-room.

Original investigation is encouraged, and the result has been a considerable number of published memoirs.

Further instruction in pure physics is provided for the especial benefit of those who are candidates for a degree in Physics. This includes special courses in acoustics, energetics, and the kinetic theory of gases, and a mathematical treatment of optics and electricity.

It is intended that students pursuing these courses shall gain a familiarity with standard works on the various branches of physics, in both their own and foreign languages. In connection with the advanced courses, a physical colloquium is held, for which the students prepare and read before the class essays on assigned physical topics. These essays are written after a study of recently published papers and memoirs, and often embody also the results of experimental work by the student. They are intended to familiarize the class with cur-

rent scientific literature, and to give experience in independent study and in the preparation and presentation of original scientific papers. This work is of particular advantage to those who intend to become teachers.

Opportunity will be offered for more advanced instruction in mathematical and experimental physics to students who are competent to pursue such courses. Among these are a course upon the electro-magnetic theory of light, and one upon the theory of diffraction and polarization, given in alternate years, and also a course upon the application of polarized light in physics and chemistry.

The Rogers Laboratory of Physics is located in the Walker Building, and occupies sixteen rooms. Of these, two are lecture-rooms: the general physical lecture-room, seating three hundred and fifty students; and a smaller lecture-room for special lectures in physics and chemistry, seating seventy. Both of these are fitted with appliances for physical experimentation and for the use of the lantern. The laboratory of general physics is devoted to instruction in general physical measurements. The acoustic laboratory is especially designed for acoustic and telephonic research, and the optical room for the study of light. The laboratory of electrical measurements is furnished with special electric circuits for lighting and power, and for both direct and alternating currents. The laboratory of heat measurements and the laboratory of physical chemistry are devoted to advanced work in these subjects. Several dark-rooms are appropriated to photometry and photography.

The Laboratories of Electrical Engineering constitute a further important portion of the Rogers Laboratory. The dynamo-room contains a large plant of direct and alternating current machinery, the driving power for which is furnished by a Westinghouse 90-horse-power simple engine and a Westinghouse 130-horse-power compound engine. Several other rooms are fitted up for study and research in the various branches of technical electricity.

The Rogers Laboratory has an exceedingly extensive equipment of apparatus for both demonstration and physical measurements, and large additions are made to it every year. It is especially well furnished with instruments for electrical testing, and for heat, sound, and electro-chemical measurements.

The library of the department contains over six thousand volumes, and is very complete in recent works upon physics and electricity. All new publications of importance are procured upon their issue. The principal physical and electro-technical periodicals are received regularly, seventy-four such being taken. The study of special topics is greatly facilitated by several valuable libraries, to which the students have admission. (See also page 142 and the circular on Electrical Engineering and Physics.)

Electrical Engineering.— As a foundation for subsequent work in electrical engineering, instruction is given in the theory of electricity. An extended course of lectures is devoted to the detailed consideration of the various technical applications of electricity to land and submarine telegraphy, the telephone, electric lighting, electro-chemistry, the electrical generation, transmission, and utilization of power, and the design of dynamo-electric machinery. Instruction is given by lectures and laboratory exercises upon the processes of photometry, especially as applied to the measurement of electric lights.

A special course of lectures for students in Electrical Engineering has been introduced, in which the transmission of power by mechanical as distinguished from electrical methods is treated.

Advanced instruction is provided in general electrical measurements and testing, and in the Laboratory of Electrical Engineering an extended series of exercises is devoted to the experimental study and testing of direct and alternating current generators and motors, transformers, and other

forms of dynamo-electric machinery. The subjects of construction, specifications, and contracts also receive attention.

Besides the work done by the regular staff of the Institute, special instruction is given by gentlemen who are professionally engaged in various departments of electrical engineering, or especially conversant with certain branches of applied electricity. During the past year such instruction has been given by the following persons.

Mr. George W. Blodgett, electrician of the Boston and Albany Railroad, on the Application of Electricity to Railway Signalling; Mr. Hammond V. Hayes, electrical engineer of the American Bell Telephone Co., on Telephone Engineering; Professor Elihu Thomson, on Recent Developments in Electrical Engineering; Mr. John Stone Stone, on the Application of Electrical Oscillations to Telephony; Mr. C. J. H. Woodbury, of the American Bell Telephone Co., on Electricity in its Relation to Fire Risks; Mr. Louis Bell, on the Electrical Transmission of Power and the Application of Electricity to Railway Transportation; Mr. S. Everett Doane, of the Marlboro Electric Co., on the Manufacture of Incandescent Lamps; and Mr. John B. Blood, on the Design of Alternating Current Machinery.

The equipment of the Laboratory of Electrical Engineering includes a large number of dynamo machines, both alternating and direct current, of various types and sizes, which are wholly available for purposes of instruction.

Among these are the following: an Edison shunt generator, having a capacity of 96 amperes at a pressure of 110 volts; a Thomson-Houston inclined-coil constant potential generator, having a capacity of 120 amperes at 110 volts; a Westinghouse multipolar compound generator, having a capacity of 180 amperes at 110 volts; a United States direct current compound generator, having a capacity of 340 amperes at 110 volts; a Weston shunt generator, having a capacity of 60 amperes at 70 volts; a Thomson-Houston alternating current generator, having a capacity of 30 amperes at 1,000

volts, with transformers of various patterns and sizes up to 15 kilowatts; a Mordey inductor alternating current generator, having a capacity of 37 amperes at 1,000 volts; a Brush arc-light generator, having a capacity of 10 amperes at 1,500 volts; an experimental three-phase low-pressure alternating current generator, having a capacity of about 15 kilowatts at 500 volts; a Westinghouse shunt generator for electrolytic work, having a capacity of 300 amperes at 15 volts; a General Electric compound bipolar generator, having a capacity of 25 amperes at 125 volts; a Westinghouse 10-horse-power machine arranged for use as a 120-volt direct current generator or motor, a quarter-phase alternating current generator or motor, or a rotary transformer; a 220-volt 7½-horse-power Thomson-Houston shunt motor; a 7-horse-power 500-volt three-phase alternating current motor; several 15-horse-power 500-volt Thomson-Houston and Edison street-railway motors; and a large number of small direct and alternating current generators and motors of various sizes up to 5 horse-power. The laboratory possesses a 15-kilowatt Thomson welding-coil, furnishing current up to 3,000 amperes if required, a set of 10-kilowatt phasing transformers for use in connection with the three-phase and quarter-phase machines, and also a constant current transformer.

A separate plant has been installed for use in regular laboratory instruction, in connection with the course in dynamo-testing and dynamo-electric measurements. It consists of two similar four-pole moderate-speed 25-kilowatt direct current compound generators made by the General Electric Company. They are belt-driven from a Westinghouse compound engine fitted with indicators, and having a surface condenser discharging the condensed steam into weighing-tanks.

The switchboard is so designed that the dynamos can be put in series or parallel, or connected in any special manner called for by the requirements of particular methods of test-

ing the efficiency, or studying the losses, either of the dynamos alone or of these in connection with the engine. A number of Weston illuminated-dial ammeters and voltmeters of suitable ranges constitute a part of the equipment. They are provided with flexible lead-wires, and so arranged as to be readily connected to meet the requirements of the ordinary commercial methods of testing efficiency as well as those of the more refined electrical methods.

The new lighting and power plant of the Institute in its buildings on Trinity Place is available for instruction and experiments related to central station work. In this plant there are two Westinghouse multipolar slow-speed direct current three-wire generators, each capable of giving a current of 350 amperes at 220 volts, or 350 amperes at 110 volts, on either side of the system. Each generator armature is carried by the extended shaft of a 100-horse-power Westinghouse compound engine, running at a speed of 300 revolutions per minute.

For additional details, see page 100 (Rogers Laboratory) and also the circular on Electrical Engineering and Physics.

Civil Engineering — The instruction in civil engineering is given by means of lectures and recitations, and by practice in the field, in the drawing-room, and in the testing laboratory.

In surveying, besides the work in the class-room, the use of the various instruments is taught by actual work in the field, including the adjustments of the instruments and the principal operations involved in land, topographical, hydrographical, railroad, city, and underground surveying. The work in the drawing-room consists in representing upon paper the surveys made in the field, with practice in topographical and map drawing. The earlier field-work includes the use of the chain, tape, compass, transit, level, and solar compass, as well as of the various pocket instruments. This is followed by the use of the stadia, sextant, and plane table. The short

course in practical astronomy includes a discussion of the methods of determining latitude, longitude, time, and azimuth, together with the theory of the usual astronomical instruments. The short course in geodesy includes a discussion of the figure of the earth and of the methods of measuring base-lines and of carrying on a geodetic survey.

Students electing the geodetic option pursue these subjects in detail, taking also the course in the method of least squares, and receiving instruction in the adjustment of observations.

An observatory in the Middlesex Fells, within easy access of Boston, is devoted to instruction in geodesy and astronomy. It is a stone building, fifteen feet square, and contains at present the following apparatus: a transit instrument of 2½-inch aperture, 27-inch focus, with micrometer eye-piece for latitude observations; a sidereal chronometer, a chronograph, a magnetometer, a dip circle, an altazimuth instrument, and various other smaller appliances, such as level triers, mercury horizons, etc. This observatory enables the Institute to offer the best facilities for instruction in geodesy.

The course in railroad engineering treats of the survey, location, construction, and equipment of railroads. In addition to the work in the class-room, an actual railroad survey and location, several miles in length, is made each year upon such ground as shall best illustrate the problems occurring in practice; and the necessary maps and profiles are prepared by the students. Advanced courses are given, in which are discussed the economics of railroad location, and also the subjects of rolling-stock, motive-power, train-resistance, brakes, signals, yards, stations, tunnels, and street railways of various kinds. Instruction in the class-room is supplemented by drawing-room work in design, and by visits to works in process of construction. Railroad administration and management form the subject-matter of a distinct course.

The work in road or highway engineering embraces the

location, construction, and maintenance of town and country roads, and of city streets and pavements. The facilities for instruction in this branch are ample, and the equipment of the department, in books, models, apparatus, and drawings, is constantly increasing. The laboratory is equipped with apparatus by which the suitability of various materials for the construction of roads or pavements may be ascertained.

The course in hydraulic engineering embraces, first, a detailed study of the principles of hydraulics, including the laws of hydrostatics and of the flow of water through orifices, over weirs, and through pipes, with numerous problems illustrating the practical application of the principles discussed; second, practice in hydraulic measurements, in which the student is instructed in the methods of gauging the flow of streams, with work in the field, using instruments of various kinds; third, practice in carrying out hydraulic experiments on the flow of water and on the loss of head under various conditions, with the aid of the tanks and other apparatus in the hydraulic laboratory, as well as in the testing of motors, and other similar work; fourth, a course of exercises, given partly by text-book and partly by lectures, covering the subjects of hydrology, water-supply, water-power, hydraulic motors, and irrigation.

In the course in sanitary engineering the object sought is to prepare the student to deal intelligently with questions relating to the health of individuals and communities, and to plan works of sewerage and drainage. The course embraces the study in detail of the house, with its apparatus, the disposal of sewage for isolated buildings by surface or sub-surface irrigation, the collection and removal of sewage in the larger towns, and the sanitary drainage of cities. Frequent opportunities are given for the inspection of actual examples of sanitary engineering, and the work in the classroom is supplemented by exercises in designing. The students also attend lectures and demonstrations in sanitary science.

The course in the strength and stability of structures embraces a study of the methods of proportioning beams, floors, columns, roofs, bridges, piers and abutments, arches, retaining-walls, and similar structures. Both the analytical and the graphical methods of investigating the strength and stability of structures are taught. The course in bridges and roofs involves an extended study of the different structures of this class, of wood, stone, and metal, with reference to economy of material, methods of proportioning parts, and the details of design. The subject of foundations also is included. In connection with these courses the student is required in the drawing-room to make complete designs and working drawings, with blue-prints, for several structures.

By the kindness of many active members of the profession, the classes are frequently enabled to inspect engineering works of interest, and to carry on field operations in favorable localities. During the past year special courtesies have been shown by Mr. Lucius Tuttle, President of the Boston and Maine Railroad, and by Mr. W. H. Barnes, General Manager of the Boston and Albany Railroad.

In addition to the regular lectures of the school, occasional lectures are given by prominent engineers, in active practice in their profession, upon subjects with which they are especially familiar. During the past year lectures have been given by Mr. George W. Blodgett, electrician of the Boston and Albany Railroad, on the Application of Electricity to Railway Working; by Mr. A. V. Garratt, on Water-wheel Governors; and by Mr. F. H. Newell, hydrographer, U. S. Geological Survey, on Irrigation.

The instruments and apparatus of the department may be classified as follows: a full outfit of instruments used in surveying and in the drawing-room; a collection of hydraulic apparatus for work in the field, comprising single and double floats of varous patterns, loaded tubes, and five-current meters of different kinds; apparatus for comparing the wearing properties and other physical characteristics of the various road-

and pavement-materials; and continuous-record instruments for measuring the strain in bridges and other structures of iron. The very complete hydraulic apparatus for the measurement of the flow of water through orifices and mouthpieces, over weirs, through pipes, etc., is described elsewhere, in connection with the engineering laboratories.

The department has also a collection of models illustrating bridge-details, problems in stone-cutting, etc., and a set of full-size models of various types of road- and pavement-construction, for use in connection with the work of instruction. It has also a large collection of blue-prints, drawings, and photographs, and a considerable number of lantern-slides.

In order to provide for the needs of students wishing to pursue graduate courses of study, leading, if desired, to advanced degrees (see page 67), an advanced course has been laid out, which includes, besides original work in research and criticism, further instruction in the design and construction of bridges, buildings, and other structures, in theoretical hydraulics, and in the theory of elasticity, with special reference to its applications to the strength of materials, together with experimental work in the engineering laboratories.

For additional details, see the circular on Civil Engineering.

SUMMER SCHOOL.— In the vacation following the third year, students taking the geodetic option are required to attend a course in geodetic and topographic surveying, including hydraulic measurements and geological field-work, during about four weeks in the early part of the summer. This is held at some convenient point in the country, and its object is to give the students opportunity for more extended and continuous field practice in these branches than is possible during the term. The work consists of a topographical survey of a certain district, with field practice in triangulation and base-line measurement, the construction of geological profiles, the gauging of streams, and the observation of tidal phenomena. The course is open, without extra charge for tuition, to all students in the department who have com-

pleted the third year, as well as to properly qualified students in other departments. Persons not connected with the Institute are also permitted to attend upon giving satisfactory evidence of being properly qualified and upon payment of a tuition fee of $25.00.

In 1896, 1897, and 1901 this school was held at Machias, on the coast of Maine; in 1898, at Lancaster, Mass.; in 1899, at Cherryfield, Me.; in 1900, at Sunapee, N. H.

Mechanical Engineering.— Instruction in Mechanical Engineering is given by means of lectures and recitations, and by practice in the drawing-rooms and in the engineering laboratories.

Mechanism.— The course includes a systematic study not only of the motions and forms of the various mechanisms occurring in machines, and the manner of supporting and guiding the parts, independent of their strength, but also of the design of gear-teeth, and the study of the mechanism found in modern American machine-tools, and cotton machinery.

The course in mechanical drawing aims to teach the proper way of making the necessary dimensioned drawings, tracings, and blue-prints for use in practice, good shop systems being adopted. The course includes the making of working detail, and assembly drawings from measurements from machinery, and the drawings necessary in connection with the course in mechanism. Practice is given in the design of gear-teeth, valve-gears, the Stephenson link, and other mechanism designs. Considerable time is spent also in boiler drawing.

Steam Engineering.— The course includes a detailed study of the principles of thermodynamics, mathematically treated; a discussion of the properties of gases and vapors, especially steam; of the flow of steam and other fluids; of air-compressors; of the steam injector; of refrigerating machines; and of the hot-air engine and gas-engine. All these topics are

treated in such a way as to give the student a good foundation in the principles of thermodynamics, especially as they apply to the steam-engine. This is followed by a study of the steam-engine itself, of the compound and multiple-expansion engine, of the mode of testing steam-engines, and of steam-boilers. A careful study is made of such data as have been based on reliable tests made on large single, compound, and multiple-expansion engines.

In machine design each student is required to make a certain number of designs,— the design of a boiler, of a large shaft with gears and pulleys, of a set of hangers, etc.,— to make all the necessary calculations and drawings, and to determine the strength of every part by means of the principles already learned.

The main principles of hydraulics and of hydraulic motors are studied with particular attention to the turbine.

Locomotive engineering begins with a careful study of the details of the more usual types of locomotives, and of the strength of the more important parts. The following topics, among others, are discussed: train-resistance; brakes; heating cars by steam from the locomotive; and compound locomotives. Marine engineering includes a detailed study of the design and construction of single, compound, and multiple-expansion marine engines, with a discussion of their form, proportions, and efficiency, as well as of the strength of the several parts. Mill engineering includes the study of mill construction, together with the processes to be carried out in a cotton mill, so far as to enable the student to take up intelligently the laying-out of machinery to best advantage, the planning of the power plant and the distribution of power, all leading up to the designing of the complete mill building.

The course in Heating and Ventilation is planned to acquaint the student with the fundamental principles of the subject, and the proper application of these principles to practice in the solution of a considerable range of problems

in this field of engineering work. The practical side of the subject is treated with as much thoroughness and fulness as is consistent with the primal aim of the course.

Engineering Laboratory.— The laboratory work, in its earlier portions, is devoted to giving the student a drill in such experimental work as a mechanical engineer has constantly to perform, such as boiler-tests and engine-tests, etc. The later work takes very largely the form of original research; and it is intended that the students in these laboratories shall, under suitable direction, undertake the experimental investigation of a number of important engineering problems. (See page 116.)

Courses are given on industrial management and on foundations, the former involving a study of the organization and relations of the various departments of an industrial establishment.

Visits are made to machine shops and manufacturing establishments where may be seen machinery in operation and manufacturing processes more extensive than would be possible at the Institute.

Besides the teaching by the regular corps of instructors, lectures upon special subjects are given by gentlemen actively engaged in the profession. During the past school year a lecture was given by Mr. S. M. Vauclain, general superintendent of the Baldwin Locomotive Works. The students of the department were enabled to attend also a course of lectures by Mr. Odin B. Roberts, on the Relation of Patent Law to Engineering.

For additional details, see the circular on Mechanical Engineering.

Naval Architecture. — The special work in Naval Architecture is given by lectures, recitations, and drawing. The lectures cover in general the theories of floating bodies, of their stability and resistance, and also all problems relating to the building, launching, and management of ships.

The course begins with descriptions of the various methods of building ships of wood and of steel. This part of the work includes such subjects as transverse and longitudinal framing for merchant ships and for war-ships; the fitting of ballast-tanks and of double bottoms; protective decks and framing behind armor of war-ships, etc. Attention is given also to the proper method of adjusting compasses and to ventilation, drainage, and piping for fire-service.

Following this detailed description of ship-building is a discussion of the methods of calculating displacement and stability. The theory and operation of Barnes's method and of the method of cross-curves are taught, as well as the various forms and methods of calculation for displacement sheets. These subjects are treated simply and directly as an introduction to the general discussion of the properties of floating bodies.

Continuing the work on displacement and stability, comes a general discussion of the properties of floating bodies. This subject is given a complete and rigorous treatment, and is intended, not only to strengthen and broaden the student's conceptions of the simple problems of stability hitherto taken up, but also to serve as a foundation for the treatment of special and complicated problems.

Somewhat later in the course the student is shown how to find the center of gravity of hull, equipment, and cargo, and how to determine the shearing-force and the bending-moments and stresses in quiet water and among waves. He is taught, furthermore, to deal with various special problems in stability. Among these may be mentioned the determination of center of gravity by an inclining experiment, and the effect on stability of adding, removing, and shifting weights; and of breaking open a compartment to the sea.

A study is made of trochoidal waves, solitary waves, and the superposition of waves. In connection with the theory of wave-motion, attention is given to the rolling of a ship in an unresisting medium, in water, and among waves. The resistance of ships is considered separately and also in conjunc-

tion with the action of the propeller, whether a screw-propeller or a paddle-wheel. An elementary discussion is given of steam-lines, and of their composition and relation to resistance. Experiments by the Froudes and others are described on the several elements of resistance, and on screw-propellers, together with a comparison of the actual resistance of ships as determined by towing or by progressive speed-trials. Froude's theory of the screw-propeller is given, together with its application by Taylor to the design of propellers. In comparison with this, a study is made of Barnaby's method of treating screw-propellers. The interference between the screw-propeller and the hull is discussed. Attention is given to progressive speed-trials, and to the distribution of power as determined from them. A comparative study is made of propulsion by paddle-wheels; of hydraulic propulsion; and of propulsion under sail, including the determination of center of effort, center of lateral resistance, and power to carry sail. Methods are given for determining the power of ships by the use of admiralty coefficients, by Froude's law of comparison, by aid of model experiments, and by independent estimation of the several elements of resistance as determined by progressive speed-trials. In connection with the lectures on marine engineering, problems on propeller designs and methods of drawing propellers are treated. In close connection with the problems of resistance and propulsion, the methods are discussed of steering and manœuvring ships under steam and under sail. Methods of balancing sail are described, with a consideration of the effect on steering. The theory and practice of compass adjustment are taught, with special application to the proper location of compasses.

A naval architect who is a master of his profession must not only be able to give the proper dimensions, proportions, and power to a ship intended for a certain service, but must have such a general knowledge of materials, of machinery, and of the development and application of power that he can design and manage the shops, docks, cranes, and other ap-

pliances for transporting, handling, and fashioning the materials which are ultimately worked into the ship. To help the student in obtaining this information, the lectures in naval architecture are made to include a discussion of dry-docks, floating docks, and lifting docks, and of the methods of launching and the problems which arise in launching.

The lectures on naval architecture are accompanied by two or three exercises a week in drawing, in which students make the calculations and constructions described in the lectures, and thus gain a proper appreciation of the principles learned and facility in applying them. In this drawing-room work the pupil is familiarized with the methods of laying out and fairing the lines of a ship and of making a displacement sheet, including the determination of metacenter stability. Instruction is given also in the design of a sailing yacht, with particular attention to the sail-plan and the determination of stability by Barnes's method.

The design of a ship for a given purpose is undertaken, beginning with the computation of the displacement and dimensions necessary to give a required speed, radius of action, and carrying capacity. The dimensions having been selected, the student designs a proper set of lines, and determines the stability for all conditions by the methods of cross-curves. The proper framing and plating are selected, and transverse and longitudinal sections are drawn, together with the proper deck-plans, to show the general arrangement for engines, boilers, cargo, and accommodation. Calculations are made of weight and center of gravity, of the shearing-forces, and bending-moments and stresses on the hull in quiet water and among waves. The computations and arrangements necessary for launching are carefully considered, and full specifications for the ship are drawn up in the customary form.

The advantageous location of the Institute at an important seaport and near a navy yard enables students to see ship- and engine-construction, and to visit ships of all types. This fact has made it possible to arrange for progressive speed-

trials, tests of engines and boilers, and tests for determining the center of gravity of a ship.

The Course in Naval Architecture, though relatively new, is already well grounded and established, and has an adequate equipment. The department owns a large collection of standard and recent works on naval architecture and marine engineering, including publications of technical interest, and has also the advantage of the large libraries of engineering, physics, chemistry, etc., belonging to the Institute.

There is in the drawing office of the department a collection of complete sets of drawings of ships and their machinery, both merchant ships and war-ships, systematically arranged and catalogued, which, together with the proper data concerning construction, power, and speed, makes it possible to proceed with the design and arrangements of ships as is done in good practice, with the difference that attention is always given to the most efficient methods of instruction.

There is a supply of planimeters and integrators which the students use freely, and a calculating machine with which they may become familiar. A Ritchie compass in a standard navy binnacle and a pelorus mounted on a revolving platform give opportunity for practice in compass adjustments.

The marine engineering of the fourth year of the course is the complement of ship-designing. The course begins with a description of marine engines in all their details, including the most modern types. It then takes up the usual discussion and calculation of the strength and proportions of marine engines. With the object of determining the greatest stresses on the parts of the engine, a discussion is given of the probable behavior of steam in cylinders, and of the effect of the reciprocating parts. The student is made familiar with the methods of designing and drawing screw-propellers and paddle-wheels. With the purpose of illustrating and enforcing the principles taught in the lectures, the student is required, along with his theoretical study, to make drawings and calculations for the preliminary design of a marine engine.

Graduates from the Department of Naval Architecture may, by an additional year's residence, take graduate work leading to the degree of Master of Science. This may advantageously consist in part of advanced work in naval architecture, and in part of the study of electricity, which is now so important for the modern ship-builder.

For details regarding the Course for Naval Constructors, arranged by request of the United States Navy Department to give advanced instruction to graduates of the Naval Academy, see page 64.

A circular of the Department of Naval Architecture will be sent on application to the Secretary of the Institute.

The Engineering Laboratories.— In the Engineering Laboratories the objects sought are the following: first, to give the students practice in such experimental work as engineers, in the pursuit of their profession, are called upon to perform; second, to afford some experience in carrying on original investigations in engineering subjects, with such care and accuracy as to render the results of real value to the engineering community; third, by publishing from time to time the results of such investigations, to add gradually to the common stock of knowledge.

These laboratories are situated in the building on Trinity Place, where they occupy a floor-space of about 21,000 square feet. The laboratory for testing the strength of materials is furnished with the following apparatus: a testing-machine of one hundred thousand pounds capacity and another of fifty thousand pounds capacity for determining tensile strength, elasticity, and compressive strength; a testing-machine of one hundred thousand pounds capacity for determining the transverse strength and stiffness of beams up to twenty-five feet in length, of framing-joints used in practice, and of other structures subjected to a transverse load; a testing-machine of eighteen thousand pounds capacity for determining the transverse strength and stiffness of beams up to

fourteen feet in length; apparatus of thirty thousand pounds capacity for making time tests of full-size timber beams; a kiln for drying lumber; apparatus for testing the strength of full-size masonry arches; a machine for testing the torsional strength and stiffness of shafting up to three inches in diameter and to twenty-one feet in length; a torsion machine of sixty thousand inch-pounds capacity; a small torsion machine of six thousand inch-pounds capacity, for very delicate work; machinery for the measurement of the twist of shafting; for testing the tensile strength of mortars and cements, and of ropes; for testing the effect of repeated stresses upon the elasticity and strength of iron and steel; for determining the strength and elasticity of wire; for determining the strength and elasticity of cloth; for testing the strength of pipe and pipe-fittings under hydraulic pressure; and also accessory apparatus for measuring stretch, deflection, and twist. Besides the above-stated apparatus, a horizontal Emery testing-machine of three hundred thousand pounds capacity forms a part of the equipment of this laboratory. It contains all the essential features of the eight hundred thousand pound testing-machine built by Lieutenant Albert H. Emery at the Watertown arsenal, and is suitable for testing a compression specimen eighteen feet long, and a tension specimen twelve feet long.

The Hydraulic Laboratory contains a closed steel tank five feet in diameter and over twenty-seven feet high, arranged for the insertion of orifices, mouth-pieces, and other special pieces of apparatus, with gates for controlling the discharge, and with connections for supplying water, in experiments upon pipes and motors. This tank is connected with a ten-inch stand-pipe over seventy feet high, so arranged that a constant head may be maintained at any desired level. Two steel tanks, each of about two hundred and eighty cubic feet capacity, give opportunity for the accurate measurement of larger quantities of water than can be weighed directly during experiments. A system of pipes connected both

with the main tank and with the pumps is arranged for the insertion of diaphragms, branches, and other apparatus for studying loss of head and the laws of discharge. An attachment has been fitted to the main tank, containing a Pitot tube for studying the laws of velocity in jets, and adjustable points for accurate measurement of the cross-section of jets.

The laboratory is further equipped with a forty-eight-inch Pelton wheel, of thirty horse-power; a three-foot American impulse wheel; a Venturi meter; an eight-inch, a twelve-inch, and two forty-eight-inch weirs, and an orifice tank for measuring water; a centrifugal pump; a rotary pump; a plunger pump; a pulsometer; a three-inch water meter and others of smaller size, and a variety of mercury gauges, standard orifices, mouth-pieces, diaphragms, branches, nozzles, etc., for experiments with flowing water under all conditions. A six-inch turbine is arranged to be run under various conditions of head and gate opening in tests for efficiency. There is also a hydraulic ram with a two-and-one-half-inch drive-pipe. The laboratory also contains a steel weir-box, the weir having a standard crest adjustable as to length from zero to five feet, and a seconds pendulum, with chronograph for exact determination of time in experimental work. Water is directly supplied for experiment by the various pumps.

The Steam Laboratory contains a triple-expansion engine, with cylinders of nine inches, sixteen inches, and twenty-four inches diameter respectively, and thirty inches stroke, arranged in such a way as to be run single, compound, or triple, as desired for purposes of experiment. This engine is of the Corliss type, and has a capacity of about one hundred and fifty horse-power when running triple, with an initial pressure of one hundred and fifty pounds in the high-pressure cylinder. It is connected with a surface condenser and the other apparatus necessary to adapt it to the purposes of accurate experiment. A tandem compound high-speed engine of about two hundred and twenty-five horse-power,

having cylinders eleven and nineteen inches in diameter by fifteen inches stroke, is similarly provided with surface condenser, air pump, and other apparatus needed for testing. This engine transmits its power through a rope drive.

This laboratory also contains a three-stage air-compressor adapted to compress one hundred cubic feet of free air per minute to twenty-five hundred pounds pressure per square inch, connected with storage tubes of about fifty-eight cubic feet capacity; a sixteen horse-power engine, and an eight horse-power engine, used for giving instruction in valve setting, etc., also a thirty-six horse-power gas-engine, and a small gas-engine. It is equipped with several surface condensers, steam-pumps, injectors and ejectors, calorimeters, mercurial pressure and vacuum columns; apparatus for determining the quantity of steam or air issuing from a given orifice or through a short tube under a given difference of pressure; apparatus for testing steam-engine indicators; apparatus for testing injectors; and indicators, planimeters, gauges, thermometers, anemometers, and other accessory apparatus.

The Engineering Laboratories are provided with a number of friction brakes; with machinery for determining the tension required in a belt or rope to enable it to carry a given power, at a given speed, with no more than a given amount of slip; with four transmission dynamometers; with two machines for determining the coefficient of friction of lubricating oils; with a pendulum governor arranged for experimental purposes; with a complete set of Westinghouse air-brake apparatus, including the parts belonging to the car and to the locomotive; with the pump and engineer's valve of the New York air-brake; with a locomotive link model; with two hot-air engines; and with cotton machinery as follows: — two cards, a drawing-frame, a speeder, a fly-frame, a ring spinning-frame, and a mule, as well as accessory apparatus. There are available for purposes of experiment in connection with the work of these laboratories four horizontal tubular

boilers in a boiler-house near the Engineering Building, with a wrought-iron stack, three feet in diameter and one hundred feet high, fitted with the apparatus necessary to make experiments on the draughts of chimneys ; two large sectional boilers situated in the Rogers Building with a masonry stack three feet square and one hundred feet high ; and also another boiler, a forty horse-power engine, a number of looms, and other apparatus in the mechanical laboratories on Garrison street.

The Engineering Library.— The libraries of the Departments of Civil, Mechanical, and Sanitary Engineering, and Naval Architecture are united into a single library under the direct charge of the Librarian of the Institute. This library contains over nine thousand volumes and thirty-eight hundred pamphlets. It is especially rich in journals and transactions of societies dealing with the various branches of engineering and ship-building. One hundred and ninety-three publications of this kind are received annually.

Mining Engineering and Metallurgy.— Instruction in mining and metallurgy is given by lectures and recitations, by laboratory work, and in the summer school. The introductory work begins with Plattner's blow-pipe assay of silver. This is followed by a course of lectures on methods of mining, including prospecting, sinking, stoping, hoisting, pumping, and ventilating, the location of mining claims, and mine surveying. Ore-dressing is taught by lectures and by laboratory work illustrating the various forms of machinery, while the lectures on metallurgy are supplemented by an extended course in the use of the furnaces in the laboratory for the smelting of gold, silver, copper, and lead. By this laboratory work the student has experience in actual metallurgical work, and checks his results by assays and chemical analyses at the appropriate stages of the process. With such practical experience, in immediate connection with class-room instruction, he acquires the best possible grasp of the subject-matter.

During the past year Mr. Timothy W. Sprague has lectured on Electricity in Mining.

The department library contains over twenty-five hundred volumes, and receives annually sixty-two periodicals.

The John Cummings Laboratories of Mining Engineering and Metallurgy.— These laboratories are designed to furnish students the means for experimental study of the various processes of ore-dressing and smelting, and at the same time to give them the mental training needful for professional practice. The apparatus has been chosen with a view to illustrating, as far as possible, the principles of the more important machines and furnaces actually used in mines, mills, and smelting works.

The crushing, concentration, and smelting of ores of lead, copper, gold, and silver furnish the best field for this laboratory work. The production of iron and steel in quantity is precluded by the size of the plant required, and by the large amount of ores and fluxes needed; the microscopical study of the structural changes that occur under heat treatment takes its place.

The experimental work of the laboratory is carried on by the students, under the immediate charge of an instructor. A sufficiently large quantity of ore is assigned to each student, who first examines it for its component minerals, sorts and samples it, determines its character and value by analysis and assay, and makes such other preliminary examinations as may serve to indicate the proper method of treatment. He then treats the given quantity, makes a careful examination of the products of each step of the process, ascertains, wherever practicable, the amount of power, water, chemicals, fuel, and labor expended, and thus learns approximately the effectiveness and economy of the method adopted. He learns also the value of chemistry as a check upon metallurgical work. Each student in working his ore is assisted by his classmates, who have opportunity in turn to manage the machines and furnaces.

It is not considered that the instruction given in this laboratory is in any sense a substitute for the experience gained in large works. It is believed, however, that it prepares students to enter works and to be almost immediately useful in them. The spirit of investigation which is developed by the work, as well as the experience of comparing processes actually carried out with the same processes as described in books, is of great advantage.

The laboratories include five parts: concentration and plate amalgamation, roasting and smelting, lixiviation and pan amalgamation, assaying, and heat treatment and microscopical examination of metals and alloys.

In the concentrating laboratory the effects of different combinations and adjustments of machines upon the saving of losses in slimes and included grains, in order to produce the best scientific result or the greatest commercial profit, can be tested under the very best conditions. Among these combinations are graded crushing, graded sizing, graded jigging; hydraulic classifying as a preparation for jigging and the slime table; jigging with much or little suction; the variations of the slope, the quantity of water, and the roughness of the surfaces of slime tables; and the adjustments of the gravity stamps, the amalgamated plates, and the Frue vanner.

In the lixiviating and amalgamating laboratory the effects of varying the sizes of grains, the strength of the cyanide solution, and the time of treatment may be tried; suitable variations also may be made in the hyposulphite process, and either by vat or by revolving barrel, in the chlorination process; in the amalgamating pan the temperature, the chemicals, and the time of exposure can all be studied for the production of the best results.

The smelting laboratory is provided with furnaces for roasting, smelting, and refining copper; for roasting, smelting, and cupelling lead; and for chloridizing roasting preparatory to pan amalgamation or lixiviation. The smelting of a

ton or two of ore cannot in the nature of things produce results which approach as nearly to the economy of practice on a large scale as is done in the other experimental lines, but the experience which the students gain throws more light upon the meaning of the lectures than any other work performed in these laboratories.

The assaying laboratory is provided with furnaces for crucible work, scorification, cupellation, and all the usual accompanying operations. Near by are rooms for fine balances and for supplies. This laboratory not only provides for the regular course in assaying which is taken by all the students in Mining Engineering and Chemistry, but it furnishes a means of testing and checking the work of the other three laboratories. A laboratory with chemical desks is provided, for conducting all the small lixiviation tests and such wet work as is necessary in connection with the smelting and lixiviation of ores. The blow-pipe laboratory of the Geological Department is used for the blow-pipe silver assay.

The metallographical laboratory is furnished with the necessary apparatus for heating, grinding, and polishing specimens of metals and alloys, for examining them microscopically, and for taking micrographs.

A museum of ores, products, and models of mining engineering and metallurgy serves to illustrate the lectures.

Summer Schools of Mining and Metallurgy.— To bring the mining students into closer acquaintance with their profession, summer schools are organized for the study of mines, mills, smelting works, and geological fields.

At the summer school of mines, the students, with their instructors, establish themselves at a mine, and take up in succession systematic studies in methods of mining and ore-dressing, of underground and surface surveying, doing actual work in all these lines.

At the summer school of metallurgy, the party visits a locality where various smelting and refining operations are conducted, and makes a systematic study of the different operations, writing up the notes from day to day.

The mining and metallurgical summer schools take place in alternate years.

In 1898 the summer school of mining was held in Nova Scotia, where a study was made of the mining and milling of gold, the mining and shipping of coal, and the manufacture of gas and coke.

In 1899 the summer school of metallurgy was held in New Jersey and Pennsylvania. Copper works were visited at Bergen Point; iron, steel, and zinc works at Bethlehem; and iron and steel works at Pittsburgh. The methods of smelting were followed through from the ore to the finished metal ready for the market.

In 1900 the summer school of mining was held in New Jersey and Eastern Pennsylvania, where the mining of iron ores and anthracite coal were the principal objects of study.

In 1901 the summer school of metallurgy was held in New York, New Jersey, Eastern Pennsylvania, and Maryland. The metallurgy of copper, lead, silver, gold, zinc, and of iron and steel was studied: copper at the works of the Nichols Chemical Company, Brooklyn, and of the Baltimore Smelting and Rolling Company, Baltimore; lead and silver in the Guggenheim Smelting Company, Maurer, N.J.; silver and gold at the United States Mint, Philadelphia; zinc at the Newark works of the New Jersey Zinc Company; iron and steel at the plants of the Atha Steel Company, Harrison, N.J., the Trenton Iron Company, and the American Bridge Company, Trenton, N.J., the Midvale Steel Company, Nicetown, Pa., the Pencoyd Iron Company, Pencoyd, Pa., the Pennsylvania Steel Company, Steelton, Pa., and the Maryland Steel Company, Sparrows Point, Md.

Architecture.— The instruction in architecture comprises the study of construction and materials, the study of building processes and of professional practice, of composition, design, and the history of architecture. It is arranged to meet the needs of those who are beginning their professional studies,

as well as of experienced draughtsmen who desire to make up deficiencies in their training, or to qualify themselves for undertaking the responsibilities of practice.

The more strictly professional work begins with the history and applications of the orders, accompanied by regular instruction in freehand drawing, from the cast and from life. The students are familiarized with the material elements of their future work by courses in practical construction, including lectures, problems, and visits to buildings.

Architectural history is taught by lectures, illustrated with the stereopticon, books, and photographs. A good knowledge of the great architectural styles is demanded of the pupil, and to this end the striking examples of each one are discussed and studied in the class-room, and every week the students are required to present for criticism abstracts of the lectures and sketches of historical monuments discussed. They are also required to test by comparison with the works themselves the descriptions and conclusions of the leading architectural authorities, and to prepare careful themes and drawings, showing the result of their research. This personal investigation serves besides to give the student a good working acquaintance with the valuable collection of books and photographs belonging to the library.

For three years the students are continually engaged upon design, and judgment is passed upon this work by a jury from the Boston Society of Architects. Continuous studies in planning give the student opportunity to enlarge his resources in the most important part of the architect's work, particular attention being paid to special classes of buildings, such as schools, theatres, churches, hospitals, etc. To supply ample store of material for this long course in design, the library of the department is freely used. Whenever a problem is given out, the students are referred to books, photographs, and drawings, from which examples may be obtained for suggestions or for solutions of similar problems.

Instruction in Architectural Engineering meets the demand

for men specially trained in the computation of all the details of modern steel construction which occur in the practice of architecture. Lectures and problems on the principles of applied mechanics and in the theory of structures, including loads and reactions, shears and moments, the proportioning of beams, columns, and tension pieces, the computation of box- and plate-girders, wooden and steel roof trusses, wind-bracing, fire-proofing, foundations, arches, etc., give the necessary preparation for practical problems in structural design, which forms the important feature of this course.

That part of the instruction in Landscape Architecture which relates to planting and the use of trees and shrubbery is given at the Arnold Arboretum, which is within convenient reach of the Institute. With the work at the Arboretum are combined excursions to neighboring parks and country places, in order to study examples of planting and design.

By means of a special fund raised for the purpose, several thousand photographs, prints, drawings, and casts were originally collected for the department. To these collections large additions have been made by regular appropriations and by gifts. Models and illustrations of architectural detail and materials are arranged in the rooms of the department. A large part of the collection of casts of architectural sculpture and detail belonging to the department has been deposited in the Museum of Fine Arts, and is arranged with the architectural collections belonging to the museum. The students of the department have free access to the museum at all times; as the building is close at hand, no inconvenience results from the change, and some of the advanced exercises in drawing are held there.

The Architectural Library contains a carefully selected collection of eleven thousand photographs, six thousand lantern slides, over three thousand volumes of technical works, and the leading American and foreign periodicals. The publications of the Royal Institute of British Architects are presented by it, and many richly illustrated and costly books

have been added to the library as gifts from friends of the Institute.

The two Rotch prizes of two hundred dollars each are given according to the will of the late Mr. Arthur Rotch, one to the student who is graduated with the highest standing in the regular course in architecture, and the other to the special student who ranks highest at the end of a two-year course. For this special student prize only those applicants are eligible who enter in accordance with the requirements on page 42, on the basis of professional office experience or as college graduates.

Summer School of Architecture.— The first summer school was held in 1893 in Chicago, during the World's Fair. In 1894 and 1895 schools were held in Salem and Portsmouth for the study of Colonial architecture. In 1896 the Institute took the important initiative of sending the school abroad, and a bicycle tour was made in England and France for the study of architectural styles. In 1897 and 1898 the school made pencil and water-color sketches of the picturesque buildings in and about Quebec. In 1899 the school again studied European architecture, visiting cities in northern Italy, and then making a bicycle tour from Genoa to Paris. In 1900 Colonial architecture was again studied, and measured drawings were made in Providence and Boston. In 1901 the demands from architects for draughtsmen's services were so great that the summer school was omitted.

For additional details see the circular of the Architectural Department.

Biology.— Under Biology is included instruction in a series of related subjects, beginning with microscopy and general biology, and extending to comparative physiology, zoölogy, bacteriology, and industrial and sanitary biology.

General biology is taught partly as an introduction to the special branches of the subject, which depend more or less upon it, and partly for its own sake, as introducing the

student to a new department of science. After a brief review of the familiar facts of common knowledge concerning living things and lifeless things, their likeness and their difference, and concerning organisms, organs, and tissues, the more recondite subjects of cells and protoplasm are considered; after which considerable time is spent upon a thorough examination and comparison, both macroscopic and microscopic, of selected plants and animals, chosen as representative forms.

Botany and Zoölogy. — General biology is succeeded and continued by brief courses in general zoölogy and general botany. These naturally introduce the student to cryptogamic botany, of which the outlines only are taught, and to more advanced zoölogy, in which larger opportunities are offered.

Comparative Anatomy and Embryology. — The student makes careful dissections and drawings of typical forms from most of the principal groups of the animal kingdom, the last six weeks of the course being devoted to the study of the embryology of vertebrates, with the embryo chick and the frog as types. This course is indispensable to those who intend to teach zoölogy; while those who intend to study medicine will find that a knowledge of the anatomy and development of vertebrates, together with the skill in dissection and embryological methods acquired in this course, will give them a great advantage during their earlier years in the medical school.

Theoretical Biology. — In this course the more philosophical questions connected with biology are brought forward and treated historically and critically. The facts and theories are examined in regard to such subjects as heredity, evolution, natural selection, variation, etc.

Comparative Physiology. — For those intending to study medicine, or to become science teachers in secondary schools, the course in physiology (and microsocopic anatomy) is especially useful. The subject is presented primarily as a pure science, and, with this as a basis, especial attention is

given to the consideration of some aspects of personal hygiene. An extensive course of laboratory work not only acquaints the student practically with the methods of modern physiological investigation, but also affords excellent training in the use of apparatus for accurate measurement of the functional activities of the animal body.

Bacteriology, Fermentation, Sanitary Science, etc. — Students who are preparing for work in some one of the sanitary or industrial applications of biology give special attention to bacteriology, especially in its latest application to sanitary science in the examination of air, ice, and water, and in its industrial applications to dairying, vinegar-making, food-preserving, etc. Owing to their practical importance, the organisms peculiar to or infesting water-works are particularly considered.

A Biological Journal Club, to which the more advanced students are admitted, is made helpful as a means of keeping abreast of current progress, and of giving practice in bibliography and in the public presentation of original matter or of abstracts.

Advanced students in biology devote most of their time to special work, in which they are allowed considerable choice, and they are expected to undertake original observations in their respective specialties. The subjects offered at present for specialization are comparative physiology (including microscopic anatomy) and applied biology (including bacteriology, industrial biology, and sanitary science).

The Institute now affords unusual opportunities for advanced or special work in fermentation, hygiene, and sanitary science. The departments giving the principal instruction in these subjects are those of biology, chemistry, physics, architecture, and sanitary engineering. Graduate or special students, such as physicians, inspectors of boards of health, superintendents of water-works or sewer departments, or persons engaged in industries depending on the activities of yeast, bacteria, etc., if qualified to pursue their work with ad-

vantage, will be admitted to such subjects as they may elect, and will be given every opportunity to equip themselves for their work.

The Biological Laboratories are located in the Henry L. Pierce Building. They comprise four well-equipped laboratories for undergraduates, with smaller rooms for special lines of work, and a laboratory devoted to more advanced or special investigation. In connection with these there is a well-appointed library and reading-room, centrally placed and containing more than two thousand volumes.

A large laboratory of general biology and microscopy supplies the needs of classes in these subjects, as well as of those in elementary zoölogy and botany. It is furnished with microscopes, microscope lamps, suitable work-tables, and other appliances. The proximity of Boston to the sea offers exceptional facilities for work along these lines, as well as for the more advanced study of zoölogy and botany.

A second laboratory, somewhat smaller, furnishes opportunities for the practical work of the classes in comparative anatomy, embryology, cryptogamic botany, and histology. It is equipped with Thoma and Minot microtomes, paraffin baths, microscopes, and reagents for work in the gross and microscopic anatomy of plants and animals. Students of biology have also valuable privileges in connection with the Boston Society of Natural History, of which the museum and library are freely accessible.

For experimental work in physiology there is a special laboratory equipped with continuous roll and drum kymographs, induction coils, and other electrical apparatus, moist chambers, tambours, plethysmographs, etc., for physiological measurements, and with desks for work in physiological chemistry. Adjoining this is a workshop, with lathe and tools, as well as a dark-room for work in physiological optics.

The laboratory of bacteriology, industrial and sanitary biology is supplied with the microscopes, incubating cham-

bers, thermostats, and other special appliances necessary for the detailed and practical study of micro-organisms. In connection with it there is a special culture-room and a room for chemical work and the preparation of nutrient media.

Finally, there is a research laboratory for the use of graduate students and special investigators. This is fitted with thermostats, autoclaves, and other apparatus for the study of problems connected with the sanitary and industrial applications of biology.

This whole series of laboratories is well organized for work directed chiefly towards the microscopical, hygienic, and industrial side of biology, and offers special opportunities for those desiring to fit themselves for teaching or medical study or for practical work in the biological sciences.

Geology and Mineralogy. — The work of the department is introduced by courses in mineralogy and blowpipe analysis. Crystallography is taught with the aid of models, diagrams, and a series of crystals. In mineralogy specimens are freely used, an example of each of the more important species being placed before each student, while a collection of typical specimens is always accessible. The students are taught to identify minerals by their crystallization and physical properties, as well as by blowpipe or chemical tests. The instruction in blowpipe analysis is supplemented by sufficient practice to insure familiarity with the methods.

At the close of the term an excursion of several days is made to localities of mineralogical interest in New England or the adjoining States.

Dynamical Geology.— The course has been planned to meet the requirements of students in a school of industrial science. It discusses the processes by which the earth acquires its topographic and hydrographic features.

It is recognized that the phenomena of the earth's surface directly influence the prosperity of communities, and that some knowledge of them is essential to an intelligent consid-

eration of many questions which arise in the administration of affairs. The subject is accordingly presented in a comprehensive manner, while parts of it are adapted to particular courses, as, for example, to civil engineering.

While the students become familiar with the geological action of streams, the sea, the atmosphere, and even the earth's interior heat, they do not dismiss these topics without considering the limitations imposed upon works constructed to utilize, resist, or evade the power of these agencies. A large number of maps, charts, diagrams, and lantern illustrations are used.

Structural Geology.— Petrology, embracing the principal structural features of large masses of rocks, such as stratification, joint-structure, faults, folds, slaty cleavage, veins, dikes, etc., is taught as concretely as circumstances will allow. Specimens as well as diagrams and other illustrations are freely used in the class-room, and the unusually favorable opportunities which the local geology of the region of Boston presents for the illustration of these topics are utilized by means of frequent field-lessons.

In the instruction in lithology, a large amount of observation or laboratory work is combined with oral instruction. At each lesson a tray containing a typical hand-specimen of each type to be studied is placed before each student, and the lessons consist largely in the examination, testing, and description of the specimens by the students themselves, the instructors directing and supplementing the work of the class. The collections in this department are specially adapted to the laboratory method of instruction, and a complete series of typical rocks is accessible to students at all times. The instruction in chemical geology embraces the formation, alteration, and decay of rocks, the origin of vein-stones and ore-deposits, of rock salt and mineral waters, and of coal and petroleum.

Historical Geology, Stratigraphical Geology.— The physical history of the earth is the subject for study in each of

these two courses, but in the selection of topics and in their presentation each is adapted to the needs of the students to whom it is given. The course in stratigraphic geology is designed for students in civil engineering, and prominence is given to the development and significance of the physical features of the surface. In historical geology a larger amount of time is devoted to the past life of the earth as antecedent to existing species. The students are taught how the geologic events determined the structures and features of existing lands, and that through these we ascertain the causes of the distribution and modes of occurrence of mineral productions, of soils, and of living species. The testimonies of geology upon the doctrine of evolution, and the geologic events which constitute a part of the earliest history of human life upon the earth, are taught in these courses. The courses are illustrated by the use of specimens, maps, diagrams, and lantern projections.

The courses in ore-deposits and economic geology are based upon extensive special collections, and are designed to prepare the students in geology for professional work in connection with mines and quarries, including the selection and testing of materials for structural purposes and for industrial processes. In addition to frequent field-lessons during term-time, students in these courses spend about ten days of the semi-annual vacation with an instructor in some mining district, making a practical study of the modes of occurrence and structural relations of the economic materials, as well as of the methods of mining, etc.

In all the courses in mineralogy and geology especial prominence is given to the practical and economic aspects of these sciences, the main object being to adapt the instruction in each case to meet the special demands of the student's profession, whether it be mining engineering, civil engineering, architecture, geology, biology, or chemistry. Students in architecture, for example, receive a course in which the study of building-stones is the prominent feature, and in

which the regular exercises are supplemented by visits to quarries, stone-yards, buildings, and monuments, and by laboratory practice in physical and chemical tests of the strength and durability of stones.

The Geological Laboratory.— The Geological Department now occupies five rooms in the buildings on Trinity Place, of which four are connecting rooms upon the first floor.

The Rogers Geological Library contains two thousand volumes, the current publications, and the geological and geographical maps used in giving instruction. In the same room is a well-selected and valuable collection of fossils stratigraphically arranged in two hundred and seventy-five drawers. An additional collection is selected and arranged with special reference to teaching structural palæontology from the specimens. The general office of the department is located here and the room is further used for some of the smaller classes.

The laboratory of mineralogy is so equipped as to be convenient both as a class-room and as a laboratory for descriptive and determinative mineralogy. It contains collections of minerals arranged for class-work in each of the above subjects and for the use of students in descriptive mineralogy. The tables in this room have been specially designed for the purpose of practice in blowpipe analysis. Here is also placed a machine for the cutting and polishing of mineral and rock sections.

The laboratory of structural geology (petrography) contains, first, a cabinet collection of rocks and an extensive series of trays specially arranged for the laboratory work in lithology; second, an exceptionally complete petrologic collection; third, a cabinet collection of minerals; and, fourth, the crystallographic illustrations, including both models and natural crystals.

Directly connected with each of these three rooms is the lecture-room, which contains the requisites for the illustration of the lectures given therein.

The laboratory of economic geology is adjacent to these and contains collections of building and ornamental stones, an extensive series of ores, economic minerals other than ores, and the illustrations in chemical geology. The instruction in ore-deposits, economic geology, and building stones is given here.

In addition to the working collections in the Pierce Building, the extensive and valuable mineralogical and geological collections of the Boston Society of Natural History are always open to students in this department. These are very conveniently placed and have been arranged with special reference to the needs of students, each division of mineralogy and geology being separately and fully illustrated in the same order in which it is taken up in the Institute courses. To impart information is regarded as but one portion of the instruction; so far as practicable, the students are led to a direct acquaintance with natural features and objects, and then trained to employ correct methods of interpretation and presentation. The collections are especially adapted for use in teaching, and every available opportunity for field-practice is improved.

Students in the Course in Geology are also expected to devote four weeks in the summer vacation following the third year to field-work in connection with the summer school already described. (See page 108.)

Modern Languages.— The study of modern languages has two principal objects: it is an important means of general training and culture; and it aims also to impart by suitable exercises such facility in reading and translating that the student may avail himself of foreign works relating to his professional department, and may gain as much familiarity with spoken French and German as his aptitudes and the time available may permit. For both purposes, a thorough and systematic study of the structure of the language is deemed to be an essential basis. This is, however, accom-

plished by means of practical work with the language itself, including written and oral exercises, rather than by study of the abstract rules of grammar. Regular students entering the Institute with preparation in French (see page 76) continue that language in the first year, and take German in their second and third years. Students entering with German (see page 77) continue German for one year, and take French in their second and third years. Practice in sight reading is provided in these as well as in special classes. In the Course in General Studies, there is more advanced work in French and German, and an optional course in French literature is open to advanced students. Instruction is offered also in Italian and Spanish.

English.—All regular students receive instruction in English during the first two years of their course. During the first half of the first year they hear lectures and have exercises in English, the aim being not to develop a theory of rhetoric, but to train them to express themselves accurately and adequately. Each student writes, frequently and regularly, themes and exercises of various sorts, which are corrected and returned by the instructors. The student has also frequent opportunities for consulting the instructors in private about his especial needs. By arrangement with other instructors, the note-books in inorganic chemistry and all written exercises in history and political economy are subject to examination and correction by the English Department, which is thus enabled to direct continuously the progress of each student in English composition. In several of the courses this criticism of the English is extended to technical papers in the fourth year. Throughout the second year instruction is given in the history of English literature, with practice in composition under the personal supervision and criticism of an instructor. In this course the student is required to read, as a whole or in part, such representative works as shall give him the best idea of the history and general character of

English literature. The aim of the department is to give students who are looking forward to professional or business life such drill as will help them to express themselves readily, accurately, and adequately, and to aid them in the understanding and appreciation of good literature.

In the Course in General Studies, instruction is offered in the following subjects, optional or required,— English literature before 1560, Elizabethan literature, English literature of the eighteenth century, English literature of the nineteenth century, contemporary English and American literature, logic, advanced English composition, and argumentation. The aim is to give the student thorough drill, according to modern methods, in the literature and literary history of the periods mentioned, and to enable him, by theory and by practice, to express his ideas in a correct and adequate form.

Students have access to a library of nearly three thousand volumes of selected works in English literature.

History and Political Science.— The study of three comprehensive topics in history and political science is required of all regular students, as follows: in the first year, United States history; in the second year, modern political history of foreign countries, illustrating the political progress of the world during the nineteenth century, with particular reference to the growth of political institutions; in the third year, political economy and industrial history, including the discussion of current economic problems.

These three general subjects may be followed or accompanied by several series of more highly specialized historical and political studies, which are required in one or more courses, and are open to all qualified students. The history of England and the United States may be studied continuously for three years; mediæval and modern European history for two years, introducing the student in the following year to the study of the era of the French Revolution.

The instruction in social science and history has been

arranged so as to connect the instruction in biology with that in history. These two departments thus present an unbroken sequence of related studies extending through three successive years, and resting upon the fundamental knowledge of living forms and of prehistoric man that is presented in general biology, zoölogy, and anthropology. The study of social science and history is followed by that of comparative politics and constitutional history. The last link in the chain is international law.

Instruction is imparted by lectures, oral and written recitations, and assignments of reading for which students are held strictly responsible. The topical method of study is employed, and syllabuses of lectures and reference readings are placed in the hands of each student.

Economics. — In the group of economic subjects, the course upon the elements of political economy taken by all regular students is continued for those in the Course in General Studies by more detailed studies extending through three years. During this period, the economic instruction is devoted to five different lines of inquiry: finance and taxation, commercial and industrial history, the theories and methods of social reform, the history of economic theory, and statistics.

The financial history of the United States from 1789 until the present time is studied. The use of public documents is taught, and the student is required to go to official sources for authority as to statements of fact. A second course is directed to the theory and history of taxation in general. A third optional course on the theory of banking and finance describes the most important banking institutions of the world, and treats with more detail the questions of banking and money.

Two courses in commercial and industrial history are presented, the first dealing with questions of transportation, railroads, shipping, and commercial development; the second,

with the industrial organization of society, as illustrated by the experience of England and the United States.

The course on social reform considers the economic systems proposed, particularly during the present century, to change the existing distribution of wealth.

In the last term of the Course in General Studies, a return may be made by optional work to the study of economic theory. The previous general historical studies, as well as the more special ones in finance and industry, lead the student to the development of the different schools of economic thought, from the mercantilists and physiocrats to the more modern representatives of the science.

In statistics there are two courses. The first is elementary, and is devoted to the use of statistical data of the United States, especially in their application to the questions of population, commerce, and finance. The more advanced and optional course treats of the general subject of statistics, its history, method, and technique. A good working library in statistics has been gathered, and the library of the American Statistical Association, deposited with the Boston Public Library and easily accessible, affords special advantages.

For students in the Department of Biology there is given a brief course on vital statistics, especially adapted for the proper interpretation of registration reports.

For students in the Department of Electrical Engineering, a short course on the economics of corporations is given, open also to others who have completed the general course in political economy.

The reading-room of the department contains libraries of authorities to be consulted in the required reference work, a large number of the best magazines and newspapers, both bound and unbound, which are useful in historical and political study, reading-tables, and work-tables for the preparation of maps, charts, diagrams, and especially for statistical work. There is a good collection of maps and diagrams, particularly serviceable for the illustration of industrial and

political history. The library in connection with the reading-room comprises nine thousand selected volumes and several thousand pamphlets. Every student enjoys immediate and unrestricted access to the shelves.

For additional details see the circular of the Course in General Studies.

Military Science and Tactics.— In conformity with the requirements of the Acts [1] of Congress of July 2, 1862, and August 30, 1890, and Section 1225 of the Revised Statutes of the United States, as amended by Act of Congress approved November 3, 1893, and the Acts of the General Court of Massachusetts in furtherance thereof, the Institute provides instruction in military science and tactics.[2]

All male students, except aliens, who take a majority of their studies in the first year, are required to attend military exercises for three hours per week.

For these exercises they are required to provide themselves with uniforms, which are made from measure and by contract, in order to secure uniformity of material and manufacture, as well as cheapness. The whole cost to each student does not exceed eighteen dollars. Any student may be excused from the prescribed course in the military department if he is a college graduate or twenty-three years of age at entrance, or if he passes an examination in the subjects taught during the year. Should a student present to the

[1] "For the endowment, support, and maintenance of at least one college where the leading object shall be without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

[2] An officer of the regular army, with the rank of professor, has the work in charge. On the graduation of every class he is required by statute to obtain from the president, and report to the adjutant general of the army, the names of such students belonging to the class as have shown special aptitude for military service, and to furnish a copy of this report to the adjutant general of the State. The names of the three most distinguished students in military science and tactics will, when graduated, be inserted in the United States Army Register. Names of students who graduated in 1900 reported in official Army Register, January, 1901: Stephen Badlam, Robert Parker Roberts.

Faculty satisfactory evidence of physical disability, he may be excused from the prescribed drill exercises, and in lieu thereof may be required to attend a course of theoretical studies in military science and tactics. All medical certificates intended to show physical disability must be presented within ten days after entrance.

All first-year students are required to fill out blanks stating their previous military experience, and no student may omit military exercises unless he has also appeared before the committee of the Faculty and received his excuse in writing from the Secretary.

Early in the school year an examination will be held with a view to the selection of officers and non-commissioned officers. It will cover the infantry drill regulations from the beginning of the book to the school of the battalion in close order, inclusive, both theoretically and practically, and will be open to all students.

Gymnastics.— Class and individual work are conducted at the Institute gymnasium under the guidance of an experienced instructor.

Libraries.

The libraries of the Institute contain fifty-seven thousand volumes and more than sixteen thousand pamphlets. The General Library of the Institute occupies a spacious and well-lighted room on the first floor of the Rogers Building. In it are to be found books in English literature and modern languages, works on education, proceedings of learned societies that are of general character, and a complete set of the publications of the Institute and its officers; besides encyclopædias, dictionaries, catalogues of other libraries, and other books of reference. The Librarian of the Institute has his office here, and the rooms of the Department of English are in immediate proximity.

The greater part of the books belonging to the Institute are distributed to nine departmental libraries, where they are easily accessible to all students. There is also a small library of about six hundred volumes in the Margaret Cheney Reading-room for the use of women students of the Institute. These libraries, some of which have been mentioned in the preceding pages, contain a careful selection of special treatises, monographs, text-books, etc., and of periodical publications germane to the work of the respective departments. They are thus working libraries, and valuable experience in the use of them is acquired before the completion of the regular courses, either incidentally to the preparation of theses or in connection with lectures or recitations. The division of the library enables each student to consult the works needed by him with the least possible inconvenience.

Students have full use also of the valuable library of the Boston Society of Natural History, and of the extensive collections of the Boston Public Library, comprising more than

five hundred thousand volumes in all departments of knowledge. Many libraries of scientific societies, of individuals, and of private corporations, rich in complete sets of the scientific periodicals of all countries, and of the publications of leading scientific societies throughout the world, are, through the courtesy of the owners, open to advanced students of the Institute.

See also pages 88, 97, 101, 120, 126 and 139

Schedule of Topics.

THE following thirty-six pages form a schedule which includes the larger part of all the distinct topics or subjects of study taught in the Institute. These subjects are classified under headings, such as "Mathematics," "Chemistry," "Physics," "Civil Engineering," "Mining Engineering," etc. In the first column of the table is given the numeral by which any given topic is designated for convenience of reference, the same numbers appearing in the course schedules, pages 32 to 70; in the second column, the name of the subject and the number of the year or years in which it is taught; in the third, the term (1st or 2d) in which the subject occurs; in the fourth, the number of hours per week given to exercises in the subject, the number of weeks being fifteen for each term, except as indicated by subscript figures; in the fifth, the number of the preparatory subject or subjects required of those desiring to be admitted to that in question; in the sixth, the manner in which the subject is taught, whether by lectures, by recitations, or by work in the laboratory, drawing-room, or field, or by several of these in conjunction; in the seventh, the name of the professor or instructor in charge of the exercise; and in the eighth, the courses including this subject. The requirements in column five include not merely the subjects specified by number, but also those required as preparation for them. Thus, for instance, the requirements for 70 (applied mechanics) are 38 and 360; that for 38 is 33; that for 33 is 27; those for 27 are 5 and 22; that for 22 is 20; those for 20 are 1 and 2 (algebra and plane geometry required for admission, page 75); the requirement for 360 is 27 (or 23), which has already been followed through. So that to take up 70,

Applied Mechanics, the applicant must be prepared to pass, or must have passed, examinations in 20, 22, 27, 33, 38, 360, and in 1, 2, and 5. The sufficient reason for this is that in topic 70 use is made of all the subjects referred to; and to carry on the work the student must have had suitable training in all of them. In the fifth column the numbers are in some cases in italics. This denotes that the corresponding topics, if not previously completed, must be taken at the same time with the topic under consideration. For instance, the student cannot take 510, Mechanism, unless he takes 33, 110, and 360 at the same time, or has already completed them. Roman numerals in parentheses in the eighth column designate courses for which the topic in question is optional.

By a careful consideration of the schedule, in connection with the pages on "Subjects and Methods of Instruction" (pages 87 to 141), the applicant for a special course may select for the earlier part of that course such topics as will enable him to pursue later those more advanced subjects which he may particularly desire. He may also ascertain what preparatory training is requisite for admission to any special course at the Institute.

Applications for exception for sufficient causes from the requirements stated in column 5 will always be considered by the Faculty.

The topics included in the schedule are subject to change at any time by action of the Faculty; and the list of studies for which any special student applies must be submitted to the Faculty for approval.

The subjects named below are the entrance requirements, full statements of which are given on pages 75 to 80:

1. ALGEBRA.
2. PLANE GEOMETRY.
3. ENGLISH.
4. HISTORY.
5. SOLID GEOMETRY.
190. FRENCH OR, 200, GERMAN.

MATHEMATICS.

No.	Subject and Year.	Term.	Hours (1) per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
20	Algebra, 1	1	2	(1) (2)	Rec.	Wells	All reg. students.
22	Plane Trigonometry, 1	1	2	(20)	Rec.	Wells	All reg. students.
23	Elements of Plane Analytic Geometry, 1	2	2	(5) (22)	Rec.	Tyler, Bartlett, Bailey, Woods, Skinner	V., VII., IX., XII.
27	Analytic Geometry, 1	2	4	(5) (22)	Lect. Rec.	Tyler, Bartlett, Bailey, Woods, Skinner	All courses except V., VII., IX., and XII.
28	Elements of the Theory of Equations, 1	2	1_{10}	(20)	Rec.	Wells	All courses except I. and XI.
29	Spherical Trigonometry, 1	2	1_{10}	(22)	Rec.	Wells	I., XI.
33	Differential Calculus, 2	1	3	(23) or (27)	Lect. Rec.	Runkle, Osborne, Tyler	All courses except $IV._3$, $V._{2, 3, 4}$, VII., IX., and XII.
34	Differential and Integral Calculus, 2	1	3	(23)	Lect. Rec.	Woods	$V._{2, 3, 4}$
35	Determinants, 2	1	1	(22)	Lect. Rec.	Woods	$VIII._2$
38	Integral Calculus, 2	2	3	(33)	Lect. Rec.	Runkle, Osborne, Tyler	All courses except $IV._3$, $V._{2, 3, 4}$, VII., IX., and XII.

(1) The number of weeks is 15 per term, except as indicated by subscript figures.

MATHEMATICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
45	Differential Equations, 3, G	1	3	(38)	Lect. Rec.	Osborne, Bartlett	V.5, (V. G), VI., VIII., XIII. A.
46	Elements of Differential Equations, 3	1	2½	(38)	Lect. Rec.	Bartlett . . .	II., X., XIII.
47	Quaternions, 3	1	2	(45)	Lect. Rec.	Bailey	VIII.2
49	Theory of Surfaces, 3 . . .	2	2	(35) (38) . .	Lect. Rec.	Woods	VIII.2
50	Advanced Calculus, 3, G . .	2	1	(35) (38) . .	Lect. Rec.	Woods	(V. G), VIII.2, XIII. A.
56	Fourier's Series; La Place's Coefficients, 4, G . . .	1, 2	2	(45)	Lect. Rec.	Bailey	VI. G, VIII.1, 2.
57	Theory of Probability and Method of Least Squares, 3, 4, G	1	2	(38)	Lect. Rec.	Bartlett . . .	I.3, (V. G), VIII., XIII. A.
61	Higher Geometry	1, 2	2	(50)	Lect.	Woods	Elective.
64	Theory of Functions . . .	1, 2	2	(50)	Lect.	Woods	Elective.

ANALYTICAL AND APPLIED MECHANICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
70	Statics; Stresses in Frames; Strength of Materials; Kinematics and Dynamics; Theory of Elasticity, 3 .	1, 2	420 310	(38) (360) . .	Lect. Rec. Lab.	Lanza, Sondericker, Miller, Johnston .	I., XI.
71	Statics and Stresses in Frames, 3, G	1	2	(38) (360) . .	Lect. Rec.	Sondericker . Fuller . . .	II., III.(1), IV.1-2(1), (V. G), VI.(1), X., XIII.
75	Strength of Materials; Kinematics and Dynamics, 3, G	2	3	(71)	Lect. Rec.	Sondericker . Fuller . . .	II., III., (V. G), VI., X., XIII., XIII. A.
76	Strength of Materials; Graphical Statics, 3 . .	2	3(2)	(71)	Lect. Rec.	Sondericker . .	IV.1, 2.
77	Analytical Mechanics, 3 . .	2	3	(45) (360) . .	Lect. Rec.	Lanza	VIII.1, 2.
85	Analytical Mechanics, 4 . .	1, 2	3	(77)	Lect. Rec.	Lanza	VIII.2
86	Strength of Materials; Friction, 4	1	3	(75)	Lect. Rec. Lab.	Lanza, Miller .	II., III., VI., X., XIII., XIII. A.
87	Strength of Materials, 4 . .	1	37	(76)	Lect. Rec.	Lanza	IV.1
88	Strength of Materials; Stability of Structures; Theory of Elasticity, 4 . .	2	3	(86)	Lect. Rec. Lab.	Lanza, Miller .	II., X., XIII., XIII. A.
89	Strength of Materials, 4 . .	1	3	(76)	Lect. Rec.	Lanza	IV.2
90	Strength of Materials, 4 . .	2	37	(89)	Lab.	Miller	IV.2
95	Strength of Materials, G . .	1		(86)	Lect. Rec.	Lanza	VI. G.

(1) 10 weeks. (2) Option 2, 52 exercises.

DRAWING.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
100	Geometrical and Mechanical Drawing, 1	1	6	. . . . .	Lect. Draw.	Faunce	All reg. students.
101	Mechanical Drawing, 1 . . .	2	6_5 [1]	(2) (5) (100) .	Lect. Draw.	Faunce	I., II., III.$_2$, V.$_1$, VI., VIII.$_3$, X., XI., XIII. IV.
102 103	Descriptive Geometry (continuation of 101), 1 . . .	2	6_{10} 12_{12}	(101)	Lect. Rec. Draw.	Faunce	I., II., III.$_2$, V.$_1$, VI., VIII.$_3$, X., XI., XIII. IV.
104	Mechanical Drawing, 1 . .	2	6	(100)	Lect. Draw.	Faunce	III.$_1$, V.$_{2,3,4,5}$, XII.
105	Mechanical Drawing, 1 . .	2	4	(100)	Lect. Draw.	Faunce	VII.$_1$, VIII.$_{1,2}$.
110	Descriptive Geometry [2] . (continuation of 102), 2, 6	1	5	(102)	Lect. Rec. Draw.	Faunce	I., II., III.$_2$, V.$_1$, (V. G.) VI., VIII.$_3$, X., XI., XIII.
115	Freehand Drawing, 1 . . .	1	1	. . . . .	Draw.	Adams	All reg. students.
116 117	Freehand Drawing, 1 . . .	2	2 3	(115)	Draw.	Adams	All courses except IV. IV.
118	Freehand Drawing, 2 . . .	1, 2	4	(117)	Draw.	Adams	IV.
119	Freehand Drawing, 3 . . .	1, 2	4	(118)	Draw.	Adams	IV.
120	Freehand Drawing, 3 . . .	2	2	(116)	Draw.	Adams	XII.$_{2,3}$.

(1) Course IV., 12 hours per week for 3 weeks.
(2) Applicants who have no previous knowledge of the subject, but are otherwise qualified to enter the second year of any of the courses named, should address Professor Faunce as early as possible.

MECHANIC ARTS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge. All instruction is under the general direction of Professor Schwamb.	Taken by
130	Carpentry and Wood Turning, 1	1	9	(*100*) (*115*)	Lab.	Merrick	Special Class.
131	Pattern Work, 1	2	6	(*104*) (*116*) (130)	Lab.	Merrick	Special Class.
132	Foundry Work, 1	2	3	(*104*) (*116*)	Lab.	Merrick	Special Class.
133	Forging, 1	1, 2	6, 3	(*100*) (*115*)	Lab.	Lambirth	Special Class.
134	Chipping and Filing, 1	1, 2	3, 3_6	(*100*) (*115*)	Lab.	Lambirth, Smith	Special Class.
135	Machine-tool Work, 1	2	6_5, 9_{10}	(*104*) (*116*) (134)	Lab.	Smith	Special Class.
136	Wood and Metal Work, 1	2	2	(*104*) (*116*)	Lab.	Merrick, Smith	V., VIII.$_{1, 2}$.
137	Carpentry and Wood Turning, 2, 4	1, 2	2		Lab.	Merrick	VI., VIII.$_3$ ([1]).
138		1	4				II., X.
139	Metal Turning, Brass, etc., 2	1	2		Lab.	Smith	VI., VIII.$_3$
140	Foundry, 2	2	2		Lab.	Merrick	(II.)
141	Pattern Work, 2	2	2	(138)	Lab.	Merrick	II.
142	Forging, 2, 3, G	1, 2	$4, 6_8$		Lab.	Lambirth	II., XIII.
143		2	3				(III. G,) X.
144	Chipping and Filing, 2, 3, 4	2, 1	6_7, 6_5		Lab.	Smith, Lambirth	II., XIII., XIII. A.([1])
146	Machine-tool Work, 4	1, 2	6_{10}, 6	(145)	Lab.	Smith	II., XIII.([2]), XIII. A.
147	Metal Turning, Iron, etc., 4	2	2		Lab.	Smith	X.
149	Pipe-fitting, 4	1	2		Lab.	Smith	XI.

([1]) First term only.

([2]) Ten weeks in second term.

ENGLISH LANGUAGE AND LITERATURE.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
160	Rhetoric and English Composition, 1	1	2	(3) (4) . . .	Lect. Rec. Comp.	Bates	All reg. students.
161	Logic, 1	2	3	(160)	Lect. Rec.	Robinson . . .	IX.
165	English Literature, 2, 3 . .	1, 2	1 (1), 2	(160)	Lect. Rec. Comp.	Bates	All reg. students.
167	English Composition (advanced course), 3. . . .	1	1	(165)	Lect. Comp.	Bates	IX.
169	English Literature: to 1660, 3	1, 2	3	(165)	Lect. Read.	Bates	(IX.)
175	English Literature: 1660–1780, 4	1	3	(165)	Lect. Read.	Bates	IX.
176	Argumentation, 4	1	2	(161)	Lect. Comp.	Pearson . . .	(IX.)
177	English Literature: 1780–1860, 4	2	3	(175)	Lect. Read.	Bates	IX.
178	Contemporary English and American Literature, 4 .	2	2	(165)	Lect. Read.	Bates	(IX.)
179	Journalism, 4	2	2	(165)	Lect. Comp.	Bates	(IX.)

(1) Course IX., 20 hours for the term.

MODERN LANGUAGES.

No.	Subject and Year	Term	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge	Taken by
190	French I. (elementary) (1), 2	1, 2	3	. . . . .	Rec.	Rambeau . . .	All reg. students not taking 200.
191	French II., 1 or 3	1, 2	3	(190)	Rec.	Rambeau . . .	All reg. students.
192	French (sight-reading), 1 . .	2	3	(*191*)	Rec.	Goodell . . .	IX.
193	French III., 2	1, 2	3	(191)	Lect. Rec.	Rambeau . . .	IX.
195	French Literature, 3 . . .	2	2	(193)	Lect. Rec.	Rambeau . . .	(IX.)
200	German I. (elementary) (1), 2	1, 2	3	. . . . .	Rec.	Vogel	All reg. students not taking 190.
201	German II., 1 or 3	1, 2	3	(200)	Rec.	Dippold . . .	All reg. students.
202	German (sight-reading), 3 . .	1, 2	2	(*201*)	Rec.	Vogel	IX.
203	Spanish I., 4	1, 2	2	. . . . .	Rec.	Rambeau . . .	(IX.) XIII., A.
204	German III.	1, 2	3	(201)	Lect. Rec.	Dippold . . .	Elective.
207	Spanish II.	1, 2	2	(203)	Rec.	Erhardt . . .	XIII., A.
208	Italian	1, 2	2	. . . . .	Rec.	Erhardt . . .	(IX.)

(1) Identical with entrance requirement. See page 71.

HISTORY.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
220	United States History, 1 . .	2	2(1)	(4)	Lect. Read.	Currier	All reg. students.
221	European History since 1815, 2, 3	1	2	(220) . . .	Lect. Rec.	Currier	All reg. students.
222	History of England, 2 . . .	1, 2	2	(220) . . .	Lect. Rec.	Sumner . . .	IX.
227	History of England, 3 . . .	1, 2	2	(222) (*228*)	Lect. Rec.	Currier	(IX.)
228	History of European Civilization and Art; principally in the Classical, Gothic, and Renaissance Ages, 3, 4	1, 2	3	(4)	Lect. Read.	Sumner . . .	IV., IX.
230	History of the Era of the French Revolution, 4 .	1, 2	2	(228) . . .	Lect. Rec.	Currier	(IX.)
231	Municipal Government and Administration, 4	1, 2	2	(221) (222)	Lect. Read.	Currier	(IX.)
234	History and Elements of Philosophy, 4	2	3	. . . . .	Lect. Rec.	Robinson . . .	IX.

(1) For Course IX., 3 hours.

ECONOMICS AND STATISTICS. POLITICAL SCIENCE.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
238	Graphic Statistics, 1 . . .	2	4	(100) . . .	Draw.	Ripley	IX.
240	Political Economy, 2 . . .	1	2	(220) . . .	Lect. Rec.	Dewey	IX.
241	Economic Problems, 2 . . .	1	1	(*240*) or (*245*) .	Read.	Ripley	IX.
245	Political Economy and Industrial History, 3, 4 .	1, 2	2, 1([1])	(221) . . .	Lect. Rec.	Dewey, Ripley .	All Courses except IX.
246	Statistics of the U. S., and Graphic Methods, 3 . .	1	2	(240) . . .	Lect. Draw.	Dewey	IX.
247	Theories and Methods of Social Reform, 3 . . .	1, 2	2	(240) or (*245*) .	Lect.	Dewey	(IX.)
250	Financial History of the U.S., 3 or 4	1	3	(240) or (*245*) .	Lect. Rec.	Dewey, Ripley .	IX.
251	Commercial Geography, 3 or 4	1	2_5	(240)	Lect. Rec.	Niles	IX.
252	History of Commerce, 3 or 4	2	3	(222) (240) .	Lect. Rec.	Dewey, Ripley .	IX.
253	History of Industry ([2]), 3 or 4	2	3	(222) (240) .	Lect. Rec.	Dewey, Ripley .	IX.

([1]) See 275.

([2]) Alternating subject, not given the present year.

ECONOMICS AND STATISTICS. POLITICAL SCIENCE.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
255	Taxation and Administration (1), 3 or 4	1	3	(241)	Lect. Rep.	Dewey, Ripley	IX.
256	Descriptive Sociology, 3, 4	2	3	(722)	Lect. Rec.	Ripley	VII-2, IX.
257	Statistics of Sociology, 4	1	3	(246) (252) or (253)	Lect. Rep.	Dewey	(IX.)
258	International Law, 4	1	2	(221)	Lect. Rec.	Ripley	IX.
260	History of Economic Theory, 4	2	–	(250) (255)	Lect. Rec.	Dewey	(IX.)
261	Economics of Corporations, 4	2	2	(245)	Lect. Rec.	Dewey, Ripley	VI.
266	Comparative Politics and Constitutional History, 4	1, 2	3	(256) (220) or (221)	Lect. Rec.	Currier	IX.
268	Vital and Sanitary Statistics, 4	2	1	(245)	Lect.	Dewey	VII.
270	Banking and Finance, 4	2	2	(250)	Lect. Rec.	Not given the present year	(IX.)
275	Business Law, 3, 4	2	1		Lect.	Albers	All reg. students.

(1) Alternative with 250; not given the present year.

CHEMISTRY.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
290	Inorganic Chemistry, 1 . .	1	7	(1) (2) (3) (4)	Lect. Lab. Rec.	Pope, Bardwell .	All reg. students.
291	Inorganic Chemistry: Qualitative Analysis, 1 . . .	2	6(1)	(290)	Lect. Lab.	Pope, Bardwell .	All courses except IV., IX.
295	Theoretical Chemistry (brief course), 2, 3, 4	2	2	(291) (360) . .	Lect.	Whitney . . .	III., VII., X., XII.$_1$
300	Analytical Chemistry: Qualitative Analysis, 2, 3	1	8	(190) or (200) (291) . . .	Lect. Lab.	Talbot, Moore, Hall	III.$_2$, V., XII.$_{1, 2}$.
			10				VII., XIII. A.
			6				III.$_1$, VIII.$_2$
			9				VIII.$_1$, X.
		2	7				VIII.$_3$
			4				XI.
302	Organic Chemistry (brief course), 2, 3	1	1	(291)	Lect.	Norris	VII., VIII.$_{1, 2}$, X., XI.
303	Theoretical Chemistry: Energetics; Atomic Theory, 2, 3	2	2	(34) (291) (360)	Lect.	Noyes	V., VIII.
305	Analytical Chemistry: Quantitative Analysis, 2, 3	2	7	(300)	Lect. Lab.	Talbot, Moore, Hall	III.$_1$
			8				III.$_2$, VII., VIII.$_3$
			10				V.
			6				VIII.$_{1, 2}$, XII.$_{1, 2}$.
			5				X.
		1	3				XI.

(1) Course V., 10 hours.

CHEMISTRY.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
311	Sugar Analysis, 3	1	2_{10}	(305)	Lab.	Rolfe	$V._{2, 3, 4}$
312	Industrial Chemistry, 3	1, 2	2_5 / 3_{10}	(291)	Lect.	Thorp	V., VIII.$_3$, X.
313	Theoretical Chemistry: Ionic Theory; Reaction Velocity, 3, 4	1	1	(303)	Lect.	Noyes	V., VIII.
314	Industrial Chemical Laboratory, 3	1 or 2 / 2	6 / 5	(305) (*312*)	Lab.	Smith	$V._{1, 2, 4}$ / X.
315	Organic Chemistry (brief course), 2, 3	2	1	(*303*)	Lect.	Norris	V., VIII.$_3$, XIII. A.
316	Air, Water, and Food Analysis, 3	1	6 / 7	(305)	Lect. / Lab.	Mrs. Richards, Woodman	$V._{2, 3}$ / VII.
317	Water Analysis, 3	2	2	(305)	Lab.	Mrs. Richards, Woodman	$V._5$
319	Analytical Methods, 3, 4	1 / 1, 2	2 / 2, 1	(305) (*191*) or (*201*)	Lect. / Rec.	Talbot, Fay	VIII.$_3$ / III., V., VIII.$_1$, XII.$_1$
320	Analytical Chemistry: Quantitative Analysis, 3, 4	1, 2	11, 11 / 8, 9 / 12, 13 [1] / 7, 5 / 6, 7	(305) (*319*)	Lab.	Talbot, Fay	III.$_1$ / III.$_2$ / V. / VIII.$_1$, VIII.$_3$ / XII.$_1$
321	Thermo- and Electro-chemistry, 3, 4	2	1 [2]	(313) (*322*)	Lect. / Rec.	Whitney	V., VIII.

[1] Seventeen hours for option 4.

[2] Five hours for $V._5$ and VIII.

CHEMISTRY.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction	Instructor in Charge.	Taken by
322	Chemical Equilibrium, 3, 4 .	2	1	(313) . . .	Lect. Rec.	Noyes	V., VIII.
328	Molecular Weight Determinations, 3, 4	1	1	(*313*)	Lab.	Whitney . . .	V.$_{1, 2, 3, 5}$, VIII.$_{1, 2}$.
329	Organic Analysis, 4	1	5	(320)	Lab.	Mulliken . . .	V.
331	Chemistry of Water and Sewage, 4	1	1	(305) (743) . .	Lect.	Mrs. Richards .	XI.
332	Organic Chemistry, 4 . . .	1, 2	3	(302) or (315) .	Lect.	Mulliken . . .	V., VII.$_1$([1]), (X.)
333	Organic Chemistry, 4 . . .	1	6 9	(302) (305) . .	Lab.	Norris	VII.$_1$. VIII.$_{1, 3}$.
334	Water Analysis, 4	1	2	(305)	Lab.	Mrs. Richards .	XI.
335	Organic Preparations and Reactions, 4	1	13([2])	(315) (*332*) . .	Lab.	Norris	V.
336	Testing of Oils, 4	1	2	(302) or (315) (305) . . .	Lect. Lab.	Gill	V., X.
337	Proximate Technical Analysis, 4	1	6	(320)	Lect. Lab.	Whitney . . .	(V.$_2$.)

([1]) First term only.

([2]) Nine hours for option 4.

CHEMISTRY.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
338	Textile Coloring, 4	1	6	(315) or (302) .	Lab.	Smith	(V.$_2$), (X.)
339	Applied Chemistry, 4 . . .	1, 2	4, 2[1]	(312) (201) . .	Lect. and Lab.	Gill	X.
340	Gas Analysis, 3, 4, G . . .	1 or 2	1	(305)	Lect. and Lab.	Gill	(III. G), V., VIII.$_3$, X.
341	Air Analysis, 4	2	1	(305)	Lab.	Mrs. Richards .	XI.
342	History of Chemistry, 4 . .	2	1	(313) (315) . .	Lect.	Norris	V.
344	Thesis Reports, 4	2	1	(320) (332) . .	Read.	Noyes	V.
350	Advanced Theoretical Chemistry, G	1	1	(322)	Rec.	Noyes, Whitney .	V. G.
351	Advanced Inorganic Chemistry, G	1, 2	1	(320) (370) . .	Rec.	Talbot, Moore .	V. G.
355	Advanced Industrial Chemistry, G	2	1	(312) (332) . .	Rec.	Thorp	V. G.
356	Qualitative Analysis of Rare Metals, G	2	9	(320) (351) . .	Lab.	Noyes	V. G.

[1] Additional work optional.

PHYSICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
360	Physics: Wave-motion, Electricity, Optics, 2	1, 2	5	(23) or (27)	Lect. Rec.	Cross, Wendell, R. R. Lawrence	All reg. students.
361	Descriptive Astronomy, 2	1	2	(23) or (27)	Read.	Drisko	VIII.$_1$.
362	Acoustics, 2	1	2	(27) (*360*)	Lect. Rec.	Clifford	VI., VIII.$_{1, 2}$.
363	Theoretical Electricity, 2	2	2	(360)	Lect. Rec.	Clifford	VI., VIII., XIII. A.
365	Physical Measurements, 2	2	1	(*366*)	Lect.	Goodwin	V., VI., VIII., XIII. A.
366	Physical Laboratory, 2	2	2	(*360*)	Lab.	Goodwin, Derr, Drisko	V., VI., VIII., XIII. A.
367	Physical Laboratory, 2	2	2	(*360*)	Lab.	Goodwin, Drisko	IX.
370	Physics: Heat, 3	1	2$_8$	(360)	Lect.	Clifford	All courses[1] except IV.
371	Photometry, 3	1	1	(360)	Read.	Clifford	VIII.$_{1, 2}$.
372	Heating and Ventilation, 3	1, 2	3, 2	(360)	Lect.	Woodbridge	IV.$_{1, 2}$., IV.$_2$
373	Physical Laboratory, 3	1, 2	2$_7$, 2	(370)	Lab.	Goodwin, Derr, Drisko	I., II., III.[2], VII., X., XI., XII., XIII.,
374	Physical Laboratory, 3	1	2$_7$	(366) (370)	Lab.	Goodwin, Derr, Drisko	V., VI., VIII.
375	Physical Laboratory, 3	2	2	(373)	Lab.	Goodwin, Wendell	VIII.$_{1, 2}$, XIII. A.

(1) Optional in Course IX.

(2) Three hours in second term.

PHYSICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
376	General Electrical Measurements, 3	2	3, 2, 4	(374) (*383*)	Lab.	Laws	VI., VIII.$_{1,2}$, VIII.$_3$
377	Theoretical Electricity, 3	1, 2	2_8	(363)	Lect. Rec.	Clifford	VI., VIII., XIII. A.
378	Methods of Telegraphy, 3	1	2_8	(363)	Lect.	Derr	VI.
379	Industrial Electricity, 3, 4	1	1	(360)	Lect.	Cross	I., II., III.$_1$, V., VI., VIII., (IX.), X., XI.
380	Dynamo-electric Measurements, 3	1	1	(360) (*379*) or (*373*) (*375*)	Lect. Lab.	R. R. Lawrence H. W. Smith	II., III.$_1$
381	Periodic Currents, 3	2	1_7	(377)	Lect. Rec.	Clifford	VI., VIII., XIII. A.
383	Electrical Measuring Instruments and Methods, 3	2	1_8, 2_7	(*374*) or (*375*) (*377*)	Lect.	Laws	VI., VIII., XIII. A.
384	Physico-chemical Laboratory, 3, 4	2	1 2	(*318*)	Lab.	Goodwin	VIII.$_{1,2}$. V.$_{2,5}$.
388	Acoustics, 4	1	1_5	(360)	Lect.	Cross	IV.$_1$
389	Color, 4	2	1_5	(360)	Lect.	Cross	IV.$_1$
390	General Theory of Light, 4	1, 2	2, 3	(38) (360)	Lect. Read.	Clifford	VIII.$_{1,2}$.
392	Photometry, 4	1	–(1)	(374) or (375)	Lect.	Clifford	VI.
393	Energetics, 4, G	2	2	(38) (318) (370)	Lect.	Goodwin	V.$_5$, V. G, VIII.
394	Kinetic Theory of Gases, 4, G.	1	1	(38) (370)	Lect.	Goodwin	V.$_5$, (V. G), VIII.$_{1,2}$.
395	Physical Colloquium, 4	1, 2	2	—	Read.	Goodwin	VIII.

(1) Time specially arranged each year.

PHYSICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
396	Heating and Ventilation, 4	I	1 2	(370)	Lect.	Woodbridge	II 1, 2, 3, XIII. A. XI.
397	Physical Laboratory, 4	1, 2	4, 3	(373)	Lab.	Derr	I.3
398	Heat Measurements, 4, G	I	2 4 3	(373) (374) or (375)	Lect. Lab.	Norton	III., VI. G, VIII.1,2. VIII.3, (X.)
399	Propagation of Electric Waves, 4	I	1	(377)	Lect.	Clifford	(VI.)
400	Electrical Engineering, 4	1, 2	4, 5 3, 3	(375) (377) (379)	Lect.	Cross	VI., XIII. A. VIII.3
401	Dynamo-electric Machinery, 4	I	2	(380) (553)	Lab.	Puffer	II.4
402	Methods of Dynamo Testing, 4	1, 2	–(1)	(400) (406)	Lect.	Puffer R. R. Lawrence	VI., VIII.3(2)
403	Railroad Signals, 4	I	–(1)	(360)	Lect.	Blodgett	I.2, (VI.).
404	Theory of Periodic Currents, 4	I	1	(377)	Lect.	Clifford	VI., VIII., XIII. A.
405	General Electrical Testing(3), 4	I	5 3	(374) or (375) (406)	Lab.	Laws	VI., VIII.3, XIII. A. VIII.1, 2.
406	Electrical Measuring Instruments and Methods, 4	I	210	(383)	Lect.	Laws	VI., VIII., XIII. A.

(1) Time specially arranged each year. (2) First term only. (3) 405 is followed by 420, and hours are subject to transfer.

PHYSICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
407	Electrical Engineering, G . .	1	2	. . . . .	Lect.	Cross	III. G, (V. G).
408	Electro-chemical Laboratory, 4, G	1 / 1, 2	3	(411)	Lab.	Goodwin . . .	(III. G), (V. G), VIII.$_3$.
409	Theory of Alternating Current Machinery, 4 . .	2	2	(404)	Lect.	Clifford . . .	VI., (VIII.$_{1, 2}$.)
410	Photography, 4	2	1	(290) (360) . .	Lect.	Derr	IV.$_3$, Elective.
411	Electro-chemistry, 4, G . . .	1, 2 / 1	2	(313)	Lect.	Goodwin . . .	VIII.$_3$ / V.$_5$, VIII.$_{1, 2}$. / (III. G), (V. G), / VI. G.
412	Potential, Theory of, 4 . .	2	2	(377)	Lect.	Clifford . . .	(VIII.$_{1, 2}$.)
413	Electro-magnetic Theory of Light	2	2	. . . . .	Lect.	Clifford . . .	Elective.
414	Principles of Scientific Investigation, 4	2	3	. . . . .	Read.	Cross	VIII.$_{1, 2}$.
415	Advanced Chemistry or Physics, 4	2	–(1)	(333) (393) .	Read. / Rec.	Noyes . . / Goodwin . . / Wendell .	VIII.$_1$
416	Direct Current Practice, 4 .	2	–(1)	(400)	Lect.	Puffer	VI., VIII.$_3$
417	Alternating Current Practice, 4	2	–(1)	(400) (404) . .	Lect.	Puffer	VI., VIII.$_3$

(1) Time specially arranged each year.

PHYSICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
418	Principles of Dynamo Design, 4	2	–(1)	(400)	Lect.	Derr	VI.
419	Telephone Engineering, 4	2	–(1)	(400)	Lect.	Hayes	VI.
420	Electrical Engineering Laboratory, 4	1, 2	–(2), 36, 5	–(3)	Lab.	Puffer R. R. Lawrence H. W. Smith	VI. VIII.3
421	Electrical and Heat Measurements, 4, G	1, 2 2	2	(373)	Lab.	Laws, Norton	(III. G). V.
422	Electrical Engineering Laboratory, G	1 2	2		Lab.	Puffer.	III. G, (V. G). XIII. A.
424	Calculating Machines	2	1 8		Lect.	Derr	Elective.
425	Applications of Polarized Light, G	2	1		Lect.	Wendell	(V. G).
427	Theory of Diffraction (4)				Lect.	Clifford	Elective.
429	Theory of Wave-surface and Polarization (4)				Lect.	Clifford	Elective.

(1) Time specially arranged each year.
(2) 405 is followed by 420, and hours are subject to transfer.
(3) Students not taking all other fourth-year electrical subjects of Course VI. will apply for admission by petition.
(4) Given in alternate years.

PHYSICS.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
430	Theoretical Electricity, G . .	1, 2	3	–(1)	Lect.	Clifford	VI. G.
431	Electrical Measurements, G .	1	5	–(1)	Lab.	Laws	VI. G.
432	Electrical Engineering Laboratory, G	1, 2	5	–(1)	Lab.	Puffer	VI. G.
433	Design of Stations and Distribution Systems, G .	1, 2	5, 6	–(1)	Lect.	Puffer	VI. G.
434	Dynamo Design, G	1	1	–(1)	Lect.	Derr	VI. G.
435	Electricity, G	2	2	. . . . .	Lect.	Derr	(V. G.)
436	Specifications and Contracts, G	2	2	–(1)	Lect.	. . . . .	VI. G.

(1) Open only to graduates of Course VI.

CIVIL ENGINEERING.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
440	Surveying and Plotting, 2 . .	1, 2	6, 5	(27)	Lect. Rec. Field. Draw.	Burton, Robbins,	I., III.$_1$([1]), IV.$_3$, XI., XII.$_3$
442	Topographical Drawing, 2. .	1	2	(102) or (104) (116) . .	Draw.	Burton, Robbins,	I., III.$_1$, IV.$_3$, XI., XII.$_3$
443	Elements of Astronomy, 2 .	1	1	(*440*)	Lect. Rec. Field.	Burton	I.
448	Curves and Earthwork, 3 . .	1	2	(440)	Lect. Rec.	Breed	IV.$_3$
450	Surveying, 3, G	1, 2	2	(360) (440) .	Lect. Rec. Field. Draw.	Burton, Hosmer,	I., (III. G), IV.$_3$, XI., XII.$_3$
451	Surveying Instruments (six lessons), 3	2	–([2])	(*526*) . . .	Lect. Field.	Burton, Robbins,	II.
452	Railroad Drawing and Field-work, 3	1, 2	4, 5 2, 5	(440) (*453*) . .	Field. Draw.	Allen, Robbins .	I., (III. G), XI.
453	Railroad Engineering, 3 . .	1, 2	2, 3([3])	(38) (440) . (*452*) . . .	Lect. Rec.	Allen	I., XI.

([1]) In second term, for Course III., 4 hours.

([2]) Time included in 526.

([3]) For Course XI., 10 weeks in first term, 7 in the second. For Course I., 10 weeks in second term.

CIVIL ENGINEERING.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
454	Highway Engineering, 3	2	3₅	(448) or (453)	Lect. Rec.	Robbins	I., IV.₃, XI.
455	Stereotomy, 3	1	4	(110)	Rec. Draw.	Porter, Sweet	I., XI.
457	Field-work and Drawing, 3	2	4	(448)	Field. Draw.	Allen, Robbins	IV.₃
460	Theory of Structures, 3	1 2	1₅ 2₁₀	(70)	Lect. Rec.	Swain, McKibben, Spofford	XIII. A. I., XI.
461	Theory of Structures, 3	2	2	(76)	Lect. Rec.	Swain, McKibben	IV.₂
465	Railroad Engineering, 4	1, 2	2, 3	(70) (453)	Lect. Rec.	Allen	I.₂
466	Railroad Management, 4	1	2	(245) (453)	Lect.	Allen	I.₂
467	Geodesy (see also 497), 4	1, 2	3, 12	(57) (450)	Lect. Rec. Field.	Burton, Hosmer	I.₃
468	Practical Astronomy, 4	1	1	(443)	Lect.	Robbins, Hosmer	I.₁, ₃.
470 471	Theoretical Hydraulics, 4	1(1)	3 2₇	(70)(2) (71)	Lect. Rec.	Porter, Sweet	I., XI. II., III., VI., (X.), XIII., XIII. A.
472	Sanitary and Hydraulic Engineering, 4	1	3	(470)	Lect. Rec.	Porter	I.₁, XI.
473	Hydraulic Measurements, 4	1	3₇	(470) or (471) for XII. (450)	Field. Draw. Rec.	Porter, Sweet	I.₁, ₃, (X.), XI., XII.₃

(1) Second term for XIII. A. (2) First term.

CIVIL ENGINEERING

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
474	Theory of Structures: Bridges and Similar Structures, 4, G	1, 2	3	(460)	Lect. Rec.	Swain	I., (III. G), XI.
475	Advanced Structures, 4	2	2	(474)	Lect. Rec.	Swain	I. 1, 2.
478	Bridge Design, 4	1, 2	6	(474)	Draw.	Swain, McKibben, Spofford	I.1, 2.
479		1	5, 4				I.3, XI.
480	Engineering Laboratory, 4	2	28	(470)	Lab.	Miller	I.1, 2, XI.
481	Sanitary Engineering and Drainage: Masonry, 4	1	4	(103)	Lect.	Swain, Porter, Sweet	IV.3
490	Hydraulic Motors, 4	2	2	(471)	Lect. Rec.	Porter	II., (X.).
491	Hydraulic Engineering, 4	2	3	(472)	Lect. Rec.	Porter	I.1, 3, XI.
493	Railroad and Highway Design, 4	1, 2	3	(465)	Draw.	Allen	I.2
494	Sanitary and Hydraulic Designing, 4	2	2 6	(472) (491)	Draw.	Porter, Sweet	I.2 XI.
495	Hydraulic Machinery, 4	2	2	(491)	Lect. Rec.	Porter	XI.
497	Geodesy (see 467), 4	2	1	(38) (450)	Lect. Rec. Field.	Burton	I.1
499	Foundations, 4	1	1	(474)	Lect.	Swain, Spofford	I.1, 2.
500	Theory of Structures, 4	1, 2	3	(87) (461)	Lect. Rec.	Swain	IV.2

MECHANICAL ENGINEERING.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
510	Principles of Mechanism, 2, G	I	2	(33) (110) (360)	Lect. Rec.	Merrill, Park, Haven . .	II., III.$_2$, III. G, (V. G), VI., X., XIII.
511	Principles of Mechanism, 3 .	I	2	(33) (110) (360) (512)	Lect. Rec.	Merrill	V.$_1$, VIII.$_3$
512	Mechanical Engineering, Drawing, 2, 3	I	2	(510) . . (511) . .	Draw.	Schwamb . . Park . . .	II., III. G, V.$_1$ VIII.$_3$, XIII.
515	Mechanical Engineering, Drawing, 2, G	2	6 3 5	(517) or (518) .	Draw.	Schwamb . . Park . . .	II., X. III.$_2$, III. G, (V. G), VI., XIII.
517	Mechanism: Construction of Gear-teeth, Machine-tools, Cotton Machinery, 2, G	2	3	(510) (515) .	Lect. Rec.	Merrill	II., (V. G), X.
518	Mechanism: Construction of Gear-teeth, Machine-tools, 2, G	2	2	(510) (515) .	Lect. Rec.	Merrill, Park, Haven . .	III.$_2$, III. G, VI., XIII.
520	Principles of Mechanism, 2 .	2	2	(33) (110) (360)	Lect. Rec.	Merrill	I.
522	Mechanical Engineering, Drawing, 2	2	3	(110) . . .	Draw.	Schwamb . . Park . . .	VIII.$_3$
523	Mechanism, 2	I	2	(524) . . .	Lect. Rec.	Park	XIII. A.
524	Machine Drawing	I	4	(523) . . .	Draw.	Park	XIII. A.

MECHANICAL ENGINEERING.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
525	Steam Engineering: Valve-gears, Boilers, 3, G . .	1, 2	3	(38) (71) (75) (370) (517) or (518) (526)	Lect. Rec.	Peabody, Miller .	II., III.$_2$, III. G, (V. G), VI., X., XIII., XIII. A.
526	Drawing Design, 3, G . . .	1, 2 1 1, 2 1, 2 1	6, 5 5 3, 2 6, 2 2	(515) (525)	Draw.	Schwamb, Peabody, Park .	II., (V. G). III.$_2$ III. G, VI. X. XIII.
528	Valve-gears and Drawing, 3 .	2	8	(511) (512)	Lect. Draw.	Miller, Park . .	VIII.$_3$
530	Engineering Laboratory, 3, G	2	2	(525) . . .	Lab.	Miller	II., III.$_2$, (V. G), VI., X., XIII., XIII. A.
531	Drawing	1	2	(525) . . .	Draw.	Park	XIII. A.
540	Steam Engineering, 4 . . .	1	2$_8$	(525) . . .	Lect. Rec.	Peabody . . .	II., VI., X., XIII., XIII. A.
541	Steam Engineering, 4 . . .	1, 2	2	(38) (370) (520)	Lect. Rec.	Peabody . . .	I.$_{1, 2}$
542 543	Dynamics of Machines, 4 . .	1	3$_9$ 3$_5$	(86) (525) . .	Lect. Rec.	Lanza, Merrill .	II., XIII., XIII. A., VI., X.

MECHANICAL ENGINEERING.

No.	Subject and Year.	Term.	Hours per Week	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
544	Machine Design, 4	1	9 / 6	(86) (525) / (526) (542)	Lect. / Rec. / Draw.	Schwamb	II. / X.$_5$
545	Engineering Laboratory, 4	1, 2	4	(471) (530) / (540) (542) / or (543)	Lab.	Miller	II., VI. [1], X. [1], XIII., XIII. A.
547	Valve-gears and Drawing, 4	1	8	(511) (512)	Lect. / Draw.	Miller, Park	V.$_1$
550	Locomotive Construction, 4	1, 2	3$_6$, 3	(86) (471) / (540) (542)	Lect. / Rec.	Lanza	II.$_2$
551	Marine Engineering, 4					Peabody	II.$_1$, XIII., XIII. A.
552	Mill Engineering, 4					Schwamb	II.$_3$
553	Heating and Ventilation [2], 4					Woodbridge	II.$_4$
554	Technical Machinery, 4	2	2	(540)	Lect.	Merrill	X.
555	Foundations, 4	2	2$_5$	(88)	Lect.	Lanza	II., XIII. A.
556	Industrial Management, 4	2	2$_5$	(550) (551) / (552) or / (553)	Lect.	Schwamb	II.
557	Engines and Machines, 4	2	4 / 2	(528)	Lect.	Miller	V.$_1$ / VIII.$_3$
559	Engineering Laboratory, 4	2	4	(86) (525) (530)	Lab.	Miller	III.$_2$
560	Drawing and Machine Design, G	1, 2	4, 8	(95) (526) (540)	Lect. / Rec. / Draw.	Schwamb	VI. G.

[1] Course VI. 45, Course X., 50 hours, first term.

[2] Two hours per week in first term.

NAVAL ARCHITECTURE.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
570	Naval Architecture, 3 . . .	1, 2	2	(71) (75) (518) (525) (571)	Lect.	Peabody . . .	XIII., XIII. A.
571	Naval Architectural Drawing, 3	1, 2	6, 5	(570) . . .	Draw.	Peabody, Hovgaard, Leland	XIII., XIII. A.
572	Naval Architecture, 4 . . .	1, 2	2	(86) (525) (540) (542) (551) (570) (573)	Lect.	Peabody . . .	XIII., XIII. A.
573	Naval Architectural Drawing, 4	1, 2	4, 6	(572) . . .	Draw.	Peabody, Hovgaard, Leland	XIII., XIII. A.
575	Naval Architecture, G . . .	1, 2	2	(570)	Lect.	Peabody, Hovgaard . .	XIII. A.
576	Ship Design, G	1, 2	8	(575) . . .	Draw.	Hovgaard . . .	XIII. A.

MINING ENGINEERING.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
580	Blow-pipe Silver Assay, 2 . .	2	2	(291) . . .	Lab.	Richards . . .	III.$_1$, (III.$_2$).
581	Mining Engineering, 3, 4 . .	1, 2 1	3 3	(360) (440) (661) (665)	Lect.	Richards, Locke,	III.$_1$ XII.$_{1,3}$.
582 583	Assaying by Fire, 3	1 2	4 2[1]	(661) (662) .	Lab.	Lodge	III. V., XII.
587	Metallurgy of Iron, 4 . . .	1	1	(291) . . .	Lect.	Hofman . . .	I.$_{1,2}$, II., III., V., X., XI., XII.$_1$, XIII., XIII. A.
588	Metallurgy of Non-ferrous Metals, 4	1	2	(291) (592) .	Lect.	Hofman . . .	III., V.$_4$
589	Elements of Non-ferrous Metallurgy, 4	1	2_{10}	(291) (661) .	Lect.	Hofman . . .	V.$_{1,2,3,5}$, VIII.$_3$, X., XII.$_1$

[1] Four hours for students in option 4 of Course V.

MINING ENGINEERING.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
590	Metallography, 4	1	–	(370) (*587*)	Lect.	Fay	III., XIII. A.
591	Electricity in Mining, 4	2	–	(370)	Lect.	Sprague	Elective.
592	Metallurgical Laboratory, 4	1, 2	8, 14 8, 12 8	(*320*) (360) (582) (*596*)	Lab.	Richards, Hofman, Lodge, Locke	III.$_1$ III.$_2$ V.$_4$ (VIII.$_3$)
593	Mining Engineering, 4	1, 2	2	(360) (661)	Lect.	Richards, Locke,	III., V.$_4$.
595	Memoirs, 4	1, 2	1	(191) (*588*) (599)	Read.	Hofman	III.
596	Laboratory Reports, 4	1, 2	1	(*592*)	Rec.	Richards, Hofman, Lodge, Locke	III., V.$_4$
598	Electro-metallurgy, 4, G	2	1	(408) (*411*) (599)	Lect.	Hofman	(III. G), VIII.$_3$
599	Metallurgy of Non-ferrous Metals and General Metallurgy, 4	2	3	(588)	Lect.	Hofman	III., V.$_4$
600	Ore Dressing, G	1	2	(593)	Read.	Richards	(III. G).
601	Metallography, G	1	1	(398) (587)	Lect.	Fay	(III. G).
602	Metallography, G	1	6	(*601*)	Lab.	Fay	(III. G).
603	Metallurgical Laboratory, G	1, 2	–	(592)	Lab.	Richards, Hofman, Lodge,	(III. G).
605	Ore Dressing, G	2	12	(600)	Lab.	Richards	(III. G).
606	Distillation of Fuels, G	2	2$_3$	(599)	Lect.	Gill	(III. G).

ARCHITECTURE.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
610	Design, 2	1	6 / 5	(103) (*118*)	Lect. / Rec. / Draw.	Gardner	IV.$_{1, 2}$ / IV.$_{3}$
611	Shades and Shadows, 1, 2	1, 2	2$_8$	(*103*) (*117*)	Lect. / Draw.	Gardner	IV.$_{1, 2}$, IV.$_{3}$
612	Materials, 1	2	1	(*103*)	Lect.	Chandler	IV.$_{1, 2}$
618	Design, 2	2	7 / 4	(610) (611) / (*118*)	Draw.	Despradelle / Gardner	IV.$_{1, 2}$ / IV.$_{3}$
619	Perspective, 2	2	1	(611)	Lect. / Draw.	Lawrence	IV.
620	Stereotomy, 2	2	1	(103)	Lect. / Draw.	Gardner	IV. $_{1, 2}$
624	Architectural History, 2	1, 2	1	(*610*)	Lect. / Draw.	Gardner	IV.
625	Design, 3	1	10 / 8	(*119*) (618)	Draw.	Despradelle / Mead	IV.$_{1, 2}$ / IV.$_{3}$
626	Architectural History, 3	1, 2	2	(610)	Lect. / Draw.	Homer	IV.
627	Specifications and Working Drawings, 3	1	4	(612)	Lect. / Draw.	Chandler	IV. $_{1, 2}$
628	Pen-and-ink, 3	2	1	(*118*)	Draw.	Gregg	IV.
629	Structural Design, 3	2	8$_8$	(*461*)	Lect. / Draw.	Lawrence / Swain	IV.$_{2}$
630	Design, 3	2	14	(625)	Draw.	Despradelle / Mead	IV.$_{1}$
631	Landscape Design, 3	2	10	(625)	Draw.	Lowell	IV.$_{3}$

ARCHITECTURE.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
634	Structural Design, 4	1, 2	19, 26	(*500*) (629)	Lect. Draw.	Swain Lawrence	IV.$_2$
635	Design, 4	1, 2	19, 26	(625) (*637*) (*541*)	Draw.	Despradelle	IV.$_1$
636	History of Construction, 4	1	1	(627)	Lect.	Chandler	IV.$_{1, 1, 2}$
637	History of Ornament, 4	1, 2	1$_{10}$	(119) (625) (628)	Lect. Draw.	Walker	IV.$_{1, 3}$
638	Constructive Design, 4	1	7$_8$	(87) (620)	Lect. Draw.	Lawrence	IV.$_1$
639	Pen-and-ink, 4	1, 2	1	(628)	Draw.	Gregg	IV.(1)
640	Water-color, 4	1, 2	2	(119)		Turner	IV.$_{1, 3}$
641	Life Class, 4	1, 2	4	(119)	Draw.	Adams, Brown	IV.$_{1, 3}$
643	Landscape Architecture, 4	1, 2	1	(631)	Lect. Draw.	Lowell	IV.$_3$
644	Landscape Design, 4	1, 2	11, 16	(631)	Draw.	Lowell	IV.$_3$
646	Specifications and Working Drawings; Landscape Gardening, 4	1	2	(*644*)	Lect.	Lowell	IV.$_3$
647	Business Relations, Contracts, etc., 4	2	1 2	(627)	Lect.	Chandler	IV.$_{1, 3}$ IV.$_2$
648	Modelling, 4	2	2	(119)		Bartlett	IV.$_{1, 3}$
649	Building Construction, 4	2	1		Lect.	Chandler	I.$_2$, XI.

(1) Omitted by option 2 in second term.

NATURAL SCIENCES.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
660	Physiography, 2	1	2	(360)	Field. Lab.	Niles	XII.
661	Mineralogy, 2	1	4	(291)	Lect. Lab.	Crosby, Warren	III., V. (1), VII., XII.
662	Blow-pipe Analysis, 2	1	2	(291) (661)	Lab.	Barton, Warren	(III.), V.-2, 3, 4, 5, VII., XII.
665	Dynamical Geology, 2	2	3	(360) 1st term	Lect.	Niles	I., III.-1, IV.-3, (V.-2, 3, 4), VII., IX., XI., XII.
666	Geological Field-work and Laboratory, 2	2	3	(668)	Field. Lab.	Crosby	XII.
568	Structural and Chemical Geology, 2	2	3 (2) 4	(661) (665)	Lect. Lab.	Crosby	III.-1, (V.-2, 3, 4), (VII.-2) XII.
669	Historical Geology, 3	1	3	(670) (568)	Lect. Rect.	Niles	III.-1, VII., XII.
670	Structural Geology, 3	1	2	(291) (665)	Lect. Lab.	Barton	I., IV.-3, XI.
671	Geological Maps and Sections, 3	1	2	(666) (668) (669)	Field. Draw.	Niles	XII.
672	Structural Palæontology, 3, 4	1	4	(716)	Lect. Lab.	Niles	XII., (VII.).
673	Geological Field-work, 3	1	4	(666) (669)	Field. Lab.	Crosby	XII.
674	Elements of Natural Landscape, 3	1	1 10	(665)	Lect.	Niles	IV.-3

(1) Option 1, two hours. (2) Two hours per week alternative with 665 for Course V.

NATURAL SCIENCES.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
675	Stratigraphic Geology, 3	2	2	(670)	Lect. Rec.	Niles	I.
676	Building Stones, 3, 4	2	2	(290)	Lect. Lab.	Crosby	IV.$_{1, 2}$
677	Mineralogy, 3	2	4	(661) (662)	Lect. Lab.	Crosby, Warren	XII.
678	Geology, 3	2	3	(665)	Lect. Rec.	Barton	IX.
679	Glacial Geology, 3	2	1	(669) or (675)	Lect.	Niles, Barton	XII.
680	Stratigraphic Palæontology, 3	2	4	(669) (672)	Lect. Lab.	Niles	XII.
681	Applied Geology, 3	2	8	(671)	Lab. Read.	Niles, Crosby	XII.$_3$
685	Climatology, 4	1	2	(360)	Lect. Rec.	Niles	VII.$_2$ A, IX., XII.
686	Geological Field-work and Laboratory, 4	1, 2	8, 10	(666)	Field. Lab.	Niles, Crosby, Barton	XII.
687	Physiographic Geology, 4	1	3	(669) or (675)	Rec.	Niles	XII.
688	Geological Memoirs, 4	1, 2	1	(669)	Rec.	Niles	XII.
689	Stratigraphic Correlation, 4	1	5	(680)	Lect. Lab.	Niles, Crosby	XII.

NATURAL SCIENCES.

No.	Subject and Year.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
690	Micro-lithology, 4	1, 2	3	(668) (669) (677)	Lect. Lab.	Warren . . .	XII.
691	Ore Deposits, 4	1	2	(668) (669) (677)	Lect. Lab.	Crosby	XII.
692	Experimental Geology, 3, 4 .	1	8 6	(669)	Lab.	Niles	$XII._3$ $XII._2$
695	Economic Geology, 3, 4 . .	2	4	(668) (669) (677)	Lect. Lab.	Crosby	$IV._3$, XII.
696	Hydrography, 4	2	3	(669)	Rec.	Niles	XII.
710	Industrial Microscopy, 1, 2 .	2	2	(290)	Lect. Rec. Lab.	Sedgwick . . .	$V._{2, 3, 4}$, VII.
711 712	General Biology, 2	1	5 4	(290)	Lect. Rec. Lab.	Sedgwick . . .	VII., XII. IX.
713	Microscopy, 2	1	2	(290)	Lect. Lab.	Winslow . . .	$VIII._{1\,2}$
714	General Biology, 2	1	1	(290)	Lect.	Prescott . . .	$IV._3$
715	General Biology, 2	2	1	(291)	Lect. Lab.	Sedgwick . . .	$V._{2, 3, 4}$, XI.
716	General Zoölogy, 2	2	2	(711) or (712) .	Lect. Lab.	Weysse . . .	VII., IX., XII.
717	General Botany, 2	2	1	(712)	Lect. Lab.	Prescott . . .	IX., XII.

NATURAL SCIENCES.

No.	Subject.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
718	Cryptogamic Botany, 2 . .	2	5	(711)	Lect. Lab.	Prescott . . .	VII.
719	Horticulture, 2	1, 2	2	(714)	Lect. Lab.	Jack	IV.$_3$
720	Elements of Botany, 2 . . .	2	2	(714)	Lect. Lab.	Prescott . . .	IV.$_3$
722	Anthropology, 3	1	1	(716)	Lect.	Ripley	VII., IX., XII.
723	Comparative Anatomy and Embryology, 3 . . .	1, 2	8	(711)	Lect. Rec. Lab.	Weysse . . .	VII., XII.$_2$
724	Horticulture, 3	1, 2	4	(717)	Lect. Lab.	Jack	IV.$_3$
726	Microscopical Organisms, 3 .	1	1	(715)	Lect. Lab.	Winslow . . .	XI.
728	Sanitation of Ships	2	1	. . . . .	Lect.	Sedgwick . . .	XIII. A.
729	General Bacteriology, 3 . .	2	4	(302) (711) or (712) or (715)	Lect. Rec. Lab.	Prescott . . .	V.$_3$, VII., XI.
730	Microscopic Anatomy, 3, 4 .	2 / 1	5 / 3	(720)	Lect. Rec. Lab.	Weysse . . .	VII.
735	Comparative Physiology, 4 .	1, 2	5	(720)	Lect. Rec.	Hough	VII.
736	Physiological Laboratory, 4 .	1	5	(720)	Lab.	Hough	VII.
738	Theoretical Biology, 4 . . .	1, 2	1, 2	(720)	Lect.	Bigelow . . .	VII.

NATURAL SCIENCES.

No.	Subject.	Term.	Hours per Week.	Preparation Required.	Method of Instruction.	Instructor in Charge.	Taken by
739	Journals, 4	1, 2	1	(711)	Read.	Sedgwick, Hough	VII.
740	Industrial Biology, 4	1	4	(302)	Lect. Lab.	Prescott	V.$_3$, VII.
741	Physiology and Personal Hygiene, 4	1	2	(711)	Rec. Lab.	Hough	IX.
742	History of Inductive Sciences, 4	1	1	(290)	Lect.	Sedgwick	VII., VIII.$_{1, 2}$.
744	Hygiene of Ventilation, 4	1	1$_5$	(553)	Lect.	Sedgwick	I.$_4$
745	Mammalian Anatomy, 4	1	3	(720)	Lect. Lab.	Weysse	VII.$_2$
746	Horticulture, 4	1, 2	4	(724)	Lect. Rec. Lab.	Jack	IV.$_3$
749	Bacteriology of Water and Sewage, 4	1	2	(743)	Lect. Rec. Lab.	Sedgwick, Winslow	V.$_3$, VII., XI.
750	Sanitary Science and Public Health, 4	2	1	(290)	Lect.	Sedgwick	I.$_1$, IV., V.$_3$, VII., IX., XI.
751	Microscopical Analysis of Water and Sewage, 4	2	2	(743)	Lect. Rec. Lab.	Winslow	V.$_3$, VII.$_1$, XI.
752	Municipal Sanitation, 4	2	2	(743)	Lect. Rec. Lab.	Sedgwick, Winslow	VII., XI.

Regulations.

School Year.— The first term begins on the first Wednesday after September 25. There is a recess of one week after the semi-annual examinations, and the second term begins on the first Tuesday after February 4. On legal holidays, on the Friday and Saturday following Thanksgiving Day, and for one week at Christmas, and three days in April, the exercises of the school are suspended.

CALENDAR FOR 1901–1902.

School Year began	Wednesday, Oct. 2, 1901.
Semi-annual Examinations begin	Tuesday, Jan. 21, 1902.
Second Term begins	Tuesday, Feb. 11, 1902.
Annual Examinations begin	Tuesday, May 27, 1902.
Degrees conferred.— School Year ends	Tuesday, June 10, 1902.
First Entrance Examinations	Thursday, June 26, 1902, and Friday, June 27, 1902.
Examinations for Advanced Standing begin	Monday, Sept. 22, 1902.
Second Entrance Examinations [1]	Tuesday, Sept. 23, 1902, and Wednesday, Sept. 24, 1902.
School Year of 1902–1903 begins	Wednesday, Oct. 1, 1902.

CALENDAR FOR 1902–1903.

School Year begins	Wednesday, Oct. 1, 1902.
Semi-annual Examinations begin	Tuesday, Jan. 20, 1903.
Second Term begins	Tuesday, Feb. 10, 1903.
Annual Examinations begin	Tuesday, May 26, 1903.
Degrees conferred.— School Year ends	Tuesday, June 9, 1903.
First Entrance Examinations	Thursday, June 25, 1903, and Friday, June 26, 1903.
Examinations for Advanced Standing begin	Monday, Sept. 21, 1903.
Second Entrance Examinations [1]	Tuesday, Sept. 22, 1903, and Wednesday, Sept. 23, 1903.
School Year of 1903–1904 begins	Wednesday, Sept. 30, 1903.

[1] See page 83.

The Status of Students in regard to scholarship and ability to continue their courses is determined in part by means of examinations; but regularity of attendance and faithfulness to daily duties are considered equally essential.

Examinations.— General examinations are held each year in January and in May; but examinations in fourth-year subjects finished before the end of the term may be held at the close of the respective courses. The January examinations are confined to the work of the first half of the year. The May examinations may cover the work of the entire year. In the fourth year the annual examination covers, in addition, any professional work upon which the instructors in charge may choose to examine. Any member of the Faculty may omit an examination in a third or fourth-year subject, if, in his judgment, such examination is unnecessary. In certain first and second-year subjects, students are marked upon term work without examinations.

Examinations for students conditioned in May in subjects of the first, second, and third years are held on the Friday and following days previous to the September entrance examinations, and for first-term subjects at the time of the May examinations.

Intermediate examinations, the results of which are not made a matter of permanent record, but are primarily for the information of students and their parents or guardians, may be held at any time in place of regular exercises.

Students conditioned in any subject and failing to make up the condition at the time appointed for the examination are not entitled to another examination, but will be required either to repeat the subject or to discontinue it, as well as all subjects dependent thereon, unless further time be allowed by special vote of the Faculty. A regular student failing entirely to make up any condition will cease to be regular, and his name will be transferred to the list of special students.

Students having clear records at the end of their first term

are allowed to choose their courses without restriction. Students will not be admitted to professional work of the several courses without clear records in those previous subjects on which the former especially depend. Intermediate cases are specially considered by the Faculty.

Any special student attaining a proper standing in all subjects required of a regular student, up to any given period of the course, may apply to have his name transferred to the list of regular students.

Reports of Standing.— Intermediate informal reports for all first and second-year subjects are sent to students, and to the guardians of those not of age, twice during each term. Formal semi-annual reports are sent at the close of each term. In connection with these reports special votes of the Faculty are transmitted in cases requiring consideration.

Attendance Card.— At the opening of each term the student is required to fill out and present to the Secretary an attendance card, blank forms for which are supplied. The attendance card is the direct means by which the student places before the Faculty his wishes in regard to his professional course or selection of studies. The card must be presented at the earliest possible moment, to give opportunity for the immediate determination of qualifications and status. All subjects applied for must be regularly pursued, and no others can be taken except by special permission of the Faculty, duly applied for by petition.

Bond or Deposit.— Every student is required, on entering the school, to file with the Bursar a bond in the sum of two hundred dollars, signed by two responsible sureties, one of whom must be a citizen of the United States, as security for the payment of all charges of the Institute against him. If, for any reason, such a bond cannot be obtained, a deposit of fifty dollars may, in exceptional cases, be accepted as security.

are allowed to choose their courses without restriction. Students will not be admitted to professional work of the several courses without clear records in those previous subjects on which the former especially depend. Intermediate cases are specially considered by the Faculty.

Any special student attaining a proper standing in all subjects required of a regular student, up to any given period of the course, may apply to have his name transferred to the list of regular students.

Reports of Standing.— Intermediate informal reports for all first and second-year subjects are sent to students, and to the places before the Faculty his wishes in regard to his professional course or selection of studies. The card must be presented at the earliest possible moment, to give opportunity for the immediate determination of qualifications and status. All subjects applied for must be regularly pursued, and no others can be taken except by special permission of the Faculty, duly applied for by petition.

Increase of Tuition Fee.— In view of large expenditures for improvements in the near future, the tuition fee will be increased to $250 for students entering after 1902.

Bond or Deposit.— Every student is required, on entering the school, to file with the Bursar a bond in the sum of two hundred dollars, signed by two responsible sureties, one of whom must be a citizen of the United States, as security for the payment of all charges of the Institute against him. If, for any reason, such a bond cannot be obtained, a deposit of fifty dollars may, in exceptional cases, be accepted as security.

No officer of instruction or student of the Institute will be received as a surety.

Fees.— The tuition fee for regular students is $200 per year, and must be paid *in advance* as follows,— $125 on or before October 10, and $75 on or before February 10. No bills are sent in advance for the *first* term. For one-half or any less fraction of the school year, the fee is $125. Payment is required also for chemicals used and for apparatus injured or destroyed in the laboratories, and for the cost of repair of damage by students to any other property of the Institute. Special students pay, in general, the full fee; but when a few branches only are pursued, and the time required for instruction is limited, application for reduction may be made to the Bursar. The fee for students in graduate courses is the same as that for regular students.

It is desired that regular students whose financial necessities are such as to prevent their continuance at the Institute communicate, through the Secretary, with the Scholarship Committee of the Faculty.

Payments.— All payments should be made to Albert M. Knight, Bursar. If by check, remittance from points out of New England should be in New York or Boston funds.

Undergraduate Scholarships.— The resources of the Institute for undergraduate scholarships have been largely increased by recent benefactions. It is the policy of the Faculty to apply the funds available to the assistance of as many students as possible by assigning, in general, amounts less than the full tuition. Preference is given in making awards to applicants who have completed at least a year of thoroughly satisfactory work at the Institute. In the case of an applicant not already in the Institute, it is important that full information should be presented from former teachers as to capacity. The facts considered in making assignments are the needs of

the student and his promise, as indicated by his previous work. It is expected that only those students who are greatly in need of aid will apply for scholarships, and none will be awarded to a student who gives little promise of future usefulness. Awards will be made in October, and five-eighths of the amount awarded will be credited on the term bill due in October, and the remaining three-eighths on the term bill due in February. Applications for scholarships should be made by June 1 on blanks supplied by the Secretary of the Faculty. Application for Massachusetts State Scholarships should be made only to the Secretary of the State Board of Education, State House, Boston, from whom the necessary blanks may be obtained. The Faculty Committee on Scholarships desires, however, to be informed, through the Secretary of the Faculty, in regard to the needs of applicants for State Scholarships, in order that recommendations to the State Board of Education may be based on full knowledge of personal circumstances, as well as of scholastic standing.

Massachusetts State Scholarships. In consideration of aid received from the Commonwealth, the Institute has established forty free scholarships, one being assigned to each senatorial district of the State. In many cases these scholarships are divided in halves in order to assist a larger number of applicants. Information regarding the terms and condition upon which these are to be awarded may be obtained by addressing the Secretary of the State Board of Education, State House, Boston.

William Barton Rogers Scholarship Fund. The income from this fund, which was presented by the Alumni Association of the Institute as a memorial of the late President Rogers, is applied to aiding needy students. Grants from this fund carry with them the obligation of ultimate repayment, and all amounts returned become immediately available as income.

Coöperative Scholarship. The Coöperative Society of the

students of the Institute applies its annual profits to the assistance of members of the Society, selected by its Board of Directors.

Perkins Fund. By a request of Richard Perkins, of Boston, the income of fifty thousand dollars is available for aiding students in such amounts as shall be recommended by the Faculty.

Vose Fund. By the will of Mrs. Ann White Vose, the Institute has received about forty thousand dollars, the income of which is used for scholarships.

Dickinson Fund. By the will of Mrs. Ann White Dickinson, the Institute has received about sixty thousand dollars, the income of which is applied to the assistance of needy and deserving students.

Billings Student Fund. By the will of Robert C. Billings the Institute has received fifty thousand dollars. Any student receiving a benefit is expected to abstain from the use of alcohol or tobacco.

Elisha Atkins Scholarship and Farnsworth Scholarship. Founded by the late Mrs. Mary E. Atkins, of Boston.

Charles L. Flint Scholarship. Founded by the late Charles L. Flint, of Boston. This scholarship is to be awarded, by preference, to a graduate of the Boston High School.

T. Sterry Hunt Scholarship. Founded by bequest of the late T. Sterry Hunt, for seven years Professor of Geology at the Institute; preference will be given chemical students of the higher years.

William F. Huntington Scholarship. Founded in memory of William F. Huntington, who graduated in Civil Engineering in the Class of '75. Preference will be given to a student in that course.

Joy Scholarships. The money by which these scholarships are sustained was given by Miss Nabby Joy. They were created pursuant to a decree of the Supreme Judicial Court of Massachusetts, for the benefit of one or more women studying natural science in the Institute. At present one scholarship

only is available; a second will be established when the fund has increased sufficiently to warrant such an expenditure.

Elisha T. Loring Scholarship. Founded by the late Elisha Thacher Loring, of Boston.

Milton High School Scholarship. Founded by the contributions of residents of Milton. This scholarship will be conferred upon such former pupil of the Milton High School as the master of that school and the school committee of the town may select.

James Henry Mirrlees Scholarship. Founded by James B. Mirrlees, of Glasgow, Scotland, in memory of his son, who died in May, 1886, while attending the Institute. This scholarship will be awarded to a third or fourth-year student in Mechanical Engineering.

Nichols Scholarship. Founded by bequest of the late Mrs. Betsey F. M. Nichols in memory of her son, William Ripley Nichols, of the Class of '69, for sixteen years Professor of General Chemistry at the Institute. Preference will be given to students in the Chemical Course.

Sherwin Scholarship. Founded by the English High School Association in memory of the late Thomas Sherwin. The pupil to receive the privilege of this scholarship is to be a graduate of the English High School of Boston and a regular student of the Institute.

The Class of 1891, on leaving the Institute, provided funds for a system of letter-boxes for the use of students. Any profits accruing from the rental of these letter-boxes will be applied to the assistance of scholarship applicants.

Graduate Scholarships and Fellowships.— Applications for graduate scholarships or fellowships must be presented to the Secretary of the Institute not later than October 1. Each application must be accompanied with a detailed statement of the proposed course of study, which will be submitted to the Faculty for their approval.

The Institute now possesses the following funds, the income of which is available, wholly or in part, for fellowships and graduate scholarships.

Austin Fund. The Institute has received from the estate of the late Edward Austin a bequest of $340,000 to assist needy meritorious students and teachers in payment of their studies. This munificent endowment places the Institute in a position to provide for the needs of its students and teachers in a manner heretofore impossible.

The distribution for the year 1900–1901 included provision for twenty-five undergraduate scholarships, in addition to those referred to on pages 188 to 189.

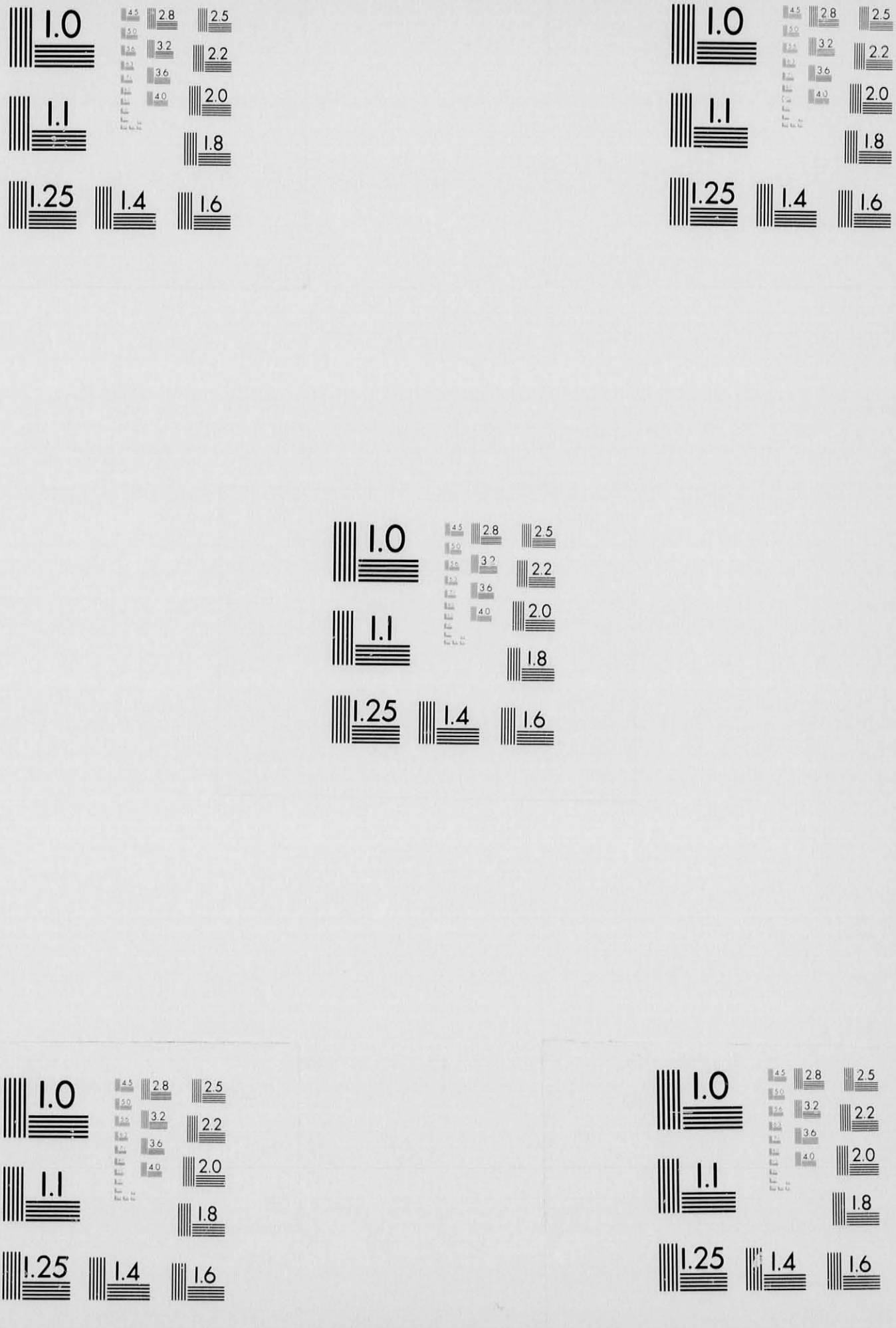
Dalton Graduate Scholarship. Founded by Charles H. Dalton, the income to be used for the payment of fees of American male students, graduates of the Institute, who may wish to pursue advanced chemical study and research, especially applicable to textile industries.

Perkins Graduate Scholarship. Founded by bequest of Willard B. Perkins, of the Class of '72. The income of six thousand dollars is available in every fourth year for a travelling scholarship in architecture.

James Savage Fellowship Fund. Founded by the late James Savage. Four hundred dollars from the income of this fund will be annually awarded to a graduate student of the Institute, or of some similar institution of equal standing. This sum will be awarded only to a student of ability who wishes to engage in the advanced study of some branch or branches of knowledge taught in the Institute.

Susan H. Swett Fellowship Fund. Four hundred dollars from the income of this fund will be annually awarded to a graduate student of the Institute, or of some similar institution of equal standing, who, by his character, capacity, training, and attainments, shall give evidence of special fitness to pursue advanced study in some branch or branches of knowledge taught in the Institute. The holder of this fellowship will be eligible to reappointment for a second year; and if in any year the sum above named cannot be advantageously used for the purpose prescribed, no appointment will be made.

For both of these fellowships the preference is given to graduate students who are candidates for advanced degrees.


1.0
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3.2
2.2
3.6
2.0
4.0
1.8
4.5
5.0

Residence and Expenses.— As the exercises of the school begin at nine o'clock in the morning, and end before five o'clock in the afternoon, students may conveniently live in any of the nearer cities or towns, on the lines of the various railroads, if they prefer to do so.

The cost of board and rooms in Boston and the neighboring cities and towns need not exceed seven or eight dollars a week. The cost of books, drawing instruments, paper, etc., exclusive of chemical breakage, is from twenty-five to thirty-five dollars a year.

Attendance.— Regular students are expected to attend all the exercises of their several courses. Special students are expected to attend all the exercises in subjects applied for on their attendance cards, unless excused by special vote of the Faculty. Students are in general expected to devote themselves to the work of the school between the hours of 9 A.M. and 4 P.M., except during the interval from 1 P.M. to 2 P.M. There are no exercises on Saturday afternoon, and the rooms are closed.

Advisers.— For the purpose of giving students the means of readily obtaining friendly advice, each new student is assigned to some member of the instructing staff, who acts as his adviser.

It is not intended by this rule that the advisers shall become, in any sense or in any degree, the guardians of the students assigned to them, nor does the Faculty by this action assume any responsibility for the conduct and deportment of students outside the halls of the Institute.

Medical Adviser.— Dr. Franklin W. White, 416 Marlborough Street, a graduate of the Institute, has been appointed medical adviser for students, and will address them during the year on personal hygiene.

Conduct.— It is assumed that students come to the Institute for a serious purpose, and that they will cheerfully conform to such regulations as may be from time to time made by the Faculty. In case of injury to the building, or to any of the furniture, apparatus, or other property of the Institute, the damage will be charged to the student or students known to be immediately concerned; but if the persons who caused the damage are unknown, the cost of repairing the same may be assessed equally upon all the students of the school.

It is the aim of the Faculty so to administer the discipline of the school as to maintain a high standard of integrity and a scrupulous regard for truth. The attempt of any student to present as his own work which he has not performed, or to pass any examination by improper means, is regarded by the Faculty as a most serious offense, and renders the offender liable to immediate expulsion. The aiding and abetting of a student in any dishonesty is also held to be a grave breach of discipline.

Register of Students.

For residence addresses in suburban portions of Boston the following abbreviations are used:

A.	Allston.	M.	Mattapan.
B.	Brighton.	N.	Neponset.
C.	Charlestown.	R.	Roxbury.
D.	Dorchester.	Ros.	Roslindale.
E. B.	East Boston.	S. B.	South Boston.
J. P.	Jamaica Plain.	W. R.	West Roxbury.

FELLOWS.

NAME.	HOME.	RESIDENCE.
Blanchard, Arthur Alphonzo	*Newton Centre*	Leipsic, Germany.
S.B., Massachusetts Institute of Technology. Austin Fellow.		
Brown, John Wesley	*Newburyport*	Heidelberg, Germany.
S.B., Massachusetts Institute of Technology. Austin Fellow.		
Chapin, Lewis Paul	*Boston*	Leipsic, Germany.
Ch.E., University of Minnesota. Austin Fellow.		
Coffin, Joseph George	*Boston*	Worcester.
S.B., Massachusetts Institute of Technology. Austin Fellow.		
Sherrill, Miles Standish	*Boston*	Leipsic, Germany.
S.B., Massachusetts Institute of Technology. Austin Fellow.		
Thompson, Maurice de Kay, Jr.	*Boston*	Zürich, Switzerland.
S.B., Massachusetts Institute of Technology. Savage Fellow.		
Walton, James Henry, Jr.	*Boston*	Heidelberg, Germany.
S.B., Massachusetts Institute of Technology. Austin Fellow.		

GRADUATE SCHOLARS.

NAME.	HOME.	RESIDENCE.
Birks, Arthur Henry	*Peoria, Ill.*	17 Blagden St.
S.B., Massachusetts Institute of Technology.		
Henrich, Louis Richard	*Buffalo, N.Y.*	2 Claremont Park.
S.B., Massachusetts Institute of Technology.		
Holford, William Gordon	*Hazardville, Conn.*	96 Pembroke St.
S.B., Massachusetts Institute of Technology.		

GRADUATE SCHOLARS (*continued*).

NAME.	HOME.	RESIDENCE.
Hyde, George Taylor . . . . S.B., Massachusetts Institute of Technology.	*Montreal, Que.* . . .	264 Newbury St.
Kattelle, Walter Roby . . . S.B., Massachusetts Institute of Technology.	*Auburndale*	Auburndale.
Lawrence, Ellis Fuller . . . . S.B., Massachusetts Institute of Technology.	*Cambridge*	Cambridge.
Morse, John Henderson . . . B.A., University of Nashville.	*Corsicana, Tex.* . .	444 Mass. Ave.
Pearse, Langdon . . . . . S.B., Massachusetts Institute of Technology.	*Boston*	317 Walnut Ave.
Phalen, William Clifton . . . S.B., Massachusetts Institute of Technology.	*Gloucester*	Cambridge.
Puckey, Francis Willard . . . S.B., Massachusetts Institute of Technology.	*Wilkesbarre, Pa.* . .	16 Berwick Park.
Swanton, Henry Aiken . . . S.B., Massachusetts Institute of Technology.	*Roxbury*	1 Regent St., R.

GRADUATE STUDENTS.

(Not including Fellows or Graduate Scholars.)

NAME.	HOME.	RESIDENCE.
Aldrich, William Truman . . S.B., Massachusetts Institute of Technology.	*Warwick Neck, R.I.* .	36 Newbury St.
Alsberg, Julius . . . . . A.B., M.E., Columbia University.	*New York, N.Y.* . .	80 Huntington Ave.
Asbury, Louis Humbert . . . A.B., Trinity College.	*Charlotte, N.C.* . .	23 Concord Sq.
Baetjer, Howard . . . . . A.B., Johns Hopkins University.	*Baltimore, Md.* . .	136 Newbury St.
Baker, Horace Singer . . . . B.S., Northwestern University.	*Evanston, Ill.* . . .	124 Huntington Ave.
Bartberger, Edward William . B.S., Columbia University.	*Pittsburgh, Pa.* . .	35 St. Botolph St.
Bartlett, Stephen Russell . . . A.B., Yale University.	*Boston*	2 Commonwealth Ave.
Bedford, Thomas Payne . . . B.S., Central College.	*Fayette, Mo.* . . .	106 Huntington Ave.
Bell, Hermon Fiske . . . . . A.B., Amherst College.	*Bristol, R.I.* . . .	566 Mass. Ave.
Bellows, Robert Peabody . . . A.B., Harvard University.	*Boston*	29 Hereford St.
Bixby, Llewellyn . . . . . B.L., Pomona College.	*Claremont, Cal.* . .	Newton Highlands.
Bolster, May Morrill . . . . B.L., Smith College.	*Roxbury*	10 Cobden St., R.
Bolster, Roy Hale . . . . . S.B., Massachusetts Institute of Technology.	*Roxbury*	10 Cobden St., R.
Bouscaren, Gustave, Jr. . . . A.B., St. Xavier College.	*Cincinnati, Ohio* . .	6 Louisburg Sq.
Boyden, Charles . . . . . A.B., Harvard University.	*Boston* . . .	267 Commonwealth Ave.
Bradshaw, George B. . . . . B.A., Beloit College.	*De Kalb, Ill.* . . .	566 Mass. Ave.

GRADUATE STUDENTS (*continued*).

NAME.	HOME.	RESIDENCE.
Braley, Jessie Nelson . . . . A.B., Wellesley College.	*New Bedford* . . .	47 St. Botolph St.
Brown, Howard Melville . . . A.B., Yale University.	*Comstock's Bridge, Ct.*	122 Huntington Ave.
Brownell, Frank Wilbur . . . B.A., Mt. Allison College.	*Chelsea*	Chelsea.
Bruton, Alfred William . . . A.B., Johns Hopkins University.	*Baltimore, Md.* . .	Beacon Chambers.
Burke, Fletcher Hamilton . . A.B., Canisius College.	*Buffalo, N.Y.* . . .	663 Tremont St.
Canby, Harry Beaver . . . . A.B., Denison University.	*Dayton, Ohio* . . .	Hotel Westminster.
Carmichael, George Patrick . . A.B., Villanova College.	*Boston*	282 Mass. Ave.
Clark, William Merritt . . . Ph.B., Sheffield Scientific School.	*New Haven, Conn.* .	76 Huntington Ave.
Cobb, Andrew Randall . . . A.B., Acadia College.	*Pt. William Sta., N.S.*	71 Newbury St.
Cross, William Perkins . . . Ph.B., University of Rochester.	*Rochester, N.Y.* . .	Beverly.
Desloge, Firmin Vincent . . . A.B., Christian Brothers College.	*St. Louis, Mo.* . . .	86 Huntington Ave.
Donovan, Jeremiah John . . . A.B., Boston College.	*Randolph*	Randolph.
Dunn, John Franklin . . . . B.S., Davidson College.	*Ocala, Fla.*	177 St. Botolph St.
Dwyer, Emmet Joseph . . . A.B., Detroit College.	*Detroit, Mich.* . . .	7 Newbury St.
Eastwood, Everett Owen . . . B.S., C E., M.A., University of Virginia.	*Portsmouth, Va.* . .	263 Newbury St.
Edwards, Robert Seaver . . . A.B., Bowdoin College.	*Jamaica Plain* . . .	14 Harris Ave., J.P.
Ferguson, William Burder, Jr. . Graduate, U.S. Naval Academy.	*Waynesville, N.C.* .	Navy Yard, C.
Foley, Daniel Alfred Berchmans A.B., Boston College.	*Boston*	193 Salem St.
Geraghty, Thomas Francis . . A.B., St. Ignatius College.	*Chicago, Ill.*	139 Beacon St.
Gilbert, Albert Champion . . B.Agr., Connecticut Agricultural College.	*Gilead, Conn.* . . .	Cambridge.
Gillett, William Lowry . . . B.A., University of the South.	*Evansville, Ind.* . .	566 Mass. Ave.
Glover, George Curtis . . . . S.B., Massachusetts Institute of Technology.	*Boston*	33 Upton St.
Goodrich, Robert Rhea . . . S.B., Massachusetts Institute of Technology.	*Boston*	497 Columbus Ave.
Graber, Howard Tyler . . . B.S., University of Illinois.	*Peoria, Ill.*	502 Columbus Ave.
Graham, Minnie Almira . . . A.B., Mount Holyoke College.	*Lockport, N.Y.* . .	Braintree.
Greene, Edwin Farnham . . . A.B., Brown University.	*Newton Centre* . . .	Newton Centre.
Hall, John . . . . . B.S., Davidson College.	*Wilmington, N.C.* .	78 Huntington Ave.
Harris, Frank Park . . . . . A.B., Amherst College.	*Amherst*	73 Pinckney St.

GRADUATE STUDENTS (*continued*).

NAME.	HOME.	RESIDENCE.
Harris, William Augustus A.B., Lincoln University.	*Madison, Ga.*	366 Columbus Ave.
Howe, James Carleton A.B., Harvard University.	*Brookline*	Brookline.
Huntington, Constant Davis A.B., Harvard University.	*Cambridge*	Cambridge.
Ireland, James Duane Ph.B., Sheffield Scientific School.	*New York, N.Y.*	264 Newbury St.
Jenkins, Austin Dickinson B.A., Williams College.	*Jamaica Plain*	20 Alveston St., J.P.
Kern, Le Roy Eskridge A.B., Randolph-Macon College.	*Nashville, Tenn.*	19 Concord Sq.
Keyes, Henry Francis A.B., Harvard University.	*Jamaica Plain*	15 Bishop St., J.P.
Lacey, Frank Herbert B.S., University of Wisconsin.	*Marlboro*	518 Columbus Ave.
Lage, Antonio Martins B.S., Neuchâtel.	*Rio de Janeiro, Brazil*	Dedham.
Lage, Renaud B.S., Neuchâtel.	*Rio de Janeiro, Brazil*	136 Newbury St.
Lamb, Arthur Becket A.M., Tufts College.	*Attleboro*	Tufts College.
Lawson, Charles Shelley M.S., University of Alabama.	*Mathews, Ala.*	112 Pembroke St.
Leathers, William Halley B.S., Iowa State College.	*Mapleton, Iowa*	27 Cumberland St.
Lind, Samuel Colville A.B., Washington and Lee University.	*McMinnville, Tenn.*	112 Pembroke St.
Livermore, Robert A.B., Harvard University.	*Jamaica Plain*	34 Alveston St., J.P.
Luquer, Lynch A.B., Harvard University.	*Boston*	3 Spruce St.
McBurney, Henry A.B., Harvard University.	*New York, N.Y.*	4 Chestnut St.
McEntee, William Graduate, U.S. Naval Academy.	*Montgomery, Minn.*	198 Beacon St.
Maroney, Agnes Teresa A.B., Boston University.	*Lynn*	Lynn.
Martin, William Chaille B.S., M.S., Texas Agricultural and Mechanical College.	*College Station, Tex.*	78 Chandler St.
Mason, Eugene Waterman, Jr. Ph.B., Brown University.	*Providence, R.I.*	41 St. Botolph St.
Merrill, Jason Leslie Ph.B., Colby College.	*Waterville, Me.*	29 Dartmouth St.
Moore, Lewis Eugene S.B., University of Wisconsin.	*Chestnut Hill*	Chestnut Hill.
Morse, Robert Brooks A.B., Johns Hopkins University.	*Baltimore, Md.*	Cambridge.
Moseley, Charles Bartlett Ph.B., Brown University.	*Needham*	Needham.
Mulherin, Charles Patrick A.B., St. Joseph's College.	*Augusta, Ga.*	129 Pembroke St.
Murray, William Donaldson A.B., Harvard College.	*Newport, R.I.*	73 Montgomery St.
Ober, Julius Edward S.B., Massachusetts Institute of Technology.	*Boston*	748 Tremont St.

GRADUATE STUDENTS (*continued*).

NAME.	HOME.	RESIDENCE.
Pelton, Ernest Williams . . . A.B., Amherst College.	*Poughkeepsie, N.Y.* .	74 Huntington Ave.
Picard, Daniel Charles . . . B.A., Gallaudet College.	*Dutchtown, La.* . .	13 St. James Ave.
Porter, Charles Huntington . . A.B., Brown University.	*Providence, R.I.* . .	10 St. James Ave.
Porter, Sam Graham . . . . A.B., Baylor University.	*Kyle, Tex.*	78 Chandler St.
Pulsifer, Julia . . . . . A.B., Vassar College.	*Auburn, N.Y.* . . .	45 St. Botolph St.
Rapier, John Bernard . . . . B.S., Catholic University of America.	*Mobile, Ala.*	475 Mass. Ave.
Reed, Frank Carlton . . . . A.M., Grove City College.	*Grove City, Pa.* . .	41 St. Botolph St.
Reeder, Edwin Colville . . . S.B., E.M., Michigan College of Mines.	*Calumet, Mich.* . .	Brookline.
Rich, Edward Benjamin . . . A.B., Oberlin College.	*Ft. Dodge, Iowa* . .	214 W. Canton St.
Richardson, Frederic Leopold W. A.B., Harvard University.	*Brookline*	Brookline.
Robbins, Joseph Drew . . . B.S., Pennsylvania State College.	*Robbins Sta., Pa.* . .	65 Pembroke St.
Roland, John Wilson . . . . B.A., Acadia University.	*Aylesford, N.S.* . .	11 Belvidere St.
Schiesinger, Bart Ernest . . . S.B., Massachusetts Institute of Technology.	*Brookline*	Brookline.
Scott, John Russell . . . . B.A., Cambridge University.	*Manchester, England,*	71 Newbury St.
Severy, Frank Joseph . . . . A.B., Colby College.	*Chase's Mills, Me.* .	4 Oxford Terrace.
Shaw, Robert Gould, Jr. . . . A.B., Harvard University.	*Wellesley*	Wellesley.
Sheafe, James Smith . . . . B.S., University of Washington.	*Seattle, Wash.* . . .	222 W. Newton St.
Simon, Jay Bear . . . . . B.S., Augustana College.	*Rock Island, Ill.* . .	124 St. Botolph St.
Sisson, Charles Hamilton . . A.B., Columbia University.	*Boston*	Langham Hotel.
Slocum, Arthur Gaylord, Jr. . A.B., University of Chicago.	*Kalamazoo, Mich.* . . A.B., Kalamazoo College.	39 St. Botolph St.
Smith, Edgar Field . . . . . A.B., Boston University.	*Saxton's River, Vt.* .	25 Cumberland Road.
Spilman, John Armistead . . Graduate, U.S. Naval Academy.	*Richmond, Va.* . .	131 St. Botolph St.
Stebbins, Horatio Ward . . . A.B., University of California.	*Cambridge*	Cambridge.
Stickney, William . . . . . A.B., Harvard University.	*New York, N.Y.* . .	12 W. Cedar St.
Stutz, Walter Francis . . . . A.B., Amherst College.	*Washington, D.C.* .	122 Huntington Ave.
Sutton, David, Jr. . . . . B.S., Earlham College.	*Richmond, Ind.* . .	Beacon Chambers.
Sweet, Arthur Jeremiah . . . A.B., Cornell University.	*Utica, N.Y.*	470 Mass. Ave.
Taylor, Robert Edward Lee . . B.A., University of Virginia.	*Norfolk, Va.* . . .	6 Louisburg Sq.

GRADUATE STUDENTS (*continued*).

NAME.	HOME.	RESIDENCE.
Vinal, Leslie Thorning A.B., Smith College.	*Somerville*	Somerville.
Walker, Elisha B.A., Yale University.	*New York, N.Y.*	97 Pinckney St.
Walker, Herbert Samuel A.B., University of Chicago.	*Chicago, Ill.*	36 Rutland Sq.
Weeks, Angelina Louisa A.B., Mt. Holyoke College.	*Arlington*	Arlington.
Weeks, Paul B.Sc., University of Nebraska.	*Lincoln, Nebr.*	237 Marlborough St.
Welsh, James Winfield A.B., Harvard University.	*Springfield, Ohio*	176 Huntington Ave.
Wheat, George Neville B.S., Texas Agricultural and Mechanical College.	*Rock Springs, Tex.*	57 Chandler St.
Wiard, Oliver Martin A.B., Yale University.	*New Britain, Conn.*	470 Mass. Ave.
Wilkiemeyer, Frederick Joseph A.B., Christian Brothers College.	*Newport, Ky.*	10 Arlington St.
Wilson, George Davis A.B., Southwestern Presbyterian University.	*Clarksville, Tenn.*	263 Newbury St.
Wilson, Lewis Gamaliel A.B., Southwestern Presbyterian University.	*Clarksville, Tenn.*	263 Newbury St.

REGULAR STUDENTS.

CANDIDATES FOR ADVANCED DEGREES.

NAME.	HOME.	RESIDENCE.
Goodrich, Robert Rhea, S.B.	*Boston*	497 Columbus Ave
Henrich, Louis Richard, S.B.	*Buffalo, N.Y.*	2 Claremont Park.
Holford, William Gordon, S.B.	*Hazardville, Conn.*	96 Pembroke St.
Hyde, George Taylor, S.B.	*Montreal, Que.*	264 Newbury St.
Kattelle, Walter Roby, S.B.	*Auburndale*	Auburndale.
Lawrence, Ellis Fuller, S.B.	*Cambridge*	Cambridge.
Ober, Julius Edward, S.B.	*Boston*	748 Tremont St.
Pearse, Langdon, S.B.	*Boston*	317 Walnut Ave.
Schlesinger, Bart Ernest, S.B.	*Brookline*	Brookline.

FOURTH YEAR.

NAME.	COURSE.	HOME.	RESIDENCE.
Adams, Isaac Rayne	IV.	*No. Cambridge*	No. Cambridge.
Allen, Carlton Brigham	XIII.	*Pittsburgh, Pa.*	15 St. Germain St.
Allen, Clarence Mason	II.	*Barre*	141 Warren Ave.
Allyn, Alfred Warren	IV.	*Lawrence*	74 Marlborough St.
Annett, Cecil Bancroft	II.	*E. Jaffrey, N.H.*	141 Warren Ave.
Appleton, Allen Lansing	XIII.	*Springfield*	261 Newbury St.
Avery, Francis Deane	I.	*Buckland*	302 Columbus Ave.
Baetjer, Howard, A.B.	I.	*Baltimore, Md.*	136 Newbury St.
Ballard, Joseph William	II.	*Greenfield*	132 Chandler St.
Bartlett, Homer Eugene	IV.	*Auburndale*	Auburndale.
Bassett, William Manning	I.	*Boston*	65 St. Botolph St.
Beckler, Edith Arthur	VII.	*So. Boston*	590 Seventh St., S.B.
Belcher, Donald Minor	XI.	*Winchester*	263 Newbury St.
Best, Edna May Williston	V.	*Roxbury*	14 Danube St., R.
Boardman, Charles H., Jr.	IV.	*Lynn*	Lynn.
Bonnemort, Charles Judson	I.	*Dedham*	Dedham.
Booth, Arthur Robert Gregory	V.	*Lowell*	Lowell.
Borden, Norman Easton	II.	*Salem*	Salem.
Bosworth, Harold Otis	X.	*Denver, Colo.*	263 Newbury St.
Bradley, Francis	II.	*Brookline*	Brookline.

Fourth Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Brainerd, Erastus LeRoy	I.	*Germantown, Pa.*	3 Arlington St.
Brodie, Matt	II.	*St. Paul, Minn.*	3 Arlington St.
Brown, Robert Vaughan	X.	*Roxbury*	94 Bird St., R.
Burr, Charles Henry	III.	*W. Newton*	W. Newton.
Capen, Bernard Winslow	VI.	*Stoughton*	Stoughton.
Cates, Louis Shattuck	III.	*Newton Centre*	Newton Centre.
Coburn, Lawrence Gardiner	VI.	*Malden*	Malden.
Collier, Arthur Luke	II.	*Chelsea*	Chelsea.
Comins, Waldo Hunter	III.	*Glen Ridge, N.J.*	2 Westmoreland St., D.
Culver, Llora Robinson	V.	*Boston*	Hotel Westland.
Cummins, Harle Oren	III.	*Montpelier, Vt.*	Hotel Westminster.
Currey, Harold Young	II.	*Evanston, Ill.*	3 Arlington St.
Cutter, Edward Henry	II.	*Chicago, Ill.*	263 Newbury St.
Davis, Harold Henry	VI.	*Chelmsford*	117 Chandler St.
Durbin, Joseph Wilber	VI.	*Burlington, N.J.*	10 St. James Ave.
Durgin, William Andrew	VI.	*Somerville*	Somerville.
Eager, Frank Joseph	III.	*Roxbury*	11 Carlisle St., R.
Eames, Jesse Jennings	II.	*So. Framingham*	So. Framingham.
Everett, Harold Arthur	XIII.	*Boston*	1 Oxford Terrace.
Farmer, Walter Havens	I.	*Hartford, Conn.*	237 Beacon St.
Ferrin, Henry Abbott	XIII.	*Lowell*	Lowell.
Field, Francis Jerome	XI.	*So. Boston*	216 Dorchester St., S.B.
Fitch, Walter Spencer	II.	*Rockville, Conn.*	1022 Boylston St.
FitzGerald, John Mark	II.	*Cambridgeport*	Cambridgeport.
Fletcher, Harold Hervey	I.	*Brookline*	Brookline.
Foote, Thomas Witherbee	III.	*Chicago, Ill.*	205 Bigelow St., B.
Franklin, Duncan Rogers	V.	*Brighton*	153 Foster St., B.
Friend, Alfred William	VI.	*Manchester*	74 Marlborough St
Frost, Richard Lincoln	II.	*Waltham*	Waltham.
Fruit, John Clyde	IV.	*La Crosse, Wis.*	215 Newbury St.
Galaher, Francis Brisbane	II.	*Lawrence*	Lawrence.
Gannett, Farley	XI.	*Washington, D.C.*	309 Chestnut Ave., J.P.
Gardner, Archibald	XIII.	*Babylon, N.Y.*	146 Marlborough St.
Gardner, Stephen A., Jr.	XIII.	*New London, Conn.*	15 St. Germain St.
Geromanos, Hercules Wallace	V.	*Springfield*	91 Revere St.
Gifford, Ralph Percy	VI.	*Lynn*	Lynn.
Goldenberg, Maurice	IV.	*E. Boston*	391 Meridian St., E.B.
Gorfinkle, Emanuel	VI.	*Chelsea*	Chelsea.
Graber, Howard Tyler, B.S.	V.	*Peoria, Ill.*	502 Columbus Ave.
Grant, Kenneth Crothers	I.	*Newport, R.I.*	314 Columbus Ave.
Greeley, William Roger	IV.	*Lexington*	Lexington.
Greene, Bertram W. B.	IX.	*Paris, France*	6 Louisburg Sq.
Hall, Arthur Parker	X.	*Charlestown*	3 Cordis St., C.
Hamblet, Abel Martin	V.	*Salem*	Salem.

Fourth Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Hammond, Lester Clark	I.	*Kingston*	302 Columbus Ave.
Hansen, August Ernst	XI.	*Viersen, Germany*	299 Dudley St., R.
Haskell, Albert Adams	V.	*Essex*	Essex.
Hervey, Eimer Merrill	VI.	*Dorchester*	8 Humphreys Sq., D.
Hill, Beulah Chapin	VIII.	*Dorchester*	107 King St., D.
Hollis, Charles Bertram	III.	*Natick*	Natick.
Holmes, Valdemar Frank	V.	*Copenhagen, Denmark*	1A Berwick Park.
Hooker, Henry Keene	VI.	*Wellesley Hills*	Wellesley Hills.
Howe, James Carleton, A.B.	VI.	*Brookline*	Brookline.
Hull, Floyd Byron	VI.	*Cleveland, Ohio*	122 Chandler St.
Hunt, Howard Nelson	II.	*Newton*	Newton.
Hunter, Frederick Huston	IV.	*Newburyport*	94 Perham St., W.R.
Hutchinson, John Albert	II.	*No. Evans, N.Y.*	9 Concord Sq.
Kellogg, Charles Wetmore, Jr.	II.	*Brookline*	6 Louisburg Sq.
Kimball, Edwin Elliot	VI.	*Salt Lake City, Utah*	455 Mass. Ave.
Knight, Elliot Walker	III.	*Allston*	55 Ashford St., A.
Koch, Harry George	IV.	*Milwaukee, Wis.*	261 Newbury St.
Lage, Antonio Martins, B.S.	VI.	*Rio de Janeiro, Brazil*	Dedham.
Lane, Frank George	II.	*Portland, Me.*	263 Newbury St.
Larrabee, Harold Davis	VI.	*Bennington, Vt.*	455 Mass. Ave.
Lawson, Charles Shelley, M.S.	VI.	*Mathews, Ala.*	112 Pembroke St.
Lockett, Kenneth	II.	*Chicago, Ill.*	17 Yarmouth St.
Lombard, Albert Eaton	I.	*Kansas City, Mo.*	215 Newbury St.
Lowe, Russell Bryant	IX.	*Fitchburg*	100 Mt. Vernon St.
McBurney, Henry, A.B.	I.	*New York, N.Y.*	4 Chestnut St.
McCarthy, Charles Emmet	X.	*Haverhill*	17 Yarmouth St.
McKechnie, Benjamin Edward	III.	*Ponkapoag*	Ponkapoag.
MacNaughton, Ernest Boyd	IV.	*Cambridge*	Cambridge.
Magne, Francis Joseph	I.	*W. Newton*	W. Newton.
Mahar, James Joseph	II.	*So. Boston*	68 L St., S.B.
Marvin, John Reginold	II.	*Brookline*	Brookline.
Mather, George Everett	XI.	*W. Brattleboro, Vt.*	8 Pratt St., A.
Mayo, Robert, Jr.	II.	*Philadelphia, Pa.*	151 Warren Ave.
Mendenhall, Byard William	VI.	*Springville, Utah*	314 Columbus Ave.
Millar, Leslie Walker	XIII.	*Boston*	116 W. Concord St.
Milliken, Humphreys	VI.	*Washington, D.C.*	25 St. Botolph St.
Mitchell, Frank Kollock	X.	*Hyde Park*	Hyde Park.
Mixter, Charles Galloupe	VII.	*Boston*	180 Marlborough St.
Mixter, William Jason	VII.	*Boston*	180 Marlborough St.
More, Arthur Smith	I.	*Springfield*	215 Newbury St.
Morse, John Russell	I.	*Brockton*	270 W. Newton St.
Nash, Arthur Edgar	X.	*Newton Highlands*	Newton Highlands.
Nelson, Arthur Thomas	I.	*E. Boston*	208 Princeton St., E.B.
Nelson, Edwin Eugene	VI.	*Lowell*	219 W. Canton St.

Fourth Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Nichols, Arthur Richardson	IV.	*Cherry Valley*	15 Gordon St., A.
Nickerson, Arthur Henry	II.	*Newburyport*	Newton Highlands.
O'Connell, George Paul	I.	*Holyoke*	47 St. Stephen St.
Odell, John Ripley	V.	*Detroit, Mich.*	Auburndale.
Page, Newell Caldwell	VI.	*Newburyport*	Newburyport.
Paraschos, George Theophanes	I.	*Constantinople, Turkey*	18 Cumberland St.
Patch, Claude Eldred	XIII.	*Stoneham*	Stoneham.
Pember, Walter Purton Ross	IV.	*Needham*	Needham.
Philbrick, Burton Garfield	VII.	*Newburyport*	28 Holyoke St.
Philbrick, Joseph	X.	*Newburyport*	28 Holyoke St.
Pitts, Earl Phelps	II.	*Fitchburg*	34 Holyoke St.
Place, Clyde Richmond	II.	*Mount Upton, N.Y.*	151 Warren Ave.
Pollard, Edson Thompson	II.	*Rutland, Vt.*	Brookline.
Pond, Harry Bradford	I.	*Unionville, Conn.*	25 Concord Sq.
Porter, Charles Huntington, A.B.	VI.	*Providence, R.I.*	10 St. James Ave.
Randall, Fred Chesley	VI.	*Woodfords, Me.*	17 Yarmouth St.
Rathbun, Eleanor Packer	VII.	*Boston*	424 Mass. Ave.
Redfield, John Howard	I.	*Wayne, Pa.*	83 Pinckney St.
Reynolds, Irving Wood	VI.	*Brockton*	17 Yarmouth St.
Ritchie, Andrew Eliot	II.	*Brookline*	Brookline.
Robbins, Frank Ambrose, Jr.	II.	*Springfield*	195 W. Brookline St.
Rogers, Gardner	VI.	*Brookline*	Brookline.
Root, Franklin Tinker	X.	*E. Orange, N.J.*	264 Newbury St.
Sawyer, Charles Adrian, Jr.	III.	*Chicago, Ill.*	237 Beacon St.
Seabury, George Tilley	I.	*Newport, R.I.*	264 Newbury St.
Sears, Walton Harvey	II.	*Arlington*	Arlington.
Sherman, Herbert Leslie	V.	*Belmont*	Belmont.
Sisson, Charles Hamilton, A.B.	III.	*Boston*	Langham Hotel.
Smith, Charles Alfred	III.	*Oconto, Wis.*	215 Newbury St.
Smith, James Woodberry	I.	*Lexington*	Lexington.
Sprague, Nathaniel, Jr.	VI.	*Lanesville*	219 W. Canton St.
Starr, Clarence Douglass	II.	*New London, Conn.*	15 St. Germain St.
Stebbins, Horatio Ward, A.B.	II.	*Cambridge*	Cambridge.
Stimson, Henry Stanton Bogue	VI.	*Pittsford, Vt.*	Brookline.
Stockman, Orlando Sargent	III.	*Newburyport*	Cambridge.
Stover, Charles Clark	II.	*Amesbury*	No. Cambridge.
Sturtevant, Edwin Whitman	II.	*Chicago, Ill.*	261 Newbury St.
Swan, Arthur Eugene	VI.	*Roxbury*	25 Wabon St., R.
Taft, Theodore Howard	II.	*No. Cambridge*	No. Cambridge.
Taylor, James Loockermann, Jr.	I.	*New York, N.Y.*	6 Louisburg Sq.
Taylor, Warren C.	I.	*Arlington*	Arlington.
Teague, Walter Owen	XIII.	*Lowell*	110 Huntington Ave.
Thatcher, Edward Gordon	V.	*Middleboro*	Middleboro.
Thurston, Ralph Emery	VI.	*Fall River*	13 Concord Sq.

Fourth Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Tolman, Charles Prescott	VI.	*Dorchester*	755 Washington St., D.
Towne, Willis Harvey	II.	*Gardner*	141 Warren Ave.
Townsend, Gilbert	IV.	*Newton*	Newton.
Trowbridge, Henry Otis	II.	*Newton*	Newton.
Upham, Everett Lyman	IX.	*E. Woodstock, Conn.*	566 Mass. Ave.
Vatter, Wilbur Lewis	VI.	*Lawrence*	472 Norfolk St., D.
Vaughan, Louis Edgar	IV.	*Worcester*	134 St. Botolph St.
Wales, Royal Linfield	X.	*Groveland*	Haverhill.
Walker, Elisha, B.A.	XIII.	*New York, N.Y.*	97 Pinckney St.
Weeks, Paul, B.Sc.	II.	*Lincoln, Nebr.*	237 Marlborough St.
Welch, William Wells	III.	*Quincy*	Quincy.
Wellman, Walter Jesse	IV.	*E. Jaffrey, N.H.*	141 Warren Ave.
Wells, Chester Harold	XI.	*Lawrence*	407 Columbus Ave.
Wendel, Conrad	I.	*Hazelton, Pa.*	25 Concord Sq.
Westcott, Henry Wilmarth	II.	*Hopedale*	285 Columbus Ave.
Wetmore, Wade Lyndon	II.	*Essex*	Essex.
White, Robert, Jr.	VI.	*Boston*	321 Hanover St.
Whitney, Philip Richardson	IV.	*Newton*	Newton.
Whittet, Rufus Mason	XI.	*Lowell*	219 W. Canton St.
Williams, Louis Ezra	II.	*Duluth, Minn.*	23 St. James Ave.
Williams, Robert Seaton	V.	*Jackson, Mich.*	189 St. Botolph St.
Williston, William High	II.	*Somerville*	Somerville.
Wright, Charles Lawrence	X.	*Lynn*	Lynn.

THIRD YEAR.

NAME.	COURSE.	HOME.	RESIDENCE.
Adams, Louis Winfield	II.	*Washington, D.C.*	237 Beacon St.
Adams, Walter Holbrook	II.	*Winchester*	Winchester.
Aldrich, Chester Stanley	II.	*Dorchester*	9 Milford St.
Allen, Arthur Benjamin	II.	*Allston*	34 Ashford St., A.
Atwood, Ichabod Francis	II.	*Rock*	Chelsea.
Aylsworth, Joseph Wheeler	II.	*Newport, R.I.*	264 Newbury St.
Babson, Roger Derby	III.	*Gloucester*	9 Newbury St.
Baker, Horace Singer, B.S.	I.	*Evanston, Ill.*	124 Huntington Ave.
Baker, Sheldon King	XI.	*Washington, D.C.*	Somerville.
Ball, Sidney Young	I.	*Cleveland, Ohio*	110 Huntington Ave.
Ballou, Roland Hunnewell	VI.	*Woonsocket, R.I.*	263 Newbury St.
Bateman, George William	II.	*Waverly*	Waverly.
Bates, Charles Lynn	I.	*Chicago, Ill.*	566 Mass. Ave.
Bates, John Ross	I.	*Hyde Park*	Hyde Park.
Bay, William Johnston	XIII.	*Ironton, Ohio*	23 St. Botolph St.
Bennett, Arthur Francis	III.	*Wayland*	4 St. Botolph St.
Beverstock, Charles Whitney	I.	*Keene, N.H.*	25 St. Botolph St.

Third Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Blatt, Herman Otto	II.	*Lead, S. Dak.*	263 Newbury St.
Blood, Alice Frances	V.	*Cambridge*	Cambridge.
Brown, Moses, Jr.	III.	*Newburyport*	28 Berwick Park
Bruton, Alfred William, A.B.	VI.	*Baltimore, Md.*	Beacon Chambers.
Bryan, Clark Albert	I.	*Springfield*	66 Montclair Ave., Ros.
Buhler, Henry Waldeck	III.	*Boston*	11 Irvington St.
Burke, Fletcher H., A.B.	III.	*Buffalo, N.Y.*	1466 Washington St.
Burnham, William Winslow	XI.	*Biddeford, Me.*	Watertown.
Chase, Charles Edward	I.	*Dorchester*	69 Pleasant St., D.
Clark, George Howard	VI.	*Everett*	Everett.
Clark, Myron Henry	V.	*Bedford*	33 Claremont Park.
Cobb, Andrew Randall, A.B.	IV.	*Pt. Williams Sta., N.S.*	71 Newbury St.
Cook, Robert Avery	I.	*Woonsocket, R.I.*	9 Follen St.
Cook, Walter Lorrain	III.	*Burlington, Iowa*	261 Newbury St.
Cooper, Claudius Howard	III.	*Houghton, Mich.*	264 Newbury St.
Copeland, Durward	III.	*Chelsea*	Chelsea.
Cox, Charles Barrows	I.	*Newton*	Newton.
Cox, Frank Gardner	II.	*Holyoke*	263 Newbury St.
Craven, Walter Sidney	III.	*Kalispell, Mont.*	420 Columbus Ave.
Cronenbold, Ernest John	XIII.	*New York, N.Y.*	163 W. Newton St.
Crosby, Fred Bickford	VI.	*Woodsville, N.H.*	Newton Highlands.
Crosby, Hewitt	XIII.	*Brooklyn, N.Y.*	Newton Highlands.
Cross, Harold Newton	XI.	*Exeter, N.H.*	28 Holyoke St.
Cross, William P., Ph.B.	XIII.	*Rochester, N.Y.*	Beverly.
Crowell, Harry Clifford	I.	*Salem*	Salem.
Cushman, James Allerton	I.	*Taunton*	W. Newton.
Davis, Francis Woodward	I.	*W. Newton*	261 Newbury St.
Davis, William Robert	I.	*Scranton, Pa.*	104 Chandler St.
Donovan, William Henry	II.	*Roxbury*	287 Highland St., R.
Dooley, John James	VI.	*Roxbury*	804 Parker St., R.
Drake, Henry Philkins	XI.	*W. Medford*	W. Medford.
Drury, Walter Maynard	III.	*Evanston, Ill.*	8 Arlington St.
Dudley, Henry Harrison	VI.	*Natick*	Natick.
Dunham, Milton Cornelius	III.	*Brockton*	511 Mass. Ave.
Eaton, Ralph Waldo	VI.	*Haverhill*	Newtonville.
Eddy, William Osgood	VI.	*Middleboro*	50 St. Stephen St.
Egerton, Charles Ozro	XIII.	*Springfield*	89 Rutland Sq.
Endres, Kenneth Windram	VI.	*Brookline*	Brookline.
Fales, Henry Hammett	II.	*Pondville*	Pondville.
Farnham, Frank Rollins	XIII.	*Newton Centre*	Newton Centre.
Ferguson, William B., Jr.	XIII.A.	*Waynesville, N.C.*	Navy Yard, C.
Ferris, Mortimer Yale	I.	*Waban*	261 Newbury St.
Ferry, Montague	VI.	*Lake Forest, Ill.*	101 Pinckney St.
Field, Richard Manning	I.	*Brooklyn, N.Y.*	237 Beacon St.

Third Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Fish, Harold Coburn	I.	*Hyde Park*	Hyde Park.
Fitzler, Henry	XIII.	*Tiverton, R.I.*	68 W. Rutland Sq.
Fletcher, Samuel Adams	VI.	*Milton*	Milton.
Forbes, Eugene Duncan	VI.	*Allston*	40 Pomeroy St., A.
Foster, Stanley Alfred	X.	*Henniker, N.H.*	17 Yarmouth St.
Gaenslen, George Ralph	III.	*San Antonio, Tex.*	673 Boylston St.
Gammons, James Madison	VI.	*Long Plain*	17 Rutland Sq.
Garcelon, George Holland	VI.	*W. Somerville*	W. Somerville.
Gibson, Jessie Gilbert	IV.	*Indianapolis, Ind.*	Cambridge.
Gilker, William Mansfield	VI.	*Boston*	213 Huntington Ave.
Gillett, William Lowry, B.A.	X.	*Evansville, Ind.*	566 Mass. Ave.
Gleason, Gilbert Howe	V.	*Roxbury*	12 Ruthven St., R.
Goodwin, Charles Carroll	III.	*Rochester, N.Y.*	123 Pembroke St.
Goodwin, Edwin Gerrish	III.	*No. Berwick, Me.*	Wakefield.
Gould, LeRoy Boardman	VI.	*Taunton*	Taunton.
Gray, Curtis Rockwell	III.	*Boston*	Brookline.
Green, Carlton Francis	III.	*Spencer*	172 W. Brookline St.
Greene, Edwin Farnham, A.B.	II.	*Newton Centre*	Newton Centre.
Griffin, Charles James	I.	*Everett*	Everett.
Ham, Clara Eleanor	VII.	*No. Middleboro*	113 Magnolia St., R.
Hardenbergh, Clarence M.	II.	*Minneapolis, Minn.*	86 Charles St.
Harlow, Justin Edwards	XIII.	*Edgewood Park, Pa.*	14 Bond St.
Harris, Galen Moses	II.	*Portland, Me.*	215 Newbury St.
Healy, Alexander	III.	*Ogden, Utah*	263 Newbury St.
Hood, Raymond Mathewson	IV.	*Pawtucket, R.I.*	19 Concord Sq.
Howard, John Wardwell	I.	*Dorchester*	147 Grampian Way, D.
Howes, Cyrus Pierce	IV.	*So. Yarmouth*	104 Chandler St.
Hudson, Henry Norman	II.	*Cambridge*	Cambridge.
Johnson, Frank	I.	*Lawrence*	Lawrence.
Jones, John Larrabee	VI.	*Portland, Me.*	101 St. Botolph St.
Jones, Joseph Russell	III.	*Highland Park, Ill.*	9 Newbury St.
Joseph, Jesse Strassburger	II.	*Allegheny, Pa.*	7 Follen St.
Joyce, Clarence Mason	V.	*Medford*	Medford.
Kearny, Philip John	II.	*Charlestown*	Navy Yard, C.
Kehew, Francis Donaldson	III.	*Cambridge*	Cambridge.
Kimball, Alfred Whitefield	V.	*Newburyport*	Brookline.
King, Robert Joshua	III.	*Billerica*	33 Claremont Park.
Lage, Renaud, B.S.	XIII.	*Rio de Janeiro, Brazil*	131 Newbury St.
Lang, Alfred Ernest	IV.	*Lawrence*	74 Marlborough St.
Latham, Bernard Wilson	II.	*Willimantic, Conn.*	98 Appleton St.
Lawton, Richard Mack	I.	*Lowell*	237 Beacon St.
Lenth, George Casper Doering	I.	*Chicago, Ill.*	119 Warwick St., R
Livermore, Robert, A.B.	III.	*Jamaica Plain*	34 Alveston St., J.P.
Loughlin, Gerald Francis	XII.	*Dorchester*	16 Thornley St., D.

Third Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Low, Harry Raymond	III.	*Brockton*	74 Marlborough St.
McCornack, Clyde Webster	I.	*Galesburg Ill.*	9 Concord Sq.
McCornack, Walter Roby	IV.	*Galesburg, Ill.*	9 Concord Sq.
McEntee, William	XIII. A.	*Montgomery, Minn.*	198 Beacon St.
MacGregor, Roderick James	VI.	*So. Lincoln, Me.*	13 Putnam St.
McKenna, John Andrew	II.	*Antigonish, N.S.*	Cambridge.
Magnitzky, Albert Louis	II.	*Jamaica Plain*	127 Chestnut Ave., J.P.
Manahan, Robert Fulton	III.	*Boston*	14 Newbury St.
Manson, Gyula Bennett	III.	*E. Boston*	200 Trenton St., E.B.
Martin, Arthur Safford	III.	*Chelsea*	Chelsea.
Mason, Stephen Nickerson	X.	*Wakefield*	Wakefield.
Mears, Joseph Archibald, Jr.	VI.	*Scranton, Pa.*	11 Irvington St.
Merrill, Herbert Chandler	X.	*Peabody*	Peabody.
Miller, Blaine Heston	I.	*Indianapolis, Ind.*	3 Arlington St.
Mitchell, William Edward	VI.	*Milton*	Milton.
Mohler, David D.	X.	*Colorado Springs, Colo.*	21 Claremont Park.
Morse, Howard Scott	I.	*Dedham*	Dedham.
Morse, Robert Brooks, A.B.	I.	*Baltimore, Md.*	Cambridge.
Mulherin, Charles Patrick, A.B.	I.	*Augusta, Ga.*	129 Pembroke St.
Neal, Clarence Adkins	I.	*Kansas City, Mo.*	263 Newbury St.
Nettleton, Van Irving	I.	*Longwood*	Longwood.
Newman, Rolf Raymond	I.	*Los Angeles, Cal.*	Cambridge.
Nibecker, Claude Pendleton	XI.	*Glen Mills, Pa.*	44 Pinckney St.
Nields, Benjamin, Jr.	III.	*Wilmington, Del.*	100 Mt. Vernon St.
Norton, Harold Lee	III.	*Medford*	Medford.
Nutter, Ralph Herbert	II.	*Lynn*	Lynn.
Olmsted, Frederic Arthur	X.	*Roxbury*	13 Rockland St., R.
Osborn, Harold	VI.	*Columbia, S.C.*	273 Columbus Ave.
Palmer, Virgil Maro	II.	*Willimantic, Conn.*	47 Rutland Sq.
Parker, Paul Revere	XIII.	*Cambridge*	Cambridge.
Pelton, Ernest Williams, A.B.	II.	*Poughkeepsie, N.Y.*	74 Huntington Ave.
Pemberton, Henry Augustus	II.	*Auburndale*	Auburndale.
Pulsifer, Harrie Bridgman	V.	*Lebanon, N.H.*	76 St. Stephen St.
Rapp, Louis Ballauf	III.	*Cincinnati, Ohio*	264 Newbury St.
Reed, Frank Carleton, A.M.	VI.	*Grove City, Pa.*	41 St. Botolph St.
Regan, John Ward	II.	*Boston*	49 Winchester St.
Rice, Philip Benard	VI.	*Stamford, Conn.*	454 Mass. Ave.
Ricker, Elmer Francis	IV.	*Quincy*	Quincy.
Riddell, Guy Crosby	III.	*Somerville*	Somerville.
Robinson, John Albert	X.	*Canton*	17 Yarmouth St.
Rott, Walter Christian	II.	*Pittsburgh, Pa.*	7 Follen St.
Ruxton, Edward James	II.	*Ludlow*	9 Milford St.
Sammet, Charles Frank	V.	*Jamaica Plain*	73 Sheridan St., J.P.
Scherrer, Herman Adolph	IV.	*Indianapolis, Ind.*	144 Chandler St.

Third Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Schmidt, Caspar Anthony	III.	*Detroit, Mich.*	47 St. Stephen St.
Scofield, Edward Candee	XIII.	*Stamford, Conn.*	454 Mass. Ave.
Scudder, Oliver Porter	XIII.	*Brockton*	33 St. Botolph St.
Sears, Thomas Everett	II.	*Plymouth*	33 St. Botolph St.
Sheafe, James Smith, B.S.	II.	*Seattle, Wash.*	Hotel Buckminster.
Sherman, Frank Arnold	III.	*Westerly, R.I.*	18 Newbury St.
Simpson, Horace Gardner	IV.	*Chelsea*	Chelsea.
Smith, Frank Arthur	II.	*Newburyport*	26 Rosedale St., D.
Smith, Horace Millikin	II.	*Terre Haute, Ind.*	30 Yarmouth St.
Smith, John Monroe	I.	*Irvona, Pa.*	25 Concord Sq.
Solomon, Benjamin David	VI.	*Boston*	681 Shawmut Ave.
Spalding, George Riddell	V.	*Newburyport*	168 Huntington Ave.
Spilman, John A.	XIII. A.	*Richmond, Va.*	131 St. Botolph St.
Stevenson, Lucy Marion	VIII.	*Lowell*	39 St. Botolph St.
Stoddard, Ava Marcella	IX.	*Roxbury*	4 Thwing St., R.
Stoddard, Edna Dwinel	IV.	*Roxbury*	4 Thwing St., R.
Sumner, Warren Ellis	X.	*Brockton*	Brockton.
Swett, George Wright	II.	*No. Cambridge*	No. Cambridge.
Taylor, Floyd Thomas	VI.	*New York, N.Y.*	34 Newbury St.
Tolman, Richard Chace	X.	*W. Newton*	W. Newton.
Turner, Howard Chubbuck	XIII.	*Arlington*	Arlington.
Underwood, Lawrence H.	III.	*Chicago, Ill.*	Brookline.
Wastcoat, Edward	III.	*Taunton*	35 Concord Sq.
Welsh, James W., A.B.	VI.	*Springfield, Ohio*	176 Huntington Ave.
Whitcomb, William Henry	V.	*Roxbury*	13 Windsor St., R.
Williams, Ralph Brown	III.	*Salem*	9 Newbury St.
Wilson, George Davis, A.B.	I.	*Clarksville, Tenn.*	263 Newbury St.
Wing, William Lawton	II.	*New Bedford*	17 Yarmouth St.
Wood, George Babcock	II.	*Dorchester*	7 Florida St., D.
Yerxa, Ralph Benjamin	III.	*No. Cambridge*	9 Newbury St.

SECOND YEAR.

NAME.	COURSE.	HOME.	RESIDENCE.
Adams, Ralph Emerson	III.	*So. Framingham*	So. Framingham.
Anderson, Augustus E.T.	XIII.	*Roslindale*	331 Metropolitan Ave., Ros.
Andrews, William Alvin	X.	*Roxbury*	12 Sargent St., R.
Atkins, George Edwin	XIII.	*Newton Highlands*	Newton Highlands.
Bailey, Edna Greenwood	V.	*Boston*	68 Huntington Ave.
Baker, Edward Stuart	VI.	*Staunton, Va.*	191 W. Brookline St.
Baker, Joseph Cheney	II.	*Syracuse, N.Y.*	311 Huntington Ave.
Baker, Ralph Hubert	XIII.	*Winthrop*	Winthrop.
Barrett, Charles Frederic	II.	*Belmont*	Belmont.
Bartlett, Arthur Warren	X.	*Newburyport*	Chelsea.

Second Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Bascom, Calvin Perry	XIII.	*Rochester, N.Y.*	132 W. Concord St.
Bates, George Martin	III.	*Windham, Conn.*	98 Appleton St.
Baum, Kenneth Michael	V.	*Claremont, N.H.*	124 Huntington Ave.
Bee, Albert Wilson, Jr.	I.	*Dorchester*	13 Payson Ave., D.
Benson, Stuart Wells	X.	*Syracuse, N.Y.*	160 W. Canton St.
Biggi, Frederic Anthony	I.	*Boston*	166 Salem St.
Blum, Bernard	I.	*Chicago, Ill.*	122 Huntington Ave.
Boggs, William Brenton	III.	*Washington, D.C.*	113 Warren Ave.
Bouscaren, Gustave, Jr., A.B.	II.	*Cincinnati, Ohio*	6 Louisburg Sq.
Bradley, Stephen Lawrence	II.	*W. Newton*	W. Newton.
Briggs, George Wright	IV.	*Taunton*	Taunton.
Broad, Charles Edward	II.	*Newton Centre*	Newton Centre.
Brown, John Leyson	II.	*Waltham*	Waltham.
Brown, Walter Stanley	III.	*Boston*	89 Mt. Vernon St.
Buckley, James Patrick, Jr.	III.	*Salem*	Salem.
Burnham, Alfred Worcester	X.	*Waltham*	Waltham.
Burnham, Leonard Preston	X.	*Gloucester*	170 St. Botolph St.
Calkins, Ernest Wilber, Jr.	II.	*No. Abington*	No. Abington.
Card, John Ford	III.	*Chicago, Ill.*	Brookline.
Carhart, Clem Clare	III.	*Salt Lake City, Utah*	571A Columbus Ave.
Carty, Francis James.	II.	*Roxbury*	6 Kensington St., R.
Carty, Walter Maurice	II.	*Roxbury*	6 Kensington St., R.
Cerf, Harry Herman	II.	*Pittsburgh, Pa.*	156 Huntington Ave.
Chace, Carll Smith	I.	*Dorchester*	31 Wales St., D.
Chace, Franklin Murphy	IV.	*Dorchester.*	31 Wales St., D.
Chandler, Willard Dalrymple	II.	*Somerville*	Somerville.
Charles, Evarts Wilson	II.	*Springfield*	160 W. Canton St.
Clarke, Lewis Cutler, Jr.	IV.	*Cambridgeport*	Cambridgeport.
Clough, Leslie	II.	*Wakefield*	Wakefield.
Cobb, Freeman Adams	II.	*Natick*	Natick.
Cockrill, Emmet	II.	*Little Rock, Ark.*	70 Rutland St.
Codd, Eliza	IV.	*Nantucket*	61 St. Botolph St.
Collins, Richard Vincent	I.	*Medway*	Medway.
Comstock, Daniel Frost	VIII.	*Boston*	102 Huntington Ave.
Coupe, Alfred Lawrence	III.	*Pymouth*	Plymouth.
Courtney, Allan Seymour	II.	*Auburndale*	Auburndale.
Crane, Harold Gilliland	VI.	*Adrian, Mich.*	27 St. Botolph St.
Crary, Fulton	I.	*Poughkeepsie, N.Y.*	154 Charles St.
Cronin, Walter Louis	II.	*So. Boston*	56 P St., S.B.
Cronin, William Walter.	I.	*Syracuse, N.Y.*	160 Newbury St.
Crowell, Joseph Warren	II.	*Newton*	Newton.
Crowell, Will Ransom	VIII.	*Los Angeles, Cal.*	561 Boylston St.
Crull, Clifton Gustavus	IV.	*Davenport, Iowa*	25 Cumberland St.
Cunningham, John Earl	I.	*Baltimore, Md.*	11 Newbury St.

Second Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Currier, James Swasey .	XIII.	*Newburyport* . . .	Newburyport.
Curtis, George Alden . . .	I.	*No. Hanover* . . .	No. Hanover.
Cutting, Robert Curtis .	II.	*Weston*	Weston.
Davis, Frank Howard . .	I.	*Evanston, Ill.* . . .	124 Huntington Ave.
Doherty, Harry Vincent .	III.	*Boston*	35 Greenwich Park.
Dole, Myron Wilkinson .	II.	*Fitchburg*	Fitchburg.
Donovan, Jeremiah John, A.B.	VI.	*Randolph*	Randolph.
Doten, William Leslie . .	II.	*Plymouth*	1 Bradshaw St., D.
Downes, Arthur Caldwell	V.	*Gloucester*	142 Marlborough St.
Dunn, John Franklin, B.S.	VI.	*Ocala, Fla.*	78 Huntington Ave.
Eager, William Hosmer .	VI.	*Syracuse, N.Y.* . .	28 St. James Ave.
Easterbrooks, Clifton Clark	II.	*Peace Dale, R.I.* . .	3 Marble St., R.
Eastman, Guy Warner .	VIII.	*Vancouver Barracks, Wash.*	102 Huntington Ave.
Edes, Edward Louis . .	I.	*Bolton*	15 Greenough St., J.P.
Elliot, Joseph Kittredge .	IX.	*Andover*	Andover.
Elwell, David	VI.	*Arlington*	Arlington.
Emerson, Charles Joseph	XIII.	*Pawtucket, R.I.* . .	215 Newbury St.
Emerson, Merton Leslie .	I.	*Braintree*	Braintree.
Emerson, Neil Davis . .	VI.	*Wilmington, N.C.* .	261 Newbury St.
Evans, William Archibald	II.	*Boston*	55 E. Newton St.
Fairfield, George Albert .	I.	*Saco, Me.*	125 Beacon St.
Farrell, Frank Sheridan .	V.	*Stoughton*	Stoughton.
Farrell, Frederick William	V.	*Stoughton*	Stoughton.
Faulkner, Robert . . .	III.	*Norwell*	35 St. Botolph St.
Fellows, Otis Dwight, Jr.	III.	*Newton Centre* . .	Newton Centre.
Ferris, Cyrus Yale . . .	II.	*Waban*	Trinity Court.
Ferry, Albert Clarke . .	VI.	*Newton Centre* . . .	Newton Centre.
Finnegan, Joseph Bernard	X.	*Stoneham*	69 Franklin St.
Fraser, Linda Susan . .	IV.	*Roxbury*	6 Waverly St., R.
Fremmer, John Arthur .	II.	*Lawrence*	Lawrence.
Galusha, Don Loomis . .	VI.	*So. Royalton, Vt.* . .	415 Columbus Ave.
Gill, Walter Josiah, Jr.	VIII.	*Roxbury*	21 Montrose St., R.
Goldthwait, Fred Warren .	II.	*Peabody*	Peabody.
Granger, Eliot	I.	*Roxbury*	18 Centre St., R.
Haar, Selby	VI.	*Kansas City, Mo.* . .	145 W. Concord St.
Hadley, Walter Elbridge .	III.	*Cambridge*	Cambridge.
Haley, Humphrey Matthew	VI.	*Salem*	Salem.
Hall, George Garfield . .	IV.	*Stony Creek, Conn.* .	37 Florence St., Ros.
Haraden, Joseph Allen .	VI.	*Charlestown*	20 Essex St., C.
Harding, Reynold Munroe	II.	*Melrose*	Melrose.
Harrah, Ernest	II.	*New York*	237 Beacon St.
Hartshorne, Richard Gardner	I	*Wakefield*	Wakefield.
Havens, Ralph Edgar . . .	I.	*Littleton*	Newton Highlands.
Haynes, Charles Rogerson	X.	*Hyde Park*	Hyde Park.

Second Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Hayward, Carle Reed	III.	*Quincy*	Quincy.
Hazeltine, Reginald	III.	*Belfast, Me.*	31 Newbury St.
Hill, Guy	VIII.	*Everett*	Everett.
Hill, Hiram Augustus	I.	*Manchester, N.H.*	139 Warren Ave.
Hill, Percy Granville	II.	*Wallingford, Conn.*	420 Mass. Ave.
Hiller, Everett Osgood	II.	*Hyde Park*	Hyde Park.
Hodge, William Edward	VI.	*Malden*	Malden.
Holbrook, Arthur Raymond	I.	*Ashland*	Ashland.
Holbrook, Elmer Allen	III.	*Fitchburg*	74 Marlborough St.
Holcombe, Amasa Maynard	II.	*Winchester*	Winchester.
Holmes, Addison Francis	II.	*Boston*	41 Ruggles St.
Homer, Charles Lowell	I.	*Prout's Neck, Me.*	16 Louisburg Sq.
Horton, Frederick Waters	III.	*Somerville*	Somerville.
Howard, Lewis Thomas	I.	*Brockport, N.Y.*	19 Linden St., A.
Hoy, Charles	X.	*Syracuse, N. Y.*	415 Columbus Ave.
Hunter, Charles Frederick	VIII.	*Poughkeepsie, N.Y.*	7 Follen St.
Hurley, Edmund Joseph	II.	*Malden*	Malden.
Ingram, Ralph Osborne	II.	*Lawrence*	74 Marlborough St.
Jacobs, Alfred Henry	IV.	*San Francisco, Cal.*	8 St. Germain St.
Johnson, Natt Madison	I.	*Albany, Vt.*	Somerville.
Kaiser, George Karl	VI.	*New London, Conn.*	34 Concord Sq.
Kalmus, Herbert Thomas	VIII.	*Dorchester*	5 Howe St., D.
Keenan, Joseph Augustine	II.	*So. Boston*	80 W. Fifth St., S.B.
Keller, Dennie Kelley	IX.	*Canton*	Canton.
Kemper, William Arthur	I.	*Butte, Mont.*	Cambridge.
Kendall, Harry Stillman	I.	*Gardner*	15 Pinckney St.
King, Carl	II.	*Lawrence*	10 Arlington St.
Knowlton, Cutler Dean	VI.	*Rockport*	Somerville.
Kramer, Henry	I.	*Roslindale*	97 Florence St., Ros.
Lackman, Herman William	II.	*Glendale, Ohio*	Brookline.
Lang, Currier	I.	*Cambridge*	Cambridge.
Lauffer, Raymond Abner	VI.	*Manor Sta., Pa.*	221 W. Newton St.
Levine, Harry	I.	*Boston*	6 Morton St.
Lynch, William Duncan	V.	*Boston*	10 Pinckney St.
McDougall, Thomas Gray	II.	*Cincinnati, Ohio*	263 Newbury St.
McQuaid, John Delaney	II.	*Holyoke*	62 Linden St., A.
Manson, Arthur James	VI.	*Dorchester*	23 Lindsay St., D.
Mason, Marquis Edgar	V.	*Aurora, Ill.*	571A Columbus Ave.
Merrill, Ambrose Moody	XIII.	*Newburyport*	Newburyport.
Merrill, Jason Leslie, Ph.B.	V.	*Waterville, Me.*	29 Dartmouth St.
Merriman, Fred Knights	I.	*Brockton*	64 Clarendon St.
Merryweather, Hubert	III.	*Cincinnati, Ohio*	264 Newbury St.
Metcalf, Edward Harris	II.	*Boston*	Haddon Hall.
Metcalfe, James Garrison	I.	*Evansville, Ind.*	261 Newbury St.

Second Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Miller, Andrew Otterson	VI.	*Brooklyn, N.Y.*	215 Newbury St.
Mooers, Ben Clayton	VI.	*Seattle, Wash.*	483 Mass. Ave.
Morrison, Edward Stanley	VI.	*Lawrence*	Lawrence.
Munster, August William	II.	*Waltham*	Waltham.
Murray, William D., A.B.	I.	*Newport, R.I.*	73 Montgomery St.
Needham, Harry Hampton	VIII.	*W. Roxbury*	156 Lagrange St., W.R.
Niles, Eliot Wright	VIII.	*Boston*	561 Boylston St.
Noyes, Harry Fordham	III.	*Auburndale*	Auburndale.
Nyce, Joseph Crawford	VI.	*Woodensburg, Md.*	135 W. Canton St.
O'Connor, Arthur Wellington	II.	*W. Bridgewater*	W. Bridgewater.
Ovington, Earle Lewis	VI.	*Brooklyn, N.Y.*	31 Concord Sq.
Paine, Paul McClary	III.	*Baltimore, Md.*	74 Marlborough St.
Palmer, Guy Prescott	I.	*Winchester*	Winchester.
Palmer, Robert	VI.	*Larchmont, N.Y.*	11 Blackwood St.
Parker, Edward Francis, Jr.	IX.	*Reading*	Reading.
Peabody, Alfred	IX.	*Salem*	Salem.
Peiler, Karl Ernst	VI.	*Hartford, Conn.*	173 St. Botolph St.
Phillips, Lee	II.	*W. Hanover*	W. Hanover.
Phinney, Robert Morris	VI.	*Barnstable*	214 W. Canton St.
Pierce, Howard Leroy	I.	*Clayton, N.J.*	566 Mass. Ave.
Pitts, James Albert	II.	*Wollaston*	Wollaston.
Porter, Arthur Peabody	I.	*Bath, N.H.*	483 Mass. Ave.
Powell, George Hardy	XIII.	*Baltimore, Md.*	261 Newbury St.
Proudfoot, Gordon McIntyre	I.	*Chicago, Ill.*	18 E. Brookline St.
Reed, Rufus Cook	III.	*Newburyport*	Newburyport.
Rice, Edmund Augustus	VI.	*E. Boston*	71 Marion St., E.B.
Rice, Rowland Grenville	XIII.	*Stamford, Conn.*	454 Mass. Ave.
Rich, Edward Benjamin, A.B.	VI.	*Ft. Dodge, Iowa*	214 W. Canton St.
Richards, Alexander Webster	IV.	*Washington, D.C.*	566 Mass. Ave.
Richardson, Henry K.	VIII.	*Lynn*	Lynn.
Richardson, Max Currier	I.	*Pelham, N.H.*	20 Rutland Sq.
Roberts, Arthur Osborne	XIII.	*Salem*	Salem.
Rockwood, Edward Farnum	II.	*Newton Centre*	Newton Centre.
Roland, John Wilson, B.A.	I.	*Aylesford, N.S.*	11 Belvidere St.
Rollins, Harry Tebbetts	II.	*Des Moines, Iowa*	35 Linden St., A.
Ropes, Fanny	IV.	*Salem*	463 Commonwealth Ave.
Rowe, Henry Woodbury	IV.	*Lawrence*	93 Newbury St.
Rupf, Ernest Louis	II.	*Lawrence*	32 W. Cedar St.
Russell, Eugene Haines, Jr.	I.	*Philadelphia, Pa.*	168 W. Brookline St.
Russell, Lester Asa	VI.	*Lowell*	19 St. James Ave.
Sanborn, John Royal	VI.	*Newport, R.I.*	566 Mass. Ave.
Saville, Charles, Jr.	XI.	*Waban*	Trinity Court.
Schumacher, Waldron P.	III.	*Wollaston*	Wollaston.
Schwartz, Melvin Humbert	IX.	*Weston*	Weston.

Second Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Shaw, John Whitman	III.	*Malden*	Malden.
Shaw, Robert Gould, Jr., A.B.	VI.	*Wellesley*	Wellesley.
Sheafe, Calvin Richard	II.	*Harvard*	Brookline.
Simons, Russell Bissell	XIII.	*Greenfield*	4 Brimmer St.
Smart, Charles Edwin	II.	*Greenfield*	102 Charles St.
Smith, Arthur Ditson	V.	*E. Boston*	38 Falcon St., E.B.
Smith, Edgar Field, A.B.	I.	*Saxtons River, Vt.*	25 Cumberland St.
Smith, Leon Hills	IV.	*Leominster*	35 St. Botolph St.
Smith, Preston Morris	X.	*Syracuse, N.Y.*	215 Newbury St.
Spargo, John Nicholas	VI.	*Ogden, Utah*	159 Mass. Ave.
Sperry, Charles Stillman, Jr.	I.	*Philadelphia, Pa.*	6 Louisburg Sq.
Staples, Percy Alexander	I.	*Portland, Me.*	215 Newbury St.
Stebbins, Charles Henry	V.	*Melrose*	Melrose.
Steinrok, Charles Leonard	XIII.	*Philadelphia, Pa.*	132 W. Concord St.
Stetson, Edward Everett	I.	*Mattapoisett*	586 Ashmont St., D.
Stetson, Harold Clap	VI.	*Walpole*	Walpole.
Stevens, Howard Leslie	XIII.	*Middleboro*	Middleboro.
Stresau, Richard	VI.	*Frankfort, Germany*	17 Blagden St.
Stutz, Walter Francis, B.A.	VI.	*Washington, D.C.*	122 Huntington Ave.
Sutton, David, Jr., B.S.	I.	*Richmond, Ind.*	Beacon Chambers.
Sweetser, Philip Starr	VI.	*Newton Highlands*	Newton Highlands.
Thompson, Herman Ellis	II.	*Lowell*	19 St. James Ave.
Thurlow, Oscar Gowen	I.	*Newburyport*	Newburyport.
Todd, William Newman	VI.	*Newburyport*	15 Batavia St.
Tompkins, Maurice Crawford	I.	*Brooklyn, N.Y.*	11 Irvington St.
Tompson, George Morris, Jr.	I.	*Wakefield*	Wakefield.
Tripp, Edwin Pool	II.	*Westport*	82 Huntington Ave.
Trowbridge, William Waldo	III.	*W. Newton*	W. Newton.
Turgeon, Fremont Nelson	III.	*Gloucester*	21 St. Botolph St.
Underhill, Charles Francis	X.	*Dorchester*	72 Esmond St., D.
Vosbury, Winfred DeWitt	II.	*Binghamton, N.Y.*	15 Concord Sq.
Weaver, Maurice Edgar	VI.	*Washington, D.C.*	114 Huntington Ave.
Wells, Albert Warren	III.	*Quincy, Ill.*	9 Newbury St.
Wentworth, Reginald Andrew	II.	*No. Cambridge*	No. Cambridge.
Wetherbee, Florence Louise	V.	*Worcester*	Worcester.
Weymouth, Albert Pierce	I.	*Dorchester*	25 Mather St., D.
Whipple, Leyland Clement	V.	*Wellesley*	Wellesley.
Whitaker, William G.H., Jr.	VIII.	*Providence, R.I.*	566 Mass. Ave.
White, Jules Edward	I.	*Arlington Heights*	Arlington Heights.
Whitmore, Walter	VI.	*Newburyport*	28 Berwick Park.
Whitney, Harrison Allan	IV.	*Chicago, Ill.*	25 Dartmouth St.
Wiard, Oliver Martin, A.B.	IV.	*New Britain, Conn.*	470 Mass. Ave.
Wilder, Fred Hall	III.	*Bennington, Vt.*	13 St. James Ave.
Willard, Arthur Cutts	X.	*Washington, D.C.*	36 Holyoke St.

Second Year (*continued*).

NAME.	COURSE.	HOME.	RESIDENCE.
Willcomb, George Edward	XI.	*Chelsea*	Chelsea.
Williams, Clarence Benton	VI.	*Utica, N.Y.*	215 Newbury St.
Wilson, Frank Stetson	I.	*Roxbury*	209 Dudley St., R.
Wood, Edwin Thomas	II.	*Concord, N.H.*	36 Holyoke St.
Worcester, Samuel Thornton	V.	*Portland, Me.*	Brookline.
Yoder, Bartolette Artman	I.	*Omaha, Nebr.*	159 Mass. Ave.

FIRST YEAR.

NAME.	HOME.	RESIDENCE.
Abbott, Arthur Howard	*Clinton*	30 Norway St.
Abbott, Fred Hathaway	*Winchester*	Winchester.
Adams, Charles Robert	*Jamaica Plain*	256 Lamartine St., J.P.
Adams, Charles Waldo	*Chicago, Ill.*	215 Newbury St.
Allen, Chester	*W. Roxbury*	203 Temple St., W.R.
Allen, Elbridge Gerry	*Portland, Me.*	237 Beacon St.
Allen, Roy Hutchins	*Winchester*	Winchester.
Amberg, Arthur John	*Chicago, Ill.*	139 Beacon St.
Andrews, Frederick Huntoon	*Manchester*	Manchester.
Anson, Charles Lyman	*Milwaukee, Wis.*	18 Newbury St.
Armstrong, Albert Crosby	*Wollaston*	Wollaston.
Astell, Godfrey Blacker	*Halifax, N.S.*	214 W. Newton St.
Atwood, Carlton Elliot	*Chelmsford*	117 Chandler St.
Atwood, Harry Nelson	*Roxbury*	47 Elmore St., R.
Ayer, John	*Belmont*	Belmont.
Ayers, Samuel Henry	*Portsmouth, N.H.*	556 Columbus Ave.
Backup, Clifford Wilson	*Roxbury*	53 W. Cottage St., R.
Balkam, Arthur Thomas	*Jamaica Plain*	55 Green St., J.P.
Ball, William Gilbert	*Boston*	Hotel Bartol.
Banash, Ira James	*Roxbury*	57 Savin St., R.
Barber, Clarence Eugene	*Norwich, Conn.*	1070 Beacon St.
Barber, Waldo Austin	*Allston*	21 Gardner St., A.
Barlow, James Evans	*Lawrence*	Lawrence.
Barnd, Jules Verne	*Melrose Highlands*	Melrose Highlands.
Barnes, James Phillips	*Syracuse, N.Y.*	84 St. Botolph St.
Barrier, Edward Andrew	*Cambridge*	Cambridge.
Barrows, George Herbert	*Taunton*	Taunton.
Barry, John Gerald	*Salem*	Salem.
Bartlett, Edward Hale	*Newburyport*	Newburyport.
Bartlett, George Merrill	*Auburndale*	Auburndale.
Bassett, John Henry	*Ware*	613 Tremont St.
Beard, Robert Stanley	*York, Pa.*	143 Berkeley St.
Becker, William Frederick	*Chicago, Ill.*	11 Columbus Sq.
Beerman, Bernard	*Chelsea*	Chelsea.

First Year (*continued*).

NAME.	HOME.	RESIDENCE.
Beers, William Herbert	*Watertown, Conn.*	21 Berwick Park.
Belding, Arthur Field	*Fitchburg*	Beacon Chambers.
Bell, Raymond Edwin	*Portland, Conn.*	473 Mass. Ave.
Bendann, Roland	*Baltimore, Md.*	38 St. Botolph St.
Bender, Erwin Ferdinand	*Brooklyn, N.Y.*	274 Chestnut Ave., J.P.
Bent, Walter Gregory	*Framingham*	Framingham.
Berry, Henry Ellis	*Brookline*	Brookline.
Bickford, Fritz Clarence	*Roxbury*	104 Hutchings St., R.
Bixby, Robert	*No. Andover Depot*	No. Andover.
Blair, Paul Alexander	*Waterbury, Conn*	566 Mass. Ave.
Blodgett, Eben Lengwick	*Charleston, S.C.*	87 Gainsboro St.
Boggs, Charles Reid	*Washington, D.C.*	113 Warren Ave.
Borie, Renshaw	*Philadelphia, Pa.*	10 Charles St.
Bowman, Melville Bryant	*San Jose, Cal.*	18 St. Stephen St.
Boynton, Augustus Swain	*Groveland*	Groveland.
Bridges, David Wills	*Baltimore, Md.*	Beacon Chambers.
Briggs, Ernest Nathaniel	*Newport, R.I.*	15 St. Germain St.
Brooks, Ernest Morton	*Woburn*	Woburn.
Brown, James Salisbury	*Pawtucket, R.I.*	Pawtucket, R.I.
Brown, Joseph Henry, Jr.	*Charlestown*	Charlestown.
Brownell, Frank Wilbur, B.A.	*Chelsea*	Chelsea.
Bryant, Bradley Franklin White	*Brant Rock*	21 Berwick Park.
Buckingham, George Holbrooke	*Rutland, Vt.*	Trinity Court.
Buff, Henry Arthur	*Jamaica Plain*	23 Cheshire St., J.P.
Bunting, Charles Knowlton H.	*Shelburne Falls*	208 Huntington Ave.
Burden, Frederick Evans	*No. Attleboro*	No. Attleboro.
Burkhardt, Edward Arthur	*Jamaica Plain*	1 Mozart St., J.P.
Burns, Walter	*No. Adams*	571 Tremont St.
Butman, Chester Arthur	*Rockport*	29 St. Botolph St.
Butts, Walter Matthews	*So. Dartmouth*	2 St. Botolph St.
Cain, Walter Bicknell	*E. Weymouth*	E. Weymouth.
Caine, Sydney Atmore	*Louisville, Ky.*	566 Newbury St.
Carhart, Frank Milton	*Salt Lake City, Utah*	571A Columbus Ave.
Carleton, Lee Thurston	*Wakefield*	Wakefield.
Casey, George Austin	*Lee*	483 Mass. Ave.
Castleman, Philip	*Boston*	44 Barton St.
Champagne, George Henry	*Maynard*	Maynard.
Charlesworth, Harry Prescott	*Haverhill*	81 W. Rutland Sq.
Chesterman, Francis John	*Newburyport*	Chelsea.
Clapp, Charles Horace	*So. Boston*	18 Atlantic St., S.B.
Clark, William Armstrong	*Boston*	63 Mt. Vernon St.
Clarke, Walter Ayer	*Biddeford, Me.*	7 Follen St.
Cline, Max	*Boston*	139 Leverett St.
Coats, Albert Blake	*Somerville*	Somerville.

First Year (*continued*).

NAME.	HOME.	RESIDENCE.
Coffin, Edward May	*Newburyport*	Newburyport.
Cole, Sidney Lovett	*Somerville*	Somerville.
Collins, David	*Dedham*	Dedham.
Cowdrey, Irving Henry	*Fitchburg*	Fitchburg.
Craig, Charles Robert	*Concord*	Concord.
Cronkhite, Leonard Wolsey	*Greenwich, N.J.*	Newton Centre.
Crosby, Gorham	*Centreville*	560 Columbus Ave.
Cuesta, Enrique Gallardo	*Guadalajara, Mex.*	26 Newbury St.
Cumming, Silas Pierce	*Central Falls, R.I.*	18 Greenwick Park.
Daly, John Charles, Jr.	*Roxbury*	47 Townsend St., R.
Danforth, Carl Eugene	*Bangor, Me.*	Brookline.
Daniels, Joseph	*Boston*	1342 Washington St.
Davis, David Lincoln	*Hyde Park*	Hyde Park.
Davis, Edward Lester	*Newton Highlands*	Newton Highlands.
Davis, George Hubbard, Jr.	*Dorchester*	32 Bradlee St., D.
Davis, Roswell	*W. Newton*	W. Newton.
Dawson, Alfred Ernest	*Saxonville*	Saxonville.
Dean, Arthur Malcolm	*Canton*	Canton.
Dean, Charles Lake	*Braddock, Pa.*	90 Appleton St.
Dean, Henry Lawrence	*Canton*	Canton.
Delano, Ward Parker, Jr.	*Marion*	Worcester.
Dickerman, Albert Cornell	*Dorchester*	21 Mill St., D.
Dickie, John Frederick	*Cambridge*	Cambridge.
Donald, Harry Walker	*Egypt*	10 Charles St.
Douglas, John Frederic	*Bucksport, Me.*	Chelsea.
Drake, Francis Edward, Jr.	*Columbus, Ohio*	2 Batavia St.
Dunham, George Eldredge	*Northfield, Vt.*	27 Berwick Park.
Dwight, Joseph	*Boston*	235 Beacon St.
Dwyer, Emmet Joseph, A.B.	*Detroit, Mich.*	7 Newbury St.
Eaton, Lewis Dinman	*Cambridge*	Cambridge.
Eckel, George Robert	*St. Joseph, Mo.*	187 Huntington Ave.
Edmunds, Howard Maurice	*London, England*	237 Berkeley St.
Eichler, Walter Gottfried	*Dorchester*	6 Greenheys St., D.
Eisele, Herman	*Cleveland, Ohio*	Cambridge.
Elliott, Frank Spencer	*Gloucester*	21 St. Botolph St.
Emerson, Ralph Dammarell	*Worcester*	Worcester.
Estabrook, Thomas Winthrop	*Roxbury*	49 W. Cottage St., R.
Falvey, Frank Alexander	*Roxbury*	36 Perrin St., R.
Farrington, Robert Douglas	*W. Roxbury*	Bellevue St., W.R.
Faymouville, LeRoy Bernard	*San Francisco, Cal.*	Brookline.
Fick, Otto Wilhelm	*St. Louis, Mo.*	109 Warren Ave
Files, True Herbert	*Everett*	Everett.
Fisher, Andrew, Jr.	*Hyde Park*	Hyde Park.
Flagg, Howard Hollister	*St. Anthony Park, Minn.*	Sharon.

First Year (*continued*).

NAME.	HOME.	RESIDENCE.
Flynn, John Henry, Jr.	*Roxbury*	31 Marcella St., R.
Foley, Leonard Harding	*Natick*	Natick.
Folsom, Robert Morse	*Dorchester*	30 Esmond St., D.
Fouhy, James Francis	*Charlestown*	21 Wall St., C.
Foulds, Roberts Shepherd	*Taunton*	Somerville.
Fowler, Elbert	*Griffin, Ga.*	106 Huntington Ave.
Fowler, Robert	*Jamaica Plain*	35 Burroughs St., J.P.
Fraser, Frederick John	*Rye Beach, N.H.*	163 Mass. Ave.
Freeman, Arthur Emery	*Arlington*	Arlington.
Fuentes, Campos Andrés	*Parras, Coahuila, Mex.*	26 Newbury St.
Fuller, George	*Rochester, N.Y.*	19 Linden St., A.
Fuller, Laurence Usher	*Lynn*	Lynn.
Fuller, Percy Wheaton	*Washington, D.C.*	7 Batavia St.
Funk, George Charles	*Brookline*	Brookline.
Gage, Clarence Edward	*Woburn*	Woburn.
Gale, Roy Fellows	*Pittsfield*	571 Tremont St.
Gammons, Herman Trafton	*Middleboro*	Middleboro.
Gardner, Robert Sherman	*New London, Conn.*	15 St. Germain St.
Geckler, Burton Edward	*Orange*	31 Batavia St.
Geraghty, Thomas Francis, A.B.	*Chicago, Ill.*	139 Beacon St.
Gerhard, Norman Paul	*Brooklyn, N.Y.*	211 Huntington Ave.
Gerry, Arthur Peterson	*Franklin Falls, N.H.*	41 Wellesley Park, D.
Gifford, Ralph Staples	*New Bedford*	1096 Boylston St.
Gilbert, Albert Champion, B.Agr.	*Gilead, Conn.*	Cambridgeport.
Gilman, Wesley Clifton	*No. Abington*	No. Abington.
Gilmore, Luther Elmer	*Lowell*	Lowell.
Gilson, Alden Pinus	*Wellesley Hills*	Wellesley Hills.
Gladding, James Nickerson	*Fall River*	41 Moreland St.
Glidden, John Tinker	*Cambridge*	Cambridge.
Goldthwaite, Lee Faulkner	*Hopkinsville, Ky.*	6 Yarmouth St.
Goodale, Percy Allen	*Dorchester*	10 Carruth St., D.
Gouinlock, William Strachan	*Warsaw, N.Y.*	502 Columbus Ave.
Grady, Ronan Calestus	*E. Boston*	897 Saratoga St., E.B.
Graesser, Carl Herman	*Buffalo, N.Y.*	21 St. Botolph St.
Grant, Edward Chester	*Covington, Ky.*	42 Mt. Vernon St.
Green, Theodore	*Louisville, Ky.*	61 Hemenway St.
Green, William	*Gloversville, N.Y.*	83 St. Botolph St.
Gregson, Robert Burton	*Fiskdale*	Cambridge.
Guerin, Harry Joseph	*Boston*	23 Dalton St.
Guibord, Fred Willis	*Plattsburgh, N.Y.*	84 Worcester St.
Guild, Frank Emmons	*Attleboro*	31 Highland Park Ave.
Hadley, Ralph Edgar	*Lawrence*	31 St. Botolph St.
Haley, Joseph Francis	*So. Boston*	134 Dorchester St., S.B.
Hall, William Alden	*No. Easton*	No. Easton.

First Year (*continued*).

NAME.	HOME.	RESIDENCE.
Hammett, Louis Wilbar	*Newport, R.I.*	457 Mass. Ave.
Hardy, Henry Lewis	*Manchester, N.H.*	414 Columbus Ave.
Harris, William Augustus, A.B.	*Madison, Ga.*	366 Columbus Ave.
Hart, Harold Pillsbury	*So. Framingham*	So. Framingham.
Hastings, Arthur Nelson	*Cambridge*	Cambridge.
Hawkes, Charles Whitney	*Dorchester*	15 Euclid St., D.
Hayes, James, Jr.	*Brockton*	Brockton.
Helpern, Myron	*Boston*	45 Lagrange St.
Higgins, Warren Sneden	*Riverhead, N.Y.*	13 St. James Ave.
Hill, Edgar Logan	*Lincoln, Ill*	176 Huntington Ave.
Hill, Edwin Bruce	*Pittsburgh, Pa.*	566 Mass. Ave.
Hill, Francis Manning	*Lynn*	Lynn.
Hine, Daniel	*Hartford, Conn.*	Dedham.
Hinkley, Philip Edward	*Portland, Me.*	215 Newbury St.
Hixon, Harold	*Cambridge*	Cambridge.
Holliday, John Hampden, Jr.	*Indianapolis, Ind.*	261 Newbury St.
Hood, Albert Hudson	*Syracuse, N.Y.*	28 St. James Ave.
Hool, George Albert	*Lawrence*	Lawrence.
Houck, Carl Alfred	*Buffalo, N.Y.*	21 St. Botolph St.
Howland, Arthur Hathaway	*Brooklyn, N.Y.*	274 Chestnut Ave., J.P.
Humphrey, Carl Thomas	*Weymouth Centre*	Weymouth Centre.
Humphrey, William Henry	*Waterbury, Conn.*	378 Tremont St.
Hunt, Franklin Livingstone	*Waltham*	Waltham.
Huntington, Charles McKay	*Boston*	18 St. Stephen St.
Hyde, Stanley Taber	*Waltham*	Waltham.
Ingalls, Roger Philip	*Lexington*	Lexington.
Jason, George, Jr	*Cohasset*	Cohasset.
Jewett, Thomas Edward	*Boston*	61 Hemenway St.
Johansson, Frederick Victor	*Roxbury*	316 Dudley St., R.
Johnson, Bertrand Leroy	*Stoneham*	Stoneham.
Johnson, Charles Henry	*Haverhill*	Haverhill.
Johnston, Charles Wiswell	*Roxbury*	1 Copeland Pl., R.
Jones, George Bayard	*St. Louis, Mo.*	Newton Centre.
Joslin, Gilman Burt	*Jamaica Plain*	46 Burroughs St., J.P.
Josselyn, Edwin Dole, Jr.	*Bridgewater*	480 Columbus Ave.
Keen, William Herbert	*Malden*	Malden.
Keith, Henry Hiram Wheaton	*New Bedford*	219 W. Canton St.
Kenway, Herbert Winthrop	*Newton*	Newton.
Kibbey, Rinker	*Marshfield Hills*	76 Huntington Ave.
Killion, Louis John	*Roxbury*	49 Crawford St., R.
Knowles, Earle Forrest	*Boston*	169 St. Botolph St.
Kriegsman, Eugen Frederick	*Providence, R.I.*	9 Albermarle St.
Lamb, Sidney Rivers	*New York*	41 Rutland Sq.
Lambie, James McClurg	*Sewickley, Pa.*	90 Appleton St.

First Year (*continued*).

NAME.	HOME.	RESIDENCE.
Langworthy, Frank Herbert	*Lynn*	Lynn.
Lawrence, Arthur Warner	*Bridgewater*	Bridgewater.
Leavitt, Charles Evans	*Weymouth*	Weymouth.
Lewis, Henry Francis	*Toronto, Ont.*	Hyde Park.
Lewis, Warren Kendall	*Laurel, Del.*	Newton.
Lindsly, Ben Edwin	*Kansas City, Mo.*	74 Marlborough St.
Lombard, Eugene	*Dedham*	Dedham.
Lombard, Norman	*Kansas City, Mo.*	215 Newbury St.
Loomis, Warren Weston	*Windsor, Conn.*	143 Berkeley St.
Lord, Clarence Arthur	*Woonsocket, R.I.*	21 St. Botolph St.
Lord, Robert Howard William	*Newton*	Newton.
Loughlin, John Sherwood	*Dorchester*	16 Thornley St., D.
Lovejoy, Roy Fisk	*Lowell*	17 St. James Ave.
Luce, Robert Francis	*Melrose*	Melrose.
Lum, Elliott	*Aberdeen, S. Dak.*	29 Newbury St.
Lutze, Fred Clemens	*Sheboygan, Wis.*	113 Eutaw St., E.B.
Lynch, John Edward, Jr.	*Boston*	10 Pinckney St.
Lynde, Harry Milton	*Waltham*	Waltham.
Lyon, Waldo Vinton	*Woonsocket, R.I.*	134 St. Botolph St.
MacBriar, Wallace Noble	*Melrose*	Melrose.
McConnell, Frank William	*Dorchester*	61 Mascot Ave., D.
Machado, Joás Martins	*Bagé, Brazil*	29 Newbury St.
Mackie, Mitchell	*Milwaukee, Wis.*	18 Newbury St.
McLean, Robert Walter	*Malden*	Malden.
McManus, John Herbert	*Dorchester*	2 Winter St., D.
Mäder, Will Thomas Patterson	*Beverly*	Beverly.
Manta, Philip Prada	*Provincetown*	118 Cowper St., E.B.
Manter, Carlton Holmes	*Taunton*	Taunton.
Marcy, Grosvenor DeWitt	*Dorchester*	103 Ocean St., D.
Marvin, George Adams	*Seattle, Wash.*	69 Summer St.
Marvin, Joseph Benson, Jr.	*Louisville, Ky.*	403 Newbury St.
Mayer, Charles Benajah	*Madison, Wis.*	41 St. Botolph St.
Mead, Edward Arnold	*Milford*	Milford.
Meggison, John Alexander	*Amesbury*	Winchester.
Meriam, Marshall Gage	*Pepperell*	8 Claremont Park.
Merrill, Alden	*Dorchester*	16 Tremlett St., D.
Merrow, Harold Kay	*Hyde Park*	Hyde Park.
Meyer, Edgar Lumley	*St. George's, Bermuda*	Brookline.
Mitchell, Harold William	*Mansfield*	41 Rutland Sq.
Molina, Vicente	*Merida, Yucatan, Mexico*	33 St. Botolph St.
Moorehead, Theodore Parker	*Shanghai, China*	261 Newbury St.
Morrill, Leon Gilbert	*Norwood*	Norwood.
Morse, Robert Wilbur	*Jamaica Plain*	49 Holbrook St., J.P.
Motter, William Duffield Bell, Jr.	*St. Joseph, Mo.*	264 Newbury St.

First Year (*continued*).

NAME.	HOME.	RESIDENCE.
Munroe, Walter Nathan	*Roxbury*	24 E. Cottage St.
Nabstedt, Harry Martin	*Davenport, Iowa*	163 Mass. Ave.
Nelson, Henry Hawkins, Jr.	*Jamaica Plain*	16 Myrtle St., J.P.
Newton, Samuel Bailey	*Newport, R.I.*	12 Yarmouth St.
Nichols, Charles Albert	*Lowell*	19 St. James Ave.
Nichols, Robert Porter	*Searsport, Me.*	127 St. Botolph St.
Nicholson, Dow Hiram	*Roxbury*	53½ Walden St., R.
Niditch, Isadore	*Dorchester*	569 Dudley St., D.
O'Leary, Frederick Alfonsus	*Richibucto, N.B.*	539 Mass. Ave.
Olmsted, Herbert Warner	*Roslindale*	18 Newburg St.,Ros.
Page, Homer Olson	*Adrian, Mich.*	27 St. Botolph St.
Page, Raymond Felt	*Newton*	Newton.
Paquet, Victor Hugo	*Portland, Oreg.*	238 Devonshire St.
Parker, Lovell Hallet	*Osterville*	Cambridge.
Parsons, Galt Fayette	*Baltimore, Md.*	122 Huntington Ave.
Patch, Ralph Reginald	*Stoneham*	Stoneham.
Payne, Frank Edward	*Winchester*	Winchester.
Payne, James Harvey	*Wilmington, N.C.*	39 Union Park.
Pease, James Chase	*Merrimac*	12 St. James Ave.
Perkins, Arthur	*Salem*	Salem.
Perkins, Grafton Brookhouse	*Salem*	Salem.
Perry, Edward DeWolf	*New York, N.Y.*	Cambridge.
Perry, George Wason	*W. Medford*	W. Medford.
Perry, Roland Ambrose	*Medford*	Medford.
Poillon, Ernest Cornelius	*New York, N.Y.*	Arlington.
Poole, Frederick Parsons	*Boston*	19 Concord Sq.
Poor, Edward Joseph	*Salem*	Salem.
Potts, Templin Morris	*Cortina, Austria*	84 Bay State Road.
Pousland, Daniel Potter	*Salem*	Salem.
Prentiss, George William	*Holyoke*	31 Newbury St.
Prescott, Albert George	*Dorchester*	14 Whitman St., D.
Prichard, Charles Rollins	*Lynn*	Lynn.
Prince, Albert Senior	*Cincinnati, Ohio*	187 St. Botolph St.
Read, Edward Mason, Jr.	*St. Louis, Mo.*	14 Durham St.
Regan, Francis White	*Boston*	49 Winchester St.
Reinhardt, Jacob Brunn	*Buffalo, N.Y.*	27 St. Botolph St.
Rhodes, George Irving	*Andover*	Andover.
Rich, Charles James	*Norwood*	Norwood.
Rich, Williston Canfield	*Red Wing, Minn.*	566 Mass. Ave.
Richards, Nathaniel Atherton	*Weymouth*	Weymouth.
Richmond, Waldemar Spaulding	*Adams*	Beacon Chambers.
Riley, Francis Bradford	*Jamaica Plain*	15 Spring Park Ave., J.P.
Rinearson, William Clements, Jr.	*Hamilton, Ohio*	30 Yarmouth St.
Rippey, Attwood Eugene	*Brookline*	Brookline.

First Year (*continued*).

NAME.	HOME.	RESIDENCE.
Robbe, Louis Ernest	*Peterboro, N.H.*	Beacon Chambers.
Roberts, Albert Arthur	*Rochester, N.H.*	1643 Dorchester Ave.
Robinson, Edwin Sprague	*No. Cambridge*	No. Cambridge.
Rogers, James Earl	*Wrentham*	Wrentham.
Runnels, Scott Clark	*Indianapolis, Ind.*	89 Pinckney St.
Russell, Arthur Edmands	*Medford*	Medford.
Russell, Henry Harding	*Brookline*	Brookline.
Sawin, Frederic VanBeuren	*W. Somerville*	W. Somerville.
Sawyer, Ralph Wainwright	*Lawrence*	Lawrence.
Schaefer, Hans Frederick	*Cincinnati, Ohio*	12 W. Cedar St.
Schofield, Lane	*Newtonville*	Newtonville.
Schonthal, Derso Clarence	*Columbus, Ohio*	10 Arlington St.
Scott, George William	*Medford*	Medford.
Seaver, Samuel	*Waban*	Waban.
Segar, Ralph LeRoy	*Westerly, R.I.*	18 Newbury St.
Senger, Richard Warren	*Port Jervis, N.Y.*	61 Hemenway St.
Seyms, Robert Wyndham	*Hartford, Conn.*	264 Newbury St.
Shapira, Samuel	*Boston*	80 Green St.
Shaw, Chester Roy	*Brockton*	Brockton.
Shaw, Howard Payne	*Buckfield, Me.*	86 Myrtle St.
Shaw, Thomas	*Plymouth*	Plymouth.
Siebrecht, Henry Benjamin	*Astoria, N.Y.*	32 Dartmouth St.
Silverman, Abraham Jacob	*E. Boston*	36 Paris St., E.B.
Simonds, Fred Washburn	*Marlboro*	Marlboro.
Simpson, Willard Eastman	*San Antonio, Tex.*	No. Cambridge.
Smart, William Fuller	*Lewiston, Me.*	76 Huntington Ave.
Smith, Albert Howell	*Malden*	Malden.
Smith, Albert Loomis	*Wenham Depot*	54 Montgomery St.
Smith, Alfred Dennett	*New York, N.Y.*	78 Huntington Ave.
Smith, Converse	*Waltham*	Waltham.
Smith, Edwin Lawrence	*Milwaukee, Wis.*	18 Newbury St.
Smith, Sidney Alfred	*Jamestown, N.Y.*	93 Mt. Vernon St.
Smith, Theodore Lincoln	*Concord*	1 W. Cedar St.
Snow, Edwin Bertrand, Jr.	*Medfield*	Medfield.
Soares, Paulo de Moraes Sarmento	*Rio de Janeiro, Brazil*	Cambridge.
Spalding, William Livingston	*Lowell*	Lowell.
Spaulding, Henry Seville	*Ipswich*	152 Quincy St., R.
Speare, Alden Herbert	*Newton Centre*	Newton Centre.
Spencer, Arthur Earle	*Roxbury*	30 Mt. Pleasant Ave., R.
Sprague, Forest Otho	*Haverhill*	28 Berwick Park.
Staples, Carl	*Waltham*	Waltham.
Stebbins, Roger Pierce	*Roslindale*	862 South St., Ros.
Steel, Edward Thomas, 2d	*Chappaqua, N.Y.*	100 Mt. Vernon St.
Steinberger, Emil	*Bradford, Pa.*	29 St. Botolph St.

First Year (*Continued*).

NAME.	HOME.	RESIDENCE.
Stevens, Samuel Spaulding	*Salem*	Salem.
Stramblad, Theodore Alexander	*Rockwell City, Iowa*	41 Rutland Sq.
Strickland, Sidney Talbot	*Brookline*	Brookline.
Sullivan, Patrick Joseph	*Lawrence*	Lawrence.
Sweetser, Harold Ricketson	*Roxbury*	11 Akron St., R.
Tadgell, Alfred Edward	*Salem*	The Ludlow.
Tarbett, Ralph Edwin	*Stoneham*	Stoneham.
Taylor, Robert Edward Lee, B.A.	*Norfolk, Va.*	6 Louisburg Sq.
Taylor, Webster Haverstock	*Roxbury*	9 Forest St., R.
Taylor, Winfred Albert	*Lawrence*	31 St. Botolph St.
Tebbets, James Hargraves	*Somersworth, N.H.*	Cambridgeport.
Thomas, George Carlyle	*Boston*	31 Concord Sq.
Thompson, Leigh Adair	*Bridgewater*	480 Columbus Ave.
Thorp, Lambert	*Cincinnati, Ohio*	19 Upton St.
Tower, Gilbert Sanders	*Cohasset*	Cohasset.
True, Albert Otis	*Newton Highlands*	Newton Highlands.
Tuck, William Oliver, Jr.	*Haverhill*	Haverhill.
Tufts, William	*Boston*	56 Dwight St.
Turner, George Engelmann	*St. Louis, Mo.*	29 St. Botolph St.
Turner, LeBaron	*Geneva, Ill.*	Hotel Westland.
Turner, Robert Nathaniel	*Waltham*	Waltham.
Turner, Waldso	*Dallas, Tex.*	1A Berwick Park.
Turner, William Camillo	*Trinidad, Cuba*	W. Newton.
Upham, Harry Warren	*Malden*	Malden.
Urquidi, Juan Francisco	*Mexico, Mexico*	180 Columbus Ave.
Wald, George Gustav	*Somerville*	Somerville.
Wales, Frederick Charles	*W. Newton*	W. Newton.
Walker, Albert Willard	*Marlboro*	Marlboro.
Walker, Henry Samuel, Jr.	*Malden*	Malden.
Walker, Hiram LeRoy	*Peabody*	Peabody.
Ware, Raymond	*Dorchester*	11 Sayward St., D.
Ware, Samuel Langmaid	*Somerville*	Somerville.
Warren, Clarke Edward	*La Grange, Ill.*	Wollaston.
Wastcoat, Roy Washburn	*Taunton*	35 Concord Sq.
Weaver, Earll Chase	*Syracuse, N.Y.*	37 St. Botolph St.
Webster, Frank DeWolf	*Greenfield*	40 Isabella St.
Welch, Edward Oscar	*Salem*	Salem.
Wells, Percy Leonard	*Waltham*	Waltham.
Wentworth, Henry Azor	*Lynn*	Lynn.
West, Harry Hyde	*Woburn*	Woburn.
Whitcomb, Ralph Nims	*Keene, N.H.*	25 St. Botolph St.
White, Bertram Nash	*Machias, Me.*	Beacon Chambers.
White, Frederick Sanford	*So. Coventry, Conn.*	91 Appleton St.
White, John Aloysius	*Salem*	Salem.

First Year (*Continued*)

NAME.	HOME.	RESIDENCE.
Whiting, Horatio	*Dorchester*	2 Gleason St., D.
Whitman, Kilborn, Jr.	*Roxbury*	109 Walnut Ave., R.
Whitmarsh, Alfred Lamson	*Abington*	Abington.
Whitmore, James Bryant	*Akron, Ohio*	6 Yarmouth St.
Whitney, Harrie Lawrence	*So. Framingham*	17 Batavia St.
Whittemore, Walter Lawrence, Jr.	*Wollaston*	Wollaston.
Wiggin, Harry	*Malden*	Malden.
Wood, Ellis Gray	*Arlington*	Arlington.
Woodbury, Ezra Ernest	*Salem*	Salem.
Young, Robert Libbey	*Haverhill*	81 W. Rutland Sq.

SPECIAL STUDENTS.

The abbreviations used in this list, which includes all students who are not in the full regular courses, are:

Ap. Mech. . Applied Mechanics.	Hist. . . . History.
Arch. . . Architecture.	Lang. . . . Modern Languages.
Biol. . . . Biology.	Math. . . Mathematics.
Chem. . . Chemistry.	M. Arts . . Mechanic Arts.
Civ. Eng. . Civil Engineering.	Mech. Eng. . Mechanical Engineering.
Draw. . . Drawing and Descriptive Geometry.	Min. Eng. . Mining Engineering.
	Nav. Arch. . Naval Architecture.
Elect. Eng. . Electrical Engineering.	Phys. . . . Physics.
Eng. . . . English.	Pol. Sci. . . Political Science.
Geol. . . . Geology.	San. Eng. . Sanitary Engineering.

NAME.	HOME.	RESIDENCE.
Abbot, Joseph Robertson . . Chem., Eng., Lang., Math.	*Kansas City, Mo.* . .	Hotel Berkeley.
Adams, Irving Ellwood . . . Chem., Geol., Min. Eng.	*Allston*	64 Aldie St., A.
Aguilar, Jose Hilario . . . . Chem., Math., M. Arts.	*Hermosillo, Mexico* .	Melrose.
Aldrich, William Truman, S.B. Arch.	*Warwick Neck, R.I.*	36 Newbury St.
Alsberg, Julius A.B., M.E. . . Geol., Min. Eng.	*New York, N.Y.* . .	80 Huntington Ave.
Ames, Henry Allison . . . . Ap. Mech., Civ. Eng., M. Arts, Mech. Eng.	*Lowell*	9 Concord Sq.
Ancona, John Flinn . . . . Ap. Mech., Draw., Hist., Math., Mech. Eng., Phys., Pol. Sci.	*Washington, D.C.* .	25 St. Botolph St.
Anderson, Frederick Sanford . Chem., Eng., Hist., Lang., M. Arts.	*W. Haven, Conn.* . .	420 Columbus Ave.
Anthony, William Stephen . . Draw., Eng., Hist., Lang., Math., M. Arts, Phys.	*So. Dartmouth* . . .	2 St. Botolph St.
Armstrong, Samuel Ellsworth . Civ. Eng., Draw., Eng., Hist., Lang., Math., Phys.	*Somerville*	Somerville.
Arnold, Perrie Morgan . . . Eng., Hist., Lang., Math., M. Arts, Mech. Eng., Phys.	*Hartford, Conn.* . .	47 Rutland Sq.
Asbury, Louis Humbert, A.B. . Arch., Draw.	*Charlotte, N.C.* . .	23 Concord Sq.
Avery, Charles Henry . . . . Ap. Mech., Lang., M. Arts, Phys., Pol. Sci.	*Newtonville* . . .	Newtonville.
Babcock, Frank Gilbert . . . Chem., Lang., Min. Eng., Pol. Sci.	*Tolland, Conn.*	Cambridgeport.

NAME.	HOME.	RESIDENCE.
Bacon, Herbert Morton . . . Chem., Lang., Math., Mech. Eng., Phys., Pol. Sci.	*Hartford, Conn.* . .	83 St. Botolph St.
Baker, Andrew Percy . . . . Civ. Eng., Geol., Lang., Phys., Pol. Sci.	*Kingston*	9 Follen St.
Baker, Edward Sherman . . . Civ. Eng., Min. Eng., Phys.	*Dedham*	Dedham.
Barnaby, George Albert . . . Ap. Mech., Chem., Geol., Lang., Min. Eng., Phys., Pol. Sci.	*Peabody*	Peabody.
Barrows, Allan Hanscom . . . Chem., Eng., Geol., Lang., Mech. Eng., Phys., Pol. Sci.	*Reading*	Reading.
Bartberger, Edward William, B.S. Arch., Civ. Eng., Phys.	*Pittsburgh, Pa.* . . .	35 St. Botolph St.
Barter, Henry Alexander . . . Chem., Draw., Mech. Eng., Phys.	*Portland, Me.*	480 Columbus Ave.
Bartlett, Stephen Russell, A.B. . Ap. Mech., Civ. Eng., M. Arts, Mech. Eng., Nav. Arch.	*Boston*	2 Commonwealth Ave.
Bary, Dmitri Alexander . . . Civ. Eng., Draw., Eng., Geol., Hist., Math., Phys.	*Melrose Highlands* .	Melrose Highlands.
Baxter, Samuel Elmer . . . . Chem., Civ. Eng., Draw., Eng., Hist., Lang., Math., Phys.	*Keene, N.H.* . . .	141 Appleton St.
Bedford, Thomas Payne, B.S. . Draw., Math., M. Arts, Mech. Eng., Phys.	*Fayette, Mo.* . . .	106 Huntington Ave.
Bell, Herman Fiske, A.B. . . Ap. Mech., Civ. Eng., Draw., Geol., Mech. Eng , Pol. Sci.	*Bristol, R.I.* . . .	566 Mass. Ave.
Bellows, Robert Peabody, A.B. Arch., Draw.	*Boston*	29 Hereford St.
Bennett, Frederick Gardner . . Chem., Draw., Eng., Math.	*Southampton, N.Y.* .	6 Yarmouth St.
Bilyea, Carl Thompson . . . Arch., Draw., Phys.	*Watertown, N.Y.* . .	261 Newbury St.
Birks, Arthur Henry, S.B. . . Civ. Eng., Math.	*Peoria, Ill.*	17 Blagden St.
Bixby, Llewellyn, B.L. . . . Chem., Civ. Eng., Draw., Lang., Phys.	*Claremont, Cal.* . .	Newton Highlands.
Blodgett, George Raymond . . Ap. Mech., Civ. Eng., Elect. Eng., Mech. Eng., Phys.	*W. Newton*	W. Newton.
Bolster, May Morrill, B.L. . . Chem.	*Roxbury*	10 Cobden St., R.
Bolster, Roy Hale, S.B. . . . Civ. Eng.	*Roxbury*	10 Cobden St., R.
Bowers, Daniel Hix Cudworth . Chem., Civ. Eng., Eng., Hist., Lang.	*Taunton*	Taunton.
Boyden, Charles, A.B. . . . . Chem., Draw., Math., M. Arts, Phys.	*Boston*	267 Commonwealth Ave.
Bradley, Franklin Sawyer . . Ap. Mech., Math., Mech. Eng., Phys., Pol. Sci.	*Dover, N.H.* . . .	264 Newbury St.
Bradley, George Edward . . . Draw., M. Arts.	*So. Framingham* . .	So. Framingham.
Bradshaw, George B., A.B. . . Ap. Mech., Chem., Draw., Mech. Eng.	*De Kalb, Ill.* . . .	566 Mass. Ave.
Braley, Jessie Nelson, A.B. . . Chem.	*New Bedford* . . .	47 St. Botolph St.
Breed, Howard . . . . . Biol., Draw., Eng , Lang., Math., Pol. Sci.	*Cincinnati, Ohio* . .	261 Newbury St.
Brewer, Charles Duncan . . . Ap. Mech., Chem., Min Eng., Phys.	*Duluth, Minn.* . . .	Auburndale.

NAME.	HOME.	RESIDENCE.
Bridges, John Samuel, Jr. . .	*Baltimore, Md.* . .	Beacon Chambers.
Ap. Mech., Chem., Lang., Math., M. Arts, Phys., Pol. Sci.		
Brigham, Charles Howard . .	*Marlboro*	Marlboro.
Civ. Eng., Eng., Hist., Math., Phys.		
Bright, George	*Pottsville, Pa.* . . .	261 Newbury St.
Ap. Mech., Chem., Civ. Eng., Min. Eng., Phys.		
Brown, Frank Zenas	*Richmond, Va.* . .	78 Huntington Ave.
Ap. Mech., Elect. Eng., Math., Mech. Eng., Phys.		
Brown, Howard Melville, A.B.	*Comstock's Bridge, Conn.*	122 Huntington Ave.
Chem., Draw., Geol., Hist., Phys.		
Brown, James Hugh	*Boston*	6 Staniford St.
Ap. Mech., Elect. Eng., Mech. Eng., Phys.		
Brown, Martha Brookes . . .	*Burlington, Vt.* . .	4 W. Cedar St.
Arch., Civ. Eng., Draw.		
Brown, Sumner Edwin . . .	*Springfield*	374 Newbury St.
Civ. Eng., Eng., Geol., Math., Phys.		
Bruce, Barbour	*Louisville, Ky.* . . .	142 Marlborough St.
Eng.		
Buck, Robert Wallace	*Southboro*	Southboro.
Draw., Eng., Hist., Lang., M. Arts.		
Bull, Freeman Nelson	*Revere*	Revere.
Civ. Eng., Eng., Hist., Lang., Math., Phys.		
Bull, Harcourt Wesson . . .	*Springfield*	6 Louisburg Sq.
Chem., Draw., Eng., Lang.		
Burdick, Herbert Clemen . .	*Cambridge*	Cambridge.
Ap. Mech., Civ. Eng., Elect. Eng., Mech. Eng., Phys.		
Burton, Eugene	*Louisville, Ky.* . . .	403 Newbury St.
Chem., Draw., Eng., Hist., Lang., Math.		
Calley, Walter England . . .	*Cambridge*	Cambridge.
Ap. Mech., Elect. Eng., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.		
Calnan, John William Joseph .	*Boston*	16 E. Canton St.
Chem., Lang., Phys., Pol. Sci.		
Canby, Harry Beaver, A.B. . .	*Dayton, Ohio* . . .	Hotel Westminster.
Ap. Mech., Civ. Eng., M. Arts, Mech. Eng.		
Capelle, George Curtis . . .	*E. Cambridge* . . .	E. Cambridge.
Ap. Mech., Math., Mech. Eng., Nav. Arch., Phys.		
Carmichael, George Patrick, A.B.	*Boston*	282 Mass. Ave.
Arch., Draw., Lang., Phys., Pol. Sci.		
Cartagena, Juan José	*Mayagüez, Porto Rico*	305 Heath St., R.
Draw., Lang., M. Arts.		
Chamberlin, Noel	*Roxbury*	42 Wait St., R.
Arch., Civ. Eng., Draw., Eng., Geol., Hist., Lang., Pol. Sci.		
Chapin, Harry Gardner . . .	*Greenfield*	40 Isabella St.
Civ. Eng., Draw., Eng., Hist., Lang., Math., Phys.		
Chapin, Henry Kent	*Chicago, Ill.* . . .	261 Newbury St.
Chem., Draw., Eng., Hist., Lang., M. Arts.		
Chapman, Harlen Monroe . .	*Turners Falls* . . .	170 St. Botolph St.
Chem., Min. Eng., Phys.		
Cheney, John Tyrrell	*Kenilworth, Ill.* . .	237 Beacon St.
Ap. Mech., Lang., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.		
Church, Albert Thomas . . .	*Oakland, Cal.* . . .	206 Huntington Ave.
Civ. Eng., Draw., Mech. Eng., Min. Eng., Phys., Pol. Sci.		
Clapp, George Huntington . .	*Leominster.*	130 St. Botolph St.
Civ. Eng., Draw., Geol., Lang., Math., Phys., Pol. Sci.		
Clare, Charles Henry	*Quincy*	Quincy.
Draw.		
Clark, William Merritt, Ph.B. .	*New Haven, Conn.* .	76 Huntington Ave.
Chem., Lang., Phys., Pol Sci.		

NAME.	HOME.	RESIDENCE.
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Puckey, Francis Willard, S.B. Arch.	*Wilkesbarre, Pa.*	16 Berwick Park.
Pulsifer, Julia, A.B. Chem.	*Auburn, N.Y.*	45 St. Botolph St.
Putnam, Amy Biol.	*Roxbury*	130 Highland St., R.
Rapier, John Bernard, B.S. Draw., Lang., Math., M. Arts, Phys., Pol. Sci.	*Mobile, Ala.*	17 Blagden St.
Rathbun, Frank DeGraff Chem., Min. Eng., Phys.	*Boston*	424 Mass. Ave.
Raymond, Frank Chem., Draw., Eng., Hist., Lang., Math., M. Arts.	*Essex*	Essex.
Raymond, Grace Huntington Chem., Draw., Eng., Lang.	*No. Abington*	No. Abington.
Read, Albert Manton Draw., Eng., Hist., Lang., Math., M. Arts, Mech. Eng., Phys.	*Pawtucket, R.I.*	237 Beacon St.
Reeder, Edwin Colville, S.B., E.M. Elect. Eng., Lang., Mech. Eng., Phys.	*Calumet, Mich.*	Brookline.
Regestein, Walter Philip Chem., Phys., Pol. Sci.	*Jamaica Plain*	92 Wyman St., J.P.
Reid, Josiah Elnathan Ap. Mech., Lang., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.	*E. Boston*	173 Lexington St., E.B.

NAME.	HOME.	RESIDENCE.
Reynolds, David Solomon . .	*Sao La Mar, Jamaica*	Somerville.
Draw., Math., M. Arts, Mech. Eng., Phys.		
Rice, Winthrop Merton . . .	*Stamford, Conn.* . .	454 Mass. Ave.
Ap. Mech., Civ. Eng., Elect. Eng., Mech Eng., Nav. Arch., Phys.		
Richards, George Chadwick . .	*Andover*	19 St. Botolph St.
Chem., Draw., Eng., Hist., Lang., Math., M. Arts, Phys.		
Richardson, Frederic L. W., A.B.	*Brookline*	Brookline.
Arch., Draw.		
Ricketts, Alfred Henry . . .	*Providence, R.I.* . .	27 St. Botolph St.
Chem., Lang., Phys.		
Riebel, Elroy Clemens . . .	*Columbus, Ohio.* . .	25 Darthmouth St.
Arch., Draw.		
Rivitz, Seymour Moses . . .	*Boston*	13 Ashland St.
Chem., Draw., Eng., Math.		
Robbins, Joseph Drew, B.S. . .	*Robbins Station, Pa.* .	65 Pembroke St.
Ap. Mech., Chem., Eng., Lang., Mech. Eng., Phys.		
Robertson, Winfred Franklin .	*Hinsdale, N.H.* . .	30 Yarmouth St.
Chem.		
Rodgers, Charles Loring . . .	*Binghamton, N.Y.* .	264 Newbury St.
Civ. Eng., Draw., Eng., Lang., Math., Mech. Eng., Phys.		
Rogers, Anne Fuller	*Boston*	126 Newbury St.
Biol.		
Rogers, George Dennison . .	*Gloucester*	Gloucester.
Ap. Mech., Civ. Eng., Elect. Eng., Lang., Mech. Eng., Phys.		
Rogers, Rutherford Hayes . .	*Boston*	566 Mass. Ave.
Draw., Elect. Eng., Math., Mech. Eng., Phys., Pol. Sci.		
Roper, Walter Frederic . . .	*Hopedale*	237 Beacon St.
Lang., Math., Mech. Eng., Phys., Pol. Sci.		
Ross, George Allen	*Montreal, Que.* . .	89 Charles St.
Arch.		
Sabin, Jay Horace	*Aurora, Ill.*	140 Huntington Ave.
Chem., Civ. Eng., Min. Eng., Phys.		
Sammis, Theodore Augustus, Jr.	*Minneapolis, Minn.* .	86 Charles St.
Draw., Eng., Hist., Lang., Math., M. Arts, Mech. Eng., Phys.		
Sanborn, George Warren . . .	*Hyde Park*	Hyde Park.
Draw., Eng., Hist., Lang., Math., M. Arts, Mech. Eng., Phys.		
Sarratea, Roberto Browne . .	*Valparaiso, Chili* . .	121 Newbury St.
Chem., Draw., Lang.		
Sawyer, Arthur Harold . . .	*Arlington*	Arlington.
Ap. Mech., Chem., Civ. Eng., Min. Eng., Phys.		
Scannell, Frank Timothy . .	*Lowell*	Lowell.
Chem., Eng., Hist., Lang., Math., M. Arts.		
Schaefer, Hans Christian . .	*Buffalo, N.Y.* . . .	263 Newbury St.
Civ. Eng., Draw., Eng., Hist., Lang., Math., Phys.		
Schlemm, Leonard Ernest . .	*Brookline*	Brookline.
Civ. Eng., Geol., Phys., Pol. Sci.		
Schlesinger, Marion McBurney .	*Brookline*	Brookline.
Chem.		
Scholtes, Alexander Joseph . .	*Dorchester*	22 Orchard Pl., D.
Arch.		
Scott, John Russell, B.A. . .	*Manchester, England*	71 Newbury St.
Ap. Mech., Mech. Eng.		
Sephton, Cecilia Hilda . . .	*Boston*	91 Regent St., R.
Biol., Chem., Eng., Geol., Hist., Lang., Phys.		
Severy, Frank Joseph, A.B. .	*Chase's Mills, Me.* .	4 Oxford Terrace.
Ap. Mech., Civ. Eng., Draw., Eng., Lang., Phys.		
Seyms, George Beach	*Hartford, Conn.* . .	264 Newbury St.
Ap. Mech., Eng., Lang., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.		

NAME.	HOME.	RESIDENCE.
Shaw, Brackley Azel . . . . Civ. Eng., Biol., Geol.	*Brookline*	Brookline.
Shaw, George Herbert . . . Ap. Mech., Chem., Math., Mech. Eng., Phys.	*Belmont*	Belmont.
Shedd, Charles Levi . . . . Civ. Eng., Mech. Eng., Phys.	*Portsmouth, N.H.* .	Somerville.
Sherlock, Robert Emmet . . . Chem., Draw., Eng., Lang., Math.	*Geneseo, N.Y.* . . .	70 Rutland St.
Sherrill, Harold Walter . . . Civ. Eng., Draw., Eng., Geol., Math., Phys.	*Poughkeepsie, N.Y.* .	Brookline.
Sibbett, George Ewing . . . Ap. Mech., Lang., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.	*Bellevue, Pa.* . . .	41 St. Botolph St.
Simmons, Herman Roswell . . Draw., Eng., Hist., Lang., Math.	*Providence, R.I.* . .	566 Mass. Ave.
Simon, Jay Bear, B.S. . . . . Ap. Mech., Civ. Eng., Draw., Lang., Min. Eng., Phys.	*Rock Island, Ill.* . .	124 St. Botolph St.
Simonds, Clark David . . . Biol., Chem., Hist., Lang., Pol. Sci.	*Manchester, Vt.* . .	19 Myrtle St.
Slocum, Arthur Gaylord, Jr., A.B. Ap. Mech., Elect. Eng., Math., M. Arts, Mech. Eng., Phys.	*Kalamazoo, Mich.* .	39 St. Botolph St.
Small, Harry Alonzo Campbell . Draw., Eng., Hist., Lang., Math., M. Arts, Phys.	*Salem*	Salem.
Smith, Charles John . . . . Chem., Elect. Eng., Math., Mech. Eng., Phys., Pol. Sci.	*Jamaica Plain* . . .	49 Burroughs St., J.P.
Smith, Daniel Arthur, Jr. . . Ap. Mech., Elect. Eng., Math., Mech. Eng., Phys., Pol. Sci.	*Newport, R.I.* . . .	92 Pembroke St.
Smith, Francis Fay Hill . . . Ap. Mech., Math., Min. Eng., Phys.	*Falmouth*	1 W. Cedar St.
Smith, Lowell Eldridge . . . Ap. Mech., Chem., Geol., Lang., Phys., Pol. Sci.	*Chelsea*	Chelsea.
Smith, Mortimer Fuller . . . Chem., Geol., Lang., Phys.	*Lynn*	Lynn.
Smith, Philip Reeder . . . . Ap. Mech., Mech. Eng., Phys.	*Milwaukee, Wis.* . .	261 Newbury St.
Sneeringer, William James, Jr. . Draw., Geol., Eng., Lang., Math., Phys.	*Baltimore, Md.* . .	Beacon Chambers.
Snydacker, Arthur Godfrey . . Biol., Chem.	*Chicago, Ill.* . . .	St. Botolph St.
Sohier, Walter . . . . . Ap. Mech., Math., Mech. Eng., Phys., Pol. Sci.	*Concord*	Concord.
Spear, George Morton . . . . Ap. Mech., M. Arts, Mech. Eng.	*Lowell*	16 Berwick Park.
Stanhope, William Edward . . Biol., Chem., Eng., Hist., Lang., Pol. Sci.	*Newport, R.I.* . . .	Beacon Chambers.
Staples, Walter Allan . . . . Draw., Math., M. Arts.	*St. John, N.B.* . .	Somerville.
Starbird, Chester Bates . . . Eng., Lang., Math., M. Arts.	*Buffalo, N.Y.* . . .	Marlboro.
Stevens, Henry Warren . . . Draw., Eng., Hist., Lang., Math., M. Arts, Mech. Eng., Phys.	*So. Gardner* . . .	22 Saunders St., A.
Stickney, William, A.B. . . . Civ. Eng., Geol.	*New York, N.Y.* . .	12 W. Cedar St.
Stiles, Harry Alland . . . . Ap. Mech., Chem., Geol., Lang., Min. Eng., Phys., Pol. Sci.	*Allston*	52 Summit Ave., A.
Stone, Mary Gray . . . . . Biol.	*Boston*	18 Chestnut St.
Stow, Kent Tillinghast . . . Ap. Mech., M. Arts, Mech. Eng., Phys.	*Buffalo, N.Y.* . . .	21 St. Botolph St.

NAME.	HOME.	RESIDENCE.
Strong, Homer David . . . Chem., Geol., Phys., Pol. Sci.	*Winsted, Conn.* . .	Brookline.
Sullivan, Richard Thomas . . Civ. Eng., Draw., Eng., Geol., Hist., Lang., Math., Phys.	*Newton Upper Falls* .	Newton Upper Falls.
Swanton, Henry Aiken, S.B. . Elec. Eng., Nav. Arch., Phys.	*Roxbury*	1 Regent St., R.
Sweet, Arthur Jeremiah, A.B. . Chem., Draw., Eng., Math., M. Arts, Mech. Eng., Phys.	*Utica, N.Y.*	470 Mass. Ave.
Sweetser, Albert Edwin . . . Draw., Eng., Lang., Math., Phys.	*Brockton*	Brockton.
Swenson, Omar Stephen . . . Arch., Draw., Math., Phys., Pol. Sci.	*Concord, N.H.* . . .	571A Columbus Ave.
Taylor, Grant Sterne . . . . Civ. Eng., M. Arts.	*Newport, R.I.* . . .	15 St. Germain St.
Tenney, William Field . . . Civ. Eng., Draw., Eng., Hist., Lang., Math.	*W. Acton*	W. Acton.
Ternan, Terence Briefri . . . Chem., Draw., Eng., Math.	*Bedford, N.S.* . . .	Hyde Park.
Thomas, Charles Sydney . . . Ap. Mech., Chem., Civ. Eng., Lang., Min. Eng., Phys.	*Denver, Colo.* . . .	175 Newbury St.
Thompson, Edward Cutter . . Ap. Mech., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.	*Boston*	697 Columbia Road.
Thwing, LeRoy Livingstone . . Ap. Mech., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.	*Somersworth, N.H.* .	34 Rutland Sq.
Titcomb, Roland Elbert . . Ap. Mech., Mech. Eng., Nav. Arch., Phys.	*Rowley*	17 Yarmouth St.
Towne, Lillian May . . . . Geol.	*Brighton*	89 Surrey St., B.
Truelson, George Adolph . . Arch.	*San Francisco, Cal.* .	2 Claremont Park.
Tsuruta, Katsuzo . . . . . Chem., Draw., Eng.	*Tokio, Japan* . . .	272 Boylston St.
Tuell, Samuel Bennett . . . Civ. Eng., Draw., Geol., Lang., Pol. Sci.	*New Bedford* . . .	17 Rutland Sq.
Turner, Everett Pendleton . . Biol., Eng., Hist., Lang., Pol. Sci.	*Arlington*	Arlington.
Turner, John Bice . . . . . Ap. Mech., Civ. Eng., Mech. Eng., Phys.	*St. Louis, Mo.* . . .	237 Beacon St.
Upham, Margaret . . . . . Eng.	*Boston*	74 Chestnut St.
Valiquet, Harry Howell . . . Ap. Mech., Lang., Math., M. Arts, Mech. Eng., Phys., Pol. Sci.	*Lynn*	Lynn.
Vinal, Leslie Thorning, A.B. . Chem., Phys.	*Somerville*	Somerville.
Vose, Ida Hersey . . . . . Eng.	*Boston*	285 Beacon St.
Walcott, Stuart Lanier . . . Biol., Chem., Geol., Phys.	*Boston*	3 Arlington St.
Walker, Herbert Samuel, A.B. Biol., Chem.	*Chicago, Ill.*	36 Rutland Sq.
Wallace, Charles Marmont . . Civ. Eng., Geol., Phys.	*Providence, R.I.* . .	Exeter St.
Wallon, Lewis Arthur . . . . Draw., Eng., Hist., Lang., Math., M. Arts, Phys.	*Somerville*	Somerville.
Warner, Mary Elizabeth . . . Arch.	*Los Angeles, Cal.* . .	Somerville.
Warren, Mary Eva . . . . . Biol.	*Weston*	Somerville.

NAME.	HOME.	RESIDENCE.
Waterman, William, Jr.	*Chicago, Ill.*	257 Huntington Ave.
Ap. Mech., Chem., Eng., Lang., Math., Mech. Eng.		
Webster, Arthur Stanley	*Roxbury*	25 Greenville St., R.
Chem., Eng., Hist., Lang., Math., M. Arts.		
Weeks, Angelina Louisa, A.B.	*Arlington*	Arlington.
Biol.		
Wehner, Lewis	*Boston*	11 Yarmouth St.
Ap. Mech., Math., Mech. Eng., Nav. Arch., Phys.		
Weld, Eloise Minot	*Dedham*	Dedham.
Arch., Phys.		
Weld, Lydia Gould	*Falmouth*	29 Morton St., J.P.
Ap. Mech., Lang., Mech. Eng., Nav. Arch., Phys.		
Wemyss, Duncan	*Somerville*	Somerville.
Ap. Mech., Civ. Eng., Lang., M. Arts, Mech. Eng., Min. Eng.		
Wertheimer, Milford	*New York, N.Y.*	140 Boylston St.
Ap. Mech., Chem., Eng., Geol., Math., Min. Eng., Phys., Pol. Sci.		
Wheat, George Neville, B.S.	*Rocksprings, Tex.*	75 Chandler St.
Ap. Mech., Arch., Draw., Lang., Pol. Sci.		
Wheeler, Mildred Frances	*Marlboro*	Marlboro.
Lang., Math.		
White, Edward Wallace	*Andover*	Andover.
Chem., Lang., Mech. Eng., Phys., Pol. Sci.		
Whitehead, Walter	*Medford*	Medford.
Chem., Lang., Math., Phys., Pol. Sci.		
Whiting, George William Carlyle	*Baltimore, Md.*	Beacon Chambers.
Civ. Eng., Draw., Eng., Lang., Math., Phys.		
Wilkiemeyer, Frederick Joseph, A.B.	*Newport, Ky.*	10 Arlington St.
Chem., Draw., Geol., Lang., Phys.		
Williams, Elizabeth Langdon	*Chelsea*	Chelsea.
Ap. Mech., Chem., Math., Phys.		
Williams, Irving	*Providence, R.I.*	9 Concord Sq.
Ap. Mech., Civ. Eng., Mech. Eng.		
Wilson, Daniel Scott	*Concord Junction*	Concord Junction.
Ap. Mech., Elect. Eng., Lang., Math., Mech. Eng., Phys., Pol. Sci.		
Wilson, Lewis Gamaliel, A.B.	*Clarksville, Tenn.*	263 Newbury St.
Ap. Mech., Arch., Lang., Phys., Pol. Sci.		
Wilson, Wilbur Thomas	*Woburn*	Woburn.
Draw., Math., Phys.		
Winchester, Henry Thornton	*Dorchester*	20 Bradlee St., D.
Elect. Eng., Lang., Math., Mech. Eng., Phys., Pol. Sci.		
Wood, Austin Clarence	*Dorchester*	7 Florida St., D.
Ap. Mech., Arch., Hist., Phys.		
Woodward, Clifford Brooks	*Glendale, Ohio*	178 W. Canton St.
Arch., Draw., Math., Phys.		
Worden, George Adelbert	*Grand Rapids, Mich.*	64 Huntington Ave.
Ap. Mech., Eng., Mech. Eng., Pol. Sci.		

SUMMARY.

Graduate Students	129	Regular Students, 2d year	236
Regular Students, 4th year	175	" " 1st year	396
" " 3d year	179	Special Students	413

Total	1,528
Deduct names counted twice	113
	1,415

Lowell Free Courses of Instruction.

The Trustee of the Lowell Institute has established, under the supervision of the Institute of Technology, courses of instruction, generally given in the evening, and open to students of either sex, free of charge.

These courses are more or less varied from year to year by the omission or interchange of particular subjects, but include in their entire scope instruction in mathematics, mechanics, physics, drawing, chemistry, geology, natural history, biology, English, French, German, history, navigation and nautical astronomy, architecture, and engineering.

The subjects and the extent of the several courses will be made known by suitable advertisement in the public journals, in October of each year.

As it is the object of these courses to provide substantial teaching rather than merely popular illustration of the subjects treated, it is expected that all persons attending will come with a serious purpose of improvement, and that they will cheerfully comply with such rules as may be prescribed in regard to attendance and order in the class or lecture-room.

The conditions of attendance on these gratuitous courses are as follows :

1. Candidates must have attained the age of eighteen years.

2. Their applications must be made in writing, addressed to the Secretary of the Institute of Technology, specifying the course or courses they desire to attend, mentioning their present or prospective occupations, and, when the course is of a nature demanding preparation, stating the extent of their preliminary training.

The number of students in each class is necessarily limited.

LOWELL FREE COURSES FOR 1901–1902.

I. METHODS OF CALCULATING EARTHWORK. Twelve lectures by Professor C. Frank Allen.

II. DESCRIPTIVE GEOMETRY. Twelve lectures by Associate Professor Linus Faunce.

III. THE METHOD OF LEAST SQUARES, WITH APPLICATIONS TO ENGINEERING PROBLEMS. Twelve lectures by Associate Professor Dana P. Bartlett.

IV. QUEEN ANNE LITERATURE. Twelve lectures by Professor Arlo Bates.

V. FINANCIAL HISTORY OF THE UNITED STATES. Twelve lectures by Professor Davis R. Dewey.

VI. APPLIED MECHANICS FOR ARCHITECTS, ENGINEERS, AND BUILDERS. Twelve lectures by Assistant Professor William A. Johnston.

VII. THE ELEMENTS OF ORGANIC CHEMISTRY. Twelve lectures by Assistant Professor James F. Norris.

VIII. NAVIGATION AND NAUTICAL ASTRONOMY. Twelve lectures by Professor Alfred E. Burton.

IX. PRINCIPLES AND APPLICATIONS OF THE CALCULUS. Twelve lectures by Assistant Professor Frederick S. Woods.

X. ELEMENTS OF MECHANISM. Twelve lectures by Assistant Professor Charles F. Park.

XI. THE ELECTRIC TELEGRAPH: An outline of its Development, and an Analysis of present methods of Simplex, Duplex, Quadruplex and Multiplex Working, including recent progress in High-speed and Wireless Telegraphy. Twelve lectures by Assistant Professor Louis Derr.

XII. THE FRENCH DRAMA IN THE SECOND HALF OF THE NINETEENTH CENTURY (continued). Twelve lectures in French by Professor Adolph Rambeau.

XIII. THE SCULPTURE AND PAINTING OF THE GOTHIC AGE AND OF THE EARLY RENAISSANCE. Twelve lectures by Assistant Professor John O. Sumner.

XIV. VOLCANIC ACTION, PAST AND PRESENT: Its relation to the History of the Earth and to the Topography of the Earth's Surface. Twelve lectures by Assistant Professor George H. Barton.

XV. LESSING, DER REFORMATOR DER DEUTSCHEN LITTERATUR. Twelve lectures, in German, by Associate Professor Frank Vogel.

XVI. THE METALLURGY OF IRON AND STEEL. Twelve lectures by Professor Heinrich O. Hofman.

XVII. ORE DEPOSITS: With special reference to the Ore Deposits of the United States. Twelve lectures by Assistant Professor William O. Crosby.

XVIII. THE CHEMISTRY AND PHYSICAL PROPERTIES OF MATERIALS OF ENGINEERING. Twelve lectures by Assistant Professor Henry Fay.

XIX. INDUSTRIAL CHEMISTRY: The industries of the Carbo-hydrates and Fermentation. Twelve lectures by Assistant Professor F. H. Thorp.

XX. TECHNICAL HEAT MEASUREMENTS. Twelve lectures by Assistant Professor Charles L. Norton.

In addition to these courses by members of the Faculty of the Institute:

XXI. SOME POINTS IN THE TEACHING OF ENGLISH. Four lectures intended especially for teachers, by Dr. William Everett.

Massachusetts School of Design.

The Massachusetts School of Design is based on the reorganization of the Lowell School of Practical Design, established in 1872 by the Trustee of the Lowell Institute for the purpose of promoting industrial art in the United States. The Corporation of the Massachusetts Institute of Technology has conducted the Lowell School of Design in accordance with the purpose and general plan of the school, as proposed by the Trustee of the Lowell Institute; and the same relation will be maintained with the new school.

Requirements for Admission.— To teach drawing is not among the objects of this school. Applicants must therefore possess a knowledge of drawing adequate to enable them advantageously to begin the work of composition and design. Applicants must be sixteen years of age, and will be required, as a test of proficiency, to make a copy in pencil and in color of a design given them.

Applicants for admission, or persons desiring further information regarding this school, may apply by letter to the Secretary of the Institute of Technology.

Regulations.— The next school year will begin Wednesday, Oct. 1, 1902, and will close June 9, 1903. The rooms of the school are open from 9 A.M. to 5 P.M. No regular attendance is compulsory, but students will be unable to keep up with the classes without daily attendance. Only those students can be retained in the school who, after a fair and patient trial, are found to have some aptitude for the work. At the close of each half-year the Director will, with

the approval of the President of the Institute, convey the needed information to such students as are found gravely deficient in qualifications for an advantageous pursuit of their studies. No publication will be made of the fact, and such students will be left to withdraw as of their own motion. Each student who attains a certain degree of merit will receive a certificate of graduation at the end of the course.

The tuition fee will be $100 per annum, paid $50 in advance and $50 at the beginning of the second term.

Course of Study.— The Course in Design will be a three-year course of two terms each year. There is to be a specialization of the student's work, as far as possible, in the second year. The lectures on the history of ornament given by the Architectural Department of the Massachusetts Institute of Technology are free to the students.

The class will be under the personal supervision of Mr. C. Howard Walker, Director.

COURSE IN DESIGN.

FIRST YEAR (Flat Ornament).

FIRST TERM.	SECOND TERM.
Drawing and Coloring from Copy. Designing Geometric Ornament. Analysis of Elemental Patterns. Planning of Ornament.	Analysis of Color. Designing Simple Ornament in Historic Styles: Repeats, etc. Application of Simple Ornament to Prints, Textiles, etc. History of Ornament.

SECOND YEAR.

FIRST TERM.	SECOND TERM.
Development of Ornament. Adaptation to Special Forms and Materials: Textiles, Prints, Carpets, Wall Papers, Woven Materials, Inlays, Mosaics, etc. History of Arts in which Ornaments are used, and their Application. Drawing from Object.	Development and Application of Ornament. Painted Ceramics. Book Bindings. Embossing. Illuminating. Lettering. Stained Glass. Embroidery, Laces, etc. Metal work. Cloisonnés, etc. Development of Color. Modelled Ornament. Turned Forms. History of Industrial Art.

THIRD YEAR.

FIRST TERM.	SECOND TERM.
Study on Architectural Mouldings and Forms. Moulding: Low and High Relief. Metal Work. Gold, Silver, and Bronze. Gas Fixtures. Woven Fabrics. Damasks, etc. Embossed Leathers.	Introduction of Figures into Design. Furniture and Interior Fittings. History of Industrial Arts.

Register of Students.

MASSACHUSETTS SCHOOL OF DESIGN.

NAME.	HOME.	RESIDENCE.
Blake, Ethel May	*Malden*	Malden.
Clark, Eugene William, Jr.	*Jamaica Plain*	20 St. John St., J. P.
Chase, Rhoda Campbell	*St. Louis, Mo.*	Cambridge.
Driscoll, John Matthew	*Brookline*	Brookline.
Fisher, Percy Eugene	*Fitchburg*	Fitchburg.
Hunt, Jeannette Louise	*Boston*	17 Worcester St.
Haskins, Martha Wadsworth	*Roxbury*	"The Warren," R.
Larkin, Helen Mary	*Ashaway, R.I.*	17 Highgate St., A.
Lyons, Maurice Joseph	*E. Dedham*	E. Dedham.
Loring, Bessie Ola	*Dorchester*	184 Harvard St., D.
MacInnes, Lucy	*Hamilton, Ont.*	146 St. Botolph St.
Mackay, Mendell Taber	*New Bedford*	New Bedford.
Miller, Ruth	*Chestnut Hill*	Chestnut Hill.
Moore, Mabel Louise	*Neponset*	89 Minot St., N.
Mullins, Rosa Bartlett	*Plymouth*	177 St. Botolph St.
Nettleton, Nellie Marion	*Detroit, Mich.*	Cambridge.
Pierce, William Marbel	*Malden*	Malden.
Pratt, Harland Otis	*Fitchburg*	Fitchburg.
Prescott, Grace Merrill	*Dorchester*	39 Stanley St., D.
Smalley, James Benjamin	*Everett*	Everett.
Whitehouse, Marion Ida	*Augusta, Me.*	Wellesley.
Whitney, Laura Noble	*Brookline*	Brookline.
Whitney, Nadine Aura	*Roxbury*	6 Cedar Park, R.

Alumni Association.

The Alumni Association of the Institute holds its annual meeting in Boston in December (usually the last Friday); and at the close of each year gives a reception to the graduating class, the Corporation, and the Faculty of the Institute. It includes in its membership all graduates of the Institute. Associate or honorary membership is open to non-graduates and to members of the Faculty or Corporation.

Its officers for 1902 are:

President: A. Lawrence Rotch, '84.

Vice-Presidents: John Alden, '77; Frederic H. Fay, '93.

Secretary: Arthur S. Robbins, '86, Massachusetts Institute of Technology.

Executive Committee: The President, Vice-President, and Secretary; C. A. Stone, '88; Franklin W. Hobbs, '89; Frank L. Locke, '86; Louis A. Ferguson, '88.

THE TECHNOLOGY CLUB.

The object of the Club is to promote the welfare of the Institute and the common social interests of its past and present officers and students. The Club-house is at No. 83 Newbury Street, nearly opposite the Rogers Building, and the membership is at present somewhat over six hundred, including graduates and other former students, members of the Corporation and of the instructing staff, and a limited number of undergraduates.

The officers for the current year are:

President: James P. Munroe, '82.

Vice-President: Francis H. Williams, '73.

Secretary: WALTER HUMPHREYS, '97.
Treasurer: ANDREW D. FULLER, '95.
Chairman of House Committee: HARRY W. GARDNER, '94.
Chairman of Membership Committee: FREDERICK H. BAILEY.

The Executive Committee includes the above and the Secretary of the Institute, *ex officio*.

THE NORTHWESTERN ASSOCIATION, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

President: I. W. LITCHFIELD, '85.
Vice-President: E. L. ANDREWS, '94.
Secretary and Treasurer: EDWARD M. HAGAR, '93, The Rookery, Chicago, Ill.
Executive Committee: THE PRESIDENT, VICE-PRESIDENT, SECRETARY AND TREASURER; VAN RENSSELAER LANSINGH, '98; W. G. ZIMMERMANN, '98; A. P. HALL.

Monthly dinners at "The Bismarck," 180 Randolph St., on the sixteenth of each month, 6.30 P.M. All Institute men are invited.
Annual Dinner about February 1.

THE WESTERN ASSOCIATION, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

President: EDWARD W. ROLLINS, '71.
Vice-President: BRADFORD H. LOCKE, '72.
Secretary and Treasurer: FRANK E. SHEPARD, '87, 924 Washington Ave., Denver, Colo.

THE M. I. T. SOCIETY OF NEW YORK.

Executive Committee: C. B. POLLOCK, '94; C. A. MEADE, '94; H. D. HIBBARD, '77; ALEX. RICE MCKIM, *Secretary and Treasurer*, 106 East Twenty-third St., New York, N.Y.

Annual Meeting first Saturday after February 1.
Summer outing second Saturday in September.

THE CONNECTICUT VALLEY ASSOCIATION, M. I. T.

Executive Committee: GEORGE L. MUNN, '88, *Chairman*, Easthampton, Mass.; HENRY SOUTHER, '87; JAMES S. NEWTON, '88; HENRY A. FRANCIS, '83; ARTHUR D. DEAN, '95.

THE TECH SOCIETY OF PHILADELPHIA.

Secretary-Treasurer: BENJAMIN ADAMS, '95.

Executive Committee: AMOS J. BOYDEN, '75; SAMUEL A. NEIDICH, '98; D. A. LYLE, '84; SAMUEL S. SADTLER, '95.

Annual dinner second Saturday in November; semi-annual dinner in April.

THE PITTSBURGH ASSOCIATION, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

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Vice-President: ARTHUR B. BELLOWS, '89.

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M. I. T. SOCIETY OF WESTERN NEW YORK.

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Annual Meeting second Saturday in September.

WASHINGTON SOCIETY OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

President: H. A. PRESSEY, '96.

Vice-President: P. L. DOUGHERTY, '97.

Secretary: WINTHROP COLE, '87, 1807 Riggs Place, Washington, D.C.

Treasurer: F. O. STETSON, '88.

Executive Committee: THE PRESIDENT, VICE-PRESIDENT, SECRETARY, and TREASURER; W. J. RICH, '84.

Institute men visiting Washington, or expecting to reside there, are invited to communicate with the officers of the Society.

ASSOCIATION OF CLASS SECRETARIES.

This association includes the Secretaries of all graduate classes and of all local alumni societies, as well as certain other members, *ex officiis*. Its object is to promote class spirit and the welfare of the Institute, and to systematize all matters pertaining to class organization and record. It has undertaken and, through a Committee on Publication, maintains the *Technology Review*, a quarterly magazine. The present officers of the association are *Secretary*, WALTER B. SNOW, '82, Watertown, Mass.; *Assistant Secretary*, FREDERIC H. FAY, '93, City Hall, Boston, Mass.

Register of Graduates.

For names of deceased graduates see the Alphabetical List, page 379.

The Roman numerals in the column marked "Course" denote the department in which the Graduate received the degree of S.B., as follows:—

I. Civil Engineering
II. Mechanical Engineering.
III. Mining Engineering and Metallurgy.
IV. Architecture.
V. Chemistry.
VI. Electrical Engineering.
VII. Biology.
VIII. Physics.
IX. General Studies.
X. Chemical Engineering.
XI. Sanitary Engineering.
XII. Geology.
XIII. Naval Architecture.

Courses no longer maintained are Sci. and Lit., Science and Literature, Phil., Philosophy, and Elective.

1868.

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ELLERY C. APPLETON. Westboro, Mass.	III.	Civil Engineer.
WHITNEY CONANT Long Branch, N.J.	III.	In Private Business.
ELI FORBES Clinton, Mass.	Sci. and Lit.	Chemist, Lancaster Mills.
CHARLES C. GILMAN 809 Tacoma Bldg., Chicago, Ill.	III.	Engineer and Contractor.
CHAS. E. GREENE, A.M., C.E. Ann Arbor, Mich.	I.	Professor of Civil Engineering; Dean, Department of Engineering, University of Michigan.
ALBERT F. HALL 3 Cordis St., Charlestown, Mass.	II.	Constructing Engineer, with The Geo. F. Blake Manufacturing Co. (East Cambridge, Mass.).
WILLIAM E. HOYT 50 Westminster Road, Rochester, N.Y.	I.	Assistant Engineer, New York Central & Hudson River R.R.
ROBERT H. RICHARDS Boston, Mass.	III.	Professor of Mining Engineering and Metallurgy, Mass. Institute of Technology.

1868.—*Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WALTER H. SEARS . . . . Plymouth, Mass.	I.	Civil Engineer.
JOSEPH STONE . . . . . 53 State St., Boston.	I.	Trustee.
BRYANT P. TILDEN . . . . Bismarck, N. Dak.	III.	In Office of U.S. Surveyor-General.
JAMES P. TOLMAN . . . . 115 Congress St., Boston.	III.	President, Samson Cordage Works.

1869.

WILLIAM H. BAKER . . . 140 Main St., Fitchburg, Mass.	I.	In Insurance Business.
HOWARD A. CARSON . . . 20 Beacon St., Boston.	I.	Chief Engineer, Boston Transit Commission.
J. RAYNER EDMANDS . . . Garden St., Cambridge, Mass.	II.	Assistant, Harvard College Observatory.
CHANNING WHITAKER . . Tyngsborough, Mass.	II.	Investigating Questions of Infringement and Patentability for the Lowell Machine Shop (Lowell, Mass.).

1870.

CHARLES R. CROSS, Sci. and Lit. Boston, Mass.		Thayer Professor of Physics; Director of the Rogers Laboratory, Mass. Institute of Technology.
CHARLES W. HINMAN . . . 7 Sherman St., Charlestown, Mass.	III.	Treasurer, Stanley Gas Machine Co.
SAMPSON D. MASON . . . Fort Casey, Island Co., Wash.	I.	Superintendent, U.S. Fortifications.
N. FREDERICK MERRILL . . Burlington, Vt.	V.	Professor of Chemistry, University of Vermont.
THEODORE F. TILLINGHAST. 37 Eighth St., New Bedford, Mass.	I.	
EDMUND K. TURNER . . . 53 State St., Boston.	I.	Civil Engineer.
DANIEL W. WILLARD . . . Redlands, Cal.	II.	Architect.
LAURENCE F. J. WRINKLE . Riverside Hotel, Reno, Nev.	III.	Professor of Mining and Civil Engineering, Nevada State University.

1871.

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FOSTER E. L. BEAL . . . . Washington, D.C.	I.	Assistant Biologist, Biological Survey, U.S. Department of Agriculture.
EDWARD H. FOOTE . . . . 3 India Pl., Boston.	I.	Of the Firm of Skilton, Foote, & Co., Manufacturers of Pickles.
FRANK L. FULLER . . . . 12 Pearl St., Boston.	I.	Civil Engineer.
HENRY M. HOWE, A.M. . . 27 W. Seventy-third St., New York, N.Y.	III.	Professor of Metallurgy, Columbia University.
ALBERT H. HOWLAND, A.M. 60 Congress St., Boston.	I.	Civil Engineer.
G. RUSSELL LINCOLN . . . 71 Newbury St., Boston.	III.	
GEORGE H. PRATT . . . . 31 Tenth St., Long Island City, N.Y.	V.	Superintendent for D. D. Williamson & Co., Manufacturing Chemists.
EDWARD W. ROLLINS . . . 19 Milk St., Boston.	III.	Banker, E. H. Rollins & Sons.
CHARLES F. STONE . . . Waltham, Mass.	III.	Treasurer, Waltham Savings Bank.
ISAIAH S. P. WEEKS . . . 1327 H St., Lincoln, Neb.	I.	Chief Engineer, Burlington & Missouri River R.R., in Nebraska.
RANDAL WHITTIER . . . Columbia Bldg., Louisville, Ky.	V.	Cashier, Kentucky Branch Office, New York Life Insurance Co.

1872.

C. FRANK ALLEN . . . . Boston, Mass.	I.	Professor of Railroad Engineering, Mass. Institute of Technology.
BENJAMIN E. BREWSTER . 31 State St., Boston.	III.	Of Firm of Brewster & Co., Cattle Breeders (Sioux County, Neb.).
FREDERIC A. EMMERTON . 9 Bratenahl Bldg., Cleveland, Ohio.	V.	Analytical Chemist and Metallurgist.
JAMES A. HERRICK . . . 1001 Chestnut St., Philadelphia, Pa.	V.	Consulting Engineer and Contractor.
JAMES M. HODGE . . . . Big Stone Gap, Va.	III.	Geologist and Engineer.
BRADFORD H. LOCKE . . . Denver Club, Denver, Colo.	III.	Mining Engineer.
CHAS. S. MINOT, S.D., LL.D. 688 Boylston St., Boston.	V.	Professor of Histology and Human Embryology, Harvard Medical School.
MAURICE B. PATCH . . . 1 Austin St., Buffalo, N.Y.	III.	Superintendent, Buffalo Smelting Works, Calumet & Hecla Mining Co.

1872.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WALTER SHEPARD, A.B. Boston Terminal Station, Boston, Mass.	I.	Chief Engineer, Boston & Albany R.R.
RICHARD H. SOULE, A.B. 71 Broadway, New York.	II.	Consulting Mechanical Engineer.
CLARENCE S. WARD, LL.B. (B.U.) Tremont Bldg., Boston.	III.	Lawyer.

1873.

AMORY AUSTIN, A.B. 66 Ayrault St., Newport, R.I.	V.	In Private Business.
GEORGE W. BLODGETT. 339 South Station, Boston.	I.	Electrical Engineer, Boston & Albany R.R.; Consulting Electrician.
WILLIAM E. BROTHERTON Carew Bldg., Cincinnati, Ohio.	V.	With Rogers, Brown, & Co.
SAMUEL M. FELTON 317 Monadnock Bldg., Chicago, Ill.	I.	President, Chicago & Alton R.R.
FREDERICK L. FISHER 35 Howland St., Roxbury, Mass.	I.	In Insurance Business (32 Kilby St., Boston, and Medway, Mass.).
FREDERICK GUILD, JR., Hingham, Mass.	Sci. and Lit.	
W. DALE HARRIS 263 MacLaren St., Ottawa, Ont.	I.	Civil Engineer.
CLAR. L. HOWES, A.B., M.D. Hanover, Mass.	II.	Physician.
FRANK B. MORSE 3 Benito Juarez, No. 12, Oaxaca, Estado de Oaxaca, Mexico	I.	Negociacion de Minas de Oro; El Rescate y Anexas; El Parian; and El Renacimiento y Anexas San Geromino Taviche.
GEORGE PHILLIPPS Green Harbor, Mass.	III.	
HENRY A. PHILLIPS 120 Tremont St., Boston.	IV.	Architect.
ELLEN H. RICHARDS, A.M. (Mrs. R. H. Richards) Boston, Mass.	V.	Instructor in Sanitary Chemistry, Mass. Institute of Technology.
HENRY L. RIPLEY Manila, P.I.	I.	Captain and Adjutant, Third Cavalry, U.S.A.
ROBERT A. SHAILER 23 Lewis St., East Boston.	I.	President, Boston Tunnel Construction Co.

1873.—*Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
C. EDWARD STAFFORD Chester, Pa.	III.	President, The Tide Water Steel Co.
SAMUEL E. TINKHAM City Hall, Boston.	I.	Assistant Engineer, Engineering Department, City of Boston; Secretary, Boston Society of Civil Engineers.
FRANK W. VERY Arcturus, Fairfax Co., Va.	V.	
WEBSTER WELLS Boston, Mass.	I.	Professor of Mathematics, Mass. Institute of Technology.
RANDAL WHITTIER	I.	(See Class of 1871.)
FRANCIS H. WILLIAMS, M.D. 505 Beacon St., Boston.	V.	Physician.
LOUIS F. WOOD 112 St. Botolph St., Boston.	V.	Chemist and Manufacturer.

1874.

HERBERT BARROWS Reading, Mass.	I.	Mining Engineer.
GEORGE H. BARRUS 12 Pemberton Sq., Boston.	II.	Expert and Consulting Steam Engineer.
WILLIAM T. BLUNT Toledo, Ohio.	I.	U.S Assistant Engineer (U.S. Engineer's Office, Cleveland, Ohio).
GEORGE E. DOANE Middleboro, Mass.	I.	Of the Firm of J. & G. E. Doane, Hardware.
WILLIAM B. DOWSE 648 Broadway, New York, N.Y.	IV.	Manufacturer, Metropolitan Rubber Co.
JOSEPH S. EMERSON Honolulu, Ter. of Hawaii.	I.	Engineer and Surveyor, Office of Hawaiian Government Survey.
ELLIOT HOLBROOK Temple Bldg., Kansas City, Mo.	I.	Chief Engineer, Kansas City Southern Ry.
AECHIRAU HONGMA 2 Kabutocho Nihonbashiku, Tokio, Japan.	I.	President, Sobu R.R. Co.; Consulting Engineer, Hokkaido Coal Mine and Ry. Co., Hokuyetsu Ry. Co.; and Director, Tobu Ry. Co.
CHARLES P. HOWARD Hartford, Conn.	I.	Secretary, J. L. Howard & Co., Dealers in Railway and Car Builders' Supplies.
FRANK H. JACKSON 104 So. Broadway, Los Angeles, Cal.	III.	Mining and Hydraulic Engineer.
HERBERT B. PERKINS Pasadena, Cal.	I.	Professor of Mathematics, Throop Polytechnic Institute.
FRANK H. POND 277 Dearborn St., Chicago, Ill.	II.	Mechanical Engineer.

1874.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
EDWARD S. SHAW . . . . 12 Pearl St., Boston.	I.	Consulting Engineer.
FRANCIS H. SILSBEE . . . Lawrence, Mass.	II.	Superintendent, Cotton Department, Pacific Mills,
STEPHEN H. WILDER, Sci. and Lit. 403 Neave Bldg., Cincinnati, Ohio.		Attorney-at-Law.

1875.

SAMUEL E. ALLEN . . . . . 68 Worth St., New York, N.Y.	I.	Selling Agent, Nashawannuck Manufacturing Co.
JAMES L. ARNOTT, Sci. and Lit. Manchester, N.H.		Civil Engineer.
AMOS J. BOYDEN . . . . 413 Walnut St., Philadelphia, Pa.	IV.	Architect.
MOSES D. BURNET . . . . Pleasanton, Kan.	III.	M. D. Burnet & Co., Miners and Shippers, Pleasanton Lump Coal.
HENRY K. BURRISON . . . . Boston, Mass.	I.	Instructor in Mechanical Drawing and Descriptive Geometry, Mass. Institute of Technology.
CHRISTOPHER A. CHURCH . . Address unknown.	I.	
FRANK S. DODGE . . . . . 77 Merchant St., Honolulu, Ter. of Hawaii.	I.	Superintendent and Land Agent, Estate of Bernice Pauahi Bishop.
EDGAR S. DORR . . . . . 28 Court Sq., Boston.	I.	Chief Engineer, Sewer Division, Street Department, City of Boston.
WILLIAM C. EDES . . . . . 4 Montgomery St., San Francisco, Cal.	I.	Civil Engineer. Assistant Engineer, Southern Pacific Co.
CHARLES W. GOODALE . . Butte, Mont.	III.	Superintendent of Mines and Works, Boston & Montana Consolidated Copper and Silver Mining Co.
EDWARD A. W. HAMMATT . . 53 State St., Boston.	I.	Civil and Hydraulic Engineer.
EDWARD A. HANDY . . . . 57 Cornell St., Cleveland, Ohio.	I.	Chief Engineer, Lake Shore & Michigan Southern Ry; Lake Erie & Western Ry.
THOMAS HIBBARD . . . . South Boston.	II.	Treasurer, George Lawley & Son Corporation.
L. P. KINNICUTT, S.D. (Harv.) Worcester, Mass.	V.	Professor of Chemistry, Worcester Polytechnic Institute.
J. AUSTIN KNAPP . . . . Brooklyn, N.Y.	II.	With Hanna & Sons.

1875. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILFRED LEWIS, 1742 Hamilton St., Philadelphia, Pa.	II.	President, The Tabor Manufacturing Co.
SAMUEL J. MIXTER, M.D., 180 Marlborough St., Boston.	VIII.	Physician.
BENJAMIN A. OXNARD, Adeline, La.	III.	Sugar Planter.
THOMAS D. PLIMPTON, Walpole, Mass.	II.	In Business.
WILLIAM A. PRENTISS, Holyoke, Mass.	Sci. and Lit.	Of Firm of George W. Prentiss & Co., Manufacturers of Wire.
FRANCIS T. SARGENT, 31 Nassau St., New York, N.Y.	II.	In Private Business.
WELLAND F. SARGENT, 1290 Old Colony Bldg., Chicago, Ill.	I.	Manager, Federal Manufacturing Co.,
WILLIAM H. SHOCKLEY, Bridgewater, Mass.	III.	Travelling.
JAMES B. STANWOOD, 623 Oak St., Cincinnati, Ohio.	II.	Secretary and Engineer, The Houston-Stanwood, & Gamble Co.
H. L. J. WARREN, Atlas Bldg., Salt Lake City, Utah.	III.	Mining Journalist.
WILLIAM R. WEBSTER, 411 Walnut St., Philadelphia, Pa.	III.	Consulting and Inspecting Engineer.

1876.

CHARLES F. ALLEN, South Duxbury, Mass.	III.	Mining Engineer and Metallurgist.
THOMAS ASPINWALL, 3 Hamilton Pl., Boston.	I.	Civil Engineer.
WILLIAM P. ATWOOD, 17 Nineteenth St., Lowell, Mass.	V.	Chemist, Hamilton Print Works.
THOMAS W. BALDWIN, A.B., Boothbay Harbor, Me.	I.	In Business.
WALTER B. BARROWS, Agricultural College, Ingham Co., Mich.	VII.	Professor of Zoölogy and Geology, Michigan Agricultural College.
AARON D. BLODGETT, 141 Franklin St., Boston.	II.	Manufacturer of Electric Clocks.
JOSHUA B. F. BREED, 1749 First St., Louisville, Ky.	I.	Chief Engineer, Bureau of Engineering.

1876. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HARRY T. BUTTOLPH . . . 109 Russell Ave., Buffalo, N.Y.	I.	Assistant Chief Engineer, Bureau of Engineering.
FREDERICK K. COPELAND . 135 Adams St., Chicago, Ill.	I.	President, Sullivan Machinery Co.
WILLIAM O. CROSBY . . . Boston, Mass.	VII.	Assistant Professor of Structural and Economic Geology, Mass. Institute of Technology.
WILLIS E. DAVIS . Safe Deposit Bldg., San Francisco, Cal.	Sci. and Lit.	In Mining Business.
CHARLES R. FLETCHER . . 82 Equitable Bldg., Boston.	V.	Consulting Chemist and Metallurgist.
JOHN R. FREEMAN . . . 814 Banigan Bldg., Providence, R.I.	I.	President and Treasurer, Manufacturers', Rhode Island, and Mechanics' Mutual Fire Insurance Cos.; Consulting Hydraulic and Mill Engineer.
FRANCIS E. GALLOUPE . . 50 State St., Boston.	II.	In Real Estate Business.
JOHN B. HENCK, JR. . . 138 E. Upsal St., Germantown, Pa.	VIII.	
FRANK W. HODGDON . . 18 Wellington St., Arlington, Mass.	I.	Engineer, Harbor and Land Commissioners of Massachusetts (Room 131, State House, Boston).
WILLIAM W. JACQUES, Ph.D. 469 Beacon St., Boston.	VIII.	
SAMUEL JAMES, JR. . . . Leadville, Colo.	III.	Superintendent, Arkansas Valley Plant, American Smelting and Refining Co.
ALFRED C. KILHAM . . . Springfield, Mo.	II.	Storekeeper, St. Louis & San Francisco R.R. Co.
THEODORE J. LEWIS . . . 1103 Harrison Bldg., Philadelphia, Pa.	II.	Secretary and Assistant Treasurer, Standard Steel Works.
ALBERT H. LOW . . . . P.O. Box 1537, Denver, Colo.	V.	Chemist and Assayer.
CHARLES T. MAIN . . . . 53 State St., Boston.	II.	Of Dean & Main, Mill and Mechanical Engineers.
ARTHUR L. MILLS . . . . 2132 Glenwood Ave., Toledo, Ohio.	I.	Vice-President, The Paddock, Hodge Co.
WILLIAM E. NICKERSON . 12 Pearl St., Boston.	V.	In Private Business.
DAVID W. PHIPPS . . . . 500½ Sixth Ave., S., Seattle, Wash.	Phil.	In Business.

1876. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES F. PRICHARD . . 90 Exchange St., Lynn, Mass.	II.	General Manager, Lynn Gas and Electric Co.
HENRY RAEDER . . . . 218 La Salle St., Chicago, Ill.	I.	Architect.
CHARLES L. RICH . . . . East Jaffrey, N.H.	I.	Cashier, Monadnock National Bank.
CHARLES A. SAWYER, Sci. and Lit. 107 Dearborn St., Chicago, Ill.		In Law and Real Estate Business.
THEODORE E. SCHWARZ . . 4 Bank Block, Denver, Colo.	III.	Mining Engineer; Manager, Iron Silver Mining Co. (Leadville, Colo.).
JULIUS H. SUSMANN . . . 11 Broadway, New York, N.Y.	III.	Consulting Mining Engineer.
WALTER D. TOWNSEND . . Chemulpo, Korea.	III.	Of the Firm of Townsend & Co.
CHARLES N. WAITE . . . Thirty-fifth St. and Gray's Ferry Road, Philadelphia, Pa.	V.	Superintendent, General Artificial Silk Co.
HENRY M. WAITT . . . . Chicago, Ill.	I.	Bridge Engineer, Chicago, Burlington, & Quincy R.R.
HENRY B. WOOD . . . . Room 132, State House, Boston.	I.	Assistant Engineer, Harbor and Land Commission.

1877.

JOHN ALDEN . . . . . Lawrence, Mass.	V.	Chemist, Pacific Mills.
CHARLES S. BACHELDER . . Spreckels, Cal.	V.	Chemist, Spreckels Sugar Co.
GEOR[illegible] BARTOL . . . . . Cleveland, Ohio.	III.	General Manager, The Otis Steel Co., (Limited).
J. WILLIAMS BEAL . . . . 55 Kilby St., Boston.	IV.	Architect.
WILLIAM H. BEECHING . . 3 John St., Boston.	II.	Cork Manufacturer.
G. WALTER CAPEN . . . . 179 Summer St., Boston.	IV.	Architect.
HENRY H. CARTER . . . 95 Milk St., Boston.	I.	President, Metropolitan Contracting Co. Consulting Engineer.
WILLIAM E. CHAMBERLIN . 27 Clinton St., Cambridgeport, Mass.	IV.	Architect.
LINUS FAUNCE . . . . . Boston, Mass.	II.	Associate Professor of Drawing, Mass. Institute of Technology.
CHARLES H. FISHER . . . Ponkapog P.O., Canton, Mass.	I.	

1877. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
MARTIN GAY . . . . . 13–21 Park Row, New York, N.Y.	I.	Assistant Engineer, Department of Bridges.
JOSEPH P. GRAY . . . . . 31 Milk St., Boston.	I.	Vice-President, Boston Manufacturers' Mutual Fire Insurance Co.
EDMUND GROVER . . . . East Walpole, Mass.	I.	Civil Engineer and Landscape Gardener.
RICHARD A. HALE . . . . Lawrence, Mass.	I.	Principal Assistant Engineer, Essex Co.
JOHN E. HARDMAN . . . Room 3, Windsor Hotel, Montreal, Que.	III.	Consulting Mining Engineer.
HENRY D. HIBBARD . . . 253 Broadway, New York, N.Y.	III.	Second Vice-President, Hibbard-Rodman-Ely Safe Co.
WALTER JENNEY . . . . 291 First St., South Boston.	III.	Superintendent, Petroleum Refinery, Jenney Manufacturing Co.
GEORGE W. KITTREDGE . . Cincinnati, Ohio.	I.	Chief Engineer, Cleveland, Cincinnati, Chicago, & St. Louis Ry.
CHARLES F. LAWTON . . . New Bedford, Mass.	I.	Superintendent of Public Works.
BENJAMIN C. MUDGE . . . 411 John Hancock Bldg., Boston, Mass.	I.	Assistant Manager.
CECIL H. PEABODY . . . . Boston, Mass.	II.	Professor of Naval Architecture and Marine Engineering, Mass. Institute of Technology.
ARTHUR L. PLIMPTON . . . 101 Milk St., Boston.	I.	Civil Engineer, in charge of Department of Civil Engineering, Bureau of Surface Lines, Boston Elevated Ry. Co.
HARRY C. SOUTHWORTH . . Stoughton, Mass.	III.	Mining Engineer.
THOMAS F. STIMPSON . . . Providence, R.I.	III.	Superintendent of Printing, Silver Spring Bleaching and Dyeing Co.
GEORGE F. SWAIN . . . . Boston, Mass.	I.	Hayward Professor of Civil Engineering, Mass. Institute of Technology; Engineer, Mass. Railroad Commission.
FREDERICK W. WOOD . . . Sparrows Point, Md.	III.	President, Maryland Steel Co.

1878.

WILLIAM B. ALLBRIGHT . . Union Stock Yards, Chicago, Ill.	V.	Manager, Swift & Co. Lard Refinery.
CHARLES M. BAKER . . . Ames Bldg., Boston.	IV.	With Chase & Barstow, Stock Brokers.

1878. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
TAKUMA DAN 17 Tango-cho Akasaka-ku, Tokyo, Japan.	III.	Managing Director, Mitsui Mining Co.
CHARLES S. EATON 219 Washington St., Boston.	IV.	In Business.
ALFRED S. HIGGINS 142 Atlantic Ave., Boston.	IV.	With R. R. Higgins & Co.
JULIAN A. KEBLER 720 Boston Bldg., Denver, Colo.	I.	President, The Colorado Fuel and Iron Co.
EVERELL J. NICHOLS 20 Pemberton Sq., Boston.	I.	Resident Engineer, Mass. Highway Commission.
FREDERICK H. PRENTISS Address unknown.	II.	
JAMES RITCHIE 413 Chamber of Commerce, Cleveland, Ohio.	I.	Of Firm of Ritchie & Ruple, Civil Engineers; Consulting Engineer for Grade Crossing Commission (Cleveland, Ohio).
JAMES W. ROLLINS, JR. 12 Rutledge St., West Roxbury, Mass.	I.	Of the Firm of Holbrook, Cabot, & Daly, General Contractors (Boston).
C. D. SAWIN, M.D., Sci. and Lit. 349 Main St., Charlestown, Mass.		Physician.
PETER SCHWAMB Boston, Mass.	II.	Professor of Machine Design, Mass. Institute of Technology.
FREDERIC P. SPALDING Boston, Mass.	I.	Assistant Engineer, Engineering Department, City of Boston.
ISAAC M. STORY 21 Linden Ave., Somerville, Mass.	I.	Assistant Engineer, New York, New Haven, & Hartford R.R.
LINWOOD O. TOWNE Haverhill, Mass.	III.	Sub-master, Haverhill High School.
EMILE F. WILLIAMS 42 Franklin St., Boston.	I.	Of the Firm of Arthur Williams, Jr., & Co., East India and Turkish Carpets and Rugs.
JAMES G. WOOLWORTH 11 Halsey St., Providence, R.I.	V.	Superintendent, John D. Lewis Dyewood Extract Manufactory.

1879.

WALTER S. ALLEN 125 Milk St., Boston.	V.	With American Bell Telephone Co.
SAMUEL T. BRALEY 41 Park St., Rutland, Vt.	II.	Mechanical Engineer, Howe Scale Co.
JOHN W. CABOT 19 Congress St., Boston.	III.	Metallurgical Engineer and Expert.

1879. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HARRY H. CAMPBELL . . Steelton, Dauphin Co., Pa.	III.	General Manager, The Pennsylvania Steel Co.
FREDERICK S. COFFIN . . 433 Walnut St., Brookline, Mass.	III.	In Private Business.
W. OTIS DUNBAR . . . . Altoona, Pa.	II.	Assistant Engineer, Motive Power Department, Pennsylvania R.R.
GEORGE W. FABENS . . . Union Depot, Ottumwa, Iowa.	I.	Trainmaster, Chicago, Burlington, & Quincy R.R.
CHARLES S. GOODING . . . 28 School St., Boston.	II.	Mechanical Engineer and Solicitor of Patents.
RAPHAEL M. HOSEA . . . 817 Boston Bldg., Denver, Colo.	I.	Chief Engineer, The Colorado Fuel and Iron Co.
HORACE J. HOWE . . . . 231 W. One hundred and twenty-fifth St., New York, N.Y.	I.	Assistant Engineer, Rapid Transit Commission.
FREDERICK B. KNAPP . . . Duxbury, Mass.	I.	Principal, Powder Point School.
FREDERIC H. LANE . . . 49 Leonard St., New York, N.Y.	II.	With the Allen-Lane Co., Commission Merchants.
FREDERIC R. LORING . . . Pottstown, Pa.	VII.	Teacher, Pottstown High School.
WILLIAM W. MACFARLANE 522 W. Ninth St., Chester, Pa.	V.	Superintendent, The Sharpless Dye Wood Extract Co.
EDWIN C. Miller . . . . Wakefield, Mass.	II.	Assistant Superintendent, Henry F. Miller & Sons' Piano Co. (88 Boylston St., Boston).
WILLIAM H. PICKERING . Cambridge, Mass.	VIII.	Assistant Professor of Astronomy, Harvard College.
GEORGE F. RIGGS . . . . Taylor House, Winchester, Va.	I.	
FRANK G. STANTIAL . . . Everett, Mass.	V.	Superintendent, The Cochrane Chemical Co.
WILLIAM S. STEARNS . . Lockland, Ohio.	I.	Superintendent, The Stearns & Foster Co.
ARTHUR M. WAITT . . . Grand Central Station, New York, N.Y.	II.	Superintendent of Motive Power and Rolling Stock, New York Central & Hudson River R.R.

1880.

GEORGE H. BARTON . . . Boston, Mass.	III.	Assistant Professor of Geology, Mass. Institute of Technology.
CHARLES H. BROWN . . . Newport, Vt.	I.	Clergyman.

1880.—*Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
EDWIN E. CHASE . . . . 824 Equitable Bldg., Denver, Colo.	I.	Mining Engineer.
FREDERICK W. CLARK . . 4 Sherman St., Chicago, Ill.	III.	President, Jonathan Clark & Sons' Co., General Contractors.
GEORGE W. HAMILTON . . 30 Tremont St., Boston.	I.	District Engineer, Sewer Division, Street Department, City of Boston.
LORING R. MILLEN . . . 149 Broadway, New York, N.Y.	III.	In Private Business.
WILLIAM T. MILLER . 88 Boylston St., Boston.	Elective.	In charge of Boston Warerooms, The Henry F. Miller & Sons' Piano Co.

1881.

IRA ABBOTT . . . . . 1 Broadway, New York, N.Y.	I.	With American Bridge Co.; Vice-President, The Young Supply Co.
JOHN H. ALLEN . . . . Minos de Rio Jinto, Hueloa, Spain.	III.	Mineralogist.
AMOS BINNEY, A.B. . . . 53 State St., Boston.	V.	Real Estate Agent.
DAVID S. BISSELL . . . . Woodland Road, E.E., Pittsburgh, Pa.	III.	President, The Duquesne Forge Co., Iron and Steel Forgings.
FRANK H. BRIGGS . . . . 22 High St., Boston.	IX.	Commission Merchant, W. L. Montgomery & Co.
FRANK E. CAME . . . . Temple Bldg., Montreal, Que.	I.	Manufacturer of Railway Specialties; Canadian Manager, Chicago Railway Equipment Co.; Chicago Grain Door Co.
FRANK D. CHASE . . . . Elizabeth, N.J.	III.	Metallurgist.
BENJAMIN G. COLLINS . . Edgartown, Mass.	II.	Surveyor.
HARRY H. CUTLER . . . . Twelfth St. and St. Paul Ave., Milwaukee, Wis.	II.	General Manager, The Cutler-Hammer Manufacturing Co.
F. GRAEF DARLINGTON . . 1218 N. Delaware St., Indianapolis, Ind.	IX.	
JOHN DUFF, M.D. . . . . 5 Dexter Row, Charlestown, Mass.	V.	Physician.
DAVID S. GODDARD . . . 61 Mt. Vernon St., Somerville, Mass.	III.	

1881. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
EDWIN J. LEWIS, Jr. . . . 9 Park St., Boston.	IV.	Architect.
WILLIAM B. LINDSAY, A.B. . Carlisle, Pa.	V.	Professor of Chemistry, Dickinson College.
JAMES LUND . . . . . Everett, Mass.	V.	Superintendent, West Department, The Cochrane Chemical Co.
GEORGE A. MOWER . . . 147 Queen Victoria St., London, England.	II.	Managing Director, Sturtevant Engineering Co. (Limited).
WEBSTER NORRIS . . . . 53 Franklin Ave., Brooklyn. N.Y.	III.	Assistant Superintendent, Gutta Percha and Rubber Manufacturing Co.
EVELYN WALTON ORDWAY . (Mrs. John M. Ordway). New Orleans, La.	V.	Professor of Chemistry, Newcomb College, Tulane University.
THEODORE PARKER . . . 65 City Hall, Boston, Mass.	I.	In Engineering Department, City of Boston.
NATHANIEL W. SHED . . State College, Pa.	V.	Professor of Metallurgy, Pennsylvania State College.
WILLIAM R. SNEAD . . . Foot of Pine St., Jersey City, N.J.	IV.	President, The Snead Co. Iron Works.
HAROLD E. STEARNS . . . Montreal, Que.	II.	Superintendent and Treasurer, Dominion Wadding Co.; Treasurer, Montreal Quilting Co.
EDWARD R. WARREN . . . 319 N. Webber St., Colorado Springs, Colo.	VII.	Civil Engineer.
CHARLES M. WILKES . . . 1142 The Rookery, Chicago, Ill.	IV.	Sanitary Engineer.
ARTHUR WINSLOW . . . . 308 Lyceum Bldg., Kansas City, Mo.	III.	General Manager and Consulting Engineer, The Liberty Bell Gold Mining Co.

1882.

CLARA P. AMES . . . . . Northampton, Mass.	V.	Teacher, Mary A. Burnham Classical School.
THOMAS B. CARSON . . . 709 Perry St., Davenport, Iowa.	II.	Secretary and Treasurer, Bettendorf Metal Wheel Co. (Davenport, Iowa; and Springfield, Ohio).
CARRIE RICE CLARK . . . (Mrs. S. P. Clark). Drawer D., Phœnix, Ariz.	V.	

1882. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
EDWARD F. ELY, A.B. 32 Westminster St., Providence, R.I.	IV.	Of Firm of Hoppin & Ely, Architects.
GEORGE FAUNCE, A.B. Carnegie, Pa.	III.	President and General Manager, The Pennsylvania Smelting Co.
CHARLES A. FRENCH, M.D. 47 Winter St., Boston.	III.	Optician.
HOWARD V. FROST, Ph.D. 3958 Drexel Boul., Chicago, Ill.	V.	Chemist, Anglo-American Provision Co.; and Fowler Brothers, Limited.
EDW. G. GARDINER, Ph.D. 131 Mt. Vernon St., Boston.	VII.	
FRANCIS P. HALL Wolfboro, N.H.	V.	In Private Business.
GEORGE L. HEINS Temple Court, New York, N.Y.	IV.	Of Firm of Heins & La Farge, Architects; State Architects of the State of New York (Albany, N.Y.).
CHARLES D. JENKINS 32 Hawley St., Boston.	V.	State Inspector of Gas and Gas Meters.
JAMES W. JOHNSON Riverside, Cal.	I.	City Engineer.
JOHN F. LOW 129 Portland St., Boston.	V.	President, Low Tile Co.
HARRY G. MANNING Washington, Pa.	II.	Resident Constructing Engineer with the Jessop Steel Co.
GEORGE W. MANSFIELD 11 Broadway, New York, N.Y.	III.	With The C. E. Dustin Co.
FRANK C. MORRISON Address unknown.	I.	
JAMES P. MUNROE 179 Devonshire St., Boston.	III.	Treasurer, Munroe Felt and Paper Co., Manufacturers of Paper.
HENRY F. ROSS 178 Devonshire St., Boston.	III.	Treasurer, The Boston Thread and Twine Co.
JOHN H. ROSS. 178 Devonshire St., Boston.	Sci. and Lit.	President, The Boston Thread and Twine Co.
GRENVILLE TEMPLE SNELLING, 111 Fifth Ave., New York, N.Y.	IV.	Of Firm of Snelling & Potter, Architects; Instructor in Architectural Engineering, Columbia University.
WALTER B. SNOW Watertown, Mass.	II.	Mechanical Engineer, B. F. Sturtevant Co. (Jamaica Plain, Mass.).

1883.

HERBERT T. BARDWELL 37 Woodside Ave., Springfield, Mass.	I.	Civil Engineer.

1883.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE H. BRYANT . . . 15 Summer St., Newport, R.I.	II.	Principal, Townsend Industrial School.
HARVEY S. CHASE . . . . 8 Congress St., Boston.	II.	Public Accountant and Auditor.
FRANK E. DAVIS . . . . Worcester, Mass.	II.	With Washburn & Moen Department, American Steel and Wire Co.
JOHN G. EPPENDORFF . . . 669 Main Street, Buffalo, N.Y.	IV.	Decorator.
GEORGE J. FORAN . . . . 120 Liberty St., New York, N.Y.	II.	With The International Steam Pump Co.
WILLIAM B. FULLER . . . . 100 William St., New York, N.Y.	I.	Hydraulic and Sanitary Engineer.
HORACE B. GALE . . . . Natick, Mass.	II.	Consulting Mechanical and Electrical Engineer.
GEORGE H. GUSTIN . . . 68 Broad St., New York, N.Y.	III.	With The Bowker Fertilizer Co.
FREDERIC O. HARRIMAN . . Jaltipan, Mexico.	I.	Civil Engineer and Contractor; Land Agent.
JAMES H. HUTCHINGS . . . 7 Water St., Room 516, Boston, Mass.	II.	In Real Estate Business.
H. WARD LEONARD . . . Bronxville, N.Y.	III.	President, The Ward Leonard Electric Co.; and The Carpenter Enamel Rheostat Co.
HARVEY M. MANSFIELD . . Fairfield, Me.	III.	Agent, Somerset & Kennebec Co.
ROBERT W. SCOTT . . . 112–114 No. Ninth St., Philadelphia, Pa.	II.	Manager, Philadelphia Engraving Co.
GEORGE A. SMITH . . . . Beach and Spruce Sts., Chelsea, Mass.	V.	Treasurer, Thos. Strahan Co., Wall Paper Manufacturers.
FRANK TENNEY . . . . . Steelton, Dauphin Co., Pa.	III.	Assistant to President, Pennsylvania Steel Co.
CHARLES H. TOMPKINS . . 120 Liberty St., New York, N.Y.	III.	Civil Engineer; President, The American Diamond Rock Drill Co.
GEORGE R. UNDERWOOD . Peabody, Mass.	V.	Superintendent, Upton Factory of American Glue Co.
DAVID WESSON . . . . . 204 Bay E., Savannah, Ga.	V.	Manager, The Wesson Process Co.; with Southern Cotton-Oil Co.

1884.

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES B. APPLETON . . Netherlands Road, Brookline, Mass.	II.	
HENRY F. BALDWIN . . . 922 Monadnock Bldg., Chicago, Ill.	II.	Chief Engineer Chicago & Alton Ry.
FRED L. BARDWELL, B.S. . Boston, Mass.	V.	Assistant Professor of Inorganic Chemistry, Mass. Institute of Technology.
T. HARRIS BARTLETT . . . Grangeville, Idaho.	III.	Mining Lawyer.
HENRY A. BOARDMAN . . Jewett City, Conn.	V.	With The Aspinook Co.
CHARLES C. BOTHFELD . . 34 Home Bank Bldg., Detroit, Mich.	I.	Consulting Engineer on Iron and Steel Structures.
W. FRANK CARR, B.S. . . 2819 Dunbar Pl., Milwaukee, Wis.	I.	General Superintendent and Engineer, The Falk Co.
CHRISTOPHER J. CARVEN . 34 Centre St., Dorchester, Mass.	I.	Assistant Engineer, Engineering Department, City of Boston.
ROSCOE L. CHASE . . . . North Adams, Mass.	V.	Chemist and Assistant Manager, Arnold Print Works.
ALFRED O. DOANE . . . . 1 Ashburton Pl., Boston.	III.	Division Engineer, Metropolitan Water Board.
ALFRED L. FITCH . . . . Union Stock Yards, Chicago, Ill.	II.	With Construction Department, Swift & Co.
GEORGE L. R. FRENCH . . Boston, Mass.	I.	Roadmaster, Eastern Division, Boston & Maine R.R.
AUGUSTUS H. GILL, Ph.D. . Boston, Mass.	V.	Assistant Professor of Gas Analysis, Mass. Institute of Technology.
FRANK M. HAINES . . . . Worth Hotel, Fort Worth, Tex.	III.	Vice-President and General Manager, The Northern Texas Traction Co.
JAMES G. HOLDER, Ph.G. . 119 Broad St., Lynn, Mass.	V.	Apothecary.
G. FREDERICK KNAPP . . Wade Bldg, Cleveland, Ohio.	V.	With Oglebay, Norton & Co., Iron Ores.
D. A. LYLE, Major, U.S.A. . P.O. Box 1606, Philadelphia, Pa.	III.	Inspector of Ordnance.
PHILIP S. MORSE, A.B. . . Dapto, New South Wales.	III.	Manager, Smelting Company of Australia.
CHARLES O. PRESCOTT . . Milton, Mass.	V.	Teacher of German and Chemistry, Milton Academy.
WILLIAM L. PUFFER . . . Boston, Mass.	III.	Associate Professor of Electrical Engineering, Mass. Institute of Technology.

1884. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ARTHUR J. PURINTON . . Main St., Palmer, Mass.	II.	Treasurer and General Manager, Springfield & Eastern Street Ry. Co.; General Manager, The Central Mass. Electric Co.
WILLLIAM J. RICH, LL.M. . 208 Eleventh St., N.E., Washington, D.C.	III.	First Assistant Examiner, U.S. Patent Office.
FRANKLIN B. RICHARDS . . Cleveland, Ohio.	III.	With M. A. Hanna & Co.
C. SNELLING ROBINSON . . 716 Boston Bldg., Denver, Colo.	III.	General Manager, Iron Department, The Colorado Fuel and Iron Co.
THEODORE W. ROBINSON . Rookery Bldg., Chicago, Ill.	III.	General Manager, The Illinois Steel Co.
A. LAWRENCE ROTCH, A.M. . 53 State St., Boston.	II.	Director of Blue Hill Meteorological Observatory (Hyde Park, Mass.).
J. PETERSON RYDER . . . Philadelphia, Pa.	V.	Director of Physical Training, Drexel Institute.
ALFRED STEBBINS, JR. . . 93 Federal St., Boston, Mass.	III.	With Lockwood, Greene & Co, Mill Engineers.
ELLIOT T. STURGIS . . . 119 Milk St., Boston.	III.	Chief Clerk, Boston Division, New England Telephone and Telegraph Co.
ALICE BROWN TYLER . . . (Mrs. H. W. Tyler) Newton Centre, Mass.	V.	
HARRY W. TYLER, Ph.D. . Boston, Mass.	V.	Professor of Mathematics and Secretary, Mass. Institute of Technology.
NAHUM WARD . . . . . 49 Homestead St., Roxbury, Mass.	V.	In Business.
WILLIAM M. WHITNEY . . Winchendon, Mass.	II.	With Baxter D. Whitney, Manufacturer of Wood-working Machinery.
FRANCIS C. WILLIAMS, JR. . Sheridan, Wyo.	I.	City Engineer and County Surveyor.

1885.

CHARLES R. ALLEN . . . New Bedford, Mass.	V.	Head Science Teacher, New Bedford High School.
DAVID BAKER . . . . . Sydney, Cape Breton, N.S.	III.	General Superintendent, The Dominion Iron and Steel Co.
EDWARD R. BENTON, Ph.D. 27 Doane St., Boston.	IV.	Architect.

1885. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
MARCELLA O. BOVERI (Mrs. Theodor Boveri) Pleischerglacisstrasse 8, Würzburg, Bavaria.	IX.	
HEYWOOD COCHRAN Room 307, Swank Building, Johnstown, Pa.	II.	Western Pennsylvania Agent, The Ridgway Dynamo and Engine Co.
EDWARD H. DEWSON Wilmerding, Pa.	II.	Engineer, Traction Department, Westinghouse Air Brake Co.
FREDERICK FOX, S.M., Ph.D. 77 State St., Portland, Me.	V.	Analytical Chemist.
THOMAS W. FRY Claremont, N.H.	II.	Secretary and Superintendent, The Sullivan Machinery Co.
ROBERT R. GOODRICH Boston, Mass.	III.	Graduate Student, Mass. Institute of Technology.
WALTER K. HARRINGTON 4 Irving Pl., New York, N.Y.	I.	General Superintendent of Meters, The Consolidated Gas Co. of New York.
ELEAZER B. HOMER Providence, R.I.	IV.	Director, Rhode Island School of Design; Lecturer on Architecture, Mass. Institute of Technology.
TRACY LYON St. Paul, Minn.	II.	General Superintendent, Chicago Great Western Ry.
HUGH MACRAE Wilmington, N.C.	III.	President, The Wilmington Cotton Mills and The Wilmington Gas Light Co.
HENRY MARTIN South Gardiner, Me.	V.	With The International Paper Co.
ALLYNE L. MERRILL Boston, Mass.	II.	Associate Professor of Mechanism, Mass. Institute of Technology.
EVERETT MORSS 79 Cornhill, Boston.	III.	With Morss & Whyte; Vice-President, The Simplex Electrical Co.
FREDERICK H. NEWELL Washington, D.C.	III.	Chief Hydrographer, U.S. Geological Survey.
JOSEPH E. NUTE 14 Bedford St., Fall River, Mass.	I.	Superintendent, Fall River Gas Works Co.
FRANK A. PICKERNELL 22 Thames St., New York, N.Y.	VI.	Engineer, American Telephone and Telegraph Co.
RICHARD H. PIERCE, A.B. 1409 Manhattan Bldg., Chicago, Ill.	VI.	Of Pierce, Richardson, & Neiler, Electrical and Mechanical Engineers.
NEWBERT M. RANDALL Sparrows Point, Md.	III.	Chief Chemist, The Maryland Steel Co.
CHARLES RUSSELL RICHARDS New York, N.Y.	II.	Director, Department of Manual Training, Teachers' College, Columbia University.

1885.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
OTIS T. STANTIAL . . . . 515 Diversey Ave., Chicago, Ill.	III.	Superintendent, Illinois Malleable Iron Co.
HENRY P. TALBOT, Ph.D. . Boston, Mass.	V.	Professor of Analytical Chemistry, Mass. Institute of Technology.
GEORGE P. VANIER . . . Steelton, Pa.	III.	Chemist, Pennsylvania Steel Co.
ERASTUS WORTHINGTON . Dedham, Mass.	I.	Civil Engineer.

1886.

GEORGE P. ABORN . . . . Third St., East Cambridge, Mass.	II.	Constructing Engineer, The George F. Blake Manufacturing Co.; and The Knowles Steam Pump Works.
ARTHUR C. ANTHONY . . P.O. Box 54, Albany, N.Y.	III.	Special Agent, The German American Insurance Co. (New York).
DANA P. BARTLETT . . . Boston, Mass.	VI.	Associate Professor of Mathematics, Mass. Institute of Technology.
BIRNEY C. BATCHELLER . . Witherspoon Bldg., Philadelphia, Pa.	II.	Engineer, Batcheller Pneumatic Tube Co.
WILLIAM L. BRAINERD . . 402 Broadway, Paducah, Ky.	IV.	Architect.
JOHN K. BURGESS . . . . Dedham, Mass.	II.	Engineer.
CHARLES L. BURLINGHAM . 118 W. Jackson Boul., Chicago, Ill.	III.	Secretary.
WM. H. CHADBOURN, JR. . Deep River, Conn.	III.	Engineer, with Pratt, Read, & Co.
WILLIAM L. CHURCH . . . Address unknown.	VI.	
HARRY E. CLIFFORD . . . Boston, Mass.	VI.	Assistant Professor of Theoretical Physics, Mass. Institute of Technology.
LOUIS R. COBB . . . . . 101 Milk St., Boston.	I.	Assistant Engineer, Elevated Lines, Boston Elevated Ry. Co.
LOUIS F. CUTTER . . . . 33 Chestnut St., Salem, Mass.	I.	Assistant Engineer, Engineering Department, City of Boston.
CHARLES C. DOE . . . . Hancock St., Lexington, Mass.	VII.	In Private Business.
ORRIN S. DOOLITTLE . . . 445 Oley St., Reading, Pa.	V.	
JAMES C. DUFF . . . . . 150 Nassau St., New York, N.Y.	V.	Chemist and Packinghouse Expert; Technical Editor, "The National Provisioner."

1886.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE W. FARMER . . . 2417 Burr St., Fort Madison, Iowa.	II.	Gang Foreman, Atchison, Topeka & Santa Fé Ry.
FRED E. FOSS, A.M. . . State College, Pa.	I.	Professor of Civil Engineering, Pennsylvania State College.
ALEXANDER S. GARFIELD . 10 rue de Londres, Paris, France.	II.	Chief Engineer, Compagnie Française pour l'Exploitation des Procédés Thomson-Houston; Consulting Engineer, Compagnie d'Électricité Thomson-Houston de la Mediterranée.
D. LEWIS K. HATHAWAY . East Cambridge, Mass.	II.	With The George F. Blake Manufacturing Co.
EDWARD E. HIGGINS . . . 32 Waverly Pl., New York, N.Y.	VI.	President, The Success Co., Publishers of "Success."
WILLIAM J. HOPKINS . . . Philadelphia, Pa.	VI.	Professor of Physics, Drexel Institute.
WALTER RENTON INGALLS 153 Milk St., Boston.	III.	Consulting Mining Engineer and Metallurgist.
WILLIAM F. JORDAN . . . Room 521, Grand Central Station, New York, N.Y.	I.	Resident Engineer, Eastern District, New York Central & Hudson River R.R.
C. BELLE KENNEY . . . . Wollaston, Mass.	V.	Teacher of Science, Quincy Mansion School.
ALBERT E. LEACH . . . . 501 State House, Boston.	II.	Analyst of Food and Drugs, Mass. State Board of Health.
FRANK L. LOCKE . . . . Malden, Mass.	I.	Assistant Superintendent, The Boston Rubber Shoe Co.
WILSON H. LOW . . . . South Omaha, Neb.	V.	Chief Chemist, The Cudahy Packing Co.
ELGOOD C. LUFKIN . . . P.O. Drawer 953, Buffalo, N.Y.	II.	Manager, The Snow Steam Pump Works.
JAMES P. LYNDE . . . . 67 Main St., Webster, Mass.	IX.	Druggist.
ALEX. RICE MCKIM, A.M. . 106 E. Twenty-third St., New York, N.Y.	I.	Consulting Architectural Engineer.
HARRY B. MERRIAM . . . 134 W. Fourteenth St., Dubuque, Iowa.	I.	Division Engineer, Chicago Great Western Ry.
HENRY P. MERRIAM . . . 120 Liberty St., New York, N.Y.	VI.	Engineer, Sims-Dudley Defence Co.
EDWARD F. MILLER . . . Boston, Mass.	II.	Associate Professor of Steam Engineering, Mass. Institute of Technology.

1886. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
EDGAR H. MUMFORD . . . Eighteenth and Hamilton Sts., Philadelphia, Pa.	II.	Secretary and Treasurer, The Tabor Manufacturing Co.
ARTHUR A. NOYES, S.M., Ph.D. Boston, Mass.	V.	Professor of Theoretical and Organic Chemistry, Mass. Institute of Technology.
EDWARD L. PIERCE . . . Syracuse, N.Y.	II.	With Solvay Process Co.; Secretary, The Semet-Solvay Co.
CHARLES F. RICHARDSON . 16 State St., Boston.	II.	Lawyer, Patent Business.
ARTHUR G. ROBBINS . . . Boston, Mass.	I.	Assistant Professor of Highway Engineering, Mass. Institute of Technology.
L. KIMBALL RUSSELL . . . Boston, Mass.	V.	Instructor in Inorganic Chemistry, Mass. Institute of Technology.
J. FRANK SEAVEY . . . . 380 Park St., West Roxbury, Mass.	II.	With American Steel and Wire Co. (Worcester, Mass.).
WILLIAM E. SHEPARD . . 10 rue de Londres, Paris, France.	VI.	Engineer, Compagnie Française pour l'Exploitation des Procédés Thomson-Houston.
JAMES E. SIMPSON . . . . 343 Essex St., Lawrence, Mass.	III.	With J. R. Simpson & Co.; and with Simpson & Surette.
THEODORE STEBBINS . . . Schenectady, N.Y.	VI.	Engineer, Committee on Local Companies, General Electric Co.
AUGUSTUS B. STOUGHTON . 1506 Land Title Bldg., Philadelphia, Pa.	II.	Attorney-at-law, Patent Business.
WILLIAM M. TAYLOR . . 740 W. Washington Ave., Indianapolis, Ind.	II.	President, The Chandler & Taylor Co.
CHARLES D. TURNBULL . . 85 State St., Boston.	II.	Trustee.
DAVID VAN ALSTINE . . St. Paul, Minn.	II.	Master Mechanic, Chicago Great Western Ry.
MAURICE A. VIELÉ, B.S. . Schenectady, N.Y.	II.	Civil and Hydraulic Engineer.
C. MORRIS WILDER . . . 403 Neave Bldg., Cincinnati, Ohio.	VI.	In Private Business.
ELWOOD J. WILSON . . . 712 No. Fourth Ave., Knoxville, Tenn.	III.	Mining Engineer.
CHARLES H. WOODBURY . Grundmann Studios, Boston, Mass.	II.	Artist.

1886.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
VERNOR F. WORCESTER . . Rutland, Vt.	II.	With The Howe Scale Co.
FRED R. YOUNG . . . . Address Unknown.	III.	

1887.

GEORGE A. ARMINGTON . . Cleveland, Ohio.	II.	Manager, The Cleveland Crane and Car Co.
SIDNEY R. BARTLETT, D.M.D. Post Office Bldg., Colorado Springs, Colo.	VII.	Of Firm of Bartlett & Smith, Dealers in Mines and Mining Stocks.
CHARLES A. BARTON . . Address Unknown.	II.	
WILLIAM B. BLAKE . . . Fort Wayne, Ind.	I.	Engineer of Maintenance of Way, Western Division, Pennsylvania Lines West of Pittsburgh.
WALTER C. BRACE . . . Colorado National Bank Bldg., Denver, Colo.	III.	Consulting Metallurgical and Mining Engineer.
DWIGHT BRAINERD . . . 4 Hospital St., Montreal, Que.	IX.	Treasurer, Hamilton Powder Co.
HENRY B. BRAINERD . . . 4 Hospital St., Montreal, Que.	IX.	Treasurer, Dominion Cartridge Co. (Limited).
HENRY F. BRYANT . . . . 4 State St., Boston.	I.	Of Firm of French & Bryant, Civil Engineers (Brookline, Mass.).
FRANK GELETT BURGESS . Bohemian Club, San Francisco, Cal.	I.	Author and Illustrator.
JULIAN A. CAMERON . . . Forge Village, Mass.	II.	President, The Abbot Worsted Co.
FRANK D. CARNEY . . . . Steelton, Pa.	III.	Assistant Superintendent, Pennsylvania Steel Co.
WINTHROP COLE . . . . Washington, D.C.	II.	With Bureau of Steam Engineering, Navy Department.
HENRY J. CONANT . . . . 26 Cortlandt St., New York, N.Y.	II.	Second Vice-President, Westinghouse, Church, Kerr, & Co., Engineers (Incorporated).
RALPH E. CURTIS . . . . 3 Head Pl., Boston.	II.	With Edison Electric Illuminating Co.
WILLIAM C. CUSHING, M.A. 2 Carson St., Pittsburgh, Pa.	I.	Superintendent, Pittsburgh Division, Pennsylvania Lines West of Pittsburgh,

1887. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
SARAH L. DAY, A.M. . . . 280 Newbury St., Boston.	V.	
WALTER C. FISH . . . . King's Beach Terrace, Lynn, Mass.	VI.	Manager, Lynn Works, General Electric Co.
JOHN M. FOX . . . . . 66 Union St., Portland, Me.	VI.	Electrical Engineer and Dealer in Electrical Supplies.
JOSEPH B. GAY . . . . . 12 Pearl St., Boston.	IV.	Of Firm of Gay & Proctor, Architects.
WALTER H. GLEASON . . . Room 916, 60 State St., Boston.	V.	In Real Estate and Mortgage Business.
WILLIAM S. HADAWAY, JR. 107 Liberty St., New York, N.Y.	VIII.	Consulting and Constructing Electrical and Heating Engineer.
WILLIAM O. HILDRETH . . Lawrence, Mass.	II.	Mechanical Engineer, Stanley Manufacturing Co.
JAMES C. HOBART . . . . 610 Baymiller St., Cincinnati, Ohio.	II.	Secretary and Manager, Triumph Electric Co.; and Triumph Ice Machine Co.
OREN S. HUSSEY . . . . Nashua, N.H.	II.	Of Firm of Gregg & Son, Manufacturers of Doors, Windows, Blinds, etc.
EDWARD A. JONES . . . . Pittsfield, Mass.	II.	With E. D. Jones & Sons' Co., Architects and Manufacturers of Paper Machinery.
CHARLES B. KENDALL . . . Passaic, N.J.	V.	Superintendent, Passaic Print Works.
WILLIAM D. LIVERMORE . Lawrence, Mass.	V.	Chemist, American Woollen Co.
PHILIP A. MOSMAN . . . Pueblo, Colo.	III.	With the Eiler Plant, American Smelting and Refining Co.
SAMUEL P. MULLIKEN, Ph.D. Boston, Mass.	V.	Instructor in Organic Chemistry, Mass. Institute of Technology.
GEORGE L. NORRIS . . . Burnham, Pa.	III.	Chemist, Standard Steel Works.
HELEN COOLEY PALMER, M.D. (Mrs. John B. Palmer) 110 W. Eighty-fourth St., New York, N.Y.	V	Physician. Assistant Surgeon, New York Ophthalmic Hospital. Professor of Chemistry, New York Medical College and Hospital for Women.
GEO. W. PATTERSON, JR., Ph.D. 814 So. University Ave., Ann Arbor, Mich.	VI.	Junior Professor of Electrical Engineering, University of Michigan.
HERBERT A. RICHARDSON . 106 Hewlett St., Roslindale, Mass.	V.	In Private Business.
FRANZ H. SCHWARZ . . . 4 Pearl St., Lawrence, Mass.	II.	Mechanical Engineer, Pacific Mills.

1887. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HENRY D. SEARS . . . . 45 Arch St., Boston.	VI.	Dealer in Electrical Supplies; General Sales Agent, The Bellevue Porcelain Works.
FRANK E. SHEPARD . . . 924 Washington Ave., Denver, Colo.	II.	President, The Denver Engineering Works, Mining Machinery.
CHARLES P. SMITH . . . Le Havre, France.	II.	Engineer of Works, Société Industrielle d'Electricité, Procédés Westinghouse.
HARRY E. SMITH . . . . West Milwaukee, Wis.	V.	Chemist, Chicago, Milwaukee, & St. Paul Ry.
J. WALDO SMITH . . . . 109 Washington St., Paterson, N.J.	I.	Vice-President, Passaic Water Co.; Engineer and Superintendent, East Jersey Water Co.
HENRY SOUTHER . . . . 440 Capitol Ave., Hartford, Conn.	III.	Consulting Engineer.
HOLLON C. SPAULDING . . Weld Bldg., Boston.	II.	New England Manager, The American Stoker Co.
TIMOTHY W. SPRAGUE . . 4 State St., Boston, and 25 Broad St., New York., N.Y.	III.	Consulting Engineer, Mining Installations and Power Transmission.
HENRY F. STODDARD . . . Paterson, N.J.	II.	With The Watson Machine Co.
GILES TAINTOR . . . . . 119 Milk St., Boston.	VI.	Attorney and Counsellor-at-law; Superintendent, Right of Way Department, New England Telephone and Telegraph Co.
EDWARD G. THOMAS . . . 4 State St., Boston.	II.	Mechanical Engineer.
FREDERICK THOMPSON . . U.S. Navy Yard, Norfolk, Va.	I.	Civil Engineer, U.S. Navy.
WALTER S. THOMPSON . . Union Station, Oil City, Pa.	I.	Assistant Engineer, Pennsylvania R.R.
GREENLEAF R. TUCKER . . Boston, Mass.	V.	Chemist, Boston City Hospital.
ALEXANDER H. TWOMBLY . Yarmouthville, Me.	II.	Superintendent, The Forest Paper Co. (S. D. Warren & Co., Proprietors).
RALPH VOSE . . . . . Hyde Park, Mass.	VI.	Electrician.
WALTER G. WHITMORE . . 44 Broad St., New York, N.Y.	VI.	Local Engineer, New York Office, General Electric Co.
GRANGER WHITNEY . . . La Follette, Tenn.	III.	Superintendent of Iron Department, La Follette Coal, Iron, and Railroad Co.

1887. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM A. WHITNEY . Wendell, N.H.	I.	Manager, Emerson Paper Co.
HERBERT A. WILCOX . . . Aspen, Colo.	III.	Mining Engineer.
SIDNEY WILLIAMS . . . Dunmore, Pa.	I.	Superintendent, Pennsylvania Coal Co.

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EDWARD COLLINS, JR. . . Washington, D.C.	VI.	Examiner, U.S. Patent Office.
ARTHUR J. CONNER . . . 180 Commercial St., Boston.	V.	President, The Arthur J. Conner Co.

1888. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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HENRY F. EASTMAN . . . 327 E. Merrimac St., Lowell, Mass.	II.	Draughtsman.
RICHARD EPPES, JR. . . . City Point, Va.	II.	Manager, Appomattox Plantations.
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BERTRAM P. FLINT . . . 91 Liberty St., New York, N.Y.	II.	With The George F. Blake Manufacturing Co.
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WILLIAM L. HARRIS . . . Towner, N. Dak.	VII.	Druggist.
GEORGE L. HARVEY . . . 115 Monroe St., Chicago, Ill.	II.	Architect and Mechanical Engineer.
CHARLES F. HASTINGS . . Address unknown.	III.	
SAVORY C. HATHAWAY, JR. 251 Hawthorn St., New Bedford, Mass.	VI.	With Hathaway, Soule, & Harrington (Incorporated).
GEORGE L. HEATH . . . . South Lake Linden, Mich.	V.	Chemist, Calumet & Hecla Smelting Works.
EDWARD W. HERRICK . . 77 Houston St., New York, N.Y.	II.	Consulting Engineer, with Baker, Smith, & Co.
EDWARD C. HOLTON . . . 100 Canal St., Cleveland, Ohio.	V.	Head Chemist, The Sherwin-Williams Co.
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1888. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FRANK M. JAMES . . . . Lynn, Mass.	II.	With General Electric Co.
ARTHUR WINSLOW JONES . Equitable Bldg., Melbourne, Australia.	VI.	Manager, The Australian General Electric Co.
EDWIN O. JORDAN, Ph.D. . Chicago, Ill.	VII.	Associate Professor of Bacteriology, University of Chicago.
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FRANK A. MOORE . . . . Windsor Arcade, Fifth Ave., New York, N.Y.	IV.	Architect.
HENRY C. MOORE . . . . 119 W. Thirty-fourth St., New York, N.Y.	II.	With "The Horseless Age."
ADDISON D. NICKERSON . Hyde Park, Mass.	I.	Engineer to Sewer Commissioners.
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CHARLES A. PETERSON, A.B. Cambridge, Mass.	VI.	
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FRED H. SAFFORD, Ph.D. (Harv.) Worcester, Mass.	VI.	Honorary Fellow in Mathematics, Clark University.

1888. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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IVAR L. SJÖSTRÖM . . . . Central Bldg., Lawrence, Mass.	I.	Treasurer, The Lawrence Dye Works Co.
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1889. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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HARRISON G. DYAR, Ph.D. . Washington, D.C.	V.	With U.S. National Museum.
J. PARKER B. FISKE . . . 164 Devonshire St., Boston.	VI.	Of Fiske & Co., Architectural Clay Products and Building Materials.

1889. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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EDWARD V. FRENCH . . . 31 Milk St., Boston.	II.	Inspector, Associated Factory Mutual Fire Insurance Cos.
HOLLIS FRENCH . . . . . Albany Bldg., Boston.	VI.	Of Firm of Hollis French & Allen Hubbard, Consulting Engineers.
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HENRY M. HOBART . . . 43 Dorotheenstrasse, Berlin, Germany.	VI.	Engineer with Union Elektricitäts Gesellschaft.
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HARRY H. HUNT . . . . Tampa, Fla.	VI.	Manager, The Tampa Electric Co.
EDWARD S. HUTCHINS . . Bath, Me.	II.	Chief Draughtsman, Engineering Department, Bath Iron Works.
LEWIS E. JOHNSON . . . . Steelton, Pa.	II.	Engineer, Bridge and Construction Department, Pennsylvania Steel Co.
WILLIAM S. JOHNSON . State House, Boston.	I.	Assistant Engineer, Mass. State Board of Health.
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ARTHUR D. KINSMAN . Park Row and State St., Erie, Pa.	VIII.	Observer, U.S. Weather Bureau.
L. HENRY KUNHARDT . . 31 Milk St., Boston.	II.	Superintendent of Plan Department and Inspector, Associated Factory Mutual Fire Insurance Cos.
GEORGE B. LAUDER . . . Concord, N.H.	VI.	Superintendent, The Concord Electric Co.
FRANK A. LAWS . . . . . Boston, Mass.	VI.	Assistant Professor of Electrical Measurement, Mass. Institute of Technology.
WILLIAM W. LEWIS . . . 20 Beacon St., Boston.	II	Assistant Engineer, Boston Transit Commission.

1889. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
JOHN W. LINZEE, JR., A.B. 101 Milk St., Boston.	I.	Assistant Engineer, Boston Elevated Railway Co.
HARRISON LORING, JR. 43 India St., Boston.	II.	Treasurer, The R. S. Brine Transportation Co.
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CHARLES W. POWER Pittsfield, Mass.	VI.	With D. M. Collins & Co., Berkshire Knitting Mills.
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GEORGE L. RICHARDSON San Rafael, Cal.	I.	City Engineer and County Surveyor.
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WILLIAM B. THURBER, S.M. Dorchester, Mass.	IX.	With Walter Baker & Co (Limited), Manufacturers of Chocolate.
ARTHUR E. TRUESDELL 50 Brenton Terrace, Pittsfield, Mass.	VI.	Manager, The West Stockbridge Lime Co.

1889. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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CHARLES H. WARNER . . Address unknown.	VI.	
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JASPER WHITING . . . . Lexington, Mass.	III.	
FRANK P. WHITNEY . . . 125 Milk St., Boston.	VI.	With New England Telephone and Telegraph Co.
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ARTHUR L. WILLISTON . . Brooklyn, N.Y.	II.	Director, Department of Science and Technology, Pratt Institute.
VICTOR WINDETT . . . . 316 Hennen Bldg., New Orleans, La.	II.	General Manager for Nash & Dowdle, Contractors.
CAROLINE A. WOODMAN, A.M. Lewiston, Me.	VII.	Librarian, Bates College.
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JOSEPH B. BAKER . . . . 40 Lincoln St., Boston.	VI.	Electrical Engineer.
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SPAULDING BARTLETT . . Webster, Mass.	V.	Superintendent, The Slater Woollen Co.

1890. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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CHARLES B. BEASOM 31 Milk St., Boston.	II.	Inspector, Associated Factory Mutual Fire Insurance Cos.
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ADELAIDE SHERMAN BLACKMER (Mrs. Edward S. Blackmer) 30 Wolcott St., Dorchester, Mass.	V.	
JOHN BALCH BLOOD Equitable Bldg., Boston.	VI.	Of Firm of Blood & Hale, Consulting and Designing Engineers.
AUSTIN DUNHAM BOSS 25 Spring St., Willimantic, Conn.	II.	Superintendent, Finishing Department, The Willimantic Linen Co.
CHARLOTTE A. BRAGG Wellesley, Mass.	V.	Associate Professor of Chemistry, Wellesley College.
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CHESTER V. CARLTON Price's, Grand Metis, Que.	I.	With Metis Lumber Co.
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WALTER F. COOK 23 Avon St., Boston.	IX.	With T. D. Cook & Co.

1890. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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DARRAGH DE LANCEY . . 530 Atlantic Ave., Boston.	II.	Works Manager, Boston Factories, Library Bureau.
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JOHN O. DEWOLF . . . . Tremont Bldg., Boston.	II.	Mechanical Engineer, with W. B. Smith, Whaley, & Co.
FREDERICK H. DODGE . . 11 Produce Exchange Bldg., Toledo, Ohio.	II.	Of Firm of Merrill, Dodge, & Jackson, General Insurance.
FRANCIS W. DUNBAR . . . Congress and Green Sts., Chicago, Ill.	VI.	Electrical Engineer, with The Kellogg Switchboard and Supply Co.
PIERRE S. DU PONT . . . Lorain, Ohio.	V.	President, The Johnson Co.
EDWIN F. DWELLEY . . . Room 439, Exchange Bldg., Boston.	I.	Civil Engineer.
ELWOOD A. EMERY, B.L. . 394 Massachusetts Ave., Boston.	IV.	Vocal Teacher.
WILLIAM H. FENN, JR. . . 792 Broad St., Newark, N.J.	I.	President, The Manufacturers' Contracting Co.
WILLIAM P. FLINT . . . 4516 Forbes St., Pittsburgh, Pa.	II.	Gas Engine Expert, Westinghouse Machine Co.
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GEORGE L. GILMORE . . . Lexington, Mass.	II.	With K. M. Gilmore & Co., Middlesex Bleach, Dye, and Print Works (Somerville, Mass.).
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FRANK M. GREENLAW . . Lynn, Mass.	VI.	Instructor in Physics, English High School.
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PHILIP M. HAMMETT, A.B. . Portland, Me.	II.	Superintendent of Motive Power, Boston & Maine R.R.

1890. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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HARRY E. HAYES, A.B. . . 22 Thames St., New York, N.Y.	VI.	With the American Telephone and Telegraph Co.
SCHUYLER HAZARD . . . Grand Central Station, New York, N.Y.	I.	Assistant Engineer, New York Central & Hudson River R.R.
FREDERICK S. HOLLIS, Ph.D. 150 York St., New Haven, Conn.	V.	Instructor in Chemistry, Yale Medical School.
S. ELLSWORTH HORTON . . Windsor Locks, Conn.	II.	Superintendent, The E. Horton & Son Co., Manufacturers of Horton Lathe and Drill Chucks.
FRANCIS H. KENDALL . . Court House, East Cambridge, Mass.	I.	Engineer for Middlesex County Commissioners; Member of Board of Water Commissioners, Belmont, Mass.
HARRY A. KENNICOTT . . Chicago, Ill.	I.	With The American Bridge Co.
FRANKLIN KNIGHT . . . Dalton, Mass.	I.	Rector of Grace Church.
BERTRAM A. LENFEST . . 15 Floyd St., Waltham, Mass.	II.	Principal, Manual Training High School Director of Grade Manual Work.
ERNEST A. LE SUEUR . . 358 Bank St., Ottawa, Ont.	VI.	Consulting Electro-chemical Expert.
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BERTRAM H. MANN . . . Bloomington, Ill.	VI.	Signal Engineer, Chicago & Alton Ry.
FREDERICK METCALF . . . 111 Elm St, Cleveland, Ohio.	II.	Treasurer, The Chase Machine Co.
BURDETT MOODY . . . . Lead, S. Dak.	I.	Engineer, Homestake and Associate Mining Companies.
STEPHEN W. MOORE . . . 1723 Wood Ave., Colorado Springs, Colo.	II.	Dealer in Bicycles and Supplies.
CHARLES NEAVE, A.M. . . 80 Broadway, New York, N.Y.	VI.	Of Firm of Richardson, Herrick, & Neave, Lawyers.
ALLAN H. NEWELL . . . Angels, Calaveras Co., Cal.	II.	Machinist.
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1890. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ALMON E. NORRIS . . . . 29 Main St., Cambridgeport, Mass.	II.	Consulting Engineer, Rawson & Morrison Manufacturing Co.
CLARENCE G. NORRIS . . P.O. Box 35, Hyde Park, Mass.	I.	Superintendent of Streets.
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JOSEPH K. NOYES . . . . 13 Ferry St., Binghamton, N.Y.	I.	Of Firm of Joseph P. Noyes & Co., Manufacturers of Combs and Buttons.
GEORGE A. PACKARD . . 18 Lafayette St., Wakefield, Mass.	III.	Mining Engineer.
WILLIAM R. PEYTON . . Fifth Ave., south, Duluth, Minn.	II.	Of The Gowan-Peyton-Twohy Co.
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EDWARD B. RAYMOND . Schenectady, N.Y.	VI.	Electrical Engineer, General Electric Co.
CALVIN W. RICE . . . . 53–57 Duane St., New York, N.Y.	VI.	Electrician, Consolidated Telegraph and Electrical Subway Co., New York Edison Co.
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EDWARD ROBINSON . . . Potsdam, N.Y.	II.	Professor of Mechanical Engineering, Clarkson School of Technology.
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MINNIE H. ROGERS . . . 44 Rockview St., Jamaica Plain, Mass.	IX.	Private Tutor.
LOUIS SCHMIDT . . . . 650 Riddle Road, Cincinnati, Ohio.	V.	Chief Chemist, Ohio Dairy and Food Commission.

1890. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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THOMAS J. STURTEVANT . Harrison Square, Mass.	VI.	With The Sturtevant Mill Co.
FREDERICK W. SWANTON . Washington, D.C.	VI.	Assistant Examiner, U.S. Patent Office.
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ROBERT T. WALKER . . . Tremont Bldg., Boston.	IV.	Draughtsman with A. W. Longfellow, Jr., Architect.
FRANKLIN W. WHITE, M.D. 416 Marlborough St., Boston.	VII.	Physician.
WILLIS R. WHITNEY, Ph.D. Boston, Mass.	V.	Assistant Professor of Theoretical Chemistry and Proximate Technical Analysis, Mass. Institute of Technology; Electro-Chemist, with General Electric Co.
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NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES W. AIKEN . . . 82 Washington St., New York, N.Y.	II.	Consulting Engineer.
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ADELAIDE BIRD . . . . . Chambersburgh, Pa.	VII.	Teacher of Biology, Wilson College.
JOHN H. BIRKS . . . . . Philips Sq., Montreal, Que.	II.	Of Firm of Henry Birks & Sons.
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DIXIE LEE BRYANT . . . Landhausstrasse, Heidelberg, Germany.	XII.	Student in the University.
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GEORGE W. BRYDEN . . . Second St., E. Everett, Mass.	II.	Mechanical Engineer and Superintendent, New England Structural Co.
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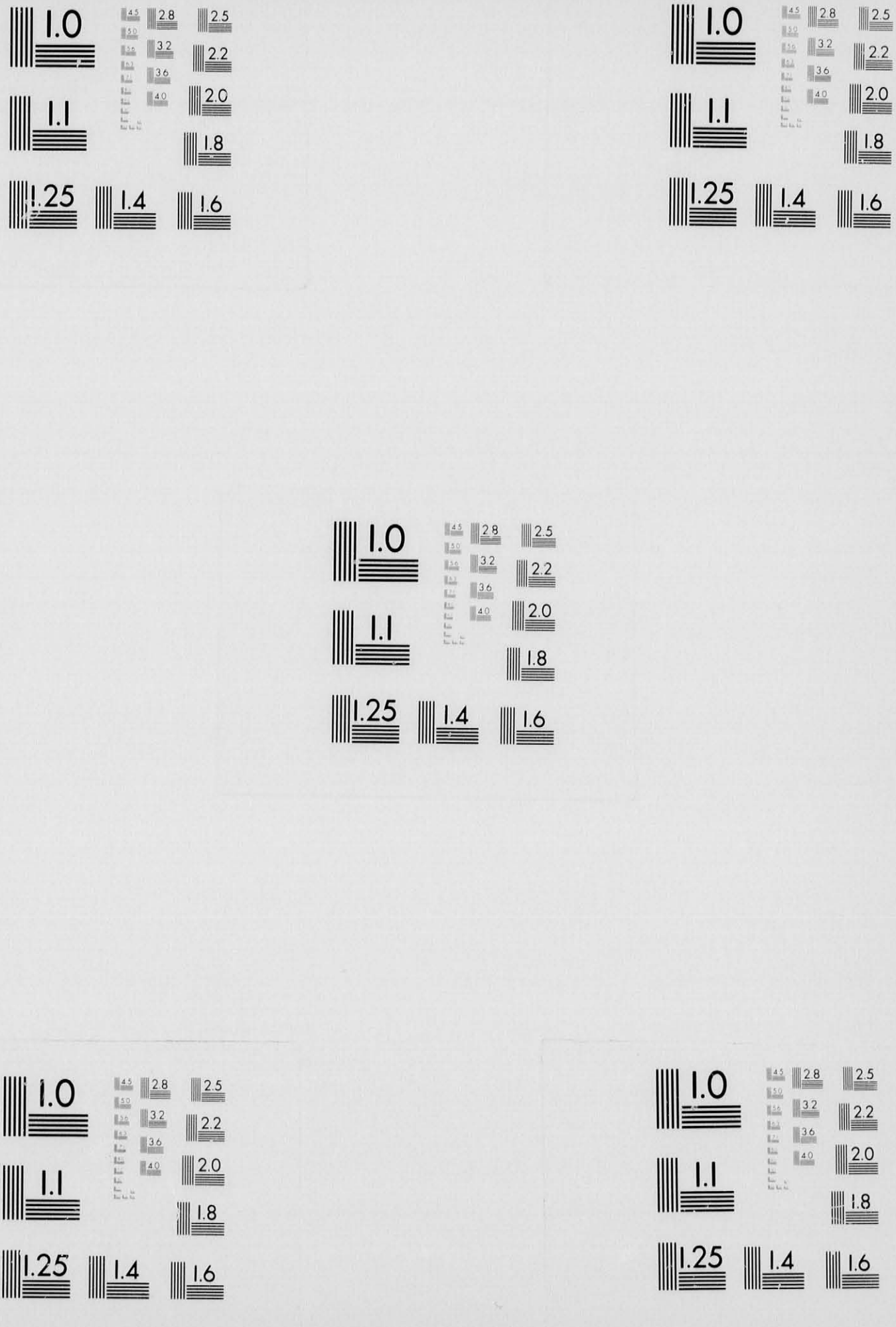
GEORGE A. CAMPBELL, Ph.D. 125 Milk St., Boston.	I.	With American Bell Telephone Co.
BARNARD CAPEN, JR. . . . 104 Milk St., Boston.	VI.	With The New England Telephone and Telegraph Co.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1891. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ANNE WHITE CARPENTER (Mrs. T. B. Carpenter) 142 No. Pearl St., Buffalo, N.Y.	V.	
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LESTER G. FRENCH 9 Murray St., New York, N.Y.	II.	Editor, "Machinery" and "Steam Engineering."

1891. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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CHARLES GARRISON . . . 390 Atlantic Ave., Boston.	VI.	Vice-President, The Chase-Shawmut Co., Electrical Specialties.
MEDOREM W. GREER . . . Care Geo. H. Greer, Dundee, Yamhill Co., Oreg.	VI.	In Private Business.
EDGAR L. HAMILTON . . . 236 Randolph St., Chicago, Ill.	III.	President, The American Roll Wrapping Paper Co.
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HERBERT E. HATHAWAY . Delawanna, N.J.	V.	With The Waldrich Bleachery Co.
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1891. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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WILLIAM MOSSMAN . . . Mattapan, Mass.	VI.	Assistant Superintendent, Mattapan Mills, The Tileston & Hollingsworth Co.
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CARLETON A. READ . . . Durham, N.H.	II.	Professor of Mechanical Engineering, New Hampshire College.
WILLIAM C. RICHARDSON . 115 Congress St., Boston.	II.	In Private Business.
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ETHEL B. ROBINSON, M.D. (Mrs. A. B. Robinson) 157 W. Seventy-fourth St., New York, N.Y.	VII.	

1891. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLARD H. ROOTS . . . St. Andrew's Rectory, Chelan, Wash.	IX.	Missionary of the Episcopal Church.
FREDERICK H. ROSE . . . 1022 Euclid Ave., Cleveland, Ohio.	II.	With The Upson Nut Co.
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1891. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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SALMON W. WILDER, JR. . 77 Broad St., Boston.	X.	General Manager, The Merrimac Chemical Co.
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C. HANCOCK WOOD . . . Fifty-first St., Pittsburgh, Pa.	II.	Draughtsman, with The American Bridge Co.

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CHARLES H. BIGELOW . . 439 Albany St., Boston.	VI.	Inspecting Engineer, Boston Elevated Railway Co.
PHILLIPS PAYSON BOURNE . East Cambridge, Mass.	II.	With The George F. Blake Manufacturing Co.
STEPHEN BOWEN . . . . Highlandville, Mass	II.	President, The John F. Brooks Co.
BERTHA MILLARD BROWN Hyannis, Mass.	VII.	Instructor in Biology, State Normal School.
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CHARLES M. BURNHAM . 36 Beach St., Waltham, Mass.	VI.	With The American Waltham Watch Co.
GUY J. BURNHAM . . . . Address unknown.	X.	
HARRY A. BURNHAM . . . Passaic, N.J.	II.	Mechanical Superintendent, Passaic Print Works.
SEVERANCE BURRAGE . . La Fayette, Ind.	VII.	Instructor in Sanitary Science, Purdue University.
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1892. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
RICHARD D. CHASE . . . 220 Broadway, New York, N.Y.	XI.	With Allen Hazen, Consulting Engineer (New York, N.Y.).
ALBERT K. CHURCH . . . Pittsburgh, Pa.	V.	With The National Tube Co.
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JOHN A. CURTIN . . . . Tremont Bldg., Boston.	I.	Attorney-at-law.
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HENRY C. DRESSER . . . Macon, Ga.	II.	Superintendent, Bibb Manufacturing Co.
BARRON P. DU BOIS . . . Navy Yard, New York, N.Y.	VI.	Paymaster, U.S. Navy.
GEORGE F. ELDRIDGE . . . 59 Wall St., New York, N.Y.	V.	With Nicoll & Co., Pig Iron, Steel, and Iron.
SUMNER B. ELY . . . . . Vandergrift Bldg., Pittsburgh, Pa.	II.	Chief Engineer, The American Sheet Steel Co.
LOGAN FELAND . . . . . Headquarters, U.S. Marine Corps, Washington, D.C.	IV.	First Lieutenant, U.S. Marine Corps.
HENRY A. FISKE	VI.	(See Class of 1891.)
HOWARD C. FORBES . . .	VI.	(See Class of 1891.)
GAYLE T. FORBUSH . . . 30 Kilby St., Boston.	X.	General Agent, The German American Insurance Co.
FREDERICK L. FRANCIS . . 387 Main St., Fitchburg, Mass.	IV.	Of Firm of H. M. Francis and Sons, Architects.

1892. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ALLEN FRENCH . . . . Concord, Mass.	IX.	Student.
EDWARD R. FRENCH . . . 116 Franklin St., Cambridge, Mass.	VI.	Electrical Engineer, Heating Department, Simplex Electrical Co.
CHARLES E. FULLER . . Boston, Mass.	II.	Assistant Professor of Mechanical Engineering, Mass. Institute of Technology.
EDWARD P. GILL . . . . P.O. Box 626, Baltimore, Md.	IV.	In Lumber Business.
HOWARD GILMORE . . . 48 Sawyer Ave., Dorchester, Mass.	II.	Manufacturer of Incandescent Lamps and Electrical Specialties, Gilmore Electric Co.
GEORGE H. GOODELL . . Allegheny, Pa.	II.	Assistant Chief Engineer, The Pressed-Steel-Bar Co.
WILLIAM P. GRAY . . . Care W. K. Trigg Co., Richmond, Va.	VI.	With Bureau of Construction and Repair, U.S.N.; stationed at W. K. Trigg's Shipyards.
WILLIAM W. GREEN . . . City Hall, Chicago, Ill.	I.	Assistant Engineer, Street Department, City of Chicago.
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FREDERICK J. HOXIE . . . Phenix, R.I.	VI.	Electrical Contractor.
W. SPENCER HUTCHINSON . Carthage, Mo.	III.	Manager, Boston Get There Zinc Co., Missouri Zinc-Fields Co., Federal Zinc and Lead Co.
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ARTHUR L. JACOBS . . . . 11 Wareham St., Boston.	VI.	Assistant Chief Inspector, Wire Department, City of Boston.

1892. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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WILLIAM R. KENDALL . . 307 Delaware St., Kansas City, Mo.	VI.	Vice-President, The William W. Kendall Boot & Shoe Co.
ARMAND D. KOCH . . . . Wells Bldg., Milwaukee, Wis.	IV.	Architect with H. C. Koch & Co.
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ELISHA LEE . . . . . Lock Haven, Pa.	I.	Supervisor, Pennsylvania R.R.
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WALLACE E. MCCAW . . . Macon, Ga.	VI.	President, The McCaw Manufacturing Co.
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GEORGE A. MERRILL . . . 18 Post Office Sq., Boston.	XI.	With The New England Structural Co.
WILLIAM H. MESSENGER . One Hundred and seventy-seventh St. and Third Ave., New York, N.Y.	II.	With Department of Highways, New York City.

1892. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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HERBERT S. MILLER . . . 1025 E. Jersey St., Elizabeth, N.J.	VI.	Secretary and Electrical Engineer, The Diehl Manufacturing Co.
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ARTHUR J. OBER . . . . 10 Lincoln St., Newport, R.I.	I.	U.S. Junior Engineer.
HAMILTON OTIS . . . . Cazadero, Sonoma Co., Cal.	I.	Stock Rancher.
CHARLES F. PARK . . . . Boston, Mass.	II.	Assistant Professor of Mechanical Engineering, Mass. Institute of Technology.
J. SCOTT PARRISH . . . . Richmond, Va.	II.	Acting Treasurer, Richmond Cedar Works; Secretary, Gulf Red Cedar Co.
FRANK EDSON PERKINS, . Grad. École des Beaux-Arts, 111 Fifth Ave., New York, N.Y.	IV.	Assistant Professor in charge of the Courses in Architectural Design, University of Pennsylvania (Philadelphia, Pa.).
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HENRY M. PHILLIPS . . . 222 Third St., Niagara Falls, N.Y.	VI.	Electrician, The Acker Process Co.
ARTHUR G. PIERCE . . . 3 Head Pl., Boston.	VI.	Technical Engineer, Direct Current Division, Edison Electric Illuminating Co. of Boston.
ARTHUR W. PIERCE . . . P.O. Box 168, Bennington, N.H.	VI.	In charge of Electric Plant for the Goodell Co. (Antrim, N.H.).
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DANA M. PRATT . . . . Brookline, Mass.	I.	With French & Bryant, Civil Engineers.

1892. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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GEORGE F. ROWELL . . . 701 Wood St., Station D, Pittsburgh, Pa.	I.	Assistant Engineer, Pennsylvania Water Co.
HORACE F. RUGGLES . . . 52 William St., New York, N.Y.	II.	Mechanical Engineer with O. B. Stillman, Mechanical Engineer.
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ARTHUR C. SMITH . . . . Waltham, Mass.	V.	With W. E. Bright.
HENRY PLYMPTON SPAULDING Boston Art Club, Boston.	VI.	Artist.
RALPH H. SWEETSER . . . Leetonia, Ohio.	III.	Assistant to President, The Salem Iron Co.

1892. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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WALTER B. TROWBRIDGE .	II.	With The United Shoe Machinery Co.
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Shanghai, China.		
JOSEPH A. WARREN . . .	XI.	With S. D. Warren & Co.
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CHARLES C. WATERMAN .	VI.	Superintendent of Construction, Southern Bell Telephone and Telegraph Co.
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HENRY S. WEBB, M.S. . .	VI.	With International Correspondence Schools.
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EDWARD C. WELLS . . .	II.	Secretary and Treasurer, Quincy Engine Works.
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1893. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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FREDERIC W. BAKER . . . Station D, Baltimore, Md.	II.	Travelling.
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EDMUND E. BLAKE . . . . Newton Upper Falls, Mass.	II.	Selling Agent, Saco & Pettee Machine Shops.
GROSVENOR T. BLOOD . . 125 Milk St., Boston.	VI.	With American Bell Telephone Co.
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HARRY L. CLAPP . . . . 115 Monroe St., Chicago, Ill.	X.	With Peirce & Fisher, Patent Attorneys.

1893. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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CHARLES D. DEMOND . Butte, Mont.	III.	With Amalgamated Copper Co.
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NAME AND ADDRESS.	COURSE.	OCCUPATION.
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WILLIAM BURT GAMBLE . Orchard Lake, Mich.	IX.	Vice-President and Assistant Manager, The Champion Mine (Silverton, Colo.).
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HOWARD GILMORE . . .	VI.	(See Class of 1892.)
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J. FRED HINCKLEY . . . . 82 Washington St., New York, N.Y.	X.	Chemist for P. T. Babbitt, Soap Manufacturer.
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1893. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
SIMEON C. KEITH, JR. 394 Rutherford Ave., Charlestown, Mass.	VII.	Bacteriologist; Manufacturer of Butter Cultures.
ERVIN KENISON . . . . . Boston, Mass.	II.	Instructor in Mechanical Drawing and Descriptive Geometry, Mass. Institute of Technology.
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1893. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HENRY W. NICHOLS . . . Chicago, Ill.	XII.	Assistant Curator of Geology, Field Columbian Museum.
CHARLES L. NORTON . . . Boston, Mass.	VI.	Assistant Professor of Heat Measurement, Mass. Institute of Technology.
FRANCIS C. NORTON . . . Rockland, Me.	IX.	With Cobb, Wight, & Co.
CHARLES L. NUTTER . . . East Bridgewater, Mass.	II.	Mechanical Engineer, The Carver Cotton-Gin Co.
CECIL E. PAINE . . . . . Bath, Me.	II.	Engineer, with The Hyde Windlass Co.
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1893. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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LOVELL BAKER STOWE . . 99 Bridge St., Springfield, Mass.	VI.	Manager, The New England Telephone and Telegraph Co.
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GEORGE L. WALKER, B.S. . 156 Fifth Ave., New York, N.Y.	I.	Contractor.

1893. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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RALEIGH B. ADAMS . . . 2 Gleason St., Dorchester, Mass.	X.	With The Boston Belting Co.
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IRVING E. BEACH . . . . Lawrence, Mass.	V.	Of The Beach Soap Co.

1894. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
NORWIN S. BEAN . . . . 992 Elm St., Manchester, N.H.	VI.	With the Second National Bank.
VALLETTE L. BENEDICT . . Schenectady, N.Y.	VI.	Electrical Engineer, General Electric Co.
HEREFORD BERRY . . . . Ampere, N.J.	VI.	With The Crocker-Wheeler Co.
GROSVENOR T. BLOOD, S.B.	II.	(See Class of 1893.)
SARAH HALL BONESTEELE (Mrs. P. F. Bonesteele) Victor, N.Y.	VIII.	
CHARLES ROYCE BOSS . . 10–20 Water St., New London, Conn.	IX.	
WILLIAM H. BOVEY . . . 1414 Harmon Pl., Minneapolis, Minn.	VI.	Superintendent of Mills, The Washburn Crosby Co.
STEPHEN ALEC BREED . . 25 Wolcott St., Malden, Mass.	II.	Interior Decorator.
WALTER V. BROWN. . . . 44 W. Twentieth St., New York, N.Y.	VI.	With Pattison Bros., Electrical Engineers (141 Broadway).
WILLIAM W. CARTER, S.B.	VI.	(See Class of 1893.)
MASON S. CHACE . . . . Elizabethport, N.J.	II.	Outside Superintendent, Crescent Shipyard.
JOHN WINSLOW CHAPMAN . Hartford, Conn.	II.	With Pratt & Whitney Co.
NATHAN C. W. CHAPMAN . Park Row Bldg., New York, N.Y.	II.	Machine Designer with Dow Composing Machine Co.
HAROLD M. CHASE . . . Wilmington, N.C.	X.	Manager, The American Chemical and Textile Coloring Co.
ALAN A. CLAFLIN . . . . Littleton, Mass.	V.	Superintendent, Avery Chemical Co.
FRED H. CLARKE . . . . City Hall, Boston.	I.	Engineer's Office, Paving Division, Street Department, City of Boston.
ARTHUR A. CLEMENT . . 200 Monroe St., Chicago, Ill.	X.	Vice-President and Manager, The American Wire Fence Co.
PRESCOTT H. COOLIDGE . . 57–67 Bethune St., New York, N.Y.	I.	With Western Electric Co.
HENRY F. COPELAND . . . Hudson and Duane Sts., New York, N.Y.	I.	With Export Department, J. S. Barron & Co.
NATHANIEL R. CRAIGHILL, S.B.	VI.	(See Class of 1893.)

1894. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HORACE A. CRARY . . . . Sheffield, Warren Co., Pa.	I.	General Superintendent, Horton, Crary, & Co.
CHARLES H. CUTLER . . . 160 Market St., Newark, N.J.	VI.	With The New York & New Jersey Telephone Co.
NELSON W. DALTON . . . Bath, Steuben Co., N.Y.	VI.	General Manager, The Bath Electric and Gas Light Co.
HENRY B. DATES . . . . Potsdam, N.Y.	VI.	Professor of Electrical Engineering and Physics, Clarkson School of Technology.
T. CLIVE DAVIES . . . . Honolulu, Ter. of Hawaii.	II.	In Sugar Business.
LEON K. DAVIS . . . . . 31 Milk St., Boston.	X.	With Plan Department, Associated Factory Mutual Insurance Co.
NATHAN B. DAY, A.B. . . 280 Newbury St., Boston.	II.	With Macleod, Calver, & Randall, Patent Attorneys.
HARRIET GALLUP DELANCEY (Mrs. Darragh deLancey) 530 Atlantic Ave., Boston.	V.	
CHARLES W. DICKEY . . . 925 Fort St., Honolulu, Ter. of Hawaii	IV.	Of Firm of Dickey & Newcomb, Architects.
HARRY S. DUCKWORTH . . Dover, N.H.	V.	Chemist, The Cocheco Manufacturing Co.
H. BELIN DU PONT . . . Phœnix, Ariz.	X.	In Private Business.
JOHN ELLIS . . . . . Lonsdale, R.I.	VI.	Manager, Lonsdale Co.'s Electric Light Plant.
ARTHUR J. FARNSWORTH . 22 Thames St., New York, N.Y.	VI.	Assistant Chief Engineer, Consolidated Railway Electric Lighting and Equipment Co.
JOHN N. FERGUSON . . . 1 Ashburton Pl., Boston.	I.	Assistant Engineer, Metropolitan Water Works.
FREDERICK E. FOWLE, JR. 1925 Fourth St., N.W., Washington, D.C.	VIII.	Assistant, Astrophysical Observatory, Smithsonian Institution.
HARRY W. GARDNER . . . Boston, Mass.	IV.	Instructor in Architecture, Mass. Institute of Technology.
J. HOWLAND GARDNER . . Harlem River Station, New York, N.Y.	II.	Assistant Superintendent of Marine Construction, New York, New Haven, & Hartford R.R.
R. WALDO GILKEY . . . 9 Irving St., Watertown, Mass.	II.	Superintendent, Silver Lake Mining Co.
LEWIS S. GREENLEAF . . . 125 Milk St., Boston.	VI.	With American Bell Telephone Co.

1894. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
BURT S. HARRISON . . . 7 E. Forty-second St., New York, N.Y.	IV.	Consulting Engineer.
HARRY P. HASTINGS . . . South Framingham, Mass.	I.	In Business.
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WILLIAM REED HILL . . . 67 Moffat Block, Detroit, Mich.	IV.	With John Scott & Co., Architects.
CHARLES F. HOPEWELL . . City Hall, Cambridge, Mass.	VI.	City Electrician, City of Cambridge.
THEODORE HORTON . . . 100 Williams St., New York, N.Y.	XI.	With Rudolph Hering and George W. Fuller, Hydraulic Engineers and Sanitary Experts.
CLIFTON A. HOWES . . . 55 Kilby St., Boston.	VI.	Electrical Inspector, Boston Board of Fire Underwriters.
WILLIAM S. HULSE . . . Dorotheenstrasse 44, Berlin, Germany.	VI.	Electrical Engineer, with Union Electricitätsgesellschaft of Berlin.
ALBERT F. HUNT, JR. . . 96 Broadway, New York, N.Y.	I.	Member of Firm of Hunt, Ingle, & Small, Lawyers.
EDWARD M. HUNT . . . City Hall, Portland, Me.	I.	Secretary of Commission of Public Works, City of Portland.
NED H. JANVRIN . . . . . Wissahickon, Pa.	I.	Assistant Engineer, The American Bridge Co.
CHARLES H. JOHNSON . . 730 Exchange Bldg., Boston.	I.	Engineer, The Old Colony Sand and Stone Co.
HERBERT E. JOHNSON . . Ashland and Burlington Aves., La Grange, Ill.	VI.	Manager of Telephone Exchange.
ALBERT L. KENDALL . . . 31 Milk St., Boston.	II.	Inspector, Inspection Department, Associated Factory Mutual Fire Insurance Co.
JOSEPH H. KIMBALL . . . City Hall, West Newton, Mass.	XI.	Assistant Engineer, Office of City Engineer, City of Newton.
WILLIAM HERBERT KING . 137 W. Forty-third St., New York, N.Y.	IX.	Attorney-at-law, with Judge of Supreme Appellate Court.
ROBERT H. KIRK . . . . 514 Ashland Ave., St. Paul, Minn.	II.	With The American Hoist and Derrick Co.
JOHN W. KITTREDGE . . . Eldora, Colo.	II.	Civil and Mining Engineer, U.S. Deputy Mineral Surveyor.
CHARLES R. KNAPP . . . 51 Water St., Pittsburgh, Pa.	IV.	With Heyl & Patterson, Contracting Engineers.

1894. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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LUCIUS PAGE LANE, A.M. . Boston, Mass.	IX.	Assistant, Catalogue Department, Boston Public Library.
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FRANK W. LOVEJOY . . . Kodak Park, Rochester, N.Y.	X.	Manager, Kodak Park Works, The Eastman Kodak Co.
GUY LOWELL, A.B., Grad. École des Beaux-Arts 1128 Tremont Bldg., Boston.	IV.	Architect; Lecturer on Landscape Architecture, Mass. Institute of Technology.
PATRICK M. LYNCH . . . 276 Dwight St., Holyoke, Mass.	I.	Architect and Engineer.
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ANGUS R. MACKAY . . . . Deadwood, S. Dak.	III.	Manager, Horseshoe Mining and Milling Co.
FRANK P. MCKIBBEN . . . Boston, Mass.	I.	Instructor in Civil Engineering, Mass. Institute of Technology.
MARION L. MAHONY . . . 900 E. Jackson St., Elkhart, Ind.	IV.	
FREDERICK M. MANN, C.E., S.M. 328 Chestnut St., Philadelphia, Pa.	IV.	Architect.
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CHARLES A. MEADE . . . 26 Broadway, New York, N.Y.	I.	With Purchasing Department, The American Agricultural Chemical Co.
LESLIE R. MOORE . . . . 133 Hunnewell Ave., Newton, Mass.	V.	Chemist with Mousam Manufacturing Co. (Kennebunk, Me.).
LUTHER R. NASH . . . . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical Experts and Engineers.
PARKER C. NEWBEGIN . . Houlton, Me.	I.	With Engineering Department, Bangor & Aroostook R.R.
HENRY L. NEWHOUSE . . 4630 Prairie Ave., Chicago, Ill.	IV.	Architect.

1894. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FREDERIC M. NOA . . . . 130 W. Eighty-fourth St., New York, N.Y.	IX.	Lecturer in Literature and the Languages.
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GEORGE OWEN, JR. . . . 122 Robinson St., Hamilton, Ont.	II.	Consulting and Mechanical Engineer.
EDWIN M. PARKER . . . 35 Winthrop St., New Britain, Conn.	IV.	Building Contractor.
WALTER W. PATCH . . . Dennison Ave., South Framingham, Mass.	I.	Assistant Engineer, Sudbury Department, Metropolitan Water Works.
JOSEPH W. PHELAN . . . Boston, Mass.	V.	Instructor in General Chemistry, Mass. Institute of Technology.
WALTER E. PIPER . . . . Fells, Mass.	V.	Assistant Superintendent, The Boston Rubber Shoe Co.
CLARENCE D. POLLOCK . . 13 Astor Pl., New York, N.Y.	I.	Senior Assistant Engineer, Sewer Division, New York Rapid Transit Railroad Commission.
WILLIAM H. PRATT . . . 60 Eastern Ave., Lynn, Mass.	VI.	Electrical Engineer, with General Electric Co.
SAMUEL C. PRESCOTT . . . Boston, Mass.	V.	Instructor in Biology, Mass. Institute of Technology.
RAYMOND BEACH PRICE . 116–128 No. Lincoln St., Chicago, Ill.	X.	Factory Manager, The Calumet Tire Rubber Co.
RICHARD W. PROCTOR . . Cincinnati, Ohio.	V.	Superintendent, The William S. Merrell Chemical Co.
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SAMUEL G. REED . . . . Roland St., Charlestown, Mass.	II.	Superintendent, The Crosby Steam Gauge and Valve Co.
HOWARD S. REYNOLDS . . Broad St., Columbus, Ga.	VI.	Manager, The Columbus Railway Co.
ROBERT D. REYNOLDS . . 411 Marlborough St., Boston.	II.	With The B. F. Sturtevant Co. (Jamaica Plain, Mass.).
THOMAS G. RICHARDS . . 29 Hampshire St., Cambridgeport, Mass.	II.	Superintendent, The Boston Woven Hose and Rubber Co.; Treasurer, The Colonial Rubber Co.

1894. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HENRY F. RIPLEY . . . 39 Franklin St., Boston.	II.	In Business.
FRANKLIN H. ROBBINS . . 1 Ashburton Pl., Boston.	II.	Draughtsman, Metropolitan Water Board.
ARTHUR S. ROGERS . . . 158 Adams St., Chicago, Ill.	VI.	With American Telephone and Telegraph Co.
S. ANTHONY SAVAGE . . . Care The Burlee Dry Dock Co., Port Richmond, Staten Island, N.Y.	II.	Assistant Superintending Engineer, U.S. Light-house Board (Washington, D.C.).
ALBERT H. SAWYER . . . 19 Pearl St., Boston.	IX.	With Industrial Development Co.
WM. H. SAYWARD, JR., M.D. 26 Bird St., Dorchester, Mass.	VII.	Physician.
FERDINAND ALFRED SCHIERTZ Guadalupe y Calvo, Estado de Chihuahua, Mexico.	III.	Mining Engineer.
WALTER O. SCOTT, S.M. . P.O. Box 556, Providence, R.I.	V.	Inspector of Milk (161 Fountain St.).
GEORGE W. SHERMAN . . Room 509, 53 State St., Boston.	X.	Of Firm of Sherman & McJennett, Mechanical Engineers (Boston); General Superintendent, North-western Rubber Co. (Liverpool, England).
ARTHUR A. SHURTLEFF, B.S. 9 W. Cedar St., Boston.	II.	With Olmsted Brothers, Landscape Architects; Instructor in Landscape Architecture, Harvard University.
FREDERIC P. SIMONDS . . 11 Central St., Boston.	IV.	Of Firm of Stratton & Simonds, Architects.
WILLIAM A. SOLEY . . . 209 Maple St., Chelsea, Mass.	III.	Of Firm of John Soley & Sons, Building Movers and Contractors.
FRANCIS M. SOUTHARD . . 11 Broadway, New York, N.Y.	VI.	Timber Merchant, Southard & Co.
AUSTIN SPERRY . . . . 2100 Pacific Ave., San Francisco, Cal.	II.	With The Fulton Engineering and Shipbuilding Works.
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HENRY A. SWANTON . . . Boston, Mass.	II.	Graduate Student, Mass. Institute of Technology.
GEORGE AYMAR TABER . . 231 W. One hundred and twenty-fifth St., New York, N.Y.	I.	Assistant Engineer, Rapid Transit Railroad Commission.

1894. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE TAYLOR . . . . 3 Hanover St., Boston.	II.	Salesman.
ALBERT B. TENNEY . . . 111 Fremont Ave., Everett, Mass.	II.	Secretary and Manager, The Suburban Gas and Electric Co. (Revere, Mass.).
JOSEPH E. THROPP, JR. . . Earlston, Bedford Co., Pa.	III.	General Manager, Joseph E. Thropp's Everett Furnace, Kearney Coal and Coke Works; Antietam Ore Mines.
ARTHUR W. TIDD . . . . Clinton, Mass.	I.	Assistant Engineer, Reservoir Department, Metropolitan Water Works.
TOROS H. TOROSSIAN, B.A. . Cazvin, Persia.	I.	Contractor on the Road Enzeli-Teheran.
THEODORE VARNEY . . . 5719 Howe St., Pittsburgh, Pa.	VI.	With Detail Engineering Department, The Westinghouse Electric and Manufacturing Co.
HENRY E. WARREN . . . Saginaw, Mich.	VI.	Engineer, The Saginaw-Valley Traction Co.
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WILLIAM R. WESTCOTT, A.B. 40 Concord St., Manchester, N.H.	VI.	Manager, New England Telephone and Telegraph Co.
ROBERT C. WHEELER . . Philippine Islands.	I.	Assistant Engineer, U.S. Service.
KENNETH F. WOOD . . . Saylesville, R.I.	II.	In charge of Construction and Repairs, Sayles Bleacheries.

1895.

LOUIS ANDREW ABBOT . . 108 Pembroke St., Boston.	II.	With Boston & Maine R.R.
BENJAMIN ADAMS . . . . 2130 Green St., Philadelphia, Pa.	VI.	With the American Blower Co.
CHARLES M. ADAMS . . . 29 Hampshire St., Cambridgeport, Mass.	VI.	With Boston Woven Hose and Rubber Co.
EDWIN CLEMENT ALDEN . 416 Seventh Ave., Pittsburgh, Pa.	VI.	With the American Telephone and Telegraph Co.
AZEL AMES, JR. . . . . Care Boston & Albany R.R., Chatham, N.Y.	I.	Division Roadmaster, Boston & Albany R.R., New York Central & Hudson River R.R. Lessee.
ERNEST FRANKLIN BADGER 48 Weybosset St., Providence, R.I.	V.	Chemist, State Board of Health of Rhode Island.

1895. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
LATIMER W. BALLOU . . . 16 Harris Ave., Woonsocket, R.I.	II.	Agent of The Guerin Spinning Co.
LAWRENCE BARR, A.B. . . Telephone Bldg., Pittsburgh, Pa.	VI.	Engineer, Central District and Printing Telegraph Co.
HAROLD K. BARROWS . . . Burlington, Vt.	I.	Assistant Professor of Civil Engineering, University of Vermont.
EDMUND D. BARRY . . Camden, N.J.	XIII.	Draughtsman with The New York Shipbuilding Co.
ETHEL BARTHOLOMEW, B.L. 623 E. Eighteenth St., Minneapolis, Minn.	IV.	Architectural Draughtsman.
FRANCIS W. BELKNAP . . Pier "A," North River, New York, N.Y.	I.	Assistant Engineer, Department of Docks and Ferries.
CHARLES W. BERRY . . . Boston, Mass.	VI.	Instructor in Mechanical Engineering, Mass. Institute of Technology.
S. LAWRENCE BIGELOW, Ph.D. Ann Arbor, Mich.	V.	Assistant Professor of General Chemistry, University of Michigan.
GEORGE L. BIXBY, S.M. . . Nineteenth St. & Allegheny Ave., Philadelphia, Pa.	X.	With The Electric Storage Battery Co.
WALTER D. BLISS . . . . Crocker Bldg., San Francisco, Cal.	IV.	Architect.
PERLEY HARTWELL BLODGETT Havemeyer Bldg., New York, N.Y.	V.	With The National Tube Co.
JOHN BOEDEKER . . . . Care Division of Revenue Cutter Service, Treasury Department, Washington, D.C.	VI.	Lieutenant in the U.S. Revenue Cutter Service.
EDGAR A. BOESEKE . . . Santa Barbara, Cal.	II.	Of the Boeseke-Dawe Co.
THOMAS B. BOOTH . . . . Washington, D.C.	VI.	Examiner, U.S. Patent Office.
FRANK A. BOURNE, S.M. . 849 Tremont Bldg., Boston.	IV.	Architect.
JESSE H. BOURNE . . . . 21 Brockton Ave., Haverhill, Mass.	II.	Instructor in Manual Training, Haverhill High School.
WALLACE C. BRACKETT . . 101 Milk St., Boston.	XI.	Division Engineer, Elevated Lines, Boston Elevated Ry. Co.
ALLEN P. BROWN . . . . Merced, Cal.	IX.	In charge of Commercial Department of the County High School.

1895. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ARTHUR L. CANFIELD . . 40 Dearborn St., Chicago, Ill.	II.	President and Treasurer, The Consolidated Engineering Co.
WALTER S. CHASE . . . . 41 Richmond St., Boston.	IV.	With The Quincy Market Cold Storage Co.
WILLIAM B. CLAFLIN . . . 424 Fifth Ave., New York, N.Y.	IV.	With Trowbridge & Livingston, Architects.
SIDNEY K. CLAPP . . . . Centre St., Waterbury, Conn.	I.	With R. A. Cairns, Civil Engineer.
CARL H. CLARK . . . P.O. Box 2136, Boston.	XIII.	
SCHUYLER S. CLARK . . 14 Odd Fellows Temple, Sandusky, Ohio.	VIII.	
ARTHUR S. COBURN . . . Haileyville, Ind. Ter.	III.	With The Terry & Tench Construction Co., *Incorporated (New York).*
LUTHER CONANT, JR. . . . 17 Beaver St., New York, N.Y.	IX.	Financial Editor, The Journal of Commerce and Commercial Bulletin.
CHARLES P. COOKE . . . 600 Spicer Ave., Victor, Colo.	VI.	U.S. Deputy Mineral Surveyor.
JOHN WILLIAMSON COOKE . 60 State St., Boston.	VI.	Operating Engineer with The Electric Storage Battery Co.
JOHN WINFIELD COOKE . . Schenectady, N.Y.	VI.	With The General Electric Co.
FREDERIC E. COX . . . . Council Bluffs, Iowa.	IV.	Architect.
WALTER N. CRAFTS, A.B. . Cleveland, Ohio.	III.	In Private Business.
HENRY M. CRANE . . . . 57 Bethune St., New York, N.Y.	II.	With Western Electric Co.
GEORGE A. CUTTER . . . Dover, N.H.	II.	With Cocheco Manufacturing Co.
WILLIAM E. DAVIS, JR. . . 21 S. Twelfth St., Philadelphia, Pa.	IV.	Resident Engineer, American Luxfer Prism Co.
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ALFRED L. DEJONGE . . . Richmond Turnpike, Stapleton, S.I., N.Y.	II.	With Louis Dejonge & Co.
EDWARD E. DENISON . . . 120 Exchange St., Portland, Me.	X.	Assistant Treasurer, Androscoggin Pulp Co.
JUDSON C. DICKERMAN . . 10 Minot St., Woburn, Mass.	X.	Chemical Engineer, Merrimac Chemical Co. (South Wilmington, Mass.).

1895.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
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JOHN THOMPSON DORRANCE, Ph.D., 32 No. Front St., Camden, N.J.	V.	Vice-President, Joseph Campbell Preserve Co.
ALBERT W. DRAKE, 406 Market St., Philadelphia, Pa.	VI.	With American Telephone and Telegraph Co.
FRED W. DRAPER, Florence, Colo.	III.	Superintendent, Rocky Mountain Smelting Co.
WILLIAM J. DRISKO, Boston, Mass.	VIII.	Instructor in Physics, Mass. Institute of Technology.
ALBERT DUNBAR, 136 Freeport St., Dorchester, Mass.	V.	Superintendent, The Dorchester Gas Light Co.
ROLFE M. ELLIS, McKeesport, Pa.	V.	With The National Tube Co.
CHARLES F. EVELETH, Albany Bldg., Boston.	VI.	With French & Hubbard, Consulting Engineers.
ROBERT D. FARQUHAR, A.B. 142 E. Thirty-third St., New York, N.Y.	IV.	Architect.
FRANCIS E. FAXON, Auburn, N.Y.	II.	Draughtsman with D. M. Osborne & Co., Manufacturers of Harvesting Machinery.
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F. A. J. FITZ GERALD, B.A., Niagara Falls, N.Y.	VI.	Chemist with The International Acheson Graphite Co.
ANDREW D. FULLER, 3 Hamilton Pl., Boston.	I.	Consulting and Contracting Engineer.
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PERLEY F. GILBERT, Central Block, Lowell, Mass.	IV.	Successor to Merrill & Gilbert, Architects.
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FRANCIS C. GREEN, 2 High St., Albany, N.Y.	XI.	General Superintendent, Consolidated Car Heating Co. (413 No. Pearl St.).
JOHN H. GREGORY, 710 City Hall, Philadelphia, Pa.	I.	Assistant Engineer, Improvement, Extension, and Filtration of Water Supply.

1895. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM T. HALL . . . Boston, Mass.	V.	Instructor in Chemistry, Mass. Institute of Technology.
FREDERICK A. HANNAH . 527 W. Twenty-second St., New York, N.Y.	II.	With The American Tobacco Co.
FREDERICK W. HARRIS . . 124 Walnut St., Clinton, Mass.	XI.	With Reservoir Department, Metropolitan Water Board.
HARRY M. HAVEN . . . Somerville, Mass.	II.	With Quincy Market Cold Storage Co. (Boston).
GEORGE W. HAYDEN . . . 493 Warren St., Roxbury, Mass.	VI.	With The New England Telephone and Telegraph Co.
HENRY A. HOLDREGE . . 203 Washington St., Chicago, Ill.	VI.	With The Chicago Telephone Co.
L. FREDERIC HOWARD . . 38 Rutland Sq., Boston.	VI.	With Boston Elevated Ry. Co. (439 Albany St.).
GEORGE R. HOWARTH . . 3 Young Ave., Providence, R.I.	II.	
GEORGE E. HOWE . . . . Glens Falls, N.Y.	I.	Assistant Engineer with The Hudson River Water Power Co.
SAMUEL P. HUNT . . Binghamton, N.Y.	VI., X.	Superintendent, The Binghamton General Electric Co.
E. LAURENCE HURD . . . 205 Lincoln St., Boston.	II.	With The United Shoe Machinery Co.
EDWARD H. HUXLEY . . . 185 Lake St., Chicago, Ill.	II.	Resident Manager, Boston Woven Hose and Rubber Co.
HERMANN KOTZSCHMAR, JR. Care Treasury Department, Washington, D.C.	II.	First Assistant Engineer, in U.S. Revenue Cutter Service.
HENRY O. LACOUNT, S.B. .	VI.	(See Class of 1894.)
RALPH R. LAWRENCE . . Boston, Mass.	VI.	Instructor in Electrical Engineering, Mass. Institute of Technology.
MAURICE LE BOSQUET . . 328 E. Eagle St., East Boston.	V.	Superintendent, Wm. H. Swift & Co., Manufacturers of Chemicals.
DORVILLE LIBBY, JR. . . . 1814 Market St., San Francisco, Cal.	VI.	Manager, The Sunset Automobile Co.
ALFRED V. LINCOLN, JR. . . Boston, Mass.	II.	Clerk, Winthrop National Bank.
ANDREW J. LOGAN . . . . 106 First St., Bangor, Me.	I.	Roadmaster, Third Division, Maine Central R.R.
ERNEST J. LORING . . . . 53 State St., Boston.	IV.	Architectural Engineer with Loring & Phipps, Architects.
THOMAS MARK LOTHROP . 125 Milk St., Boston.	II.	With Electrical Department, New England Telephone and Telegraph Co.

1895. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
J. T. Reid McManus . . . P.O. Box 433, Sydney, C.B.	I.	Contractor.
Walter C. Marmon . . . Indianapolis, Ind.	II.	Secretary and Treasurer, Nordyke & Marmon Co.
Frank B. Masters . . . 20 Morse St., Newton, Mass.	II.	Designer and Illustrator.
François E. Matthes . . Washington, D.C.	I.	Topographer, U.S. Geological Survey.
Gerard H. Matthes . . Washington, D.C.	I.	Assistant Hydrographer, U.S. Geological Survey.
Charles A. Meserve, Ph.D. Storrs, Conn.	V.	Professor of Chemistry and Military Science, Connecticut Agricultural College.
Franklin T. Miller . . 146 Franklin St., Boston.	XIII.	Secretary, The F. W. Dodge Co.
John D. J. Moore . . . . 11 Broadway, New York, N.Y.	II.	General Manager, The Clayton Fire Extinguishing and Disinfecting Co.
Richard Morey . . . . 809 New York Life Bldg., Kansas City, Mo.	I.	Engineer and Manager, Gilsonite Roofing and Paving Co. (St. Louis).
Arthur F. Nesbit, A.M., B.S. Durham, N.H.	VI.	Associate Professor of Physics and Electrical Engineering, New Hampshire College.
John L. Newell . . . . 39 Court St., Boston.	X.	Counsellor-at-law.
Franklin A. Park . . . South Bend, Ind.	II.	With The Singer Manufacturing Co.
Winthrop D. Parker . . 100 Boylston St., Boston.	IV.	With Wheelwright & Haven, Architects.
Charles L. Parmelee . Hudson and Sussex Sts., Jersey City, N.J.	I., XI.	Chief Engineer, New York Continental Jewell Filtration Co.
William F. Patten . . . 125 Milk St., Boston.	VI.	With American Bell Telephone Co.
Walter C. Powers . . . 116 Pearl St., Springfield, Mass.	X.	With The Powers Paper Co. (Holyoke, Mass.).
Walter W. Reed . . . . Care, Citizens Electric Light and Power Co., Houston, Tex.	VI.	In charge of Electrical Construction, General Electric Co.
Frederick L. Richards . 127 Summer St., Somerville, Mass.	X.	With Evans, Almirall, & Co. (Boston).
Walter J. Rickey . . . Schenectady, N.Y.	II.	With General Electric Co.
George A. Rockwell . . 155 Ruthven St., Roxbury, Mass.	X.	Lawyer (801 Sears Bldg., Boston).

1895.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
LOUIS K. ROURKE . . . . P.O. Box 37, Abington, Mass.	I.	With Guayaquil & Quito R.R. Co. (Ecuador).
HAROLD N. RUST . . . . 22 No. Washington St., Wilkesbarre, Pa.	VI.	Electrical Contractor and Supply Dealer.
SAMUEL S. SADTLER . . . Tenth and Chestnut Sts., Philadelphia, Pa.	V.	Consulting and Analytical Chemist, with Samuel P. Sadtler, Ph.D.
CLIFFORD B. SANBORN . . 27 School St., Boston.	IX.	Of Firm of Sheldon & Sanborn, Lawyers.
FRANK C. SCHMITZ . . . 66 Beaver St., New York, N.Y.	I.	General Manager, The Fireproofine Manufacturing Co.
EDWARD P. SCHOENTGEN . Baldwin Bldg., Council Bluffs, Iowa.	IV.	Architect.
ROBERT K. SHEPPARD . . 94 Grove St., Worcester, Mass.	X.	With American Steel & Wire Co. Division, Washburn & Moen Department, United States Steel Corporation.
RICHARD B. SHERIDAN . 39 Victoria St., Westminster, S.W., London, England.	XIII.	In European Office, The Brown Hoisting and Conveying Machinery Co.
JOHN CARLETON SHERMAN 5914 Wellesley Ave., Pittsburgh, Pa.	VI.	With The Westinghouse Co.'s Publishing Department (East Pittsburgh).
ALFRED L. SIMMONS . . . 1 Ashburton Pl., Boston.	I.	With Engineering Department, Metropolitan Water Board.
ALFRED PRITCHARD SLOAN, JR. Harrison, N.J.	VI.	With Hyatt Roller-Bearing Co.
WALTER F. STEVENS . . . 703 Union St., Schenectady, N.Y.	II.	With General Electric Co.
WILLIAM E. SWIFT . . . 147 Columbus Ave., New York, N.Y.	I.	Assistant Engineer, New York Rapid Transit Railroad Commission.
GERARD SWOPE . . . . . 810 Spruce St., St. Louis, Mo.	VI.	Manager, Western Electric Co.
C. CHESTER TAFT . . . . 688 Philadelphia Bourse, Philadelphia, Pa.	X.	Of Firm of Taft & Taft, Manufacturers and Manufacturers' Agents.
JAMES W. THOMAS . . . . Wyoming, Pa.	II.	Assistant Manager, The Wyoming Shovel Works.
STURGIS H. THORNDIKE, A.B. 60 City Hall, Boston.	I.	Assistant Engineer, Engineering Department, City of Boston.

1895. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES F. TILLINGHAST . 260 Angell St., Providence, R.I.	II.	Agent, The Granger Foundry and Machine Co.
EDWARD A. TUCKER . . . 165 Summer St., Boston.	I.	Architectural Engineer.
HUGH M. TUCKER . . . . Honolulu, Ter. of Hawaii.	II.	
LOREN G. WAITE . . . . 1381 Boston Road, New York, N.Y.	VI.	In Private Business.
JOSEPH E. WALWORTH, Ph.D. Lawrence, Mass.	V.	Assistant Chemist, American Woolen Co.
WILLARD H. WATKINS . . 87 Poplar St., Roslindale, Mass.	V.	With Sch ellkopf, Hartford, & Hanna Co. (163 Oliver St., Boston).
DAVID B. WESTON . . . . Lansing, Mich.	V.	With the Lansing Sugar Co.
RALPH N. WHEELER . . . 15 Linden Ave., Brooklyn, N.Y.	I.	Assistant Engineer, Rapid Transit Railroad Commission (13 Astor Pl.).
THOMAS H. WIGGIN . . . Hudson and Sussex Sts., Jersey City, N.J.	I.	Assistant Engineer, The New York Continental Jewell Filtration Co.
CHARLES G. WILLIAMS . . Ford's Hotel, Phœnix, Ariz.	I.	Travelling.
ROGER J. WILLIAMS . . . Canton, Mass.	IX.	With Draper Brothers' Co.
WALTER S. WILLIAMS . . 21 Hoosac St., North Adams, Mass.	X.	Assistant Chemist, Arnold Print Works.
WILLAM H. WINKLEY . 58 Kilby St., Boston.	XIII.	Special Agent, Hartford Fire Insurance Co.
JOHN J. C. WOLFE . . . . 4318 Berkeley Ave., Chicago, Ill.	II.	With National Supply Co. (1407 Manhattan Bldg.).
LUTHER K. YODER . . . . Clybourn and Fullerton Aves., Chicago, Ill.	II.	In Experimental Department, Deering Harvester Co.
HENRY YOERG . . . . . Spokane, Wash.	II.	Assistant Engineer, Great Northern Ry.
ALFRED E. ZAPF . . . . 156A Tremont St., Boston.	IV.	Vice-President and Secretary, American School of Correspondence.

1896.

NAME AND ADDRESS.	COURSE.	OCCUPATION.
BUTLER AMES . . . . . U.S. Bunting Co., Lowell, Mass.	II.	Agent of The Wamesit Power Co.
WILLIAM P. ANDERSON . . 600 E. Third St., Cincinnati, Ohio.	III.	Mining Engineer.
WILLIAM M. ANDREW . . Fifth and Race Sts., Cincinnati, Ohio.	VI.	With Power and Mining Department, General Electric Co.
GEORGE F. ASHTON . . . 39 Church St., Salem, Mass.	II.	Of Firm of Metcalf & Ashton, Civil Engineers.
ERNEST C. ATKINS . . . . 129 Ontario St., Providence, R.I.	II.	Draughtsman with Builders' Iron Foundry.
THOMAS W. BAILEY . . . Room 131, State House, Boston.	I.	With Massachusetts Harbor and Land Commission.
REUBEN E. BAKENHUS . . Navy Yard, League Island, Pa.	I.	Civil Engineer, U.S. Navy.
E. ARTHUR BALDWIN . . . Schenectady, N.Y.	VI.*	With Railway Engineering Department, General Electric Co.
CHARLES E. BATCHELDER . 29 John St., Boston.	VI.	With J. D. Batchelder & Co., Commission Merchants.
DANIEL M. BATES . . . . Wilmington, Del.	X.	Assistant Superintendent, Joseph Bancroft & Sons Co.
DAVID W. BEAMAN . . . 214 So. Water St., New Bedford, Mass.	VI.	Station Superintendent, The New Bedford Gas and Edison Light Co.
GEORGE S. BOWES . . . . Monessen, Pa.	II.	Superintendent, Open-Hearth, The Page Woven Wire Fence Co.
AUGUSTUS J. BOWIE, JR., A.B. P.O. Box 145, Bakersfield, Cal.	II., VI.	Engineer, in charge of Mechanical Department, Kern County Land Co.
E. RAYMOND BRACKETT . . Room 502, State House, Boston.	V.	Assistant Chemist, Mass. State Board of Health.
EDWARD M. BRAGG . . 250 W. Logan Sq., Philadelphia, Pa.	XIII.	Draughtsman, Wm. Cramp & Sons, Ship and Engine Building Co.
LEWIS B. BREED . . . . 53 State St., Boston, Mass.	VI.	Erecting Engineer for the Westinghouse Electric and Manufacturing Co.
JOHN FLAVEL BROOKS . . 47 Main St., North Hanover, Mass.	II.	In Business.
HARRY W. BROWN . . . . 200 Summer St., Boston.	VI.	With General Electric Co.
HARRY P. BROWNE . . . 537 Congress St., Portland, Me.	VI.	Junior and Electrical Engineer, Office of U.S. Engineer, Portland, Me., District.
RUSSELL S. BUCHER . . . Harrisonburg, Va.	IV.	Of Firm of Wm. M. Bucher & Son, Architects and Builders.

1896. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE K. BURGESS, Sc.D. (Paris) . . . . 2747 Channing Way, Berkeley, Cal.	VIII.	Instructor in Physics, University of California.
JOHN G. CALLAN . . . . Lynn, Mass.	VI.	Assistant Engineer, Experimental Department, General Electric Co.
LEWIS T. CANNON . . . . 511 Templeton Bldg., Salt Lake City, Utah.	IV.	Secretary, The Geo. Q. Cannon Association.
MARION L. CHAMBERLAIN . (Mrs. H. W. Chamberlain) Boston, Mass.	IV.	Library Assistant, Fine Arts Department, Boston Public Library.
HAROLD M. CHASE . . .	V.	(See Class of 1894.)
WINTHROP H. CHENERY, A.M. 435 E. University St., Ann Arbor, Mich.	IV.	Instructor, Romance Language Department, University of Michigan.
JOSEPH W. CLARY . . . Washington, D.C.	XIII.	With Scientific and Computing Branch, Bureau of Construction and Repairs, Navy Department.
ALBERT E. CLUETT, A.B. . River St., Troy, N.Y.	VI.	Mechanical Engineer, with The John A. Manning Paper Co.
JOHN L. COLEY . . . . . Empire Bldg., Pittsburgh, Pa.	II.	With The Babcock & Wilcox Co., Pittsburgh District.
WILLARD H. COLMAN . . 1319 State St., La Crosse, Wis.	II.	Student, Washington, D.C.
FRANCIS M. CONANT . . . 31 Nassau St., New York, N.Y.	X.	With Sanderson & Porter, Engineers and Contractors.
WILLIAM D. COOLIDGE, Ph.D. Boston, Mass.	VI.	Instructor in Theoretical Chemistry, Mass. Institute of Technology
WINTHROP COOLIDGE . . 10616 Prospect Ave., Washington Heights, Chicago, Ill.	III.	Metallurgist, Chicago Copper Refining Co.
EDWIN CLAASSEN CRAMER . Pabst Bldg., Milwaukee, Wis.	IV.	Of Firm of Fernekes & Cramer.
HENRY M. CRANE	VI.	(See Class of 1895.)
STEPHEN D. CRANE . . . 160 Market St., Newark, N.J.	VI.	Manager, Equipment, Furnishing, and Maintenance Department, New York & New Jersey Telephone Co.
CALVIN IRA CROCKER . . Melville Station, Newport, R.I.	I.	Draughtsman, with Augustus Smith (39 Cortlandt St., New York, N.Y.).
RALPH W. CROSBY . . . Osterville, Mass.	XIII.	Of Firm of Daniel Crosby & Son, Yacht Designers and Builders.

1896. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HENRY CUMMINGS, JR. . . 89 State St., Boston.	IV.	Contracting Agent, American Bridge Company.
NATHAN H. DANIELS, JR. . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical Experts and Engineers.
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ROBERT A. DAVIS . . . . 104 Milk St., Boston.	VI.	With Engineering Department, New England Telephone and Telegraph Co.
HAROLD W. DE LONG . Bath, Me.	XIII.	With The Bath Iron Works (Limited).
LEONARD P. DICKINSON . . Chicago, Ill.	VI.	Instructor in Electrical Engineering, Armour Institute.
HELEN CHAMBERLIN DODD (Mrs. Walter S. Dodd) East Corinth, Vt.	IV.	
WILLIAM T. DORRANCE, A.B. 5 Vanderbilt Ave., New York, N.Y.	I.	Assistant Engineer, New York Central & Hudson River R.R.
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ALPHONSUS L. DRUM . . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical Experts and Engineers.
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ELIZABETH F. FISHER . . Wellesley, Mass.	XII.	Instructor in Geology and Mineralogy, Wellesley College.
HARRY G. FISK . . . . . Chicopee Falls, Mass.	IX.	Treasurer, The Fisk Rubber Co.
FREDERICK E. FORSTER . . P.O. Box 504, Atlanta, Ga.	X.	Travelling Salesman with The Draper Co.
GEORGE FRESCH, JR. . . . 146 Worcester St., Boston.	IV.	Architect.
MYRON L. FULLER . . . Washington, D.C.	XII.	Assistant Geologist, with U.S. Geological Survey.
ROBERT L. FULLER . . . 452 Main St., Worcester, Mass.	IV.	Architect, The Fuller & Delano Co.
STEPHEN DEM. GAGE . . Lawrence, Mass.	V.	Biologist, Mass. State Board of Health, Lawrence Experiment Station.
HENRY GARDNER . . . . Boston, Mass.	II.	Assistant Chief Draughtsman, Motive Power Department, Boston & Maine R.R. Co.

1896. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ABRAM GARFIELD, A.B. 1005 Garfield Bldg., Cleveland, Ohio.	IV.	Of Firm of Meade & Garfield, Architects.
LEONARD H. GOODHUE Fells, Mass.	V.	Chemist, The Boston Rubber Shoe Co.
EDWARD B. GORDON, JR. 332 Main St., Springfield, Mass.	II.	With The National Steam Economizer Co.
AMADEUS W. GRABAU, S.D. (Harv.) New York, N.Y.	XII.	Lecturer in Paleontology, Department of Geology, Columbia University.
ANDREW H. GREEN, A.B. 403 La Salle Ave., Chicago, Ill.	I.	
NATHAN C. GROVER, B.C.E. Orono, Me.	I.	Professor of Civil Engineering, University of Maine.
HENRY G. GRUSH 116 Richmond St., Boston.	VI.	Foreman, New England Telephone and Telegraph Company.
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GEORGE E. HARKNESS 374 Cambridge St., Boston.	I.	Assistant Engineer, Cambridge Bridge Commission (on New Cambridge Bridge).
JOSEPH HARRINGTON Ætna, Lake Co., Ind.	II.	In Private Business.
HIRAM B. HARTWELL Roland St., Charlestown, Mass.	II.	Draughtsman, Crosby Steam Gage and Valve Co.
JAMES H. HASTE Kodak Park, Rochester, N.Y.	V.	With The Eastman Kodak Co.
HARVEY F. HAWLEY Baldwinsville, N.Y.	I.	In Private Business.
HARRISON W. HAYWARD Boston, Mass.	X.	Assistant in Mechanical Engineering, Mass. Institute of Technology.
HENRY R. HEDGE 115 Water St., Boston.	IX.	Insurance Broker, with The Frank Gair Macomber Co., Insurance Brokers and Adjusters.

1896. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM R. HEDGE . . . 95 Kilby St., Boston.	IX.	With The Boston Insurance Co.
FREDERICK M. HEERMANN . 31 Milk St., Boston.	II.	Inspector, Associated Factory Mutual Fire Insurance Cos.
JAMES B. HENDERSON . . 4 Fayette Park, Cambridgeport, Mass.	II.	With Boston Woven Hose and Rubber Co. (29 Hampshire St., Cambridgeport, Mass.).
RALPH C. HENRY, S.M. . . 1128 Tremont Bldg., Boston.	IV.	With Guy Lowell, Architect.
JOSEPH HEWETT . . . 26 E. Chestnut St., Brockton, Mass.	VIII.	With The Geo. E. Keith Co., Shoe Manufacturers.
WALTER M. HOLLIS . . . 614 F St., Washington, D.C.	VI.	With The Eastern Railroad Association.
JAMES C. HOPKINS . . . . 9 Park St., Boston.	IV.	Of Firm of Kilham & Hopkins, Architects.
FRANK A. HOWARD . . . 26 Cortlandt St., New York, N.Y.	I.	With Engineering Department, Erie R.R.
JOSEPH M. HOWE . . . . Houston, Tex.	I.	Assistant Engineer, Maintenance of Way, Houston & Texas Central R.R.
EUGENE C. HULTMAN . . 101 Milk St., Boston.	I.	Engineer for Board of Directors, West End Street Ry. Co., and for Fitchburg R.R. Co.
BENJAMIN HURD . . . . 570 W. Broadway, New York, N.Y.	VI.	Of Firm of Hurd & Co., Engineers and Manufacturers.
CHARLES GILMAN HYDE . Philadelphia, Pa.	XI.	Assistant Engineer, in charge of Spring Garden and of Torresdale Testing Stations.
CHARLES H. INGALLS . . . 516 Atlantic Ave., Boston.	VI.	With Inspection Department, Edison Electric Illuminating Co.
WALTER H. JAMES . . . . Boston, Mass.	II.	Assistant in Mechanical Engineering, Mass. Institute of Technology.
MINOR S. JAMESON . . . Bridgeport, Conn.	I.	Draughtsman, Engineer's Office, New York, New Haven, & Hartford R.R.
HOWARD K. JONES . . . . 314 Fourth Ave., Pittsburgh, Pa.	IV.	With Alden & Harlow, Architects.
THEODORE I. JONES . . . 160 Market St., Newark, N.J.	VI.	With The New York & New Jersey Telephone Co.
JOSEPH H. KNIGHT . . . 109 Ames Bldg., Boston.	IX.	Attorney and Counsellor-at-law.
LEEBERT L. LAMBORN, B.S. 108 Fulton St., New York, N.Y.	V.	Technical Chemist.

1896.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES E. LAWRENCE, 81 Willoughby St., Brooklyn, N.Y.	M.A. VI.	With Engineering Department, New York & New Jersey Telephone Co.
EUGENE H. LAWS . . . . Bedford, Mass.	V.	With the Rico Mining and Milling Co. (Rico, Colo.)
MARSHALL O. LEIGHTON . 456 Bloomfield Ave., Montclair, N.J.	VII.	Consulting Sanitary Expert and Health Officer of Montclair.
WALTER S. LELAND . . Boston, Mass.	XIII.	Instructor in Naval Architecture, Mass. Institute of Technology.
PAUL W. LITCHFIELD . . Akron, Ohio.	X.	Superintendent, Goodyear Tire and Rubber Co.
CHARLES E. LOCKE . . . Boston, Mass.	III.	Instructor in Mining Engineering and Metallurgy, Mass. Institute of Technology.
JOHN E. LONNGREN . . . Braddock, Pa.	II.	Assistant Superintendent, Rankin Works, American Steel and Wire Co.
ALF C. LOOTZ . . . . . 116 St. Botolph St., Boston.	I.	Draughtsman, Department of Yards and Docks, U.S. Navy Yard (Charlestown).
HERMANN C. LYTHGOE . . 501 State House, Boston.	V.	Assistant Analyst of Food and Drugs, Mass. State Board of Health.
WILLIAM H. MCALPINE . . Portsmouth, N.H.	XI.	Surveyor, Department of Yards and Docks, U.S. Navy Yard.
FRANK G. MCCANN . . . Park Ave. and Fifty-ninth St., New York, N.Y.	II.	Heating and Ventilation Draughtsman, Building Bureau, Board of Education of New York City.
JOHN H. MANAHAN . . . 105 E. Fifth St., Cincinnati, Ohio.	VI.	Contracting Engineer, with The Cincinnati Gas and Electric Co.
EDWARD S. MANSFIELD . . 3 Head Pl., Boston.	VI.	With The Edison Electric Illuminating Co.
JAMES G. MELLUISH . . . 222 Unity Bldg., Bloomington, Ill.	IX.	Civil and Sanitary Engineer; Superintendent, The Union Gas and Electric Co.
IRVING S. MERRELL . . . 340 W. Fayette St., Syracuse, N.Y.	II.	Factory Superintendent, The Merrell-Soule Co.
GEORGE E. MERRYWEATHER Chicopee, Mass.	II.	Superintendent, The Overman Automobile Co.
CHARLES P. MOAT . . . . 196 Main St., Burlington, Vt.	V.	Chemist, Laboratory of Hygiene, Vermont State Board of Health.
CHARLES MORRIS, JR. . . Care Navy Department, Washington, D.C.	VI.	Passed Assistant Paymaster, U.S.N.
CHARLES K. B. NEVIN . . 220 Devonshire St., Boston.	IV.	With Allen & Vance, Architects.

1896.—*Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HERBERT D. NEWELL . . Boston, Mass.	I.	Draughtsman, U.S. Engineer's Office.
CHARLES S. NEWHALL . . Ouray, Colo.	III.	Assayer with American Gold Mining Co.
FRED B. OWEN . . . . . 3 South St., Providence, R.I.	VI.	Electrician, Narragansett Electric Lighting Co.
KARL A. PAULY . . . . 15 Mynders St., Schenectady, N.Y.	VI.	Designer, Alternating Current Department, General Electric Co.
WALTER O. PENNELL. . . Eleventh and Filbert Sts., Philadelphia, Pa.	VI.	With Bell Telephone Co. of Philadelphia.
CLARENCE W. PERLEY . . Chicago, Ill.	VII.	Classifier, John Crerar Library.
JOEL H. PILLSBURY . . . Fernandina, Fla.	I.	In U.S. Engineer's Office.
EDWIN D. PINGREE . . . 31 Milk St., Boston.	II.	Inspector, Associated Factory Mutual Insurance Cos.
HENRY A. PRESSEY, B.S. . Washington, D.C.	I.	Hydrographer, U.S. Geological Survey.
JOHN LUTHER PUTNAM . . 829 Banigan Building, Providence, R.I.	VI.	Assistant General Manager, The Clark Automatic Telephone Co.
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JAMES W. RAYNOLDS . . . Santa Fé, New Mexico.	III.	Secretary of the Territory.
DANIEL A. RICHARDSON . . 440 Capitol Ave., Hartford, Conn.	II.	Mechanical Engineer, with Henry Souther.
EDWIN H. ROBERTS . . . Perry Park, Colo.	III.	Plaster Manufacturer.
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WILLIAM LACY ROOT . . Newark, N.J.	X.	Instructor in Physics, Newark High School.
A. RUCKGABER . . . . . Park Row Building, New York, N.Y.	VI.	With Rapid Transit Subway Construction Co.
A. LE BARON RUSSELL . . 28 State St., Boston.	IX.	Note Broker.
NORMAN F. RUTHERFORD . 26 Cortlandt St., New York, N.Y.	VI.	With Westinghouse, Church, Kerr, & Co.

1896. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
LAWRENCE K. SAGER . . . Washington, D.C.	VI.	Assistant Examiner, U.S. Patent Office.
NATHAN H. SANDERSON . . 70 Kilby St., Boston.	I.	Estimator, Boston Bridge Works.
MORITZ SAX . . . . . 18 E. Fourth St., Cincinnati, Ohio.	IV.	Draughtsman, with Elzner & Anderson, Architects.
FREDERICK F. SCHALLER . South Natick, Mass.	VI.	Assistant to Electrical Engineer, Boston & Albany R.R. (Boston).
DONALD C. SCOFIELD . . . 802 Rose Bldg., Cleveland, Ohio.	IV.	Of Firm of Scofield, Architects.
JOHN C. SCOVEL, JR. . . . 2443 Kenmore Ave., Chicago, Ill.	II.	Mechanical Engineer, with The Saladin Pneumatic Malting Construction Co.
HENRY K. SEARS . . . . Tewksbury Centre, Mass.	IX.	Principal of High School.
MORTIMER A. SEARS . . . Care Dr. Peirce, 301 Hotel Pelham, Boston.	III.	
GEORGE F. SHEPARD, JR. . 111 Fifth Ave., New York, N.Y.	IV.	Draughtsman, with Brite & Bacon, Architects.
FRANK N. SMALLEY . . . 9 Codding St., Providence, R.I.	V.	Chemist for The Builders' Iron Foundry.
SAMUEL T. SMETTERS, Ph.B. Monadnock Block, Chicago, Ill.	I.	Civil Engineer, with Scherzer Rolling Lift Bridge Co.
F. HASKELL SMITH . . . Akron, Ohio.	X.	With Diamond Rubber Co.
HERBERT E. SMITH, S.M. . 221 Main St., Gloucester, Mass.	IV.	With L. E. Smith, Sanitary Architect.
HOWARD EVERETT SMITH . 185 Euclid Ave., Cleveland, Ohio.	XI.	U.S. Junior Engineer.
ALBERT E. SMYSER, S.M. . Duquesne, Pa.	II.	Assistant Superintendent, Open Hearth Department, Duquesne Works, Carnegie Steel Co.
FREDERIC W. SMYSER . . Duquesne, Pa.	II.	With United States Steel Corporation.
JAMES S. SMYSER . . . . P.O. Box 886, Schenectady, N.Y.	II.	With General Electric Co.
WALTER M. STEARNS . . . 478 Main St., Waltham, Mass.	VI.	Assistant Superintendent, The Waltham Gas and Electric Light Co.
HAROLD C. STEVENS . . . 710 City Hall, Philadelphia, Pa.	I.	Second Assistant Engineer, Department of Public Works, Improvement, Extension, and Filtration of Water Supply.
JOSEPH W. STICKNEY . . . 15 Dey St., New York, N.Y.	VI.	With Maintenance Department, American Telephone and Telegraph Co.

1896. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES H. STONE . . . 32 Hawley St., Boston.	V.	Second Assistant State Gas Inspector.
ESTHER STONE . . . . . 49 Westminster St., Providence, R.I.	IV.	Draughtsman, with Stone, Carpenter, & Wilson, Architects.
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GRACE A. VAN E. STOUGHTON, (Mrs. Grace A. Van E. Stoughton) 841 Jefferson Ave., Brooklyn, N.Y.	V.	
MEYER J. STURM . . . . Room 808, 84 La Salle St., Chicago, Ill.	IV.	Of Firm of L. G. Hallberg & Meyer J. Sturm, Architects.
GEORGE W. SUMNER . . . 709 So. Twenty-ninth St., Omaha, Nebr.	VI.	In Business.
HARRISON S. TAFT, B.P. . P.O. Box 1443, Providence, R.I.	II.	In Private Business.
LEWIS H. TAPPAN . . . . 315 Banigan Bldg., Providence, R.I.	II.	Of Fletcher & Tappan, Bankers and Brokers.
FRANK A. THANISCH . . 3305 Washington St., Boston.	III.	Mining Engineer.
WILLIAM H. THOMAS, JR. . Passaic, N.J.	V.	With Passaic Print Works.
ALBERT W. THOMSON . . Manchester, N.H.	II.	Superintendent of Machine Shop, Amoskeag Manufacturing Co.
LUCY D. THOMSON, A.B. . Belchertown, Mass.	IV.	Draughtsman.
SAMUEL F. THOMPSON . . West Point, N.Y.	I.	
JOHN TILLEY . . . . . 18 Cortlandt St., New York, N.Y.	III.	With Engineering Department, New York Telephone Co.
HENRY H. TOZIER . . . . Nepera Park, N.Y.	V.	Chemist, The Nepera Chemical Co.
CHARLES E. TROUT . . . Pier "A," North River, New York, N.Y.	I.	Department of Docks and Ferries.
CHARLES W. TUCKER . . Grant and Farragut Roads, Swampscott, Mass.	V.	Chemist, with Thomas A. Kelly & Co., Glazed Kid Manufacturers.
ARTHUR P. UNDERHILL . . 68 Monadnock St., Dorchester, Mass.	VI.	With The Knox Automobile Co. (Springfield, Mass.).

1896.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HERMANN V. VON HOLST, Care Thos. G. Gage, 1780 Old Colony Bldg., Chicago, Ill.	A.B. IV.	Travelling.
WILLIAM G. WALL . . . Indianapolis, Ind.	VI.	Electrical Engineer, with The National Automobile and Electric Co.
ROBERT S. WASON . . . 61 Chatham St., Boston.	V.	Of Firm of Wason & Co., Wholesale Grocers and Importers.
HENRY A. WATERMAN . . Chicago, Ill.	II.	Assistant Master Mechanic, Chief of Department of General Engineering, McCormick Harvesting Machine Co.
J. LLOYD WAYNE . . . . 15 Dey St., New York, N.Y.	VI.	With Engineering Department, New York Telephone Co.
ALBERT J. WELLS . . . . 277 Dearborn St., Chicago, Ill.	II.	Draughtsman, The Otis Elevator Co.
CHARLES A. WENTWORTH . Boston, Mass.	I.	Draughtsman, with Boston Bridge Works.
LAMBERT N. WHITNEY . . 15 Dey St., New York, N.Y.	VI.	With American Telephone and Telegraph Co.
W. H. WHITTEN, JR., S.M. Twelfth and Michigan Sts., Chicago, Ill.	VIII.	Teacher of Mathematics, Chicago Manual Training School, University of Chicago.
JOHN H. WILLIS, A.B. . . Windsor Road, Waban, Mass.	IV.	Draughtsman, with Shepley, Rutan, & Coolidge, Architects (Boston).
WILLETT A. WOOD . . . 115 Griswold St., Detroit, Mich.	VI.	Electrical Engineer.
JULIAN E. WOODWELL . . Care Treasury Department, Washington, D.C.	II.	Inspector of Electric Light Plants.
CONRAD H. YOUNG . . . 173 Housatonic Ave., Bridgeport, Conn.	II.	Refrigerating Engineer, with The Nonpareil Cork Manufacturing Co.

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JOHN T. ALDEN . . . . 119 Milk St., Boston.	II.	With New England Telephone and Telegraph Co.
WILLIAM H. ALLEN, JR. 253 Atlantic Ave., Boston.	XIII.	Engineer and Draughtsman, with New England Bolt and Nut Co.
ROBERT ANDERSON, Ph.B. . 2459 Grandin Road, Cincinnati, Ohio.	VI.	Inspector, The Bullock Electric Manufacturing Co. (East Norwood, Ohio).
THOMAS C. ATWOOD . . . 710 City Hall, Philadelphia, Pa.	I.	Second Assistant Engineer, Improvement, Extension, and Filtration of Water Supply.

1897.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES F. BALDWIN . . Jefferson St., Chicago, Ill.	VI.	With Western Electric Co.
HENRY W. BALLOU . . . 3 South St., Providence, R.I.	I.	Civil Engineer, with Narragansett Electric Lighting Co.
WILFRED BANCROFT . . . 1600 Hamilton St., Philadelphia, Pa.	II.	With Wm. Sellers & Co. (Incorporated).
EDGAR L. BARKHOUSE . . Address Unknown.	VI.	
WARREN H. BARNES . . . 11 Harrison Pl., Fond du Lac, Wis.	I.	Civil Engineer, Chicago & North-Western Ry.
BERNARD BARROWS . . . Washington, D.C.	X.	Assistant Examiner, U.S. Patent Office.
HERBERT P. BEERS . . . Room 1142, The Rookery, Chicago, Ill.	IV.	With D. H. Burnham & Co., Architects
WILLIAM BINLEY, JR. . P.O. Box 36, Newport News, Va.	XIII.	Draughtsman in Office of U.S. Naval Constructor.
PERCY E. BLOOD . . . . 205 Broadway, Cambridge, Mass.	I.	Assistant Engineer, Railroad Department, Barbour-Stockwell Co.
HUGH BORLAND . . . . Charlestown, Mass.	I.	Draughtsman, Department of Yards and Docks, U.S. Navy Yard.
EDGAR C. BOWEN, JR. . . P.O. Box 284, Michigan City, Ind.	II.	On Local Supervision, U.S. River and Harbor Improvements.
RALPH A. BOWEN . . . . 163 Oliver St., Boston.	V.	With Schoellkopf, Hartford, & Hanna Co.
JOHN BOYD . . . . . 111 Westford St., Lowell, Mass.	V.	Chemist, with The Merrimac Manufacturing Co.
CHARLES W. BRADLEE . . 85 Union St., Boston.	IX.	Of Firm of Bradlee & Chatman, Heating and Ventilating Engineers and Contractors.
EDWIN A. BRAINERD . . . 93 Federal St., Boston.	I.	Structural Steel Draughtsman, with Stone & Webster.
CHARLES T. BRAMHALL . . West New Brighton, N.Y.	II.	Chief Draughtsman, The C. W. Hunt Co.
CHARLES B. BREED . . . Boston, Mass.	I.	Instructor in Civil Engineering, Mass. Institute of Technology.
E. PERCY BROWN . . . Bridgewater, N.S.	III.	Assayer and Mining Engineer.
JAMES M. BROWN . . . . 343 No. Main St., Mansfield, Ohio.	II.	Assistant Superintendent, Aultman & Taylor Machinery Co.

1897.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WARREN D. BROWN, A.B. 103 E. Thirty-ninth St., New York, N.Y.	VI.	Electrical Engineer.
HOWARD H. BURDICK 205 Sigourney St., Hartford, Conn.	II.	Chief Inspector, Liability Department, Travelers Insurance Co.
FRED E. BUSBY Boston, Mass.	V.	Assistant in Industrial Chemistry, Mass. Institute of Technology.
WALTER M. BUSH 115 Broadway, New York, N.Y.	II.	With Engineering Department, The New Jersey Twine Co.
JOHN E. CARTY 30 Tremont St., Boston.	I.	Draughtsman, Sewer Division, Street Department, City of Boston.
CHARLES BEVAN CLARK, A.B. 60 New St., New York, N.Y.	I.	With Chambers & Hone, Consulting Engineers.
HENRY A. CLARK Lee, Mass.	II.	Of The H. C. Clark & Son Machine Co.
EZRA A. COLEMAN 516 Atlantic Ave., Boston.	VI.	Head Foreman, Edison Electric Illuminating Co.
JOHN A. COLLINS, JR., S.M. 79 Tremont St., Lawrence, Mass.	X.	With the Arlington Mills.
LUZERNE S. COWLES 101 Milk St., Boston.	I.	Assistant Engineer, Boston Elevated Ry., Elevated Lines.
ALLEN S. CROCKER Rochester, N.Y.	II.	Instructor in Machine Design, Statics, and Steam Engineering, Mechanics Institute.
CHARLES R. CURRIER 282 Lamartine St., Jamaica Plain, Mass.	II.	Draughtsman, B. F. Sturtevant Co.
ARTHUR V. CURTIS Washington, D.C.	XIII.	Draughtsman, Bureau of Construction and Repair, U.S. Navy Yard.
WILLIAM H. CUTLER 1214A Main St., Kansas City, Mo.	IV.	With Van Brunt & Howe, Architects.
JERE R. DANIELL 31 State St., Boston.	XIII.	Naval Architect, with B. B. Crowninshield.
HENRY M. DEAVITT 394–396 Wabash Ave., Chicago, Ill.	V.	Practical and Consulting Chemist.
LEONARD M. DEMERITT 28 Light St., Baltimore, Md.	II.	With T. C. Barshon Co., Contractors.
ARTHUR S. DEWOLF Melrose Highlands, Mass.	II.	Teacher, Haverhill Manual Training School (Haverhill, Mass.).
EDWIN S. DODGE 18 rue Bonaparte, Paris, France.	IV.	Student of Architecture, École des Beaux-Arts.

1897. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FRANKLIN W. DOLIBER . . 291 Atlantic Ave., Boston.	IX.	With Mellin's Food Co.
JOHN A. DONOVAN . . . 256 Branch St., Lowell, Mass.	IX.	Teacher, Lowell High School.
ALFRED R. DOTEN . . . . Quincy, Mass.	II.	With Fore River Ship and Engine Co.
PROCTOR L. DOUGHERTY . 133 Vermont Ave., Washington, D.C.	VI.	Assistant Inspector of Electric Lighting Plants, Treasury Department.
ALFRED KIMBALL DOWNES 294 Main St., Bangor, Me.	I.	Assistant Roadmaster, Third Division, Maine Central R.R.
IRENÉE DU PONT, S.M. . . 788 Broad St., Newark, N.J.	X.	Treasurer, Manufacturers' Contracting Co.
JOHN R. DWYER . . . . Columbia Bldg., Eighth and Locust Sts., St. Louis, Mo.	IV.	Architect and Superintendent.
CHARLES H. EAMES . . . 93 Federal St., Boston.	VI.	Electrical Engineer, with Stone & Webster, Electrical Experts and Engineers.
WILLIAM W. EATON . . . 347 Spruce St., Steelton, Pa.	II.	With Mechanical Department, Pennsylvania Steel Co.
FREDERICK L. EDMANDS . 408 Spruce St., N.W., Washington, D.C.	II.	Assistant Examiner, U.S. Patent Office.
ARTHUR ELSON, A.B. . . . 811 Beacon St., Boston.	X.	Teacher in Evening Schools.
FRANK W. EVERETT . . . 26 Cortlandt St., New York, N.Y.	VI.	Engineer, with Wendell & MacDuffie.
MALCOLM F. EWEN . . . 16 Hill St., Finsbury, London, E.C., England.	IV.	With The Luxfer Prism Co.
FLORENCE WOOD EWING (Mrs. W. C. Ewing) 77 Cedar St., Roxbury, Mass.	VIII.	
WILLIAM C. EWING . . . 2380 Washington St., Boston.	VI.	Chief Assistant and Clerk, The C. H. W. Wood Co., Civil Engineers and Surveyors.
JOHN S. EYNON . . . . . 20 Kilby St., Boston.	VI.	Insurance Inspector, John C. Paige & Co.
WILLIAM ALECK FAXON . 401 Main St., Buffalo, N.Y.	V.	With Faxon, Williams, & Faxon.
FRANK G. FEELEY . . . . 31 Milk St., Boston.	II.	Inspector, Associated Factory Mutual Insurance Co.

1897. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ROBERT M. FERRIS, JR. . . 81 Willoughby St., Brooklyn, N.Y.	VI.	In Engineering Department, New York & New Jersey Telephone Co.
JOHN WATSON FITZGERALD, S.B. Address Unknown.	VI.	
MORTIMER FRANK, M.D. . 233 Hampden Court, Chicago, Ill.	I.	Physician.
FREDERIC WILLIAM FULLER Carr Bldg., Springfield, Mass.	VI.	Manager, Equitable Life Assurance Society of New York.
JAMES L. FYFE . . . . . 417 Home Ave., Oak Park, Ill.	IV.	
LAWRENCE L. GAILLARD . 32 Park Pl., New York, N.Y.	VI.	With Electrical Construction Department, Manhattan Ry. Co.
J. MONROE GILMORE, B.L. . Pittsfield, Mass.	VI.	Foreman of Motor, Generator, and Transformer Testing Room, Stanley Co.
WALTER A. GLEASON . . . 11 Broadway, New York, N.Y.	I.	Draughtsman, with Milliken Bros., Engineers and Contractors.
GEORGE M. GOODSPEED . . McKeesport, Pa.	V.	With The National Tube Co.
SUMNER GOWEN . . . . 511 Main St., Phœnixville, Pa.	I.	Assistant Engineer, The Phœnix Bridge Co.
OWEN H. GRAY . . . . . Des Moines, Iowa.	VI.	Superintendent, Mutual Telephone Co.
R. GEORGE HALL . . . . Ouray, Colo.	V.	Manager, American Gold Mining Co.
ALFRED STARR HAMILTON . 93 State St., Albany, N.Y.	IX.	In Insurance Business.
CHARLES L. HAMMOND . . Portsmouth, N.H.	I.	Leveller, Department of Yards and Docks, U.S. Navy Yard.
CHARLES N. HASKINS, S.M., A.M., Ph.D. (Harv.) Göttingen, Germany.	VIII.	Student at the University.
ISRAEL HATCH, JR. . . . Rochester, N.Y.	X.	Chemist, Photo-Materials Co.
EDGAR M. HAWKINS . . . 324 Pine St., Steelton, Pa.	II.	Chief Engineer, The Pennsylvania Steel Co.
NATHAN HAYWARD, A.B. . Eleventh and Filbert Sts., Philadelphia, Pa.	VI.	With Bell Telephone Co. of Philadelphia.
ROYAL H. HAYWARD . . . 703 Union St., Schenectady, N.Y.	VI.	With Railway Department, General Electric Co.
FREDERICK E. HEALY . . Philadelphia, Pa.	II.	Mechanical and Electrical Engineer, New U.S. Mint.

1897. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FREDERICK J. HEMMINGS 12 Pearl St., Boston.	V.	Chemist, with Henry Carmichael, Analytical and Consulting Chemist.
WILLIAM G. HILL, JR. 84 Converse Ave., Malden, Mass.	V.	
ARTHUR T. HOPKINS 3 Fayette Park, Cambridge, Mass.	XI.	With Boston Woven Hose and Rubber Co.
ROGER E. HOSFORD 125 Milk St., Boston.	V.	With American Bell Telephone Co.
ETHAN HENRY HOWARD 366 Delaware Ave., Buffalo, N.Y.	VI.	In Business.
BENJAMIN A. HOWES Park Row Bldg., New York, N.Y.	VI.	Special Representative in Alaska and Yukon Territory of the Robins Conveying Belt Co.
CHESTER D. HUBBARD 3112 West Ave., Newport News, Va.	VI.	With Newport News Shipbuilding and Dry Dock Co.
WALTER HUMPHREYS Boston, Mass.	II.	Assistant to the Secretary, Mass. Institute of Technology.
FREDERICK A. HUNNEWELL Washington, D.C.	XIII.	Draughtsman, Bureau of Construction and Repair, Navy Department.
HARRY B. HUNT Susquehanna, Pa.	II.	Chief Draughtsman, Erie R.R. Co.
HARRY D. HUNT 44 Elen St., North Attleboro, Mass.	IX.	Proprietor and Publisher, "The Evening Chronicle."
JOHN P. ILSLEY, JR. 136 Liberty St., New York, N.Y.	II.	With The Niles Tool Works Co.
ELBRIDGE C. JACOBS Burlington, Vt.	III.	Assistant Professor of Chemistry and Mineralogy, University of Vermont.
ARTHUR L. JENNINGS 135 No. Third St., Philadelphia, Pa.	II.	With B. F. Sturtevant Co.
FRANK H. KEISKER 14 So. Broad St., Philadelphia, Pa.	IV.	Architect.
WILLIAM A. KENT Plattsburg Barracks, Plattsburg, N.Y.	I.	First Lieutenant, Twenty-third U.S. Infantry.
JAMES W. KILLAM 1 Ashburton Pl., Boston.	I.	With Metropolitan Water Board.
ALBERT E. KIMBERLY Lawrence, Mass.	V.	In Experiment Station, Mass. State Board of Health.
GEORGE H. KNIGHT Hudson, Mass.	II.	Draughtsman, with The Putnam Machine Co. (Fitchburg, Mass.).

1897. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
AUGUSTUS C. LAMB . . . Huntington, Mass.	X.	With The Chapin & Gould Paper Co.
GEORGE S. LAWLER . . . 259 Webster St., East Boston.	VI.	With The Boston Elevated Ry. Co.
WILLIAM H. LEACH, JR. . 725 William St., Bridgeport, Conn.	II.	With The Union Metallic Cartridge Co.
ERNEST F. LEARNED . . . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical Experts and Engineers.
FREDERIC N. LEBARON . . 1133 Broadway, New York, N.Y.	IV.	With Jones & LeBaron, General Agents for Solar Prisms.
JAMES E. LEWIS . . . . Address unknown.	I.	
HENRY M. LOOMIS . . . 315 Buffalo Ave., Niagara Falls, N.Y.	V.	With The Castner Electrolytic Alkali Co.
BENJAMIN A. LOVELAND . 7 Water St., Boston.	I.	Draughtsman, U.S. Engineer's Office.
ROBERT S. LUNT . . . . 153 Milk St., Boston.	X.	With Kuttroff, Pickhardt, & Co., Importers of Dyestuffs.
GEORGE H. MCCARTHY . . 440 Columbus Ave., New York, N.Y.	IX.	With The Frank L. Fisher Co., Real Estate.
EDMUND B. MCCORMICK . Manhattan, Kans.	II.	Professor of Mechanical Engineering and Superintendent of Shops, Kansas State Agricultural College.
JOHN P. MCMILLAN . . . Petrolia, Ont.	X.	In Private Business.
THOMAS F. J. MAGUIRE . . Washington, D.C.	VI.	Civil and Electrical Engineer, Supervising Architect's Office.
JOSEPH M. MAHONEY . . . 11 Wareham St., Dorchester, Mass.	VI.	Electrical Inspector, Wire Department, City of Boston.
EDMUND S. MANSON, JR., S.M. 7 Holiday St., Dorchester, Mass.	VIII.	
HERMAN W. MARSHALL . . 1006 No. Broadway, Baltimore, Md.	VII.	Student, Johns Hopkins University Medical School.
EARL P. MASON . . . . . Greenwich, Conn.	II.	With A. L. Mason, Manufacturer of Gas Engines.
GEORGE A. MORAN . . . Lawrence, Mass.	V.	Assistant Chemist, Pacific Mills.
EDWARD R. MOTCH . . . 119 Bank St., Cleveland, Ohio.	II.	With Cleveland Branch, Marshall & Huschart Machinery Co.

1897. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HAROLD T. MULHALL . . 205 La Salle St., Chicago, Ill.	VI.	With The Armour Grain Co.
HOWARD A. NOBLE . . . Twenty-first and Liberty Sts., Pittsburgh, Pa.	II.	In Mechanical Department, A. French Spring Co.
ALBERT P. NORRIS . . . . 760 Mass. Ave., Cambridge, Mass.	V.	Student, Harvard Medical School (Boston).
EDWIN R. OLIN . . . . . 101 Milk St., Boston.	X.	With the Boston Elevated Ry. Co., Elevated Lines.
HUGH ORR . . . . . 53 State St., Boston.	IV.	With Cram, Goodhue, & Ferguson, Architects.
EDWIN P. OSGOOD . . . . Columbia, N.J.	XI.	Superintendent of Construction of Paulins Kill Dam for D. L. Emanuel, (Catasauqua, Pa.).
CHARLES B. PAINE . . . . 76 State St., Augusta, Me.	IV.	Granite Constructor.
ARCHIBALD L. PARSONS . . 735 No. Capitol St., Washington, D.C.	I.	Assistant Engineer, U.S. Engineer Office for Erection of New Building for Government Printing Office.
JOHN SHELLEY PECHIN . . South Chicago, Ill.	II.	With Construction Department, Illinois Steel Co.
VERNON M. PEIRCE . . . Room 70, City Hall, Boston.	I.	Assistant Engineer, Paving Division, Street Department, City of Boston.
CHARLES L. W. PETTEE . . 440 Capitol Ave., Hartford, Conn.	V.	Chemist, with Henry Souther, Consulting Metallurgical Engineer.
OTTO S. PIKE . . . . . Steelton, Pa.	II.	With The Pennsylvania Steel Co.
WILLIAM C. POTTER . . . . 1001 Great Northern Bldg., Chicago, Ill.	III.	Mining Engineer, Atchison, Topeka, & Santa Fé Ry. System.
GILBERT H. PRATT . . . 502 State House, Boston.	V.	Assistant Chemist, Mass. State Board of Health.
ACHILLES H. PUGH, JR. . . Madison Ave., Cincinnati, Ohio.	X.	
WILLIAM EDGAR REED . . 2 Boulevard Sardi-Carnot, Le Havre, France.	VI.	Electrician, La Société Industrielle d'Electricité, Procédés Westinghouse.
WILLIAM STEVENS RHODES 30 Tremont St., Boston.	XII.	Assistant Engineer, Sewer Division, Street Department, City of Boston.
LOUIS J. RICHARDS . . . City Hall, Elizabeth, N.J.	XI.	Health Officer.
ELMER H. ROBINSON . . . 116 Richmond St., Boston.	VI.	In Construction Department, New England Telephone and Telegraph Co.
JOHN R. ROGERSON . . . 20 Central St., Boston.	I.	With G. E. Sleeper, Civil Engineer.

1897. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WARREN A. ROOKE . . . 47 Cedar St., New York, N.Y.	IV.	With Howells & Stokes, Architects.
JAMES C. ROYCE . . . . Toronto Junction, Ont.	II.	Manager, The Toronto Suburban Railroad Co.
WALTER B. RUSSELL . . . Brooklyn, N.Y.	II.	Assistant Instructor in Mechanical Drawing, Pratt Institute.
LUTHER R. SAWIN . . . . 34 Robbins St., Waltham, Mass.	V.	Biologist, Mass. State Board of Health (Room 502, State House, Boston).
CARL SCHUTTLER . . . . 66 Lake Shore Drive, Chicago, Ill.	II.	In Private Business.
DAVID SCHWARTZ . . . . New Orleans, La.	V.	With The Southern Cotton Oil Co.
WILLIAM H. SELLEW . . . The Auburndale, Sta. E, Cincinnati, Ohio.	II.	With Cincinnati, Hamilton, & Dayton Ry. Co.
HENRY A. SHERMAN . . . 30 Tremont St., Boston.	III.	With Sewer Division, Street Department, City of Boston.
JESSE W. SHUMAN . . . Hennepin and Eighth Sts., Minneapolis, Minn.	VI.	With The Red River Lumber Co.
HARRISON W. SMITH, A.B. Boston, Mass.	II.	Instructor in Electrical Engineering, Mass. Institute of Technology.
JAMES W. SMITH . . . Boston, Mass.	XIII.	Assistant in Mechanical Engineering, Mass. Institute of Technology.
OREN B. SMITH, JR. . . . Phœnix, B.C.	III.	Mining Engineer for Granby Consolidated, M. S. & P. Co.
PERCY M. SMITH . . . . 18 Phillips St., Lowell, Mass.	II.	With Lawrence Manufacturing Co.
W. FRANKLIN SMITH . . . 97 Paulison Ave., Passaic, N.J.	II.	Principal, Manual Training School.
WALTER E. SPEAR . . . 814 Banigan Bldg., Providence, R.I.	XI.	Civil Engineer, with John R. Freeman.
ARTHUR D. SPIESS . . . 4 W. Thirty-third St., New York, N.Y.	IV.	Real Estate Broker.
RUSSELL C. SPRING . . . 100 Boylston St., Boston.	IV.	Draughtsman, with Wheelwright & Haven, Architects.
G. FRANKLIN STARBUCK . Concord, N.H.	II.	Inspector, Motive Power Department, Boston & Maine R.R.
CHARLES B. STEBBINS . Quincy, Mass.	XIII.	Draughtsman, Fore River Ship and Engine Co.

1897. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
KLAUS J. STEINER . . . Sharon, Pa.	III.	Assistant to General Manager, The Sharon Steel Co.
PERCY G. STILES . . . . Baltimore, Md.	VII.	Assistant in Physiology, Johns Hopkins University.
HARRISON S. TAFT, B.P.	XIII.	(See Class of 1896.)
JOHN TAYLOR . . . . . 200 Summer St., Boston.	VI.	With General Electric Co.
EDGAR L. TINKHAM, B.P. . Seventeenth and Filbert Sts., Philadelphia, Pa.	VI.	In Engineers' Department, Bell Telephone Co. of Philadelphia.
JAY E. TONE . . . . . 109 Court Ave., Des Moines, Iowa.	X.	With Tone Bros., Manufacturers of Flavoring Extracts.
MORRIS K. TRUMBULL . . 2476 Archer Ave., Chicago, Ill.	I.	Chief Draughtsman, Joint Track Elevation, Eighteenth St. to Ashland Ave.
LUCIUS S. TYLER . . . . 152 Strathmore Road, Aberdeen, Boston.	VI.	
T. ERNEST VIDETO, S.M. . Tacon 3, Havana, Cuba.	IV.	Architect, Engineering Department, City of Havana.
RALPH S. VINAL . . . . 1128 Tremont Bldg., Boston.	IV.	Draughtsman with Guy Lowell, Architect.
GEORGE R. WADLEIGH . . Jackson, Tenn.	II.	Assistant Superintendent, Jackson Fibre Co.
FRANCIS H. WATTS . . . 2 Carson St., Pittsburgh, Pa.	I.	With Maintenance of Way Department, Pittsburgh, Cincinnati, Chicago, & St. Louis Ry.
THOMAS R. WEYMOUTH . . 40 Wall St., New York, N.Y.	VI.	Electrical Engineer, International Hydraulic Co.
DAVID T. WHITON . . . . Hingham Centre, Mass.	II.	Draughtsman, Fore River Ship and Engine Co. (Quincy, Mass.).
WILLIAM R. WOOD . . New London, Conn.	XIII.	With The Eastern Shipbuilding Co.
ALPHEUS G. WOODMAN . . Boston, Mass.	V.	Instructor in Sanitary Chemistry, Mass. Institute of Technology.
GEORGE M. WOODMAN . . Woodsville, N.H.	I.	With Boston & Maine R.R.
E. HAROLD WOODWORTH . 135 So. Main St., Jamestown, N.Y.	V.	Manager, The Aristo Chemical Co.
ERNEST WOODYATT . . . 1142 The Rookery, Chicago, Ill.	IV.	With D. H. Burnham & Co., Architects.

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NAME AND ADDRESS.	COURSE.	OCCUPATION.
DONALD N. ALEXANDER, Lawrence Hall, Cambridge, Mass.	IV.	Student.
LEON ALLAND, 661 Broadway, New York, N.Y.	I.	Of Firm of Alland Bros., Manufacturers of Straw and Felt Goods.
ROBERT STARR ALLYN, 41 Park Row, New York, N.Y.	II.	With Mitchell, Bartlett, & Brownell, Lawyers.
LYMAN ARNOLD, 104 So. Common St., Lynn, Mass.	VI.	With General Electric Co.
MILAN V. AYRES, Schenectady, N.Y.	VI.	In Engineering Department, General Electric Co.
ROGER WARD BABSON, 43 Milk St., Boston.	I.	Banking, Municipal and Street Railway Bonds.
LYMAN E. BACON, Williams, Ariz.	I.	Assistant Engineer, Santa Fé Pacific R.R. Co.
JOSEPH BANCROFT, Wilmington, Del.	X.	Assistant Treasurer, The Joseph Bancroft & Sons Co.
ELLIOTT R. BARKER, Berlin, N.H.	V.	Chemist, The Burgess Sulphite Fibre Co.
HARRINGTON BARKER, 17 Grant Pl., Washington, D.C.	II.	Assistant Examiner, U.S. Patent Office.
WILLIAM H. BARLOW, 4242 Chestnut St., Philadelphia, Pa.	V.	
HENRY C. BELCHER, Proctor, Vt.	II.	Mechanical Engineer, with The Vermont Marble Co.
FRANCIS P. BERGEN, 1052 W. Madison St., Chicago, Ill.	VI.	Electrician, Commonwealth Electric Co.
FREDERIC L. BISHOP, Peoria, Ill.	VIII.	Director of Physics, Bradley Polytechnic Institute, University of Chicago.
WILLIAM D. BLACKMER, Giddings Bldg., Colorado Springs, Colo.	III.	Mining Engineer.
ARTHUR A. BLANCHARD, Fürstenstrasse 7, III, Leipsic, Germany.	V.	Student, University of Leipsic.
JOHN S. BLEECKER, 93 Federal St., Boston.	II.	With Stone & Webster, Electrical Experts and Engineers.
HOWARD L. BODWELL, Pittsburgh, Pa.	II.	With Engineering Department, The American Sheet Steel Co.
GEORGE H. BOOTH, Newport News, Va.	II.	With Engineering Department, Newport News Shipbuilding and Dry Dock Co.
MARTIN BOYLE, Newburyport, Mass.	V.	With Towle Manufacturing Co., Silversmiths.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM BREWSTER . . . Pinar del Rio, Pinar del Rio, Cuba.	II.	Contractor, and in Tobacco Culture Business.
DICKSON Q. BROWN, A.B. . 12 Broadway, New York, N.Y.	VI.	With The Tide Water Oil Co.
GEORGE BURNHAM . . . . 120 Exchange St., Portland, Me.	IV.	Architect.
WILLIAM L. BUTCHER . . Room 140, State House, Boston.	I.	Assistant, Engineering Department Mass. State Board of Health.
ELWELL R. BUTTERWORTH . 111 Putnam Ave., Cambridge, Mass.	II.	Assistant Superintendent, The Reversible Collar Co.
LE ROY H. BYAM . . . Room 516, Grand Central Station, New York, N.Y.	I.	Assistant Engineer, Pennsylvania Division, New York Central & Hudson River R.R.
DONALD C. CAMPBELL . . 328 Hyde Bldg., Spokane, Wash.	II.	Agent, The Rand Drill Co. of New York.
IRA M. CHACE, JR. . . . . 91 School St., New Bedford, Mass.	I.	Assistant in City Engineer's Office.
EDWARD S. CHAPIN . . . 115 High St., Boston.	V.	Chemist, with The New York & Boston Dyewood Co.
PAUL CLIFFORD . . . . . 143 Federal St., Boston.	II.	In Wool Business.
HERBERT FRANKLIN COBB Hamilton and Belden Sts., Cleveland, Ohio.	II.	Mechanical and Civil Engineer for The Brown Hoisting Machinery Co.
HERBERT LUTHER COBB . 945 E. Fifty-third St., Chicago, Ill.	VI.	With The Chicago Telephone Co.
HOWARD L. COBURN . . . 24 W. Twenty-fifth St., New York, N.Y.	II.	
JOSEPH G. COFFIN . . . 70 Florence St., Worcester, Mass.	VIII.	Student, Clark University.
FRANK F. COLCORD . . . Maurer, N.J.	III.	Chief Assayer, American Smelting & Refining Co. (Perth Amboy Plant).
FRANK E. COOMBS . . . 3 Hamilton Pl., Boston.	IV.	With Agent for Building Materials.
WORTHINGTON CORNELL . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical and Mechanical Experts and Engineers.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM E. COTTER . . . 101 Milk St., Boston.	IV.	Draughtsman, Architectural Department, Boston Elevated Ry. Co., Elevated Lines.
GEORGE THURSTON COTTLE 186 Christian St., Wallingford, Conn.	V.	With The New York Insulated Wire Co.
EVA H. CRANE . . . . . 56 Trowbridge St., Cambridge, Mass.	IV.	Assistant to Professor Hyatt, Boston Museum of Natural History.
GEORGE W. CRAVEN . . . Lock Box 1310, Butte, Mont.	VI.	With The Boston & Montana Mining Co.
LUTHER A. CROWELL . . Address unknown.	VI.	
HARVEY L. CURRIER . . . 1627 No. Seventh St., Philadelphia, Pa.	II.	In Engine Drawing Room, with Wm. Cramp & Sons, Ship and Engine Building Co.
EVERETT N. CURTIS . . . 82 Devonshire St., Boston.	IX.	Attorney and Counsellor-at-law.
FRED. B. CUTTER . . . . P.O. Box 448, Schenectady, N.Y.	VI.	Electrician.
WILLIAM S. B. DANA . . 80 Washington Sq., E., New York, N.Y.	IV.	Draughtsman, with Ward W. Ward, Architect.
RAYMOND H. DANFORTH . East Pittsburgh, Pa.	II.	With Westinghouse Electric and Manufacturing Co.
PHILIP H. DATER, B.A. . . 45 Triangle Bldg., Rochester, N.Y.	I.	Draughtsman, Western Division, New York State Engineer's Office.
ALVAN L. DAVIS . . . . Pompton, N.J.	III.	Superintendent, The Ludlum Steel and Spring Co.
HUNTLY W. DAVIS . . . 27 Common St., Montreal, Que.	IV.	
GEORGE R. DAVISON . . . Plane and Orange Sts., Newark, N.J.	VI.	With Manhattan General Construction Co.
ROBERT S. DE GOLYER . . Schiller Bldg., Chicago, Ill.	IV.	Draughtsman, with W. B. Mundie, Architect, Board of Education, Chicago.
JOHN B. DIXON . . . . . Collins House, Glens Falls, N.Y.	V.	Chemist, Glens Falls Portland Cement Co.
IRVING B. DODGE . . . . 22 Bellevue St., Medford Hillside, Mass.	II.	
CHESTER F. DRAKE . . . 710 City Hall, Philadelphia, Pa.	XI.	With Improvement, Extension, and Filtration of Water Supply Co.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ROBERT M. DRAPER . . . Great Falls, Mont.	III.	With Boston & Montana Consolidated Copper and Silver Mining Co.
DANIEL W. EDGERLY, S.M. . College Point, Long Island, N.Y.	V.	Superintendent, The Chilton Paint Co.
RAY C. FAUGHT . . . . . 214 So. Eleventh St., Philadelphia, Pa.	VI.	Salesman, with General Electric Co.
ALBERT J. FEARING . . . Boston, Mass.	I.	Bridge Engineer, with Boston & Albany R.R.
DAVID C. FENNER, Ph.B . . South Bethlehem, Pa.	II.	With The Bethlehem Steel Co.
FINLAY F. FERGUSON, A.B., B.S. Carpenter Bldg., Norfolk, Va.	IV.	Of Firm of Carpenter, Breese, & Ferguson, Architects.
HOWELL FISHER . . . . Everett, Mass.	X.	With New England Gas and Coke Co.
GEORGE I. FISKE . . . . 36 Brook St., Pawtucket, R.I.	VI.	With Howard & Bullough, American Machine Co. (Limited).
SIMON FLEISHER . . . . Address unknown.	VI.	
MABEL FORREST . . . . 227 Westford St., Lowell, Mass.	VII.	Science Teacher, Rogers Hall School.
EDWARD T. FOULKES . . . 111 Fifth Ave., New York, N.Y.	IV.	With Cass Gilbert, Architect.
WILLIAM C. FOWNES, JR. . Fourteenth and Etna Sts., Pittsburgh, Pa.	X.	Secretary, The S. Jarvis Adams Co.
ARTHUR I. FRANKLIN . . 100 Canal St., Cleveland, Ohio.	V.	Assistant Chemist, The Sherwin-Williams Paint Co.
ALBERT I. FRYE . . . . Bend, Oreg.	I.	Chief Engineer, The Oregon Irrigation Co.
FREDERIC FURBISH, B.S. . . 1128 Tremont Bldg., Boston.	IV.	Architectural Draughtsman, with Guy Lowell, Architect.
ERNEST A. GALLISON . . . 49 Saratoga St., East Boston.	II.	Chief Draughtsman for Bertelsen & Petersen, Designers and Builders of Marine Engines.
LESTER D. GARDNER . . . 203 Broadway, New York, N.Y.	IX.	With "The Mail and Express."
FREDERICK C. GILBERT . . Pueblo, Colo.	V.	Chief Assayer, Eilers Plant, American Smelting and Refining Co.
CHARLES H. GODBOLD, JR. 2040 Clinton Ave., Alameda, Cal.	XIII.	Draughtsman in Office of Superintending Constructor, U.S.N., Union Iron Works.
JOHN N. GODDARD . . . Apartado 101, Monterey, Nuevo Leon, Mexico.	V.	Chief Chemist, Monterey Plant, The American Smelting and Refining Co.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE M. GODLEY . . . Philadelphia, Pa.	III.	With Microscopical Laboratory, The Midvale Steel Co.
CLARENCE GOLDSMITH . . North Andover, Mass.	II.	Superintendent of Water Works.
ARTHUR L. GOODRICH . . Penton Harbor, Mich.	X.	Assistant Chemist, The Wolverine Sugar Co.
GEORGE O. HASKELL . . . Macon, Ga.	II.	Manager, Mechanical and Oil Mill Department, McCaw Manufacturing Co.
LEWIS A. HAYDEN . . . . 1637 Sherman Ave., Denver, Colo.	III.	In Private Business.
JAMES E. HAZELTINE . . . Warren, Pa.	VI.	Superintendent, with The Bashlin Co.
FRANK B. HEATHMAN . . Davies Bldg., Dayton, Ohio.	IV.	With F. A. Brooks, Architect.
LYMAN F. HEWINS. . . Washington, D.C.	XIII.	Draughtsman, Department of Construction and Repair, U.S. Navy Yard.
CARL S. HIGH . . . . . Arlington, Kans.	VI.	Stock Raising.
HEBER A. HOPKINS . . . 278 Congress St., Boston.	II.	With James W. Tufts, Soda Fountains, Bottling Machinery.
RALPH T. HORTON . . . . Watertown N.Y.	I.	Assistant Engineer, Rome, Watertown, & Ogdensburg Division, New York Central & Hudson River R.R.
ARTHUR F. HOWARD, B.S. . Room 5, Congress Block, Portsmouth, N.H.	VI.	Assistant Superintendent, Portsmouth Electric Ry.
WINFRED DEAN HUBBARD Concord, Mass.	XI.	Superintendent of Water Works and Sewers.
GEORGE D. HUNTINGTON, A.B. Watertown, N.Y.	I.	Assistant Engineer, New York Air Brake Co.
CHARLES S. HÜRTER . . . 320 Howe St., Vancouver, B.C.	III.	Chief Assayer, Dominion of Canada Assay Office.
GEORGE A. HUTCHINSON . Anaconda, Mont.	II.	Mechanical Engineer, The Anaconda Copper Mining Co.
HARRY C. INGALLS . . . Paris, France.	IV.	Student, École des Beaux-Arts.
ARELI H. JACOBY . . . . 176 Purchase St., Boston.	V.	Chemist, with F. E. Atteaux & Co.
PAUL F. JOHNSON . . . . 120 Sycamore St., Milwaukee, Wis.	II.	Factory Superintendent, The Johnson Electric Service Co.
FREDERIC A. JONES . . . Needham, Mass.	I.	With New York Central & Hudson River R.R.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
IRVIN H. KAUFMAN . . . 128 Tremont St., Boston.	II.	With Cupples & Schoenhof, Foreign Book-dealers.
ARTHUR SAMUEL KEENE . 53 Tremont St., Boston.	IV.	Architect.
WILLIAM KELLEY . . . . Houston, Tex.	V.	Chemist, Texas Refinery, Southern Cotton Oil Co.
FRANKLIN M. KELLOGG . . 27 William St., New York, N.Y.	VI.	With Munson Steamship Line.
ROBERT E. KENDALL . . . Union St., Glens Falls, N.Y.	V.	Chemist, Bureau of Tests, The International Paper Co.
ELWELL F. KIMBALL . . . 78 Day St., Fitchburg, Mass.	I.	Teacher.
WALTER E. KIMBALL . . 1 Robin Hood St., Roxbury, Mass.	XIII.	Draughtsman in Office of Superintending Naval Constructor, Fore River Engine Co. (Quincy, Mass.).
CARLETON S. KOCH . . . 1600 Hamilton St., Philadelphia, Pa.	V.	With William Sellers & Co.
EDWIN KUTTROFF . . . . 128 Duane St., New York, N.Y.	X.	In Private Business.
ROBERT LACY, A.B. . . . Washington, D.C.	I.	Assistant Engineer, Southern Ry.
EDWARD P. LANE . . . . 322 W. Church St., Elmira, N.Y.	I.	With The Elmira Bridge Co.
VANRENSSELAER LANSINGH, B.S. 1610 Fisher Bldg., Chicago, Ill.	VI.	Consulting and Contracting Electrical Engineer.
WALTER H. LEE . . . . Sixth and Vine Sts. Cincinnati, Ohio.	IV.	Draughtsman, Samuel Hannaford & Sons, Architects.
OWEN L. LEONARD . . . 130 Pearl St., Boston.	V.	Chemist and Manager, Dye Stuff and Mill, Chemical Department, J. H. McClellan & Co.
JESSE T. LIPPINCOTT . . . 42 Main St., Cincinnati Ohio.	X.	With The Lippincott & Cree Co.
EDMUND C. LITTLE . . . Columbia Bldg., St. Louis, Mo.	IV.	Draughtsman, with Isaac S. Taylor, Architect.
PERCIVAL H. LOMBARD, A.B. Schenectady, N.Y.	VI.	With General Electric Co.
CHARLES E. LORD . . . . 1901 Fourth St., N.W., Washington, D.C.	VI.	Assistant Examiner, U.S. Patent Office.
WALTER G. MCCONNELL 59 Coddington St., Quincy, Mass.	XIII.	With The Fore River Ship and Engine Co.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
JAMES S. McINTYRE . . . 1128 Tremont Bldg., Boston.	IV.	Architectural Draughtsman.
PAUL McJUNKIN . . . York, Pa.	VIII.	Manager, American Incandescent Lamp Co.
WILLIAM ADAMSON MARSHALL Woburn, Mass.	X.	Superintendent, Baeder, Adamson, & Co., Glue Manufacturers.
GEORGE EUGENE MATHEWS Room 918, Reibold Bldg., Dayton, Ohio.	IV.	Draughtsman, with Frank M. Andrews, Architect.
DURAND MAYER . . . . 147 Wabash Ave., Chicago, Ill.	VI.	Real Estate Manager, A. G. Spalding Land Association.
JOSEPH J. MOEBS . . . . 70 City Hall, Boston.	I.	Assistant Engineer.
RICHARD MOMMERS . . . Rockford, Ill.	V.	Assistant Superintendent, Rockford Works Glucose Sugar Refining Co.
EDWARD F. MORRILL . . . 81 Willoughby St., Brooklyn, N.Y.	VI.	With Engineering Department, New York & New Jersey Telephone Co.
JAMES FRED MUHLIG . . . Pawtucket, R.I.	II.	Draughtsman, Howard and Bullough, American Machine Co. (Limited).
SAMUEL A. NEIDICH, Ph.B., A.M. 39 So. Tenth St., Philadelphia, Pa.	II.	Mechanical Engineer.
WILLARD B. NELSON . . . 18 Willoughby Ave., Brooklyn, N.Y.	VI.	Teacher of Physics, Manual Training High School.
GEORGE K. NEWBURY . Cleveland, Ohio.	XIII.	With American Steel and Wire Co., Newburgh Steel Works.
HENRY B. NEWHALL, JR. . 26 Cortlandt St., New York, N.Y.	VI.	Superintendent, Engineering Department, New Jersey Foundry and Machine Co.
CLARENDON NICKERSON . . 349 Grand St., Waterbury, Conn.	X.	With The Waterbury Farrel Foundry and Machine Co.
HENRY D. OSGOOD . . . . Manila, P.I.	XI.	Sanitary Engineer, Board of Health for Philippine Islands and City of Manila.
ALPHEUS A. PACKARD . Camden, N.J.	XIII.	In charge of Order Department, New York Shipbuilding Co.
WALTER PAGE . . . . 912 Witherspoon Bldg., Philadelphia, Pa.	XIII.	With New York Shipbuilding Co. (Camden, N.J.).
CHARLES H. PEASE . . . 149 Lowell St., Somerville, Mass.	II.	In Business.
LEROY D. PEAVEY . . . . 89 State St., Boston.	I.	Engineer, Boston Office, American Bridge Co.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES W. PENDELL . . 809 Topeka Ave., Topeka, Kans.	VI.	Electrical Signal Inspector, Atchison, Topeka, & Santa Fé Ry.
WILLIAM M. PERLEY . . . 1846 E. Belmont Ave., Chicago, Ill.	V.	Assistant Chemist, Chicago & North-Western Ry.
FRANK B. PERRY . . . . 1 Federal St., Providence, R.I.	II.	Mechanical and Mill Engineer, Howard & Bullough, American Machine Co. (Pawtucket, R.I.).
SHIRLEY S. PHILBRICK . . 31 Milk St., Boston.	II.	Surveyor and Draughtsman, Factory Mutual Fire Insurance Cos.
ARTHUR F. PORTER . . . Pompton Lakes, N.J.	V.	Chemist, Smokeless Powder Department, Laflin & Rand Powder Co.
ROBERT W. PRATT . . . . 140 State House, Boston.	I.	Assistant, Engineering Department, Mass. State Board of Health.
BENSON B. PRIEST . . . . East Berlin, Conn.	I.	With Berlin Branch, American Bridge Co.
WILLIAM E. PUTNAM, JR., A.B. 1 Somerset St., Boston.	IV.	Architect.
EDWARD B. RICHARDSON . 3 Hamilton Pl., Boston.	VI.	Engineer.
HENRY P. RICHMOND . . . 1128 Tremont Bldg., Boston.	IV.	Draughtsman, with Guy Lowell, Architect.
JOSEPH C. RILEY . . . . Boston, Mass.	II.	Instructor in Mechanical Engineering, Mass. Institute of Technology.
EDWARD W. RITCHIE . . Tacon No. 3, Havana, Cuba.	IV.	Assistant Engineer, City of Havana.
THOMAS MAYO ROBERTS, A.B. 755 Tremont St., Boston.	VI.	Draughtsman, New England Structural Co. (East Everett).
ERNEST F. RUSS . . . . 143 Milk St., Boston.	IX.	General Salesman for Baeder, Adamson, & Co.
BENJAMIN F. W. RUSSELL . 1128 Tremont Bldg., Boston.	IV.	With Guy Lowell, Architect.
EUGENE W. RUTHERFORD . Malden, Mass.	II.	Draughtsman, with Boston Rubber Shoe Co.
HOMER E. SARGENT, JR., Ph.B. Lexington Hotel, Chicago, Ill.	VI.	In Private Business.
HARRY F. SAWTELLE . . 60 City Hall, Boston.	I.	With Cambridge Bridge Commission (City Hall, Boston).
HENRY F. SCOTT . . . . 6 Summit St., South Framingham, Mass.	II.	With The Dennison Manufacturing Co.
HEYWARD SCUDDER, B.A. . Boston, Mass.	V.	Private Assistant for Dr. Mulliken, Mass. Institute of Technology.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
JOSEPH H. SEARS . . . . 225 E. Nineteenth St., Chicago, Ill.	V.	Assistant Chemist, The American Cotton Oil Co., at the N. K. Fairbanks Co.'s Works.
LEWIS J. SEIDENSTICKER . 6 Hurlburt St., Cambridge, Mass.	V.	
ALBION W. SHAW . . . . 19 High St., Boston.	VI.	With Testing Department, Stone & Webster, Electrical Experts and Engineers.
ALBERT R. SHEDD . . . 12 Greenleaf St., Quincy, Mass.	II.	Draughtsman, with Senior Inspector of Machinery, U.S.N.
EDWARD C. SHERMAN . . 60 City Hall, Boston.	I.	With The Cambridge Bridge Commission.
CHARLES J. SKINNER . . . Ottawa, Kans.	I.	With Engineering Department, Atchison, Topeka, & Santa Fé Ry.
CHARLES H. SMITH . . . 31 Milk St., Boston.	II.	With Associated Factory Mutual Insurance Co.
HORACE T. SMITH . . . . 137 E. Main St., Bridgeport, Conn.	V.	Chemist, Farist Steel Co.
WILLIAM GRAVES SMITH . 20 Hunter St., West Newton, Mass.	I.	Transitman for City Engineer of Newton.
FRANK A. SPAULDING . . 314 Babcock St., Buffalo, N.Y.	I.	Draughtsman, Assistant Engineer's Office, Buffalo & Rochester Divisions, Pennsylvania R.R.
WILLIAM D. STAPLES . . . 406 Market St., Philadelphia, Pa.	VI.	With American Telephone and Telegraph Co.
WILLIAM F. STEFFENS . . Room 500, Grand Central Sta., New York, N.Y.	I.	Bridge Department, New York Central & Hudson River R.R.
GORHAM P. STEVENS, S.M. . 26 Gray St., Cambridge, Mass.	IV.	Draughtsman for Professor Despradelle.
WILLIAM W. STEVENS . . Washington, D.C.	IV.	Computer, Supervising Architect's Office, U.S. Treasury Department.
LEWIS S. STRENG . . . . 207 Market St., Newark, N.J.	VI.	With the United Electric Co. of New Jersey.
WILLIAM R. STRICKLAND . Kittredge Bldg., Denver, Colo.	I.	Civil Engineer, with Colorado Fuel and Iron Co.
EDWARD STURTEVANT . . Newport, R.I.	IX.	Teacher of Science, St. George's School.
THOMAS E. TALLMADGE . . Evanston, Ill.	IV.	Draughtsman, with D. H. Burnham & Co., Architects (Chicago, Ill.).

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
EDWARD MOLINEUX TAYLOR 66 Garden St., Poughkeepsie, N.Y.	II.	
MARK E. TAYLOR . . . . Third St., E. Cambridge, Mass.	II.	Draughtsman, with The George F. Blake Manufacturing Co.
HORACE R. THAYER . . . Fifty-first St., Pittsburgh, Pa.	I.	Draughtsman, with The American Bridge Co.
MAURICE DE K. THOMPSON, JR. Pension Tiefenan, Zürich, Switzerland.	VIII.	Student.
MARY J. THOMSON . . . . 119 W. Grand St., Elizabeth, N.J.	V.	Teacher of Science, The Craven School (Newark, N.J.).
RUDOLPH TIETIG . . . . 66 Broadway, New York, N.Y.	IV.	With G. K. Thompson, Architect.
GEORGE W. TREAT . . . 19 Milk St., Boston.	I.	With E. H. Rollins & Sons, Bankers.
ATHERTON H. TUCKER . . 530 Atlantic Ave., Boston.	IV.	Draughtsman, with the Library Bureau.
FRANK S. TUCKER . . . . Trenton, N.J.	II.	With The Trenton Malleable Iron Co.; Engineer and Inspector, The Hoshor-Platt Co. (15 Cortlandt St., New York).
FRED H. TWOMBLY . . . 25 Broad St., New York, N.Y.	IX.	With Flint Eddy & American Trading Co., Exporters and Importers.
GEORGE F. ULMER . . . . Foot of Pearl St., Brooklyn, N.Y.	V.	Chief Chemist, Arbuckle Bros., Sugar Refinery.
SUSANNAH USHER . . . 45 St. Botolph St., Boston.	VII.	Teacher, School of Housekeeping.
GEORGE R. WADSWORTH . Albany, N.Y.	I.	Resident Engineer, New York Central & Hudson River R.R.
JOHN E. WARREN . . . . Park Row Bldg., Park Row, New York, N.Y.	II.	Mechanical Engineer, with The Paul System Co.
KARL W. Waterson . . . . 125 Milk St., Boston.	VI.	With American Bell Telephone Co.
EDGAR A. WEIMER . . . . Lebanon, Pa.	II.	Consulting Mechanical and Blast Furnace Engineer; Superintendent, Weimer Machine Works Co.
JOHN F. WESSEL, A.B. . . Continental Trust Bldg., Baltimore, Md.	VI.	With General Electric Co.
PAUL B. WESSON . . . . Lowell, Mass.	II.	Foreman of Lowell Machine Shop.

1898. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ROSCOE B. WHITTEN . . . P.O. Box 472, Sydney, C.B.	IV.	Architect.
CLIFTON W. WILDER . . . 309 Broadway, New York, N.Y.	II.	Engineer and Architect, with Geo. F. Hardy.
RALPH E. WILDER . . . . Johnstown, Cambria Co., Pa.	I.	Draughtsman, Structural Department, Cambria Steel Co.
DAVID L. WING . . . . . 100 Williams St., New York, N.Y.	IX.	With Wm. E. Peck & Co., Export Merchants.
C.-E. A. WINSLOW, S.M. . . Boston, Mass.	VII.	Instructor in Biology, Mass. Institute of Technology.
WINTHROP B. WOOD . . . Concord, Mass.	I.	With Leonard Metcalf, Civil Engineer (14 Beacon St., Boston).
WALTER G. ZIMMERMANN . 903 Schiller Bldg., Chicago, Ill.	II.	With Carl Binder, Engineer and Contractor.

1899.

LEWIS B. ABBOTT . . . . 122 Ames Bldg., Boston.	IV.	Draughtsman, with Shepley, Rutan, & Coolidge.
HERBERT H. ADAMS, B.A. . Detroit, Mich.	I.	Assistant Engineer, Michigan Central R.R.
J. HOWARD ADAMS . . . Pawtucket, R.I.	IV.	Draughtsman, with Peters & Rice, Architects (Tremont Bldg., Boston).
WALTER O. ADAMS . . . 1776 Massachusetts Ave., North Cambridge, Mass.	X.	Head Chemist, Boston Works, Lever Bros., Limited (Soap Makers).
LAWRENCE ADDICKS . Perth Amboy, N.J.	II., VI.	Assistant to Superintendent, Raritan Copper Works.
J. WALTER ALLEN . . . 17 Foster St., Newtonville, Mass.	VI.	In Electrical Department, Boston Elevated Ry. Co. (439 Albany St., Boston).
HAROLD O. AYER . . . . 206 Bay St., E., Savannah, Ga.	V.	Chemist, with Southern Cotton Oil Co.
T. WENDELL BAILEY . . . East Berlin, Conn.	IV.	Architectural Draughtsman, with American Bridge Co.
BERTHA L. BALLANTYNE . 236 Union St., Springfield, Mass.	VII.	Teacher of Biology, Springfield High School.
WALTER R. BEAN . . . P.O. Box 563, Woodbury, N.J.	XIII.	With The New York Shipbuilding Co. (Camden, N.J.).
RAYMOND F. BENNETT . . 3 Long Wharf, Portland, Me.	I.	Of Firm of W. F. Bennett & Son, Contractors.
CARROLL BENNINK . . . Washington, D.C.	IV.	Draughtsman, Supervising Architect's Office.

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
NEWTON D. BENSON . . . P.O. Box 27, Everett, Mass.	IV.	Draughtsman, with The Boston Bridge Works, Incorporated (Boston).
GEORGE E. BERGSTROM . . Oconto Falls, Wis.	IV.	Draughtsman with The Falls Manufacturing Co.
ARTHUR E. BLACKMER . . Jersey Shore, Pa.	I.	Assistant in Engineer's Office, Pennsylvania Division, New York Central & Hudson River R.R.
F. MINOT BLAKE . . . . 426 Marlborough St., Boston.	II.	Draughtsman, with B. F. Sturtevant Co. (Jamaica Plain, Mass.)
KENNETH M. BLAKE . . . Newton, Mass.	II.	With Locomobile Co. of America.
WALTER W. BONNS . . . 538 Jefferson St., Milwaukee, Wis.	IV.	With Charles H. Stehli g, Tannery Specialist.
ARTHUR H. BROWN . . . 1906 H St., N.W., Washington, D.C.	II.	Assistant Examiner, U.S. Patent Office.
CARROLL W. BROWN . . . Cleveland, Ohio.	I.	With The Brown Hoisting and Conveying Machinery Co.
PHILIP BURGESS . . . . Newtonville, Mass.	XI.	
FREDERICK W. CALDWELL . 309 Pine St., Steelton, Pa.	II.	Draughtsman, Mechanical Engineer's Office, Bridge and Construction Department, Pennsylvania Steel Co.
HARRY A. B. CAMPBELL . . 500 No. Broad St., Philadelphia, Pa.	II.	In Drawing Rooms of Baldwin Locomotive Works.
SYLVESTER Q. CANNON . . 511 Templeton Bldg., Salt Lake City, Utah.	III.	Travelling in Europe.
WILLARD T. CANNON . . . Salt Lake City, Utah.	II.	With Utah Light and Power Co.
HERBERT M. CASE . . . . 15 Mynderse St., Schenectady, N.Y.	VI.	With General Electric Co.
EDNA M. CHANDLER . . . 13 Mason St., Brunswick, Me.	V.	Teacher of Mathematics and Chemistry, Brunswick High School.
JAMES F. CHAPMAN, S.B. . 209 E. Evans Ave., Pueblo, Colo.	VI.	Assistant in Engineering Department, Colorado Fuel and Iron Co.
DAVID C. CHURCHILL . . Sholapur, India.	II.	Civil Engineer, British Government.
FREDERICK O. CLAPP, A.B., A.M. City Hall, Providence, R.I.	I.	In City Engineer's Office.
JAMES KENNETH CLARK . Ferguson Bldg , Pittsburgh, Pa.	II.	With S. V. Huber & Co., Consulting Engineers.

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CLARENCE B. CLUFF . . . 225 E. Nineteenth St., Chicago, Ill.	V.	Chemist, American Cotton Oil Co.
JOHN E. CONGDON . . . . 84 Prospect St., Passaic, N.J.	II.	Superintendent of Tests, The New York Belting & Packing Co., Limited.
HERBERT K. CONKLIN . . Lawyers Bldg., Newark, N.J.	IV.	Of Firm of Conklin, Boring, & Tilton, Architects.
GEORGE I. COPP . . . . . 51 Union St., Worcester, Mass.	II.	With H. G. Barr & Co.
WILLIAM M. CORSE . . . . 560 E. Milwaukee Ave., Detroit, Mich.	V.	Chemist, with the Detroit White Lead Works.
WILLIAM L. CURRY . . . 168 Homewood Ave., Pittsburgh, Pa.	VI.	With Engineering Department, Duquesne Works, Carnegie Steel Co.
HARVEY M. CUSHING . . . Schenectady, N.Y.	VI.	With Testing Department, General Electric Co.
HARRY S. DAMON . . . . Stewartsville, N.J.	II.	Engineer, with Edison Portland Cement Co.
HENRIETTA C. DOZIER . . 69 Crew St., Atlanta, Ga.	IV.	Architect.
CHARLES D. DREW, A.B. . Victoria de las Tunas, Cuba.	I.	Assistant Division Engineer and District Manager of Construction, The Cuba Co.
TIMOTHY J. DRISCOLL . . Sydney, C.B.	VI.	Resident Engineer, The United Coke and Gas Co.
HENRY C. EATON . . . . 50 Taylor St., Waltham, Mass.	II.	Foreman, Engineering Department, American Waltham Watch Co.
JAMES B. ELLERY . . . . Duquesne, Pa.	V.	With the Carnegie Steel Co.
GEORGE D. EMERSON . . . San Francisco, Cal.	VI.	With Electrical Department, Union Iron Works.
JOHN B. FERGUSON . . . Lincoln, Nebr.	I.	Division Engineer, Burlington & Missouri River R.R.
LEONARD H. FIELD, JR., A.B. 53 State St., Boston.	IV.	Draughtsman, with Peabody & Stearns, Architects.
FREDERIC ALONZO FIFIELD . Kodak Park, Rochester, N.Y.	II.	Chief Draughtsman, Eastman Kodak Co.
JOHN A. FLEMINGS . . . 9 St. Paul St., Baltimore, Md.	VI.	Special Inspector, Chesapeake & Potomac Telephone Co.
WILLIAM B. FLYNN . . . Park Row Bldg., New York, N.Y.	VI.	With Rapid Transit Subway Construction Co.
ARTHUR B. FOOTE . . . . Care, D. W. Deshler, Chemulpo, Korea.	I.	Civil Engineer, Wunsan Mines.

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FRANK F. FOWLE . . . . 22 Thames St., New York, N.Y.	VI.	With American Telephone and Telegraph Co.
GARDNER M. GALE . . . . 1123 Broadway, New York, N.Y.	IV.	Draughtsman, with Hill & Stout, Architects.
CHARLES B. GILLSON . . . Burnham, Pa.	X.	Assistant Chemist in Laboratory of Standard Steel Works.
RUSSELL, GILPIN . . . . Address unknown.	II.	
GEORGE CURTIS GLOVER . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
HARRY W. GOLDTHWAITE . 19 Bigelow St., Brighton, Mass.	II.	Mechanical Engineer.
HERBERT C. GREER . . . 214 No. Jefferson St., New Castle, Pa.	III.	With American Tin Plate Co.
ASA WATERS GROSVENOR, B.S. 2 Carson St., Pittsburgh, Pa.	II.	Assistant on Engineer Corps, Pittsburgh Division, Pennsylvania Lines West of Pittsburgh.
FREDERICK W. GROVER . Easton, Pa.	VIII.	Instructor in Electrical Engineering, Lafayette College.
EDWARD H. HAMMOND . . 206 E. Illinois St., Chicago, Ill.	V.	With The Brandsville Fruit Farm Co.
ROSS HASBROUCK . . . . Jersey City, N.J.	I.	Office Engineering Corps, Maintenance of Way Department, Pennsylvania R.R.
LAWRENCE A. HAWKINS, B.A. Pittsfield, Mass.	VI.	With Stanley Electric Manufacturing Co.
BENJAMIN P. HAZELTINE . McKeesport, Pa.	VI.	Assistant to Master Mechanic, The National Tube Co.
R. STEWART HENDERSON, B.S. Walnut, Ill.	I.	Instrument Man, Chicago & North Western Ry.
BERNARD HERMAN . . . Washington, D.C.	I.	Assistant Engineer, Department of Bridges and Buildings, Southern Ry.
FRANK E. HERMANNS . . Phœnixville, Pa.	I.	Draughtsman, The Phœnix Bridge Co.
JOSEPH L. HERN . . . . Room 60, City Hall, Boston.	VI.	With Engineering Department, City of Boston.
HENRY H. HEWITT, A.B. . 12 rue de Seine, Paris, France.	IV.	Student, École des Beaux-Arts.

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
BENJAMIN S. HINCKLEY . . 147 Western Ave., St. Paul, Minn.	II.	With Northern Pacific Ry. Co.
EVERETT H. HINCKLEY . . 53 India St., Boston.	X.	Chemist, with Thomas Leyland & Co.
AMASA A. HOLDEN . . . 238 No. Main St., Woonsocket, R.I.	IX.	Sub-master of High School.
ALEXANDER R. HOLLIDAY . Allegheny, Pa.	I.	Assistant Engineer, Pennsylvania Co.
FRANK J. HUSE . . . . . 1715 Orrington Ave., Evanston, Ill.	II.	With D. H. Burnham & Co., Architects (Chicago, Ill.).
JEROME PAUL JACKSON, A.B. 122 Ames Bldg., Boston.	IV.	Draughtsman, with Shepley, Rutan, & Coolidge, Architects.
H. PHILIP JAMES . . . 31 Milk St., Boston.	II., VI.	Electrical Inspector, with the Associated Factory Mutual Insurance Co.
HANS P. JENSEN . . . . Canonsburg, Pa.	I.	Draughtsman, with Fort Pitt Bridge Works.
EDWARD JOHNSON, JR. . . 178 Marlborough St., Boston.	I.	Hydrographic Surveyor, U.S. Navy, Vallejo, Cal.
HARRY G. JOHNSON . . . 5 Lee St., Cambridge, Mass.	V.	With the Boston Woven Hose and Rubber Co.
LANE JOHNSON . . . . . 503 Broadway, Pueblo, Colo.	II.	Draughtsman, with The Colorado Fuel and Iron Co.
HARRY M. KEYS . . . . 1900 Filbert St., Philadelphia, Pa.	VI.	With Keystone Telephone Co.
FRED L. H. KIMBALL . . 35 Congress St., Boston.	III.	Mining Investments.
WILLIAM B. KING . . . . 119 Milk St., Boston.	VI.	With Electrical Department, New England Telephone and Telegraph Co.
WILLIAM A. KINSMAN . . Bridgeport, Conn.	II.	With the American Ordnance Co.
JAMES G. LEIPER, JR. . . 1602 Master St., Philadelphia, Pa.	II.	Student, University of Pennsylvania Law School.
THOMAS F. LENNAN . . . Joplin, Mo.	V.	Superintendent, The Sulphide Corporation.
CLANCEY M. LEWIS . . . Macao, China.	III.	Professor of Mining Engineering, Christian College.
JOSEPH E. LEWIS . . . . 638 New Britain Ave., Hartford, Conn.	II.	Mechanical Engineer, with The Whitlock Coil Pipe Co.

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ALLEN LOOMIS . . . . 35 Nassau St., New York, N.Y.	XIII.	Draughtsman, with Cary Smith, & Barbey.
RALPH W. LOUD . . . . 906 Pemberton Bldg., Boston.	I.	Engineering Assistant, Metropolitan Sewerage Works.
LEE R. LOVEMAN . . . . Address unknown.	VI.	
ALMERON WALLACE MCCREA 242 W. Seventy-sixth St., New York, N.Y.	IV.	Architect.
W. SCOTT MATHESON . . East Boston, Mass.	II.	Draughtsman, The Atlantic Works.
CARL S. MILLIKEN . . . 89 Saunders St., Lawrence, Mass.	VII.	Teacher of Science, Lawrence High School.
CLARENCE ALFRED MOORE 133 Broadway, Arlington, Mass.	X.	With Maintenance Department, Metropolitan Sewerage Commission.
CARL L. MORGAN . . . . 3 Head Pl., Boston.	VI.	In Purchasing Agent's Office, Edison Electric Illuminating Co. (Boston).
HARRY S. MORK . . . . 21 Wabeno St., Roxbury, Mass.	V.	Chemist, with Little & Walker, Consulting Chemists.
BENJAMIN E. MORSE . . . Canton, Mass.	II.	In Office of Morse Bros.
HARRY L. MORSE . . . 390 Atlantic Ave., Boston.	II., VI.	With Chase-Shawmut Co., Dealers in Electrical Specialties.
STANLEY MOTCH . . . . 322 Pine St., Steelton, Pa.	III.	With the Pennsylvania Steel Works.
ALBERT F. NATHAN, JR. . . Washington, D.C.	X.	Examiner, U.S. Patent Office.
LESTER ALLAN NEWELL . Hailey, Idaho.	III.	Mining Engineer.
WILLIAM S. NEWELL . . Boston, Mass.	XIII.	Instructor in Mechanical Engineering, Mass. Institute of Technology.
TIMOTHY C. O'HEARN . . Boston, Mass.	X.	Assistant in Mechanical Engineering, Mass. Institute of Technology.
WILLIAM H. J. O'LEARY, A.M. Pittsburgh, Pa.	VI.	With Construction Department, Westinghouse Electric & Manufacturing Co.
EDWIN A. PACKARD . . . Buffalo, N.Y.	II.	Draughtsman, Mechanical Engineering Department, Lackawanna Iron and Steel Co.
CHARLES B. PAGE . . . Sparrows Point, Md.	XIII.	Draughtsman, Marine Department, Maryland Steel Co.
WORTHINGTON PALMER . . University Club, Buffalo, N.Y.	IV.	Draughtsman, with George Cary, Architect.
WILL ROGERS PARKER . . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical Experts and Engineers.

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM E. PARKER . . . Washington, D.C.	I.	With U.S. Coast and Geodetic Survey.
GEORGE A. PENNOCK . . . Rock Island, Ill.	II.	Mechanical Engineer.
GEORGE HAWTHORNE PERKINS Lowell, Mass.	II.	Instructor in Mechanical Engineering, Lowell Textile School.
WILLIAM C. PHALEN . . . Boston, Mass.	V.	Graduate Student, Mass. Institute of Technology.
EARLE B. PHELPS . . . . Lawrence, Mass.	V.	With State Board of Health, Lawrence Experiment Station.
E. EVERETT PIERCE . . P.O. Box 563, Woodbury, N.J.	XIII.	Draughtsman, with New York Shipbuilding Co. (Camden, N.J.).
RALPH H. PINKHAM . . . Altoona, Pa.	I.	Transitman, in Principal Assistant Engineer's Office, Pennsylvania R.R.
WILLARD A. PRICE . . . 1553 Monadnock Blk., Chicago, Ill.	I.	Draughtsman, with Purdy & Henderson, Consulting Engineers.
GEORGE H. PRIEST . . . Newark, N.J.	X.	With the Essex and Hudson Gas Co.
JUNA REAL Y GAILLARD, A.B. 3 St. Gerómino, Santiago, Cuba.	I.	Engineer, with Cuban Central R.R.
ERNZST A. REGESTEIN . . 15 Mynderse St., Schenectady, N.Y.	VI.	With General Electric Co.
CLARENCE RENSHAW . . . E. Pittsburgh, Pa.	VI.	In Engineering Department, Westinghouse Electric and Manufacturing Co.
ALBERT A. REYNOLDS, B.A. Williamstown, Mass.	V.	Instructor in Chemistry, Williams College.
GERALD M. RICHMOND . . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical Experts and Engineers.
BURT R. RICKARDS . . . 607 Sudbury Bldg., Boston.	V.	Assistant Bacteriologist, Boston Board of Health, Bacteriological Laboratory.
HERBERT H. RIDDLE . . . 3 rue Soufflot, Paris, France.	IV.	Student of Architecture.
LEWIS W. RIDDLE . . . 417 First National Bank Bldg., Chicago, Ill.	XIII.	With The Kenwood Bridge Co.
GEORGE H. RIKER . . . . 111 Putnam Ave., Cambridge, Mass.	X.	With Reversible Collar Co.
SAMUEL B. ROBERTSON . . 2 Carson St., South Side, Pittsburgh, Pa.	I.	With Engineer, Maintenance of Way, Pittsburgh Division, Pittsburgh, Cincinnati, Chicago, & St. Louis Ry.
EDWIN F. SAMUELS . . . 21 Austin St., Hyde Park, Mass.	II.	With Lowell Machine Shop (Lowell, Mass.).

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM O. SAWTELLE . 50 Penobscot St., Bangor, Me.	VIII.	Director of Mathematics, Bangor High School.
HAVEN SAWYER . . . . . Vernal, Uinta Co., Utah.	II.	With The Uintah Copper Summit Co.
NORMAN E. SEAVEY . . . 93 Federal St, Boston, Mass.	VI.	With Stone & Webster, Electrical Experts and Engineers.
MILES S. SHERRILL . . . Brüderstrasse, Leipsic, Germany.	V.	Student, University of Leipsic.
EDWARD W. SIBLEY . . . Brownell St., Providence, R.I.	II.	Draughtsman for the Universal Winding Co.
FREDERICK R. SITES . . . Steelton, Pa.	I.	Draughtsman, Bridge and Construction Department, Pennsylvania Steel Co.
HERVEY J. SKINNER . . . Eleventh and Linden Sts., Camden, N.J.	V.	Chemist, General Chemical Co., Moro Phillips Works.
CHARLES A. SMITH . . . Atlanta, Ga.	I.	With Ford, Bacon, & Davis, Engineers.
LAWRENCE CLEMENT SOULE Newtonville, Mass.	X.	
HERBERT H. STARR . . 3744 Main St., Philadelphia, Pa.	I.	Draughtsman, Office of Erecting Engineer, American Bridge Co.
FREDERIC B. STEARNS . . 3 Hamilton Pl., Boston.	IV.	Draughtsman with Winslow, Wetherell, & Bigelow, Architects.
PHILIP STOCKTON, A.B. . . 390 Beacon St., Boston.	I.	Treasurer of Lowell Bleachery.
JACOB STONE, JR. . . . . P.O. Box 85, Ford City, Pa.	IV.	With Pittsburgh Plate Glass Co.
GERALD B. STREET . . . . Address Unknown.	II.	
EDWIN SUTERMEISTER . . Cumberland Mills, Me.	V.	Chemist for S. D. Warren & Co.
WALTER H. SUTLIFF . . . Janes Bldg., Toronto, Ont.	IV.	Engineer with The National Portland Cement Co.
CLIFFORD M. SWAN . . . 91 Babcock St., Brookline, Mass.	V.	In Business.
CHARLES W. SWIFT . . . Philadelphia, Pa.	II.	With Fayette R. Plumb, Incorporated.
FRANK R. SWIFT . . . . Troy, N.Y.	X.	Mechanical Engineer with Cluett, Peabody, & Co.
FREDERIC TAPPAN . . . . 18 Cortlandt St., New York, N.Y.	VI.	With Engineering Department, New York Telephone Co.
DENZIL H. TAYLOR . . . Lavag, Ilocos Norte, P.I.	I.	Provincial Supervisor.

1899.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES A. TORREY, JR. Boston, Mass.	V.	
EDGAR P. TRASK . . . Woodbury, N.J.	XIII.	Draughtsman, Scientific Department, New York Shipbuilding Co. (Camden, N.J.).
ALBERT W. TUCKER . . . Gold Hill, N.C.	III.	Mining Engineer with Union Copper Mining Co.
JOHN L. TUFTS . . . . . Edgewater, N.J.	V.	Chemist, Hudson River Works, General Chemical Co.
ROBERT M. VINING . . . 21 Union St., South Weymouth, Mass.	II.	
FREDERICK C. WADDELL . Cleveland, Ohio.	I.	Draughtsman, Brown Hoisting Machinery Co.
ETHEREDGE WALKER . . . Ouray, Colo.	III.	With Mt. Lion Mines Co.
ROBERT B. WALLACE . . West Bay City, Mich.	XIII.	Manager, The West Bay City Shipbuilding Co.
JOHN ABBET WALLS . . . Niagara Falls, N.Y.	VI.	In Office of W. C. Johnson, Engineer for Hydraulic Power and Manufacturing Co.
EDWARD P. WALTERS . . . 88 Magnolia St., Roxbury, Mass.	V.	Assistant Biologist, Metropolitan Water Board.
WILLIAM J. WALTHER . . 7 Arch St., Boston.	I.	Agent for C. S. Knowles.
JAMES H. WALTON, JR. . . Heidelberg, Germany.	V.	Student, University of Heidelberg.
FREDERICK A. WATKINS . Chicago, Ill.	II.	With Western Electric Co.
CHARLES ALBERT WATROUS 22 Congress St., Boston.	IV.	Draughtsman with Coolidge & Carlson, Architects.
WALTER W. WELLS . . . 105 Quincy St., Chicago, Ill.	VI.	With American Telephone and Telegraph Co.
LEWIS R. WHITAKER . . East Everett, Mass.	I.	Draughtsman with The New England Structural Co.
HARRY KEITH WHITE . . 160 Fifth Ave., New York, N.Y.	IV.	Draughtsman with McKim, Mead, & White, Architects.
WILLIAM WHITE . . . . Parlin, N.J.	V.	Chemist for the International Smokeless Powder and Dynamite Co.
EDWARD S. WIARD . . . Wardner, Idaho.	III.	Assayer and Assistant Engineer, Empire State-Idaho Mining and Developing Co.
CHARLES F. WING, JR. . . 552 Harrison Ave., Boston.	VI.	Engineer.

1899. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
PERCY W. WITHERELL . . 91 Causeway St., Boston.	VI.	Secretary, The Warren F. Witherell Co., Wholesale and Retail Grocers.
WILLIARD L. WOOD, JR. . Cole Bldg., Nashville, Tenn.	VI.	With Sales Department, General Electric Co.
JOHN W. WOOLLETT . . . Twenty-eighth and Railroad Sts., Pittsburgh, Pa.	I.	Chief Draughtsman, Marshall Foundry and Structural Works (Pittsburgh).

1900.

DAVID G. ABEEL . . . . Hudson and Sussex Sts., Jersey City, N.J.	I.	Assistant Engineer, New York Continental Jewell Filtration Company.
GEORGE O. ADAMS . . . Experiment Station, Lawrence, Mass.	V.	With State Board of Health, Lawrence Experiment Station.
ELBERT G. ALLEN, S.M. . . 93 Federal St., Boston, Mass.	II.	With Stone & Webster, Electrical Experts and Engineers.
HARRISON EVERETT ASHLEY 947 Acushnet Ave., New Bedford, Mass.	X.	Chemist, with the Tremont Nail Co. (West Wareham).
STEPHEN BADLAM . . . . 23 No. Fourth St., Steelton, Pa.	III.	Assistant Superintendent, Merchant Mill Department, Pennsylvania Steel Co.
R. WILFRED BALCOM . . Boston, Mass.	V.	Assistant in Analytical Chemistry, Mass. Institute of Technology.
CHARLES E. BALDWIN . . 28 Binford St., Boston.	V.	Chemist, with The Cellulose Products Co.
JAMES E. BARKER . . . . Plaza Blk., El Paso, Texas.	VI.	Superintendent, International Light and Power Co.
MORGAN BARNEY . . . 32 Broadway, New York, N.Y.	XIII.	Draughtsman, with H. C. Wintringham, Naval Architect.
CHARLES A. BARTON, JR. . 259 So. Clinton St., Chicago, Ill.	VI.	With Engineering Department, Western Electric Co. (Chicago).
JAMES H. BATCHELLER . . 83 Newbury St., Boston.	III.	
JOHN V. D. BEEKMAN, JR. . 75 Fifth Ave., New York, N.Y.	IV.	With Purdy & Henderson, Consulting Engineers.
ROBERT S. BLAIR . . . . Washington, D.C.	VI.	Assistant Examiner, U.S. Patent Office.
INGERSOLL BOWDITCH, A.B. 28 State St., Boston.	I.	Civil Engineer.
ALBERT B. BRIGGS . . . . Room 372, South Station, Boston.	I.	With Engineering Department, Boston & Albany R.R.

1900.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES C. BRIGGS, JR. . 153 Craig St., Pittsburgh, Pa.	XIII.	Draughtsman, with Jones & Laughlin (Limited), American Iron and Steel Works.
HENRY M. BROCK, A.B. . 15 Woodville St., Boston.	VIII.	In Private Business.
MILES E. BROOKS . . . . Vicksburg, Miss.	I.	Assistant Engineer, Alabama & Vicksburg Ry.; Vicksburg Shreveport, & Pacific R.R. (Queen & Crescent Route).
PAUL R. BROOKS . . . . Beardstown, Ill.	II.	With Operating Department, Chicago, Burlington, & Quincy R.R.
CHARLES H. BROWN . . . 30 Ferry St., New York, N.Y.	X.	With Laboratory Department, United States Leather Co.
CLARENCE C. BROWN . . . 125 Milk St., Boston.	VI.	With American Bell Telephone Co.
JOHN W. BROWN . . . . Heidelberg, Germany.	V.	Student in the University.
STEPHEN P. BROWN . . . Atlanta, Ga.	II.	Of Firm of Collier & Brown, Consulting Engineers.
FREDERICK D. BUFFUM . . 223 Lincoln St., Johnstown, Pa.	II.	Draughtsman, with The Cambria Steel Co.
EDWARD E. BUGBEE . . . Boston, Mass.	III.	Assistant in Mining Engineering and Metallurgy, Mass. Institute of Technology.
ROY G. BURNHAM . . . . 530 Atlantic Ave., Boston.	II.	Draughtsman.
KARL BURROUGHS . . . . Rumford Falls, Me.	X.	With Stone & Webster, Electrical Experts and Engineers, (93 Federal St., Boston).
MARION L. CADE . . . . Boston, Mass.	V.	Private Assistant to Mrs. Richards, Mass. Institute of Technology.
JOHN CAMPBELL . . . 23 No. Fourth St., Steelton, Pa.	III.	With The Pennsylvania Steel Co.
LLEWELLYN L. CAYVAN . . Chicago, Ill.	V.	With The National Biscuit Co.
WALTER C. CHAFFEE . . . 85 Edmund Pl., Detroit, Mich.	IV.	Architect.
WALTER N. CHARLES . . . West Newton, Mass.	I.	Draughtsman, City Engineer's Office, City of Newton.
AURIN M. CHASE, B.S. . . 312 Comstock Ave., Syracuse, N.Y.	II.	Mechanical Engineer, with the Syracuse Chilled Plow Co.
ROBERT H. CLARY . . . Care, State Mining Bureau, San Francisco, Cal.	III.	Mining Engineer.

1900. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
RUDOLPH J. CLAUSEN, 624 W. Sixth St., Davenport, Iowa.	IV.	With Clausen & Burrows, Architects.
PERCIVAL C. CLOW, East Berlin, Conn.	IV.	Draughtsman, with The American Bridge Co.
WILLIAM R. COLLIER, Atlanta, Ga.	VI.	Of Firm of Collier & Brown, Consulting Engineers.
FRANKLIN N. CONANT, 127 Purchase St., Boston.	VI.	With Testing Laboratory, Stone & Webster, Electrical Experts and Engineers.
HAROLD S. CONANT, Reading, Mass.	VII.	Teacher, Reading High School.
JOHN B. CONANT, 28 Bridge St., Lowell, Mass.	VI.	With Lowell Electric Light Corporation.
FREDERICK H. COOKE, Portsmouth, N.H.	I.	Draughtsman, Yards and Docks Department, U.S. Navy Yard.
EDWARD H. DAVIS, Room 73, City Hall, Boston.	IX.	Statistical Clerk, Department of Municipal Statistics.
WALTER CLARK DEAN, Norfolk, Va.	VI	With Bureau of Construction and Repair, U.S. Navy Yard.
PAUL H. DELANO, Jersey Shore, Pa.	I.	With Maintenance of Way Department, Pennsylvania Division, New York Central & Hudson River R.R.
WILLIAM A. DOREY, 7452 Bond Ave., Chicago, Ill.	III.	With Blast Furnace Department, Illinois Steel Co.
JOSEPH P. DRAPER, Canton, Mass.	IX.	Student, Harvard University Law School.
CLARA I. DURGIN, Belmont, Mass.	V.	
FRANCIS B. DUTTON, A.B., 23 No. Fourth St., Steelton, Pa.	X.	With The Pennsylvania Steel Co.
WARREN A. EDSON, Roland St., Charlestown, Mass.	II.	Draughtsman, with The Crosby Steam Gage and Valve Co.
SAMUEL B. ELBERT, Club Hotel, Idaho Springs, Colo.	III.	Mining Engineer.
CARLETON ELLIS, Boston, Mass.	V.	Assistant in Oil and Gas Analysis, Mass. Institute of Technology.
LEWIS EMERY, 3d, 41 Main St., Bradford, Pa.	III.	With The Emery Manufacturing Co., Oil Refiners.
ETHEL F. FIFIELD, A.B., 17 Pleasant St., Salem, Mass.	IV.	Instructor in School of Housekeeping (Boston).
STANLEY G. H. FITCH, 18 Post Office Sq., Boston.	X.	With Dillaway & Co., Bankers and Brokers.

1900.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE B. FORD, A.B. 53 State St., Boston.	IV.	Draughtsman, with Peabody & Stearns, Architects.
CHARLES M. FOSDICK . Boston, Mass.	XI.	Assistant in Civil Engineering, Mass. Institute of Technology.
PHILIP R. FRENCH . Lowell, Mass.	V.	Instructor in Analytical Chemistry, Lowell Textile School.
GERALD FRINK . P.O. Box 175, Seattle, Wash.	II.	Assistant Superintendent, The Washington Iron Works Co.
WILLIAM H. FULTON . 413 No. Pearl St., Albany, N.Y.	VI.	Mechanical Inspector, The Consolidated Car Heating Co.
EDWARD G. GALLAGHER . 146 Concord St., South Framingham, Mass.	VI.	With Boston Elevated Street Ry. Co.
STEPHEN F. GARDNER . 992 I St., N.W., Washington, D.C.	II.	Heating and Ventilating Draughtsman, Supervising Architect's Office, U.S. Treasury Department.
CARL F. GAUSS . Colorado Springs, Colo.	IX.	With First National Bank.
GEORGE CROCKER GIBBS . Cleveland, Ohio.	I.	Draughtsman, with The Brown Hoisting Machinery Co.
JOHN T. F. GLADDING . 26 Stanwood St., Providence, R.I.	II.	Draughtsman, with New England Putt Co.
FREDERIC S. GOODRIDGE . 109 High Rock Ave., Lynn, Mass.	II.	With F. B. Gilbreth, Building Contractor.
LOUIS N. GOWELL . 18 Post Office Sq., Boston.	IV.	Draughtsman, with The New England Structural Co.
MILTON WESTON HALL . 1134 Judson Ave., Evanston, Ill.	VII.	Student in Medical Department, University of Illinois.
STEPHEN MINARD HALL . Norfolk, Va.	VI.	With Bureau of Construction and Repair, U.S. Navy Yard.
ARTHUR L. HAMILTON . Marinette, Wis.	III.	Secretary and Treasurer, Marinette Iron Works Manufacturing Co.
C. HOWARD HAPGOOD . 25 E. Forty-sixth St., Chicago, Ill.	VI.	Assistant Electrical Engineer, with The Schwarzschild & Sulzberger Co. (Ashland and Forty-first Sts.).
HARRY M. HARPS . Fort Dodge, Iowa.	I.	Draughtsman, Bridge Department, Mason City & Fort Dodge R.R.
GARABED G. HEGHINIAN, A.B. 1 Newark St., Hoboken, N.J.	XI.	With W. F. Whittemore, Civil Engineer.
EDWARD HERBERT . 111 Loomis St., Chicago, Ill.	VI.	With Western Electric Co.
DEAN HINMAN . Pueblo, Colo.	I.	Civil Engineer, with Colorado Fuel and Iron Co.

1900.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
TOMOKICHI HIROKAWA, B.S. Kyoto, Japan.	VI.	Teacher, Doshisha College.
CHARLES W. HODSDON . . Boston, Mass.	II.	Assistant in Mechanical Drawing, Mass. Institute of Technology.
GEORGE M. HOLBROOK . . 300 E. Sixty-first Pl., Chicago, Ill.	V.	With Rail Mill Department, South Works, Illinois Steel Co.
HARRIS G. HOOPER . . Greenport, N.Y.	XIII.	Naval Architect, with The Greenport Basin and Construction Co.
BERTRAM C. HOPEMAN . . 39 Lake View Park, Rochester, N.Y.	IV.	With A. W. Hopeman, Builder.
ROBERT M. HOPKINS . . . 1149 Marquette Bldg., Chicago, Ill.	VI.	With C. A. Chapman, Consulting Engineer.
FRANK N. HORTON . . . Howard St., Quincy, Mass.	II.	Draughtsman, Engineering Department, Fore River Ship and Engine Co.
WILLIAM B. HOUGH . . . 812 Lewis Blk., Pittsburgh, Pa.	II.	With The Dravo Construction Co.
HERBERT H. HOWE . . . 21 Durant St., Newton, Mass.	IX.	
HERMAN R. HUNT . . . 886 St. Nicholas Ave., New York, N.Y.	XIII	Ship Draughtsman, Third Class, Office of Naval Constructor, Gas Engine and Power Co.
JAMES W. HUSSEY . . . Camden, N.J.	XIII.	Draughtsman, Scientific Department, New York Shipbuilding Co.
CHARLES C. JOHNSON . . . 20 Beacon St., Boston.	X.	With Boston Transit Commission.
DANIEL S. JOHNSON . . . 712 Summit St., Pueblo, Colo.	III.	With The Philadelphia Plant, American Smelting and Refining Co.
HENRY D. JOUETT . . . . West Albany, N.Y.	I.	Assistant Supervisor of Track, New York Central & Hudson River R.R.
WALTER R. KATTELLE . . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
HERBERT O. KEAY . . . . 361 Medford St., Somerville, Mass.	II.	Chief Draughtsman, Motive Power Department, Boston & Maine R.R. (Boston).
LEIGH S. KEITH . . . . . 18 Cortlandt St., New York, N.Y.	VI.	With Engineering Department, New York Telephone Co.
ARTHUR I. KENDALL . . . Lawrence, Mass.	VII.	Assistant Biologist, State Board of Health.
WILLIAM A. KINGMAN . . Leominster, Mass.	V.	Chemist, with The Viscoloid Co.

1900. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE W. KNIGHT . . . Central Soledad, Cienfuegos, Cuba.	V.	Chemist, with E. Atkins & Co.
GRACE LANGFORD . . . Wellesley, Mass.	VIII.	Instructor in Physics, Wellesley College.
JOHN HEBER LARRABEE . . Washington, D.C.	I.	Draughtsman, Hydrographic Office, U.S. Navy Department.
LEWIS M. LAWRENCE . . . Jacksonville, Fla.	IV.	Draughtsman, with Arthur B. Gilkes, Architect.
ROBERT H. LEACH . . . . New Linden Hotel, Lake Linden, Mich.	III.	With Todd C. Woodworth.
CLIFFORD M. LEONARD . . 1744 Monadnock Blk., Chicago, Ill.	I.	Draughtsman.
RONDEL MORSE LEWIS . . Malden, Mass.	V.	Chemist.
EDITH LILIENCRANTZ . . . 359 Telegraph Ave., Oakland, Cal.	IV.	
FRANCIS C. LINCOLN . . . Socorro, N.M.	III.	Professor of Chemistry and Geology, New Mexico School of Mines.
ROBERT R. LINGLEY . . . 7 King St., North Cambridge, Mass.	II.	With Densmore & Le Clear (15 Exchange St., Boston).
HOMER LITTLEFIELD . . . 844 Union St., Schenectady, N.Y.	VI.	With Testing Department, General Electric Co.
FRANCIS H. MCCRUDDEN . Boston, Mass.	V.	In Pathological Research Work, Mass. General Hospital.
FRANCIS X. MCGOWAN . . 57 Bethune St., New York, N.Y.	II.	With Western Electric Co.
HERBERT A. MACPHERSON 8 Grand View Ave., Medford, Mass.	XIII.	Draughtsman.
SUMNER M. MANLEY . . . 50 Jenkins St., Providence, R.I.	II.	With Silver Spring Bleaching and Dyeing Co.
DANIEL E. MAXFIELD . . 9 Eldredge St., Newton, Mass.	II.	Assistant Operator in Testing Department, Watertown Arsenal, Mass.
GEORGE H. MEAD, B.L. . . 24 Binford St., Boston.	X.	Chemist, with Cellulose Products Co.
ARTHUR C. MELCHER . . Boston, Mass.	V.	Private Assistant to Professor Whitney, Mass. Institute of Technology.
CHARLES V. MERRICK . . 424 Fifth Ave., New York, N.Y.	IV.	Draughtsman and Superintendent, with Trowbridge & Livingston, Architects.

1900. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ALBERT S. MERRILL . . . Madison, Wis.	X.	Instructor in Mechanical Engineering, University of Wisconsin.
GEORGE B. MOODY . . 83 South St., Bath, Me.	XIII.	Draughtsman, with The Bath Iron Works.
HAROLD L. MORGAN . . . 133 W. Ninety-seventh St., New York, N.Y.	VI.	With New Jersey Foundry and Machine Co.
MORTON C. MOTT-SMITH . New York, N.Y.	VI.	Student in Philosophy and Psychology, Columbia University.
WALTER A. MOULTON . . 57 Oliver St., Boston.	III.	Salesman, with Perrin, Seamans, & Co.
NEWITT J. NEALL . . . Pittsburgh, Pa.	VI.	With Department of Electrical Engineering, Westinghouse Electric and Manufacturing Co.
EDWARD NORTH, 2d . . . Ouray, Colo.	III.	Mining Engineer.
HARRY E. OSGOOD . . . 53 State St., Boston.	II.	Draughtsman, with Dean & Main.
ISAAC OSGOOD . . . . . 105 Front St., Schenectady, N.Y.	II.	With Testing Department, General Electric Co.
HORACE W. OXNARD . . . Houlton, Me.	I.	Draughtsman, Bangor & Aroostook R.R.
JAMES A. PATCH . . . . Beirût, Syria.	X.	Instructor in the Natural Sciences, Syrian Protestant College.
CHARLES E. PAUL . . . . 278 Congress St., Boston.	II.	Draughtsman, with American Soda Fountain Co.
ARTHUR S. PECK . . . 40 Clinton St., Boston.	VIII.	
THOMAS E. PENARD . . . 32 Irving St., Everett, Mass.	VI.	Draughtsman, with the Edison Electric Illuminating Co. of Boston.
THOMAS D. PERRY, A.B. . 8 Pearl St., Charlestown, Mass.	II.	Assistant in Mechanical Department, Library Bureau (Boston).
WILLIAM G. PIGEON . . . Ames Bldg., Boston.	IV.	Draughtsman, with Shepley, Rutan, & Coolidge, Architects.
EDMUND H. PITCHER . . Lawrence, Mass.	II.	Assistant Engineer, Lower Pacific Mills.
HOWARD C. PLUMMER . . Placerville, Cal.	III.	Assayer for The River Hill Mining and Milling Co.
JOHN L. PORTER . . . . 602 Carondelet St., New Orleans, La.	XI.	Chemist, New Orleans Sewerage and Water Board.
PAUL L. PRICE, Ph.M., M.S. East Berlin, Conn.	IV.	Draughtsman, with American Bridge Co.

1900. — *Continued.*

NAME AND ADDRESS	COURSE.	OCCUPATION.
WILLIAM P. RAND . . . . 20 Wilson Ave., Malden, Mass.	IV.	Draughtsman, Boston Steel and Iron Co.
WALTER L. RAPP . . . . Johnston Bldg., Cincinnati, Ohio.	IV.	With George W. Rapp, Architect.
ARVILLE C. REDMAN . . . 310 A St., N.E., Washington, D.C.	I.	With Engineering Department, Sewer Division.
ARTHUR A. REIMER . . . 9 Main St., East Orange, N.J.	I.	Engineer and Architect, North Jersey Street Ry. Co.
CHESTER A. RICHARDSON . . 208 Temple Court Bldg., New York, N.Y.	I.	Draughtsman, with Joseph H. Wallace, Paper Mill Architect and Engineer.
PHILIP F. RIPLEY, A.B. . . Maynard, Mass.	V.	Chemist, with American Woollen Co.
ROBERT P. ROBERTS . . . Great Falls, Mont.	III.	With Boston & Montana Mining Co.
RALPH ROOT . . . . . 19 McKinley Bldg., Joplin, Mo.	III.	Assistant to Frank Nicholson, Mining Engineer.
GEORGE E. RUSSELL . . . Berwick, Pa.	I.	Designer, Steel Car Department, American Car and Foundry Co.
WARREN W. SANDERS . . 132 Noble St., Brooklyn, N.Y.	V.	Chemist, with The General Chemical Co.
ALBERT G. A. SCHMIDT . . 527 Wabasha St., St. Paul, Minn.	II.	With The American Hoist & Derrick Co.
GEORGE O. SCHNELLER . . Ansonia, Conn.	II.	Treasurer, The Ansonia O. & C. Co.
LEWEN F. SEARLE . . . . Weehawken, N.J.	I.	With Maintenance of Way Department, River Division, New York Central & Hudson River R.R.
KENNETH SEAVER . . . . 6335 Marchand St., Pittsburgh, Pa.	I.	With American Bridge Co.
HENRY T. SHAPLEY . . . Leavitt, Nebr.	X.	Chemist, with The Standard Beet Sugar Co.
CHARLES E. SHERMAN . . 139 Main St., Westerly, R.I.	IV.	With R. A. Sherman.
LOUIS W. SHUMAKER . . . 7600 Frankstown Ave., Pittsburgh, Pa.	VI.	With American Telephone and Telegraph Co.
MORTIMER SILVERMAN . . 150 Jay St., Schenectady, N.Y.	VI.	Assistant Foreman, Induction Motor Test Department, General Electric Co.
ROBERT C. SIMPSON . . 31 State St., Boston.	XIII.	Draughtsman, with B. B. Crowninshield, Naval Architect.

1900. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CHARLES E. SMITH . . . 301 Railroad Bldg., New Haven, Conn.	I.	Draughtsman, Bridge Engineer's Office, New York, New Haven, & Hartford R.R.
LAWRENCE S. SMITH . . . Boston, Mass.	II.	Assistant in Mechanical Engineering, Mass. Institute of Technology.
FREDERICK W. SNOW . . South Boston, Mass.	III.	With The Carmichael Reduction Co.
FREDERIC W. SOUTHWORTH 120 Tremont St., Boston.	IV.	Draughtsman, with H. A. Phillips, Architect.
MARCY L. SPERRY . . . . Philadelphia, Pa.	II.	With William Sellers & Co.
HERBERT R. STEARNS . . 108 Cushing Ave., Dorchester, Mass.	I.	Civil Engineer, Metropolitan Sewerage Works.
W. LEONARD STEVENS . . Ducktown, Tenn.	III.	Assistant Chemist, The Tennessee Copper Co.
LEWIS STEWART . . . . 35 Wall St., New York, N.Y.	IV.	With Ernest Flagg, Architect.
WILLARD W. STONE . . . District Bldg., Washington, D.C.	I.	With Engineering Department, Sewer Division, City of Washington.
CHARLES H. STRATTON . . Annapolis, Md.	IV.	Inspector, Department of Buildings and Grounds, U.S. Naval Academy.
CARL F. SUHR . . . . . Ansonia, Conn.	II.	Assistant Master Mechanic, Wire Mill, Ansonia Brass and Copper Co.
HENRY H. SULLIVAN . . . 93 Federal St., Boston.	II.	Draughtsman, with Lockwood, Greene, & Co., Mill Engineers.
RUSSELL SUTER . . . . . 1 Ashburton Pl., Boston.	I.	Draughtsman, Engineering Department, Metropolitan Water and Sewerage Board.
HARRY MARTIN THAYER . Augusta, Ga.	V.	Chemist, with Southern Cotton Oil Co., Augusta District.
CLINTON D. THURBER . . League Island, Philadelphia, Pa.	I.	Structural Steel Draughtsman, Department of Yards and Docks, U.S. Navy Yard.
PERCIVAL E. TRUE . . . . Elizabethport, N.J.	X.	Chemist, with The Bowker Fertilizer Co.
THEODORE C. TUCK . . . Phœnixville, Pa.	I.	With The Phœnix Bridge Co.
WARREN C. TUDBURY . . Office of Division Engineer, Watertown, N.Y.	I.	Rodman, with New York Central & Hudson River R.R. Co.
GEORGE A. TWEEDY . . Ferry Bldg., San Francisco, Cal.	III.	Field Assistant, California State Mining Bureau.

1900.— *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
EMIL F. VOGEL . . . . . Columbus, Ohio.	I.	With The Case Manufacturing Co.
HARRY L. WALKER . . . 542 Equitable Bldg., Atlanta, Ga.	IV.	With J. H. Dinwiddie, Architect,
ARTHUR C. WALWORTH, JR. 100 Pearl St., Boston.	II.	Steam Engineer.
FRANK D. WARREN . . . 53 State St., Boston.	II.	With Dean & Main, Mechanical and Mill Engineers.
RICHARD WASTCOAT . . . 70 Kilby St., Boston.	I.	With Estimating Department, Boston Bridge Works.
WILLIAM H. WEDLOCK . . 30 Tremont St., Boston.	I.	With Sewer Division, Street Department, City of Boston.
IRVING C. WEEKS . . . . Easthampton, Mass.	IX.	Teacher, Williston Seminary.
ARTHUR B. WHITE . . . Steelton, Pa.	I.	Draughtsman, Bridge and Construction Department, The Pennsylvania Steel Co.
WALTER C. WHITNEY . . 10 Maple St., Newton, Mass.	I.	Inspector, Engineering Department, Boston & Albany R.R.
ALICE V. WILSON . . . . Smith's Grove, Ky.	V.	Teacher of Science and of Mathematics, Vanderbilt Training School.
FREDERICK W. WITHERELL Boston, Mass.	XI.	With Engineering Department, Mass. State Board of Health.
WILLIAM I. WYMAN . . Charlestown, Mass.	XIII.	Ship Draughtsman, U.S. Navy Yard.
PERCY R. ZIEGLER . . . . 57 Bethune St., New York, N.Y.	II.	With Western Electric Co.

1901.

CLAYTON ALBISTON . . . 1 Seventh St., New Bedford, Mass.	II.	
WILLIAM T. ALDRICH . . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
G. WINTHROP ALLEN . . . Essex Bldg., Boston.	II.	With Fred S. Hinds, Mill Engineer and Architect.
CHARLES L. B. ANDERSON . 26 Fair St., Newburyport, Mass.	I.	With Sewer Construction Department, City of Newburyport.
ROBERT ANDREW . . . . The Inn, Vandergrift, Pa.	II.	Machinist.
W. CORNELL APPLETON . . 919 Exchange Bldg., Boston.	IV.	Draughtsman, with Peabody & Stearns, Architects.
WILLIAM COLLINS ARSEM . Schenectady, N.Y.	V.	Research Chemist, General Electric Co.

1901. — *Continued*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE D. ATWOOD . . . 141 Broadway, New York, N.Y.	II.	With Henry W. Bulkley.
CHARLES I. AUER . . . . 818 Richmond St., Cincinnati, Ohio.	III.	Mining Engineer.
FREDERIC C. AYERS . . 9 Cleverly Ct., Quincy, Mass.	XIII.	Draughtsman, with The Fore River Ship and Engine Co.
ROBERT W. BAILEY . . 30 W. Twenty-fifth St., New York, N.Y.	XIII.	
FREDERIC H. BASS . . . . Minneapolis, Minn.	XI.	Instructor in Civil Engineering, University of Minnesota.
FRANCIS K. BAXTER, JR. . Grantville, Ga.	III.	Assistant Superintendent, The Wilkes Mining Co.
EDWARD P. BECKWITH . . Boston, Mass.	V.	Assistant in Chemistry, Mass. Institute of Technology.
EDWARD B. BELCHER . . . 148 Hawthorne St., Malden, Mass.	II.	With F. P. Greene, Machinist and Engineer.
WARREN I. BICKFORD . . Boston, Mass.	VI.	Assistant in Physics, Mass. Institute of Technology.
L. HERBERT BIGELOW . . Room 77, Central Bldg., Lowell, Mass.	I.	Assistant Engineer with The Merrimac Paving Co.
ARTHUR H. BIRKS . . . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
HUSE T. BLANCHARD . . . 122 Ames Bldg., Boston.	IV.	With Shepley, Rutan, & Coolidge, Architects.
WILLIAM G. BLAUVELT, A.B. 125 Milk St., Boston.	VI.	With American Bell Telephone Co.
ROY H. BOLSTER . . . . Boston, Mass.	VI.	Graduate Student, Mass. Institute of Technology.
FREDERICK H. BOND, JR. . 1 Somerset St., Boston, Mass.	IV.	Architectural Draughtsman, with C. K. Cummings.
FREDERIC R. C. BOYD . . Lynn, Mass.	VI.	In Special Condenser Investigation Work, General Electric Co.
JOHN BOYLE, JR. . . . . Boston, Mass.	III.	Assistant in Mining Engineering and Metallurgy, Mass. Institute of Technology.
JOHN P. BRIGGS . . . . 152 Sumac St., Philadelphia, Pa.	I.	With Engineering Department, The American Bridge Co.
EDMOND F. BRIGHAM . . . 42–52 Chardon St., Boston.	X.	With Forbes, Hayward, & Co., Incorporated Confectioners.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
MATTHEW C. BRUSH 432 Superior St., Duluth, Minn.	II.	
EDWIN P. BURDICK East Everett, Mass.	I.	Draughtsman, with The New England Structural Co.
CHARLES W. CADE East Cambridge, Mass.	X.	With The George F. Blake Manufacturing Co.
FRANCIS E. CADY Boston, Mass.	VI.	Assistant in Physics, Mass. Institute of Technology.
ANTOINE B. CAMPAU 407 Madison Ave., Grand Rapids, Mich	IV.	Studying abroad.
CHARLES F. F. CAMPBELL Leipsic, Germany.	IX.	Student, University of Leipsic.
GEORGE W. CARTER 68 Bradford St., Pittsfield, Mass.	VI.	With The Stanley Electric Manufacturing Co.
ALBERT A. CASANI East Berlin, Conn.	I.	Draughtsman, with American Bridge Co.
JOSEPH P. CATLIN 26 Air Brake Ave., Wilmerding, Pa.	VI.	Electrical Engineer, with The Westinghouse Air Brake Co.
HARRY B. CHALMERS Dedham, Mass.	X.	Treasurer and Secretary, The Colloid Chemical Co.
HOWARD T. CHANDLER 93 Federal St., Boston.	II.	With Stone & Webster, Electrical Experts and Engineers.
LEONARD D. CHANDLER 132 Federal St., Boston.	II.	Draughtsman, with The Walworth Manufacturing Co.
EBEN L. CHAPMAN 127 Pine St., Harrisburg, Pa.	I.	Draughtsman, with The Pennsylvania Steel Co. (Steelton, Pa.).
FRANK D. CHASE Chicago, Ill.	I.	Inspector, Engineering Department, Chicago & Alton Ry.
CHESTER N. CHUBB Allegheny, Pa.	I.	Assistant on Engineering Corps.
EDWIN F. CHURCH, JR. 1620 Poplar St., Philadelphia, Pa.	XIII.	In Engine Drafting Room with Wm. Cramp & Sons.
FRED W. CLAFLIN Room 312, South Terminal Sta., Boston, Mass.	I.	Civil Engineer, Boston & Albany R.R.; New York Central & Hudson River R.R. Lessee.
FREDERICK G. CLAPP Boston, Mass.	XII.	Assistant in Geology, Mass. Institute of Technology.
FREDERICK W. COBURN P.O. Box 85, Sparrows Point, Md.	X.	With Maryland Steel Co.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FRANK A. COLBY . . . . Ames Bldg., Boston.	IV.	Draughtsman, with Shepley, Rutan, & Coolidge, Architects.
FREDERICK C. CROSS . . . Fitchburg, Mass.	IX.	Salesman with The Henneman Coffee Roaster Co.
LOUIS A. CROWELL . . . East Dennis, Mass.	I.	
WALTER M. CURTIS . . . 54 Park Ave., Whitman, Mass.	II.	Draughtsman, with The Crosby Steam Gage and Valve Co.
NEWMAN L. DANFORTH . . 31 Milk St., Boston.	II.	Surveyor and Draughtsman, with the Associated Factory Mutual Insurance Co.
ALBERT C. DART, JR. . . . 1517 Miner st., Idaho Springs, Colo.	III.	Chemist and Assayer.
HARRY E. DART . . . . Boston, Mass.	VI.	Assistant in Physics, Mass. Institute of Technology.
WILLIAM F. DAVIDSON . . 9 Wallace Ave., New Castle, Pa.	II.	Draughtsman, with The National Steel Co.
ARTHUR C. DAVIS . . . . Boston, Mass.	V.	Assistant in Chemistry, Mass. Institute of Technology.
WALTER P. DAVIS . . . . 241 Pine St., Steelton, Pa.	III.	With Steel Foundry Department, Pennsylvania Steel Co.
CLINTON M. DEARDEN . Boston, Mass.	VIII.	Assistant in Electro-Chemistry, Mass. Institute of Technology.
WILFORD W. DEBERARD, B.S. Testing Station, Spring Garden Water Works, Philadelphia, Pa.	XI.	Engineering Office Assistant, Improvement, Extension, and Filtration of the Water Supply.
CHARLES H. DENNISON . . 12 Pearl St., Boston.	X.	With Henry Carmichael, Analytical and Consulting Chemist.
RICHARD E. DOW . . . . Melrose, Mass.	V.	
WILLARD W. DOW . . . . Alpine St., Malden, Mass.	IX.	With The Boston Rubber Shoe Co. (Malden, Mass.).
FRANCIS B. DRISCOLL . . . Boston, Mass.	I.	Assistant in Civil Engineering, Mass. Institute of Technology.
NORMAN A. DUBOIS . . . Providence, R.I.	V.	Instructor in Chemistry, Brown University.
FREDERICK J. DULUDE . . Tenth St. & Pennsylvania Ave., Pittsburgh, Pa.	I.	Draughtsman, Chief Engineer's Office, Pennsylvania Lines West of Pittsburgh.
LAMMOT DU PONT . . . . 212 Rochelle Ave., Wissahickon, Pa.	I.	Draughtsman, with The Pencoyd Iron Works.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
FRANK N. EMERSON, A.B. 905 No. Jefferson Ave., Peoria, Ill.	IV.	
MANSFIELD ESTABROOK, A.B. 136 Liberty St., New York, N.Y.	II.	With The Niles, Bement, Pond Co.
WILLIAM E. FARNHAM, Ph.B. 18 Cortlandt St., New York, N.Y.	VI.	Assistant Engineer, with The New York Telephone Co.
EDWARD P. FLEMING . . . Troy, Ariz.	III.	With The Troy Copper Co.
CHARLES K. FLINT . . . . 3 W. One hundred twenty-ninth St., New York, N.Y.	VI.	With Westinghouse Electric Co.
LEONARD S. FLORSHEIM . . 4913 Grand Boulevard, Chicago, Ill.	I.	Rodman, with The Chicago & Alton Ry.
EUGENE S. FOLJAMBE . Boston, Mass.	XIII.	Assistant in Machine Tool Work, Mass. Institute of Technology.
H. GILMAN FOLSOM . . . Telephone Bldg., Pittsburgh, Pa.	VI.	Engineer, Central District and Printing Telegraph Co.
MORTIMER B. FOSTER . . . 171 W. Seventy-first St., New York, N.Y.	VI.	
FREDERIC WILLIAM FREEMAN Boston, Mass.	III.	Assistant in Heat Measurements, Mass. Institute of Technology.
ANNA B. GALLUP . . . Providence, R.I.	VII.	Teacher of Physiology and Biology, Rhode Island Normal School.
WILLIAM W. GARRETT . Boston, Mass.	III.	Assistant in Mining Engineering and Metallurgy, Mass. Institute of Technology.
HENRY R. GILSON . . . . 85 Water St., Boston.	II.	Engineer with the Schlicht Combustion Co.
ALBERTO P. GONZALEZ . Calle Dr. Mier, No. 96, Monterey, N. L., Mexico.	III.	Assayer, San Gablo Mine (Monterey).
ROBERT R. GOODRICH, S.B. .	II.	(See Class of 1885.)
HARRY L. GRANT . . . Camden, N.J.	XIII.	Hull Draughting Room, The New York Shipbuilding Co.
GRETA GRAY . . . . . Hopkins Park, Mt. Auburn, Cincinnati, Ohio.	IV.	
GUSTAF E. GUSTAFSON . . East Berlin, Conn.	I.	Draughtsman, American Bridge Co.
DENNIS F. HALEY . . . Mineville, N.Y.	III.	With Witherbee & Co.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
GEORGE A. HALL . . . . 222 Marlborough St., Boston.	IX.	
CLIFFORD R. HAMMOND . . 5 So. Church St., Schenectady, N.Y.	VI.	With Testing Department, General Electric Co.
ERNEST C. HARPER, B.A. . Pittsburgh, Pa.	I.	With The Riter-Conley Co.
CHARLES H. HARRIS . . . 93 Federal St., Boston.	VI.	With Stone & Webster, Electrical Experts and Engineers.
ARTHUR G. HAYDEN . . . 6341 Marchand St., Pittsburgh, Pa.	I.	Draughtsman, with The American Bridge Co. (Pittsburgh Plant).
HARRY R. HEALEY . . . Dover, N.H.	X.	With Print Works Laboratory, Cocheco Manufacturing Co.
GARABED G. HEGHINIAN, A.B., S.B.	I.	(See Class of 1900).
LOUIS R. HENRICH . . . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
ALBERT W. HIGGINS . . . Saylesville, R.I.	X.	Draughtsman, with Sayles' Bleacheries.
Horace E. Hildreth, A.B., . Crafton, Pa.	I.	Assistant on Maintenance of Way Engineering Corps, Pittsburgh Division, Pittsburgh, Cincinnati, Chicago & St. Louis Ry.
JULES H. HIRT . . . . . Watson St., Boston.	III.	With Ball-Bearing Co.
HARRY A. HODGDON . . . 43 Milk St., Boston.	II.	Heating and Ventilation Engineer.
MILTON W. HOGLE . . . P.O. Box 15, Wellesville, Ohio.	II.	With The American Sheet Steel Co.
WILLIAM G. HOLFORD . . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
LEWIS W. HORNE . . . 1620 Poplar St., Philadelphia, Pa.	XIII.	With Wm. Cramp & Sons.
AUSTIN T. HYDE . . . . 127 Purchase St., Boston.	X.	Chemist in Experimental Laboratory.
GEORGE T. HYDE, B.S. . . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
FREDERICK DUB. INGALLS 16 Post Office Sq., Boston.	II.	Assistant Engineer with A. A. Sanborn, Heating and Ventilating Contractor.
ALONZO K. ISHAM . . . . Tweedvale, Hamilton Co., Ohio.	II.	With The Laidlaw, Dunn, Gordon Co.
ARTHUR C. JEWETT . . . Toledo, Ohio.	II.	Mechanical Draughtsman, American Bridge Co. (Toledo Branch).

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
CARL F. JOHNSON . . . . 120 Sycamore St., Milwaukee, Wis.	II.	
WILL G. KELLEY . . . . 4356 Vincennes Ave., Chicago, Ill.	VI.	Inspector with The Chicago Edison Co.
HERBERT H. KENNEDY . . South Framingham, Mass.	VI.	
KING H. KNOX . . . . . 320 Church St., Baton Rouge, La.	VI.	Travelling.
DONALD A. KOHR, Ph.B. . 452 E. Third St., Dayton, Ohio.	V.	Chemist, with The Lowe Brothers Co., Paint Manufacturers.
THEODORE F. LANGE . . . 2 Carson St., Pittsburgh, Pa.	I.	Assistant on Engineer Corps, Pennsylvania Lines West of Pittsburgh.
ELLIS F. LAWRENCE . . . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
J. BRADFORD LAWS . . . 119 E. Pearl St., Cincinnati, Ohio.	IX.	Of Firm of James H. Laws & Co., Commission Merchants.
CHARLES T. LINCOLN . . . 125 Milk St., Boston.	V	Chemist, with American Bell Telephone Co.
ROBERT S. LITTLEFIELD . 1620 Poplar St., Philadelphia, Pa.	XIII.	With Wm. Cramp & Sons.
HARRY J. LOHBILLER . . . 93 Federal St., Boston.	II.	Assistant Engineer with Chas. K. Stearns, Mechanical and Electrical Engineer.
RALPH S. LORING . . . . 178 Devonshire St., Boston.	I.	Draughtsman, with A. W. Woodman, Civil Engineer.
THOMAS M. LUNAN . . . Boston, Mass.	V.	Private Assistant to Professor Richards, Mass. Institute of Technology.
OTTO G. LUYTIES . . . . 328 E Fifteenth St., New York, N.Y.	II.	
ALLEN B. MCDANIEL . . . East Berlin, Conn.	IV.	Draughtsman, with the American Bridge Co.
HARRY P. MCDONALD, JR. . Foot of Pine St., Jersey City, N.J.	I.	Draughtsman, The Snead & Co. Iron Works.
BENJAMIN G. MACINTIRE . 248 Congress St., Boston.	V.	Chemist, with the American Soda Fountain Co.
GRACE MACLEOD . . . . Mt. Hermon, Mass.	V.	Teacher of Geology, and Assistant Teacher of Chemistry and Physics, Mt. Hermon School for Boys.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HECTOR MCNEIL . . . . Lower Grand Anse, Rich Co., C.B.	I.	Engineer.
SALVADOR S. MADERO . . Parras, Coahuila, Mexico.	III.	President, Compania Exploradora de Minas; Sub-treasurer, Compania Industrial de Parras; Secretary, Compania Minera de Consuelo y Anexas; of Firm of Ernesto Madero y Huos.
HENRY C. MARCUS . . . . Menlo Park, Cal.	III.	Mining Machinist in Copper Mines at Ely, Nev.
CHARLES E. MARTIN . . . Foot of Pine St., Jersey City, N.J.	IV.	With the Snead & Co. Iron Works.
WALTER I. MARTIN . . . 417 First National Bank Bldg., Chicago, Ill.	I.	Draughtsman, with the Kenwood Bridge Co.
FREDERIC I. MERRICK . . 244 Fifth Ave., New York, N.Y.	IV.	Architectural Draughtsman with Percy Griffin.
LESLIE E. MERRILL . . . Haverhill, Mass.	II.	
BENJAMIN MILLER . . . . 5 E. Third St., Cincinnati, Ohio.	VI.	Student.
LEWIS A. MILLER . . . . Room 379, Broad St. Sta., Philadelphia, Pa.	I.	With Maintenance of Way Department, Pennsylvania R.R.
S. BERWICK MILLER . . . 31 Milk St., Boston.	X.	Surveyor and Draughtsman, Plan Department, Associated Factory Mutual Insurance Cos.
GEORGE LER. MITCHELL, B.S. Boston, Mass.	VI.	Assistant in Physics, Mass. Institute of Technology.
PHILIP WYATT MOORE . . 322 Pine St., Steelton, Pa.	II.	With the Pennsylvania Steel Co.
HENRY C. MORRIS . . . . 100 William St., New York, N.Y.	III.	
ROBERT B. MORTON, B.S. . 55 Duane St., New York, N.Y.	VI.	With Meter-Testing Department.
RAY MURRAY . . . . . Philadelphia, Pa.	I.	Draughtsman, Erection Department, American Bridge Co.
WILLIAM J. NEWLIN, B.A. . 25 Equitable Bldg., Boston.	II.	Mechanical Engineer, with Byron Eldred.
LESTER A. NIMS . . . . . 2 Carson St., Pittsburgh, Pa.	I.	With Maintenance of Way Department, Pittsburgh, Cincinnati, Chicago & St Louis Ry.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
ALFRED D. NUTTER . . . Pittsburgh, Pa.	I.	Inspector, Chief Engineer's Office, Pennsylvania Lines West of Pittsburgh.
JULIUS E. OBER . . . . . Boston, Mass.	V.	Graduate Student, Mass. Institute of Technology.
DANIEL L. ORDWAY . . . 65 Warren St., Glens Falls, N.Y.	V.	Chemist, with The International Paper Co.
PERCY H. PARROCK . . . 241 Pine St., Steelton, Pa.	II.	With Engineering Department, Pennsylvania Steel Co.
LANGDON PEARSE, A.B. . . Boston, Mass.	I.	Graduate Student, Mass. Institute of Technology.
JOHN M. PERKINS, JR. . . 2 Eastern Ave., Arlington Heights, Mass.	VI.	With the United States Steel Co. (W. Everett, Mass.).
OLIVER H. PERRY, JR. . 282 Nesmith St., Lowell, Mass.	XIII.	With the Fore River Ship and Engine Co. (Quincy, Mass.).
ASHTON C. PERSONS . . . 133 Prospect St., Willimantic, Conn.	V.	Chemist for the American Thread Co.
ANTHONY W. PETERS . . . Glens Falls, N.Y.	I.	With The Hudson River Water Power Co.
JOSEPH E. PHILBRICK . . 394 Atlantic Ave., Boston.	X.	With The Wheaton Machine Co.
PRESTON PLAYER, A.B. . . 93 Federal St., Boston.	II.	With Stone & Webster, Electrical Experts and Engineers.
PHILIP A. POTTER . . . . 322 Pine St., Steelton, Pa.	II.	With The Pennsylvania Steel Co.
ELZEAR J. PROULX . . . . 334 Washington St., Brookline, Mass.	I.	With French & Bryant, Civil Engineers.
FRANCIS W. PUCKEY, B.S. . Boston, Mass.	IV.	Graduate Student, Mass. Institute of Technology.
J. RUSSELL PUTNAM . . . 282 Congress St., Boston.	II.	Draughtsman, with The American Soda Fountain Co.
FRANK D. RASH, A.B. . Earlington, Ky.	III.	Assistant Engineer, The St. Bernard Coal Co.
WALTER A. READ . . 95 Madison St., Brooklyn, N.Y.	XIII.	Draughtsman, Bureau of Construction and Repair, U.S. Navy Yard.
THOMAS F. E. REARDON . . Seventh Ave. and Montour Way, Pittsburgh, Pa.	VI.	With Engineering Department, Central District and Printing Telegraph Co.
RALPH C. ROBINSON . . . Boston, Mass.	V.	Private Assistant to Professor Noyes, Mass. Institute of Technology.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
JOHN A. ROSS JR. . . . U.S Naval Draughting Room, Seattle, Wash	XIII.	Draughtsman, with U.S. Naval Constructor, Moran Brothers Shipbuilding Co.
CARL ROSSMASSLER . . Camden, N.J.	XIII.	Draughtsman, with New York Shipbuilding Co.
ALLAN WINTER ROWE . . 23 Sabine St., Providence, R.I.	X.	With Victor Shaw Ring Traveller Co.
S. WINTHROP ST. CLAIR . 22 Congress St., Boston.	IV.	Draughtsman, with Coolidge & Carlson, Architects.
G. VICTOR SAMMET . . . Boston, Mass.	V.	Private Assistant to Professor Noyes, Mass. Institute of Technology.
WILLIAM J. SAYWARD, B.S. Twenty-fifth St. and North River, New York, N.Y.	IV.	Draughtsman, with Ellin, Kitson, & Co., Architectural Sculptors.
BART E. SCHLESINGER, A.B. Boston, Mass.	V.	Graduate Student, Mass. Institute of Technology.
WALTER SCOTT . . . . . Lawrence, Mass.	II.	
STANLEY C. SEARS . . . . 340 Locust St., Steelton, Pa.	III.	With The Pennsylvania Steel Co.
EDWARD SEAVER, JR. . . . 322 Pine St., Steelton, Pa.	II.	With The Pennsylvania Steel Co.
FREDERIC H. SEXTON. . . Boston, Mass.	III.	Assistant in Mining Engineering, Mass. Institute of Technology.
CLIFFORD H. SHIVERS . . 2A Park St., Boston.	IV.	Draughtsman, with G. H. Ingraham.
GEORGE P. SHUTE . . . . The Cedars, Malden, Mass.	X.	With Boston Rubber Co. (Edgeworth).
ROLAND E. SIMONDS . . . 16 Vine St., Winchester, Mass.	II.	With The United Shoe Machinery Co., McKay Department (Winchester).
NORMAN L. SKENE . . 515 Broadway, South Boston.	XIII.	Draughtsman, with W. Starling Burgess, Naval Architect (15 Exchange St., Boston).
FREDERICK W. SMITH, B.A. Mattoon, Ill.	I.	Assistant Engineer, Cleveland, Cincinnati, Chicago & St. Louis Ry.
SUMNER IVES SMITH . . . 505 W. Sixty-second St., Chicago, Ill.	VI.	With Western Electric Co.
RALPH H. STEARNS . . . 108 Cushing Ave., Dorchester, Mass.	XI.	Rodman, Metropolitan Sewerage Works.
WILLIAM I. STURTEVANT . Seattle, Wash.	VI.	With The Seattle Electric Co.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
WILLIAM G. SUCRO . . . Baltimore, Md.	I.	Structural Draughtsman, with Bartlett, Hayward, & Co.
ALBERT F. SULZER . . . . 6 Selye Terrace, Rochester, N.Y.	X.	Assistant Chemist, with The Eastman Kodak Co.
WILLIAM J. SWEETSER . . 96 Condor St., East Boston.	II.	Head Draughtsman, with The Steel Cable Engineering Co.
ALEXANDER J. TAYLOR, C.E. Wilmington, Del.	XI.	Assistant Engineer, Street and Sewer Department, City of Wilmington.
ARTHUR K. TRENHOLME, A.B. 15 Exchange St., Boston.	IV.	With Walter Atherton, Architect.
CHARLES G. TUFTS . . . . Boston, Mass.	X.	Private Assistant to Professor Gill, Mass. Institute of Technology.
WILLIAM W. WALCOTT . . 22 W. Central St., Natick, Mass.	IX.	Student, Harvard Medical School.
FRED B. WEBSTER . . . Quincy Point, Mass.	XIII.	Fitter's Helper, The Fore River Ship and Engine Co.
ASHER L. WEIL . . . . . Portland, Me.	II.	Draughtsman, with American Stone Co.
JOHN F. WENTWORTH . 512 Thirteenth St., N.W., Washington, D.C.	XIII.	Draughtsman, with Bureau of Construction and Repairs, Navy Department.
WILLIAM WHIPPLE . . . Cinclare, La.	II.	With Central Factory, The Cinclare Sugar Co.
HARRY R. WHITE . . . Boston, Mass.	XIII.	Assistant in Mechanical Engineering, Mass. Institute of Technology.
RALPH WHITMAN . . . . Room 65, City Hall, Boston.	I.	Rodman.
ROGER W. WIGHT . . . Union St., Bath, Me.	XIII.	First Class Assistant Draughtsman, Office of U.S. Inspector of Machinery, Bath Iron Works.
WALDO G. WILDES . . . Clinton, Mass.	I.	With Reservoir Department, Metropolitan Water Works.
CHARLES F. WILLARD . . P.O. Box 336, Groton, Conn.	II.	With Scientific Department, Eastern Shipbuilding Co.
ROBERT L. WILLIAMS . . . 93 Federal St., Boston, Mass.	II.	With Lockwood, Greene & Co.
ARCHIBALD H. WILSON . . 13 Melvin St., Lawrence, Mass.	II.	Assistant Master Mechanic, Pacific Mills.
GEORGE T. WILSON . . . 176 Federal St., Boston.	II.	With Engineering Department, for Frank B. Gilbreth, General Contractor.
SAMUEL L. WONSON, A.B. . Boston, Mass.	I.	Assistant in Civil Engineering, Mass. Institute of Technology.

1901. — *Continued.*

NAME AND ADDRESS.	COURSE.	OCCUPATION.
HOWARD I. WOOD . . . . 13 No. College St., Schenectady, N.Y.	V.	Research Chemist, with General Electric Co.
LEONARD P. WOOD . . . Saxonville, Mass.	I.	Rodman, with Aqueduct Department, Metropolitan Water Board.
JAMES C. WOODSOME . Boston, Mass.	VI.	Assistant in Mechanical Drawing, Mass. Institute of Technology.

Alumni will confer a favor by informing the Secretary of the Faculty of any change of address or occupation.

Other persons who have been connected with the Institute for one year or more will also confer a favor by informing the Secretary of the Faculty of their address and occupation.

It should be noticed that the graduates comprise but about one-third of all the students who have in the past been connected with the Institute.

NUMBER OF GRADUATES BY CLASSES.

Class of 1868	14	Class of 1885	28
" " 1869	5	" " 1886	59
" " 1870	10	" " 1887	58
" " 1871	17	" " 1888	77
" " 1872	12	" " 1889	75
" " 1873	26	" " 1890	103
" " 1874	18	" " 1891	103
" " 1875	28	" " 1892	133
" " 1876	42	" " 1893	129
" " 1877	32	" " 1894	138
" " 1878	19	" " 1895	144
" " 1879	23	" " 1896	189
" " 1880	8	" " 1897	179
" " 1881	28	" " 1898	200
" " 1882	24	" " 1899	173
" " 1883	19	" " 1900	184
" " 1884	36	" " 1901	199

Total	2,532
Deduct names counted twice	14
	2,518

ALPHABETICAL LIST OF GRADUATES.

NAME.	COURSE.	CLASS.
Abbot, Charles G.	VIII.	1894
Abbot, Louis A.	II.	1895
Abbott, Frederic B.	VI.	1893
Abbott, Ira	I.	1881
Abbott, Lewis B.	IV.	1899
Abeel, David G.	I.	1900
Aborn, George P.	II.	1886
Adams, Arthur H.	II.	1890
Adams, Benjamin	VI.	1895
Adams, Charles M.	VI.	1895
Adams, George O.	V.	1900
Adams, Herbert H.	I.	1899
Adams, John H.	IV.	1899
Adams, Raleigh B.	X.	1894
Adams, Walter O.	X.	1899
Addicks, Lawrence	II., VI.	1899
Aiken, Charles W.	II.	1891
Albee, Orton W.	III	1893
Albiston, Clayton	II.	1901
Alden, Charles H., Jr.	IV.	1890
Alden, Edwin C.	VI.	1895
Alden, Herbert W.	II.	1893
Alden, John	V.	1877
Alden, John T.	II.	1897
Aldrich, William T.	IV.	1901
Alexander, Donald N.	IV.	1898
Alland, Leon	I.	1898
Allbright, William B.	V.	1878
Allen, C. Frank	I.	1872
Allen, Charles F.	III.	1876
Allen, Charles R.	V.	1885
Allen, Charles V.	VI.	1893
Allen, Elbert G.	II.	1900
Allen, George W.	II.	1901
*Allen, Henry W. (July 2, '97)	X.	1897
Allen, James W.	VI.	1899
Allen, John H.	III.	1881
Allen, Samuel E.	I.	1875
Allen, Walter S.	V.	1879
Allen, William H., Jr.	XIII.	1897
Allyn, Robert Starr	II.	1898
Ames, Azel	I.	1895
Ames, Butler	II.	1896
Ames, Clara P.	V.	1882
Anderson, Charles L. B.	I.	1901
Anderson, George H.	X.	1894
Anderson, Robert	VI.	1897
Anderson, William P.	III.	1896
Andrew, Robert	II.	1901
Andrew, William M.	VI.	1896
Andrews, Edmund L.	VI.	1894
Anthony, Arthur C.	III.	1886
*Anthony, John G. (Jan. '01)	III.	1893
Appleton, Charles B.	II.	1884
Appleton, Ellery C.	III.	1868
Appleton, William C.	IV.	1901
Armington, George A.	II.	1887
Arnold, Lyman	VI.	1898
Arnott, James L.	Sci. and Lit.	1875
Arsem, William C.	V.	1901
Ashley, Harrison E.	X.	1900
Ashton, George F.	II.	1896
Aspinwall, Thomas	I.	1876
Atkins, Ernest C.	II.	1896
*Atkinson, James S. (Dec. 17, '83)	II.	1881
Atwood, Frank W.	V.	1890
Atwood, George D.	II.	1901
Atwood, Thomas C.	I.	1897
Atwood, William P.	V.	1876
Auer, Charles I.	III.	1901
Austin, Amory	V.	1873
Ayer, Arthur W.	II.	1890
Ayer, Harold O.	V.	1899
Ayers, Frederic C.	XIII.	1901
Ayres, Milan V.	VI.	1898
Babb, Cyrus C.	I.	1890
Babson, Roger Ward	I.	1898
Bachelder, Charles S.	V.	1877
Bacon, Lyman E.	I.	1898
Badger, Ernest F.	V.	1895
Badger, Frank S.	I.	1893
Badlam, Stephen	III.	1900
Bailey, Robert W.	XIII.	1901
Bailey, Thomas Ward	I.	1896
Bailey, Thomas Wendell	IV.	1899
Bakenhus, Reuben E.	I.	1896
Baker, Charles M.	IV.	1878
Baker, David	III.	1885
Baker, Fred C.	II.	1894
Baker, Frederic W.	II.	1893
Baker, Joseph B.	VI.	1890
Baker, William H.	I.	1869
Balcom, R. Wilfred	V.	1900
Baldwin, Charles E.	V.	1900
Baldwin, Charles F., Jr.	VI.	1897
Baldwin, E. Arthur	VI.	1896
Baldwin, Henry F.	II.	1884
Baldwin, Hiram E.	I.	1890
Baldwin, Thomas W.	I.	1876
Ball, Robert S.	II.	1891

*Deceased.

NAME.	COURSE.	CLASS.
Ballantyne, Bertha L.	VII.	1899
*Ballard, Hetty O. (Dec. 20, '97)	XII.	1893
Ballou, Henry W.	I.	1897
Ballou, Latimer W.	II.	1895
Bancroft, Joseph	X.	1898
Bancroft, Wilfred	II.	1897
Barbour, Minard T.	II.	1893
Bardwell, Fred L.	V	1884
Bardwell, Herbert T.	I.	1883
Barker, Elliott R.	V.	1898
Barker, Harrington	II.	1898
Barker, James E.	VI.	1900
Barkhouse, Edgar L.	VI.	1897
Barlow, William H.	V.	1898
Barnes, Warren H.	I.	1897
Barnes, William T.	I.	1893
Barney, Morgan	XIII.	1900
Barr, Lawrence	VI.	1895
Barri, Joel G.	I.	1891
Barrows, Bernard	X.	1897
Barrows, Harold K.	I.	1895
Barrows, Herbert	I.	1874
Barrows, Walter B.	VII.	1876
Barrus, George H.	II.	1874
Barry, Edmund D.	XIII.	1895
Barstow, George E.	II.	1894
Bartholomew, Ethel	IV.	1895
Bartlett, Dana P.	VI.	1886
Bartlett, Sidney R.	VII.	1887
Bartlett, Spaulding	V.	1890
Bartlett, T. Harris	III.	1884
Bartol, George	III.	1877
Barton, Charles A.	II.	1887
Barton, Charles A., Jr.	VI.	1900
Barton, George H.	III.	1880
Barton, Howard R.	VI.	1894
Basford, George M.	II.	1889
Bass, Frederic H.	XI.	1901
Bassett, William H.	V.	1891
Batchelder, Charles E.	VI.	1896
Batchelder, John L., Jr.	VII.	1890
Batcheller, Birney C.	II.	1886
Batcheller, James H.	III.	1900
Bates, Daniel M., Jr.	X.	1896
Bates, Harry R.	V.	1894
Bates, Henry D.	IV.	1888
Batson, Walter V.	VI.	1894
Baxter, Francis K., Jr.	III.	1901
Beach, Charles B.	X.	1894
Beach, Edward J.	V.	1889
Beach, Irving E.	V.	1894
Beal, Charles A.	VI.	1892
Beal, Foster E. L.	I.	1871
Beal, J. Williams	IV.	1877
Beaman, David W.	VI.	1896
Bean, Norwin S.	VI	1894
Bean, Walter R.	XIII.	1899
Beasom, Charles B.	II.	1890
Beattie, Roy H.	I.	1893
Beckler, Alice H.	VII.	1892
Beckwith, Edward P.	V.	1901
Beeching, William H.	II.	1877
Beekman, John V. D., Jr.	IV.	1900
Beers, Herbert P.	IV.	1897
Belcher, Edward B.	II.	1901
Belcher, Henry C.	II.	1898
Belknap, Francis W.	I.	1895
Bellows, Arthur B.	II.	1889
Bemis, Albert F.	I.	1893
Benedict, Vallette L.	VI.	1894
Bennett, Raymond F.	I.	1899
Bennett, Sophia H.	IV.	1890
Bennink, Carroll A.	IV.	1899
Benson, Newton D.	IV.	1899
Benton, Edward R.	IV.	1885
Bergen, Francis P.	VI.	1898
Bergstrom, George E.	IV.	1899
Berry, Charles W.	VI.	1895
Berry, Hereford	VI.	1894
Bickford, Elizabeth E.	VII.	1890
Bickford, Warren I.	VI.	1901
Bigelow, Charles H.	VI.	1892
Bigelow, Henry F.	IV.	1888
Bigelow, Lyman H.	I.	1901
Bigelow, Samuel Lawrence	V.	1895
Binley, William, Jr.	XIII.	1897
Binney, Amos	V.	1881
Bird, Adelaide	VII.	1891
Bird, Herbert S.	V.	1888
Birks, Arthur H.	IV.	1901
Birks, John H.	II.	1891
Biscoe, Maurice B.	IV.	1893
Bishop, Frederic L.	VIII.	1898
Bissell, David S.	III.	1881
Bixby, George L.	X.	1895
Bixby, Willard G.	II.	1889
Blackmer, Adelaide S.	V.	1890
Blackmer, Arthur E.	I.	1899
Blackmer, William D.	III.	1898
Blackwell, Ethel B. (*see* Robinson).		
Blair, Robert S.	VI.	1900
Blake, Edmund E.	II.	1893
Blake, Francis M.	II.	1899
*Blake, Francis P. (Dec. 24, '00)	III.	1896
Blake, Kenneth M.	II.	1899
Blake, William B.	I.	1887
Blanchard, Arthur A.	V.	1898
Blanchard, Frederick C.	II.	1891
Blanchard, Huse T.	IV.	1901
Blanchard, Winslow	II.	1888
Blauvelt, William G.	VI.	1901
Bleecker, John S.	II.	1898

* Deceased.

NAME.	COURSE.	CLASS.
Bliss, Walter D.	IV.	1895
Bliss, Zenas W.	II.	1889
Blodgett, Aaron D.	II.	1876
Blodgett, George W.	I.	1873
Blodgett, Perley H.	V.	1895
Blood, Grosvenor T. II.	1894	VI. 1893
Blood, John B.	VI.	1890
Blood, Percy E.	I.	1897
Blunt, William T.	I.	1874
Boardman, Henry A.	V.	1884
Bodwell, Howard L.	II.	1898
Boedeker, John	VI.	1895
Boeseke, Edgar A.	II.	1895
Bolan, Thomas V.	VI.	1891
Bolster, Roy H.	VI.	1901
Bond, Frederick H., Jr.	IV.	1901
Bonesteele, Sarah Hall	VIII.	1894
Bonns, Walter W.	IV.	1899
Booth, George H.	II.	1898
Booth, Thomas B.	VI.	1895
Borden, Charles N.	II.	1889
Borland, Hugh	I.	1897
Boss, Austin D.	II.	1890
Boss, Charles R.	IX.	1894
Bothfeld, Charles C.	I.	1884
Bourne, Frank A.	IV.	1895
Bourne, Jesse H.	II.	1895
Bourne, Phillips P.	II.	1892
Boveri, Marcella O.	IX.	1885
Bovey, William H.	VI.	1894
Bowditch, Ingersoll	I.	1900
Bowen, Edgar C., Jr.	II.	1897
Bowen, Ralph A.	V.	1897
Bowen, Stephen	II.	1892
Bowes, George S.	II.	1896
Bowie, Augustus J., Jr.	II., VI.	1896
Boyd, Frederic R. C.	VI.	1901
Boyd, John	V.	1897
Boyden, Amos J.	IV.	1875
Boyle, John, Jr.	III.	1901
Boyle, Martin	V.	1898
Brace, Walter C.	III.	1887
Brackett, E. Raymond	V.	1896
Brackett, Wallace C.	XI.	1895
Bradlee, Arthur T.	II.	1888
Bradlee, Charles W.	IX.	1897
Bradlee, Henry G.	VI.	1891
Bradley, Frederick W.	VI.	1889
Bradley, Harry C.	I.	1891
Bragg, Charlotte A.	V.	1890
Bragg, Edward F.	II.	1890
Bragg, Edward M.	XIII.	1896
Brainerd, Dwight	IX.	1887
Brainerd, Edwin A.	I.	1897
Brainerd, Frederick H.	III.	1889
Brainerd, Henry B.	IX.	1887
Brainerd, Wallace H.	VI.	1891
Brainerd, William L.	IV.	1886
Braley, Samuel T.	II.	1879
Braman, Samuel N.	II.	1893
Bramhall, Charles T.	II.	1897
Brand, Horace L.	II.	1891
Breed, Charles B.	I.	1897
Breed, Joshua B. F.	I.	1876
Breed, Lewis B.	VI.	1896
Breed, Stephen Alec	II.	1894
Brewster, Benjamin E.	III.	1872
Brewster, William	II.	1898
Bridges, Luther W.	II.	1889
Briggs, Albert B.	I.	1900
Briggs, Charles C., Jr.	XIII.	1900
Briggs, Frank H.	IX.	1881
Briggs, John P.	I.	1901
Brigham, Edmond F.	X.	1901
Brock, Henry M.	VIII.	1900
Brooks, John F.	II.	1896
Brooks, Miles E.	I.	1900
Brooks, Paul R.	II.	1900
Brotherton, William E.	V.	1873
Brown, Alice I. (*see* Tyler).		
Brown, Allen P.	IX.	1895
Brown, Arthur H.	II.	1899
Brown, Bertha M.	VII.	1892
Brown, Carroll W.	I.	1899
Brown, Charles H.	I.	1880
Brown, Charles H.	X.	1900
Brown, Clarence C.	VI.	1900
Brown, Dickson Q.	VI.	1898
*Brown, Edward D. (July 16, '98)	VI.	1890
Brown, Edward Percy	III.	1897
Brown, Harry W.	VI.	1896
Brown, James M.	II.	1897
*Brown, John Clifford (Jan. 17, '01)	VI.	1893
Brown, John W.	V.	1900
Brown, Stephen P.	II.	1900
Brown, Walter Vail	VI.	1894
Brown, Warren D.	VI.	1897
Browne, Harry P.	VI.	1896
Brownell, Ernest H.	I.	1890
Brush, Matthew C.	II.	1901
Bryant, Dixie L.	XII.	1891
Bryant, Ernest C.	I.	1893
Bryant, George H.	II.	1883
Bryant, Henry F.	I.	1887
Bryant, William P.	X.	1891
Bryden, George W.	II.	1891
Buchanan, Leonard B.	VI.	1893
Bucher, Russell S.	IV.	1896
Buchholz, Charles E.	I.	1893
Buck, Arthur A.	VI.	1893
Buffum, Frederick D.	II.	1900
Bugbee, Edward E.	III.	1900

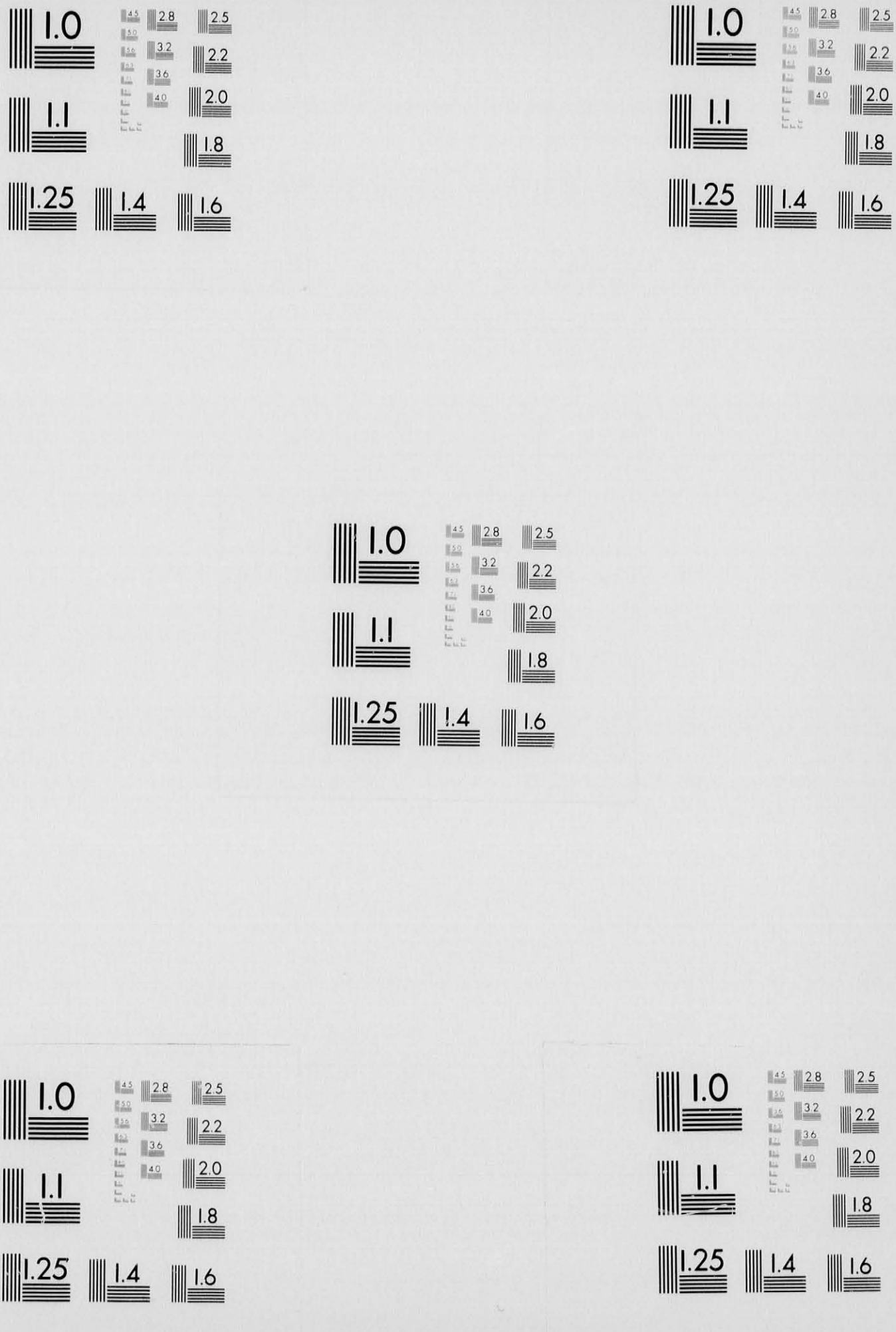
* Deceased.

NAME.	COURSE.	CLASS.
Bulkley, J. Norman	VI.	1889
Burbank, Philip M.	VI.	1892
Burdick, Edwin P.	I.	1901
Burdick, Howard H.	II.	1897
Burgess, F. Gelett	I.	1887
Burgess, George K.	VIII.	1896
Burgess, John K.	II.	1886
Burgess, Philip	XI.	1899
Burke, John R.	I.	1893
Burlingham, Charles L.	III.	1886
Burnet, Moses D.	III.	1875
Burnham, Charles M.	VI.	1892
Burnham, Edward C.	II.	1890
Burnham, George	IV.	1898
Burnham, Guy J.	X.	1892
Burnham, Harry A.	II.	1892
Burnham, Roy G.	II.	1900
Burrage, Severance	VII.	1892
Burrison, Henry K.	I.	1875
Burroughs, Karl	X.	1900
Burton, Frank H.	II.	1891
Busby, Fred E.	V.	1897
Bush, Walter M.	II.	1897
Butcher, William L.	I.	1898
Butterworth, Elwell R.	II.	1898
Buttolph, Benjamin G.	II.	1888
Buttolph, Harry T.	I.	1876
Byam, LeRoy H.	I.	1898
Cabot, John W.	III.	1879
Cade, Charles W.	X.	1901
Cade, Marion L.	V.	1900
Cady, Francis E.	VI.	1901
Caldwell, Frederick W.	II.	1899
Calkins, Gary N.	IX.	1890
*Callahan, Dennis E. (Nov. 28, '00)	VI.	1893
Callan, John G.	VI.	1896
Came, Frank E.	I.	1881
Cameron, Julian A.	II.	1887
Campau, Antoine B.	IV.	1901
Campbell, Charles F. F.	IX.	1901
Campbell, Donald C.	II.	1898
Campbell, George A.	I.	1891
Campbell, Harry A. B.	II.	1899
Campbell, Harry H.	III.	1879
Campbell, John	III.	1900
Canfield, Arthur L.	II.	1895
Cannon, Lewis T.	IV.	1896
Cannon, Sylvester Q.	III.	1899
Cannon, Willard T.	II.	1899
Capen, Barnard, Jr.	VI.	1891
Capen, G. Walter	IV.	1877
Card, Huber D.	XII.	1892
Carleton, Elbridge S.	IV.	1888
Carlisle, Morten	VI.	1890
Carlton, Chester V.	I.	1890
Carney, Edward B.	II.	1893
Carney, Frank D.	III.	1887
Carney, James A.	V.	1890
Carpenter, Anne E.	V.	1891
Carr, W. Frank	I.	1884
Carson, Howard A.	I.	1869
Carson, Thomas B.	II.	1882
Carter, George W.	VI.	1901
Carter, Henry H.	I.	1877
Carter, William W. VI.	1894	X. 1893
Carty, John E.	I.	1897
Carvalho, Raul de R.	IX.	1892
Carven, Christopher J.	I.	1884
Casani, Albert A.	I.	1901
Case, Herbert M.	VI.	1899
Cater, Douglas A.	II.	1892
Catlin, Joseph P.	VI.	1901
Cayvan, Llewellyn	V.	1900
Center, David A.	VI.	1888
Chace, Ira M., Jr.	I.	1898
Chace, Mason S.	II.	1894
Chadbourn, William H., Jr.	III.	1886
Chaffee, Walter C.	IV.	1900
Chalmers, Harry B.	X.	1901
*Chamberlain, Herbert W. (May 26, '99)	IV.	1895
Chamberlain, Marion Lewis	IV.	1896
Chamberlin, Helen (*see* Dodd).		
Chamberlin, William E.	IV.	1877
Chandler, Edna M.	V.	1899
Chandler, Howard T.	II.	1901
Chandler, Leonard D.	II.	1901
Chapin, Edward S.	V.	1898
Chapman, Eben L.	I.	1901
*Chapman, George D. (May 31, '00)	II.	1890
*Chapman, George H. (Jan. 21, '79)	II.	1877
Chapman, James F.	VI.	1899
Chapman, John Winslow	II.	1894
Chapman, Nathan C. W.	II.	1894
Charles, Walter N.	I.	1900
Chase, Aurin M.	II.	1900
Chase, Charles H.	VI.	1892
Chase, Edwin E.	I.	1880
Chase, Frank D.	III.	1881
Chase, Frank D.	I.	1901
Chase, Frank L.	I.	1890
Chase, Harold M. V.	1896	X. 1894
Chase, Harvey S.	II.	1883
Chase, Richard D.	XI.	1892
Chase, Roscoe L.	V.	1884
Chase, Walter S.	IV.	1895
Chenery, Winthrop H.	IV.	1896
*Childs, Edward L. (Mar. 3, '94)	II.	1891
Child, Stephen	I.	1888
Chubb, Chester N.	I.	1901

* Deceased.

NAME.	COURSE.	CLASS.
Church, Albert K.	V.	1892
Church, Christopher A.	I.	1875
Church, Edwin F., Jr.	XIII.	1901
Church, William L.	VI.	1886
Churchill, David C.	II.	1899
Cilley, Frank H.	I.	1889
Claflin, Alan A.	V.	1894
Claflin, Fred W.	I.	1901
Claflin, George E.	VI.	1888
Claflin, William B.	IV.	1895
Clapp, Frederick G.	XII.	1901
Clapp, Frederick O.	I.	1899
Clapp, Harry L.	X.	1893
Clapp, Sidney K.	I.	1895
Clapp, Wilfred A.	I.	1893
*Clark, Arthur H. (June 21, '99)	VI.	1895
Clark, Carl H.	XIII.	1895
Clark, Carrie Rice	V.	1882
Clark, Charles B.	I.	1897
*Clark, Edward K. (Sept. 10, '78)	II.	1870
Clark, Frederick W.	III.	1880
Clark, Henry A.	II.	1897
Clark, James, Jr.	VI.	1890
Clark, James K.	II.	1899
Clark, Schuyler S.	VIII.	1895
*Clarke, Edward D. (July 30, '98)	VI.	1894
Clarke, Fred H.	I.	1894
Clary, Joseph W.	XIII.	1896
Clary, Robert H.	III.	1900
Clausen, Rudolph J.	IV.	1900
Clement, Arthur A.	X.	1894
Clement, Hugh B.	IV.	1891
Clifford, Harry E.	VI.	1886
Clifford, Paul	II.	1898
Clough, Albert L.	VI.	1891
Clow, Percival C.	IV.	1900
Cluett, Albert E.	VI.	1896
Cluff, Clarence B.	V.	1899
Cobb, Herbert F.	II.	1898
Cobb, Herbert L.	VI.	1898
Cobb, Louis R.	I.	1886
Cobb, Sylvanus H.	VI.	1888
Coburn, Arthur S.	III.	1895
Coburn, Frederick W.	X.	1901
Coburn, Howard L.	II.	1898
Cochran, Heywood	II.	1885
Codman, John S.	VI.	1893
Cody, Lewis P.	VI.	1892
Coffin, Frederick S.	III.	1879
Coffin, Joseph G.	VIII.	1898
Cogswell, Charles P., Jr.	I.	1892
Colby, Frank A.	IV.	1901
Colby, John M., Jr.	II.	1892
Colby, Russell H.	V.	1888
Colcord, Frank F.	III.	1898
Cole, Fred A.	II.	1891
Cole, Fred B.	II.	1888
Cole, Harrison I.	II.	1891
Cole, Winthrop	II.	1887
Coleman, Ezra A.	VI.	1897
Coley, John L.	II.	1896
Collier, William R.	VI.	1900
Collins, Benjamin G.	II.	1881
Collins, Bertrand R. T.	II.	1888
Collins, Edward, Jr.	VI.	1888
Collins, John A., Jr.	X.	1897
Collins, Reuben B.	I.	1891
Collins, William H.	V.	1890
Colman, Willard H.	II.	1896
Conant, Francis M.	X.	1896
Conant, Franklin N.	VI.	1900
Conant, Harold S.	VII.	1900
Conant, Henry J.	II.	1887
Conant, John B.	VI.	1900
Conant, Luther, Jr.	IX.	1895
Conant, Roger W.	VI.	1891
Conant, Whitney	III.	1868
Congdon, John E.	II.	1899
Conklin, Herbert K.	IV.	1899
Conner, Arthur J.	V.	1888
*Connor, Addison (Jan. 4, '91)	I.	1871
Cook, Charles Nourse	X.	1893
Cook, Walter F.	IX.	1899
Cooke, Charles P.	VI.	1895
Cooke, Frederick H.	I.	1900
Cooke, J. Williamson	VI.	1895
Cooke, John Winfield	VI.	1895
Cooley, Helen (*see* Palmer).		
Coolidge, Prescott H.	I.	1894
Coolidge, William D.	VI.	1896
Coolidge, Winthrop	III.	1896
Coombs, Frank E.	IV.	1898
Copeland, Frederick K.	I.	1876
Copeland, Henry F.	I.	1894
Copp, George I.	II.	1899
Cornell, Worthington	VI.	1898
Corse, William M.	V.	1899
Cotter, William E.	IV.	1898
Cottle, George T.	V.	1898
Cowles, Luzerne S.	I.	1897
Cox, Frederic E.	IV.	1895
Crabtree, Fred	V.	1889
Crafts, Walter N.	III.	1895
Craighill, Nathaniel R. VI. 1894	II.	1893
*Craigin, Henry A. (Nov. 27, '96)	II.	1889
Cramer, Edwin Claassen	IV.	1896
Crane, Eva H.	IV.	1898
*Crane, Francis H. (Apr. 15, '93)	VI.	1886
Crane, Henry M. VI. 1896	II.	1895
Crane, John G.	I.	1890
Crane, Joshua, Jr.	VI.	1892
Crane, Stephen D.	VI.	1896

* Deceased.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NAME.	COURSE.	CLASS.
Crary, Horace A.	I.	1894
Craven, George W.	VI.	1898
Crocker, Allen S.	II.	1897
Crocker, Calvin Ira	I.	1896
Cromwell, Charles H.	II.	1889
Crosby, Ralph W.	XIII.	1896
Crosby, William O.	VII.	1876
Crosby, William W.	II.	1893
Cross, Charles R.	Sci. and Lit.	1870
Cross, Frederick C.	IX.	1901
*Croswell, Joseph S. (Sept. 24, '01)	II.	1900
Crowell, Louis A.	I.	1901
Crowell, Luther A.	VI.	1898
Cummings, Henry, Jr.	IV.	1896
Cunningham, Edward	X.	1891
Currier, Charles R.	II.	1897
Currier, Harvey L.	II.	1898
Curry, William L.	VI.	1899
Curtin, John A.	I.	1892
Curtis, Arthur V.	XIII.	1897
Curtis, Everett N.	IX.	1898
Curtis, Ralph E.	II.	1887
*Curtis, Russell H. (June 8, '97)	I.	1870
Curtis, Walter M.	II.	1901
Cushing, Harvey M.	VI.	1899
Cushing, William C.	I.	1887
Cutler, Charles H.	VI.	1894
Cutler, Harry H.	II.	1881
*Cutler, Henry M. (May 16, '77)	I.	1871
Cutler, William H.	IV.	1897
Cutter, Fred B.	VI.	1898
Cutter, George A.	II.	1895
Cutter, Louis F.	I.	1886
Cutter, Roland N.	I.	1889
Dadmun, George E.	II.	1892
Daggett, Herbert C.	I.	1891
Dalton, Nelson W.	VI.	1894
Dame, Frank L.	VI.	1889
Damon, Harry S.	II.	1899
Dan, Takuma	III.	1878
Dana, Gorham	I.	1892
Dana, William S. B.	IV.	1898
Danforth, Newman L.	II.	1901
Danforth, Raymond H.	II.	1898
Daniell, Jere R.	XIII.	1897
Daniels, Nathan H., Jr.	VI.	1896
Darlington, F. Graef	IX.	1881
Darrow, Courtland R.	I.	1893
Dart, Albert C., Jr.	III.	1901
Dart, Harry E.	VI.	1901
Dater, Philip H.	I.	1898
Dates, Henry B.	VI.	1894
Davenport, William S.	V.	1889
Davidson, William F.	II.	1901
Davies, T. Clive	II.	1894
Davis, Albert G.	VI.	1893
Davis, Alvan L.	III.	1898
Davis, Arthur C.	V.	1901
Davis, Arthur L.	II.	1889
Davis, Carleton E.	I.	1893
Davis, Edward H.	IX.	1900
Davis, Frank E.	II.	1883
Davis, Franklin H.	III.	1896
Davis, Huntly W.	IV.	1898
Davis, Leon K.	X.	1894
Davis, Robert A.	VI.	1896
Davis, Walter P.	III.	1901
Davis, William E., Jr.	IV.	1895
Davis, Willis E.	Sci. and Lit.	1876
Davison, George R.	VI.	1898
Dawes, Herbert N.	II.	1893
Day, Nathan B.	II.	1894
Day, Sarah L.	V.	1887
Dean, Arthur D.	VI.	1895
Dean, Walter C.	VI.	1900
Dearborn, George K.	IX.	1893
Dearden, Clinton M.	VIII.	1901
Deavitt, Henry M.	V.	1897
De Berard, Wilford W.	XI.	1901
Defren, George	V.	1895
De Golyer, Robert S.	IV.	1898
Dejonge, Alfred L.	II.	1895
de Lancey, Darragh	II.	1890
de Lancey, Harriet Gallup	V.	1894
Delano, Alexander J.	I.	1890
Delano, Paul H.	I.	1900
DeLong, Harold W.	XIII.	1896
DeMeritt, Leonard M.	II.	1897
Demond, Charles D.	III.	1893
Denison, Edward E.	X.	1895
*Dennett, Clarence L. (June 6, '78)	II.	1876
Dennett, Hartley	IV.	1892
Dennison, Charles H.	X.	1901
Densmore, Edward D.	VI.	1893
Derr, Louis	VI.	1892
Devens, Richard	II.	1888
De Wolf, Arthur S.	II.	1897
De Wolf, John O.	II.	1890
Dewson, Edward H., Jr.	II.	1885
Dickerman, Judson C.	X.	1895
Dickey, Charles W.	IV.	1894
Dickinson, Leonard D. P.	VI.	1896
Dill, Howard A.	I.	1891
Dillon, Frederick N.	V.	1893
Dixon, John B.	V.	1898
Dixon, Laurence B.	VI.	1893
Doane, Alfred O.	III.	1884
Doane, George E.	I.	1874
Dodd, Helen Chamberlin	IV.	1896
Dodd, Margaret E.	VII.	1892
Dodge, Charles B.	IX.	1889
Dodge, Edwin S.	IV.	1897

*Deceased.

NAME.	COURSE.	CLASS.
Dodge, Frank S.	I.	1875
Dodge, Frederick H.	II.	1890
Dodge, Irving B.	II.	1898
Dodge, Samuel D.	I.	1893
*Dodge, William B. (Jan. 29, '98)	I.	1872
Doe, Charles C.	VII.	1886
Dolan, Peter F.	VI.	1893
Doliber, Franklin W.	IX.	1897
Donham, Benjamin C.	I.	1895
Donn, Edward W., Jr.	IV.	1891
Donovan, John A.	IX.	1897
Doolittle, Orrin S.	V.	1886
Dorey, William A.	III.	1900
Dorman, Theodore T.	X.	1893
Dorr, Edgar S.	I.	1875
*Dorr, Frank H. (Jan. 8, '97)	VI.	1891
Dorrance, John Thompson	V.	1895
Dorrance, William T.	I.	1896
Doten, Alfred R.	II.	1897
Dougherty, Proctor L.	VI.	1897
Douglass, Walter B.	I.	1892
Dow, Richard E.	V.	1901
Dow, Willard W.	IX.	1901
Downes, Alfred K.	I.	1897
Dowse, William B.	IV.	1874
Dozier, Henrietta C.	IV.	1899
Drake, Albert W.	VI.	1895
Drake, Chester F.	XI.	1898
Draper, Fred W.	III.	1895
Draper, Joseph P.	IX.	1900
Draper, Robert M.	III.	1898
Dresser, Henry C.	II.	1892
*Drew, Albert T. (Nov. 6, '01)	X.	1898
Drew, Charles D.	I.	1899
Driscoll, Francis B.	I.	1901
Driscoll, James M.	I.	1896
Driscoll, Joseph	I.	1896
Driscoll, Timothy J.	VI.	1899
Drisko, William J.	VIII.	1895
Drum, Alphonsus L.	VI.	1896
Dubois, Norman A.	V.	1901
Du Bois, Barron P.	VI.	1892
Duckworth, Harry S.	V.	1894
Duff, James C.	V.	1886
Duff, John	V.	1881
Dulude, Frederick J.	I.	1901
Dunbar, Albert	V.	1895
Dunbar, Francis W.	VI.	1890
Dunbar, W. Otis	II.	1879
Dunham, Lewis A.	I.	1891
du Pont, Henry Belin	X.	1894
du Pont, Irenée	X.	1897
du Pont, Lammot	I.	1901
du Pont, Pierre S.	V.	1890
Durfee, Nathan	II.	1889
Durgin, Clara I.	V.	1900
Dutton, Edgar F.	VI.	1888
Dutton, Francis B.	X.	1900
Dwelley, Edwin F.	I.	1890
Dwyer, John R.	IV.	1897
Dyar, Harrison G.	V.	1889
Eames, Charles H.	VI.	1897
Eastman, Henry F.	II.	1888
Eaton, Charles S.	IV.	1878
Eaton, Henry C.	II.	1899
Eaton, William W.	II.	1897
Edes, William C.	I.	1875
Edgerly, Daniel W.	V.	1898
Edmands, Frederick L.	II.	1897
Edmands, J. Rayner	II.	1869
Edson, Warren A.	II.	1900
*Edwards, Arthur V. (Aug. 3, '97)	IV.	1889
Elbert, Samuel B.	III.	1900
Eldridge, George F.	V.	1892
Ellery, James B.	V.	1899
Ellis, Carleton	V.	1900
Ellis, John	VI.	1894
Ellis, Rolfe M.	V.	1895
*Ellis, Walter H. (Oct. 4, '99)	I.	1895
*Ellsworth, Alfred B. (Jan. 10, '93)	I.	1888
Elson, Arthur	X.	1897
Ely, Edward F.	IV.	1882
Ely, Sumner B.	II.	1892
Emerson, Frank N.	IV.	1901
Emerson, George D.	VI.	1899
Emerson, Joseph S.	I.	1874
Emery, Elwood A.	IV.	1890
Emery, James A.	I.	1893
Emery, Lewis, 3d	III.	1900
Emmerton, Frederic A.	V.	1872
England, Paul W.	VI.	1891
Ensworth, Horace H.	VI.	1891
Eppendorff, John G.	IV.	1883
Eppes, Richard, Jr.	II.	1888
Estabrook, Mansfield	II.	1901
Esty, William	VI.	1893
Eveleth, Charles F.	VI.	1895
Everett, Frank W.	VI.	1897
Ewen, Malcolm F.	IV.	1897
Ewing, Florence Wood	VIII.	1897
Ewing, William C.	VI.	1897
Eynon, John S.	VI.	1897
Fabens, George W.	I.	1879
*Fabens, S. A., Jr. (Mar. 14, '75)	I.	1873
Farmer, George W.	II.	1886
Farnham, William E.	VI.	1901
Farnsworth, Arthur J.	VI.	1894
Farquhar, Robert D.	IV.	1895
Farwell, Arthur	VI.	1893
Faught, Ray C.	VI.	1898
*Faunce, Elmer (July 6, '82)	III.	1871
Faunce, George	III.	1882

* Deceased.

NAME.	COURSE.	CLASS.
Faunce, Linus	II.	1877
Favor, George W.	III.	1891
Faxon, Francis E.	II.	1895
Faxon, William A.	V.	1897
Fay, Frederic H.	I.	1893
Fearing, Albert J.	I.	1898
Feeley, Frank G.	II.	1897
Feland, Logan	IV.	1892
Felton, Samuel M.	I.	1873
Fenn, William H., Jr.	I.	1890
Fenner, David Colton	II.	1898
Ferguson, Finlay F.	IV.	1898
Ferguson, John B.	I.	1899
Ferguson, John N.	I.	1894
Ferguson, Louis A.	VI.	1888
Field, Leonard H., Jr.	IV.	1899
Ferris, Robert M., Jr.	VI.	1897
Field, Frederick E.	XI.	1896
Fifield, Ethel F.	IV.	1900
Fifield, Frederick A.	II.	1899
*Firth, Frank R. (June 9, '72)	I.	1868
Fish, Milton L.	VI.	1895
Fish, Walter C.	VI.	1887
Fisher, Charles H.	II.	1877
Fisher, Elizabeth F.	XII.	1896
Fisher, Frederick L.	I.	1873
Fisher, Howell	X.	1898
Fisk, Harry G.	IX.	1899
Fiske, George I.	VI.	1898
Fiske, Henry A. VI. 1892	X.	1891
Fiske, J. Parker B.	VI.	1889
Fitch, Alfred L.	II.	1884
Fitch, Stanley G. H.	X.	1900
Fitz Gerald, Francis A. J.	VI.	1895
Fitz Gerald, John W.	VI.	1897
Fleisher, Simon	VI.	1898
Fleming, Edward P.	III.	1901
Flemings, John A.	VI.	1899
Fletcher, Charles R.	V.	1876
Flint, Bertram P.	II.	1888
Flint, Charles K.	VI.	1901
*Flint, Wm. C. (June 14, '81)	III.	1877
Flint, William P.	II.	1890
Flynn, William B.	VI.	1899
Flood, Samuel D.	II.	1890
Florsheim, Leonard S.	I.	1901
Foljambe, Eugene S.	XIII.	1901
Folsom, Harry G.	VI.	1901
Foote, Arthur B.	I.	1899
Foote, Edward H.	I.	1871
Foque, Theodore A.	II.	1888
Foran, George J.	II.	1883
Forbes, Eli	Sci. and Lit.	1868
Forbes, Fred B.	V	1893
Forbes, Howard C. VI. 1892	X.	1891
Forbush, Gayle T.	X.	1892

NAME.	COURSE.	CLASS.
Ford, George B.	IV.	1900
Forrest, Mabel F.	VII.	1898
Forster, Frederick E.	X.	1896
Fosdick, Charles M.	XI.	1900
*Foss, Edward S. (Oct. 3, '90)	V.	1886
Foss, Fred E.	I.	1886
*Foss, Harry A. (Aug. 19, '85)	II.	1882
Foster, Mortimer B.	VI.	1901
*Foster, Theodore R. (Apr. 15, '97)	II.	1886
Foulkes, Edward T.	IV.	1898
Fowle, Arthur E.	X.	1893
Fowle, Frank F.	VI.	1899
Fowle, Frederick E., Jr.	VIII.	1894
Fownes, William C.	X.	1898
Fox, Frederick, Jr.	V.	1885
Fox, John M.	VI.	1887
Francis, Frederick L.	IV.	1892
Frank, Mortimer	I.	1897
Franklin, Arthur I.	V.	1898
Freeman, Frederick W.	III.	1901
Freeman, John R.	I.	1876
French, Alfred W.	I.	1889
French, Allen	IX.	1892
French, Charles A.	III.	1882
French, Edward R.	VI.	1892
French, Edward V.	II.	1889
French, George L. R.	I.	1884
French, Hollis	VI.	1889
French, Lester G.	II.	1891
French, Philip R.	V.	1900
Fresch, George, Jr.	IV.	1896
Frink, Gerald	II.	1900
Frisbie, Walter L.	II.	1893
Frost, Howard V.	V.	1882
Fry, Thomas W.	II.	1885
Frye, Albert I.	I.	1898
Füger, Frederick W.	II.	1891
Fukuzawa, Stejiro	I.	1888
Fuller, Andrew D.	I.	1895
Fuller, Charles E.	II.	1892
Fuller, Frank L.	I.	1871
Fuller, Frederic W.	VI.	1897
Fuller, George W.	V.	1890
Fuller, J. Edward, Jr.	IV.	1888
Fuller, Myron L.	XII.	1896
Fuller, Robert L.	IV.	1896
Fuller, William B.	I.	1883
Fulton, William H.	VI.	1900
*Furber, Pierce P. (Apr. 7, '93)	IV.	1877
Furbish, Frederic	IV.	1898
Fyfe, James L.	IV.	1897
Gage, Stephen De M.	V.	1896
Gaillard, Lawrence L.	VI.	1897
Gale, Gardner M.	IV.	1899
Gale, Horace B.	II.	1883
Gallagher, Edward G.	VI.	1900

* Deceased.

NAME.	COURSE.	CLASS.
Gallison, Ernest A.	II.	1898
Galloupe, Francis E.	II.	1876
Gallup, Anna B.	VII.	1901
Gallup, Harriet T. (*see* de Lancey).		
Gamble, William Burt	IX.	1893
Gannett, Earl W.	VI.	1889
Gardiner, Edward G.	VII.	1882
Gardiner, John H.	II.	1895
Gardner, Harry W.	IV.	1894
Gardner, Henry	II.	1896
Gardner, J. Howland	II.	1894
Gardner, Lester D.	IX.	1898
Gardner, Stephen F.	II.	1900
Garfield, Abram	IV.	1896
Garfield, Alexander S.	II.	1886
Garrett, William W.	III.	1901
Garrison, Charles	VI.	1891
Gauss, Carl F.	IX.	1900
Gay, Charles M.	IV.	1895
Gay, Joseph B.	IV.	1887
Gay, Martin	I.	1877
Gaylord, Wallace K.	V.	1893
Gerrish, William H.	II.	1888
Gibbs, George C., 3d.	I.	1900
Gilbert, Frederick C.	V.	1898
Gilbert, James P.	V.	1889
Gilbert, Perley Fred	IV.	1895
Gilkey, R. Waldo	II.	1894
Gill, Augustus H.	V.	1884
Gill, Edward P.	IV.	1892
Gillson, Charles B.	X.	1899
Gilman, Charles C.	III.	1868
Gilmore, George L.	II.	1890
Gilmore, Howard . . VI. 1893	II.	1892
Gilmore, Jonathan Monroe	VI.	1897
Gilpin, Russell	II.	1899
Gilson, Henry R.	II.	1901
Gladding, John T. F.	II.	1900
Gleason, Walter A.	I.	1897
Gleason, Walter H.	V.	1887
Glidden, John W.	II.	1890
Glover, George C.	IV.	1899
*Glover, Marie O. (*see* Holman).		
Godbold, Charles H., Jr.	XIII.	1898
Goddard, David S.	III.	1881
Goddard, John N.	V.	1898
Godley, George M.	III.	1898
Goldsmith, Clarence	II.	1898
Goldthwaite, Harry W.	II.	1899
Gonzalez, Alberto P.	III.	1901
Goodale, Charles W.	III.	1875
Goodell, George H.	II.	1892
Goodhue, Leonard H.	V.	1896
Gooding, Charles S.	II.	1879
Goodrich, Arthur L.	X.	1898
Goodridge, Frederic S.	II.	1900
Goodrich, Robert R. II. 1901	III.	1885
Goodspeed, George M.	V.	1897
Goodwin, Harry M.	VIII.	1890
Goodyear, Watson E.	VI.	1895
Gordon, Edward B., Jr.	II.	1896
Gorham, Marvine	II.	1893
*Gould, Robert H. (Nov. 19, '78) Metall.		1876
Gowell, Louis N.	IV.	1900
Gowen, Sumner	I.	1897
Grabau, Amadeus W.	XII.	1896
Grant, Harry L.	XIII.	1901
Gray, Greta	IV.	1901
Gray, Joseph P.	I.	1877
Gray, Owen H.	VI.	1897
Gray, William P.	VI.	1892
Green, Andrew H.	I.	1896
Green, Francis C.	XI.	1895
Green, William W.	I.	1892
Greene, Charles E.	I.	1368
*Greene, Irving G. (Feb. 24, '91)	I.	1888
Greenlaw, Frank M.	VI.	1890
Greenleaf, Lewis S.	VI.	1894
Greer, Herbert C.	III.	1899
Greer, Medorem W.	VI.	1891
Gregory, John H.	I.	1895
Grimes, Charles B.	V.	1892
Gross, Harold G.	VII.	1888
Grosvenor, Asa W.	II.	1899
Grover, Edmund	I.	1877
Grover, Frederick W.	VIII.	1899
Grover, Nathan C.	I.	1896
Grush, Henry G.	VI.	1896
Guild, Frederick, Jr. Sci. and Lit.		1873
Guppy, Benjamin W.	I.	1889
Guptill, Frank E.	VI.	1896
Gustafson, Gustaf E.	I.	1901
Gustin, George H.	III.	1883
Hadaway, William S., Jr.	VIII.	1887
Hadley, Frederic W.	VI.	1893
Hagar, Edward M.	II.	1893
Haines, Frank M.	III.	1884
Hale, George E.	VIII.	1870
Hale, Richard A.	I.	1877
Haley, Dennis F.	III.	1901
Hall, Albert F.	II.	1868
Hall, Edward C., Jr.	II.	1892
Hall, Francis P.	V.	1882
Hall, George A.	IX.	1901
Hall, John R.	VI.	1890
Hall, Milton W.	VII.	1900
Hall, Robert G.	V.	1897
Hall, Sarah A. (*see* Bonesteele).		
Hall, Stephen M.	VI.	1900
Hall, Walter A.	VI.	1896
Hall, William T.	V.	1895
Hallaran, John S.	I.	1896

* Deceased.

NAME.	COURSE.	CLASS.
Hamblet, George W.	II.	1888
Hamilton, Alfred Starr	IX.	1897
Hamilton, Arthur L.	III.	1900
Hamilton, Edgar L.	III.	1891
Hamilton, George W.	I.	1880
Hammatt, Edward A. W.	I.	1875
Hammett, Philip M.	II.	1890
Hammond, Charles F.	I.	1891
Hammond, Charles L.	I.	1897
Hammond, Clifford R.	VI.	1901
Hammond, Edward H.	V.	1899
Hanchett, George T.	VI.	1893
Handy, Edward A.	I.	1875
Hannah, Frederick A.	II.	1895
Hapgood, Charles W.	V.	1896
Hapgood, Cyrus H.	VI.	1900
Hardman, John E.	III.	1877
Hardy, Robert S.	VI.	1896
Harkness, George E.	I.	1896
Harper, Ernest C.	I.	1901
Harps, Harry M.	I.	1900
Harriman, Frederic O.	I.	1883
Harrington, Joseph	II.	1896
Harrington, Walter K.	I.	1885
Harris, Charles H.	VI.	1901
Harris, Frederick W.	XI.	1895
Harris, W. Dale	I.	1873
Harris, William L.	VII.	1888
Harrison, Burt S.	IV.	1894
*Hartwell, Ernest G. (Sept. 22, '89)	IV.	1879
Hartwell, Hiram B.	II.	1896
Harvey, Frederic H.	III.	1893
Harvey, George L.	II.	1888
*Harwood, F. W., Jr. (Oct. 18, '95)	VI.	1894
Harwood, Harry A.	I.	1892
Hasbrouck, Ross	I.	1899
Haskell, George O.	II.	1898
Haskins, Charles N.	VIII.	1897
*Haskins, William (Apr. 24, '99)	III.	1891
Haste, James H.	V.	1896
Hastings, Charles F.	III.	1888
Hastings, Harry P.	I.	1894
Hatch, Arthur E.	I.	1891
Hatch, Israel, Jr.,	X.	1897
Hathaway, D. Lewis K.	II.	1886
Hathaway, Herbert E.	V.	1891
Hathaway, Savory C., Jr.	VI.	1888
Haven, George B.	II.	1894
Haven, Harry M.	II.	1895
Hawkins, Edgar M.	II.	1897
Hawkins, Laurence A.	VI.	1899
Hawley, Harvey F.	I.	1896
Hayden, Arthur G.	I.	1901
Hayden, Charles	IX.	1890
Hayden, George W.	VI.	1895
Hayden, Lewis A.	III.	1898
Hayden, Sophia G. (*see* Bennett).		
Hayes, Frank	II.	1890
Hayes, Harry E.	VI.	1890
Hayward, Harrison W.	X.	1896
Hayward, Nathan	VI.	1897
Hayward, Royal H.	VI.	1897
Hazard, Schuyler	I.	1890
Hazeltine, Benjamin P.	VI.	1899
Hazeltine, James E.	VI.	1898
*Head, James H. (Aug. 18, '75)	II.	1875
Healy, Frederick E.	II.	1897
Healey, Harry R.	X.	1901
Heath, George L.	V.	1888
Heathman, Frank B.	IV.	1898
Hedge, Henry R.	IX.	1896
Hedge, William R.	IX.	1896
Heermann, Frederick M.	II.	1896
Heghinian, Garabed G. I. 1901	XI.	1900
Heins, George L.	IV.	1882
Hemmings, Frederick J.	V.	1897
Henck, John B., Jr.	VIII.	1876
Henderson, Reuben S.	I.	1899
Henderson, James B.	II.	1896
Henrich, Louis R.	IV.	1901
Henry, Ralph C.	IV.	1896
Herbert, Edward	VI.	1900
Herman, Bernard	I.	1899
Hermanns, Frank E.	I.	1899
Hern, Joseph L.	VI.	1899
Herrick, Edward W.	II.	1888
Herrick, James A.	V.	1872
Hersam, Ernest A.	V.	1891
Hewett, Joseph	VIII.	1896
Hewins, Lyman F.	XIII.	1899
Hewitt, Henry H.	IV.	1898
Heywood, Albert S.	VI.	1892
*Heywood, Geo. H. (May 17, '98)	III.	1884
*Heywood, Lincoln C. (Dec., '94)	I.	1891
Hibbard, Henry D.	III.	1877
Hibbard, Thomas	II.	1875
Higgins, Albert W.	X.	1901
Higgins, Alfred S.	IV.	1878
Higgins, Edward E.	VI.	1886
High, Carl S.	VI.	1898
Hildreth, Horace E.	I.	1901
Hildreth, William O.	II.	1887
Hill, William G., Jr.	V.	1897
Hill, William Reed	IV.	1894
Hilliard, John D., Jr.	VI.	1892
Hinckley, Benjamin S.	II.	1899
Hinckley, Everett H.	X.	1899
Hinckley, J. Fred	X.	1893
Hinman, Charles W.	III.	1870
Hinman, Dean	I.	1900
Hirokawa, Tomokichi	VI.	1900
Hirt, Jules H.	III.	1901

*Deceased.

NAME.	COURSE.	CLASS.
Hobart, Henry M.	VI.	1889
Hobart, James C.	II.	1887
Hobbs, Franklin W.	II.	1889
Hodgdon, Frank W.	I.	1876
Hodgdon, Harry A.	II.	1901
Hodge, James M.	III.	1872
Hodsdon, Charles W.	II.	1900
Hogle, Milton W.	II.	1901
Holbrook, Elliot	I.	1874
Holbrook, George M.	V.	1900
Holden, Amasa A.	IX.	1899
Holder, James G.	V.	1884
Holdrege, Henry A.	VI.	1895
Holford, William G.	IV.	1901
Holliday, Alexander R.	I.	1899
*Hollingsworth, S. (June 26, '99)	II.	1876
Hollis, Frederick S.	V.	1890
Hollis, Walter M.	VI.	1896
Holman, George U. G.	VI.	1889
*Holman, Marie G. (May 5, '85)	V.	1881
Holman, Silas W. (Apr. 1, '00)	VIII.	1876
Holmes, Francis C.	IX.	1892
Holmes, George A.	X.	1891
Holton, Edward C.	V.	1888
Homer, Eleazer B.	IV.	1885
Hongma, Aechirau	I.	1874
Hooker, Richard	IV.	1889
Hooper, Harris G.	XIII.	1900
Hopeman, Bertram C.	IV.	1900
Hopewell, Charles F.	VI.	1894
Hopkins, Arthur T.	XI.	1897
Hopkins, Frederick L.	V.	1889
Hopkins, Heber A.	II.	1898
Hopkins, James C.	IV.	1896
Hopkins, Prescott A.	IV.	1892
Hopkins, Robert M.	VI.	1900
Hopkins, William J.	VI.	1886
Hopton, Walter E.	II.	1891
Horn, Henry J., Jr.	I.	1888
Horne, Lewis W.	XIII.	1901
Horton, Frank N.	II.	1900
Horton, Ralph T.	I.	1898
Horton, S. Ellsworth	II.	1890
Horton, Theodore	XI.	1894
Hosea, Raphael M.	I.	1879
Hosford, Roger F.	V.	1897
Houck, William G.	I.	1893
Hough, William B.	II.	1900
Howard, Arthur F.	VI.	1898
Howard, Charles P.	I.	1874
Howard, Ethan H.	VI.	1897
Howard, Frank A.	I.	1896
Howard, Lemuel Frederic	VI.	1895
Howarth, George R.	II.	1895
Howe, George E.	I.	1895
Howe, Henry M.	III.	1871
Howe, Herbert H.	IX.	1900
Howe, Horace J.	I.	1879
Howe, Joseph M.	I.	1896
Howes, Benjamin A.	VI.	1897
Howes, Clarence L.	II.	1873
Howes, Clifton A.	VI.	1894
Howland, Albert H.	I.	1871
Howland, Frederick H.	IX.	1893
Hoxie, Frederick J.	VI.	1892
Hoyt, William E.	I.	1868
Hubbard, Chester D.	VI.	1897
Hubbard, Winfred D.	XI.	1898
Hulse, William S.	VI.	1894
Hultman, Eugene C.	I.	1896
Humphreys, Walter	II.	1897
Hunnewell, Frederick A.	XIII.	1897
Hunt, Albert F.	I.	1894
*Hunt, Alfred E. (Apr. 26, '99)	III.	1876
Hunt, Edward M.	I.	1894
Hunt, Harry B.	II.	1897
Hunt, Harry D.	IX.	1897
Hunt, Harry H.	VI.	1889
Hunt, Herman R.	XIII.	1900
Hunt, Samuel P.	VI., X.	1895
Huntington, George D.	I.	1898
*Huntington, W. F. (Aug. 7, '77)	I.	1875
Hurd, Benjamin	VI.	1896
Hurd, E. Laurence	II.	1895
Hürter, Charles S.	III.	1898
Huse, Frank J.	II.	1899
Hussey, James W.	XIII.	1900
Hussey, Oren S.	II.	1887
Hutchings, James H.	II.	1883
Hutchins, Edward S.	II.	1889
Hutchinson, George A.	II.	1898
Hutchinson, W. Spencer	III.	1892
Huxley, Edward H.	II.	1895
Hyde, Austin T.	X.	1901
Hyde, Charles G.	XI.	1896
Hyde, George T.	IV.	1901
Ilsley, John P., Jr.	II.	1897
Ingalls, Charles H.	VI.	1896
Ingalls, Frederick DuB.	II.	1901
Ingalls, Harry C.	IV.	1898
Ingalls, Walter Renton	III.	1886
Ingraham, George H.	IV.	1892
Isham, Alonzo K.	II.	1901
Jackson, Daniel D.	V.	1893
Jackson, Frank H.	III.	1874
Jackson, Jerome P.	IV.	1899
Jacobs, Arthur L.	VI.	1892
Jacobs, Elbridge C.	III.	1897
Jacoby, Areli H.	V.	1898
Jacques, William W.	VIII.	1876
James, Frank M.	II.	1888
James, Henry P.	II., VI.	1899

* Deceased.

NAME.	COURSE.	CLASS.
James, Lawrence S.	V.	1893
James, Samuel, Jr.	III.	1876
James, Walter H.	II.	1896
Jameson, Arthur H.	V.	1893
Jameson, Minor S.	I.	1896
Janvrin, Ned H.	I.	1894
Jenkins, Charles D.	V.	1882
Jensen, Hans P.	I.	1899
Jenney, Walter	III.	1877
Jennings, Arthur L.	II.	1897
Jewett, Arthur C.	II.	1901
*Jewett, William P. (Jan. 4, '84)	I.	1873
Johnson, Carl F.	II.	1901
Johnson, Charles C.	X.	1900
Johnson, Charles H.	I.	1894
Johnson, Daniel S.	III.	1900
Johnson, Edward, Jr.	I.	1899
Johnson, Harry G.	V.	1899
Johnson, Herbert E.	VI.	1894
Johnson, James W.	I.	1882
Johnson, Jesse F.	X.	1892
Johnson, Lane	II.	1899
Johnson, Lewis E.	II.	1889
Johnson, Paul F.	II.	1898
Johnson, William S.	I.	1889
Johnston, William A.	II.	1892
Jones, Arthur W.	VI.	1888
Jones, Edward A.	II.	1887
Jones, Frederic A.	I.	1898
Jones, Howard K.	IV.	1896
Jones, Theodore I.	VI.	1896
Jordan, Edwin O.	VII.	1888
Jordan, Harry W.	V.	1891
Jordan, William F.	I.	1886
Jouett, Henry D.	I.	1900
Kales, William R.	II.	1892
Kattelle, Walter R.	IV.	1900
Kauffman, Milton H.	V.	1891
Kaufman, Irvin H.	II.	1898
Keay, Herbert O.	II.	1900
Kebler, Julian A.	I.	1878
Keene, Arthur S.	IV.	1898
Keene, Thomas M.	I.	1891
Keene, William F.	I.	1891
Keisker, Frank H.	IV.	1897
Keith, Leigh S.	VI.	1900
Keith, Simeon C., Jr.	VII.	1893
*Keith, William H. (Oct. 17, '98)	VI.	1896
Kelley, Will G.	VI.	1901
Kelley, William	V.	1898
Kellogg, Franklin M.	VI.	1898
Kendall, Albert L.	II.	1894
Kendall, Arthur I.	VII.	1900
Kendall, Charles B.	V.	1887
Kendall, Francis H.	I.	1890
Kendall, Lilly M.	V.	1892
Kendall, Robert E.	V.	1898
Kendall, William R.	VI.	1892
Kenison, Ervin	II.	1893
Kennedy, Herbert H.	VI.	1901
Kenney, C. Belle	V.	1886
Kennicott, Harry A.	I.	1890
Kent, William A.	I.	1897
Keough, William T.	II.	1888
Keyes, Frederic Hale	II.	1893
Keys, Harry M.	VI.	1899
Kilham, Alfred C.	II.	1876
Kilham, Walter H.	IV.	1889
Killam, James W.	I.	1897
Kimball, Elwell F.	I.	1898
Kimball, Fred L. H.	III.	1899
Kimball, Herbert S.	X.	1891
Kimball, Joseph H.	XI.	1894
Kimball, Walter E.	XIII.	1898
*Kimball, William A. (Dec., '87)	II.	1873
Kimberly, Albert E.	V.	1897
King, Warren D.	VI.	1893
King, William Herbert	IX.	1894
King, William B.	VI.	1899
Kingman, William A.	V.	1900
Kinnicutt, Leonard P.	V.	1875
Kinsman, Arthur D.	VIII.	1889
Kinsman, William A.	II.	1899
*Kirk, Joseph (July, '86)	II.	1877
Kirk, Robert H.	II.	1894
Kittredge, George W.	I.	1877
Kittredge, John W.	II.	1894
Knapp, Charles R.	IV.	1894
Knapp, Frederick B.	I.	1879
Knapp, George Frederick	V.	1884
Knapp, J. Austin	II.	1875
Knight, Franklin	I.	1890
Knight, George H.	II.	1897
Knight, George W.	V.	1900
Knight, Joseph H.	IX.	1896
Knowles, Morris	I.	1891
Knowlton, Willis T.	I.	1893
Knox, King H.	VI.	1901
Koch, Armand D.	IV.	1892
Koch, Carleton S.	V.	1898
*Koehler, Walter J. ('01)	V.	1881
Kohr, Donald A.	V.	1901
Kotzschmar, Hermann, Jr.	II.	1895
Kunhardt, Lewis Henry	II.	1889
Kuttroff, Edwin	X.	1898
Lacount, Henry O. VI. 1895	II.	1894
Lacy, Robert	I.	1898
Lamb, Augustus C.	X.	1897
Lamb, William F.	VI.	1893
Lambert, Wallace C.	I.	1893
Lamborn, Leebert L.	V.	1896
Lane, Edward P.	I.	1898

* Deceased.

NAME.	COURSE.	CLASS.
Lane, Frederic H.	II.	1879
Lane, Lucius Page	IX.	1894
Lane, William H.	VI.	1892
Lange, Theodore F.	I.	1901
Langford, Grace	VIII.	1900
Lansingh, Van Rensselaer	VI.	1898
Larrrabee, John H.	I.	1900
Latey, Harry N.	VI.	1893
Latham, Harry M.	II.	1893
Lauder, George B.	VI.	1889
Lawler, George S.	VI.	1897
Lawrence, Charles E.	VI.	1896
Lawrence, Ellis F.	IV.	1901
*Lawrence, J. A. M. (Jan. 18, '93)	II.	1886
Lawrence, Lewis M.	IV.	1900
Lawrence, Ralph R.	VI.	1895
Lawrence, William H.	IV.	1891
Laws, Eugene H.	V.	1896
Laws, Frank A.	VI.	1889
Laws, James B.	IX.	1901
Lawton, Charles F.	I.	1877
Leach, Albert E.	II.	1886
Leach, William H., Jr.	II.	1897
Leach, Robert H.	III.	1900
Learned, Ernest F.	VI.	1897
LeBaron, Frederic N.	IV.	1897
Le Bosquet, Maurice	V.	1895
Lee, Elisha	I.	1892
Lee, George S.	I.	1888
Lee, Walter H.	IV.	1898
Leeming, Woodruff	IV.	1891
Leighton, Marshall O.	VII.	1896
Leiper, James G., Jr.	II.	1899
Leland, Walter S.	XIII.	1896
Leland, William E.	II.	1891
Lenfest, Bertram A.	II.	1890
Lennan, Thomas F.	V.	1899
Leonard, Clifford M.	I.	1900
Leonard, Frederick M.	I.	1894
Leonard, H. Ward	III.	1883
Leonard, Owen L.	V.	1898
Le Sueur, Ernest A.	VI.	1890
Lewis, Clancey M.	III.	1899
Lewis, Edwin J., Jr.	IV.	1881
Lewis, Herbert.	VI.	1893
Lewis, James E.	I.	1897
Lewis, Joseph E.	II.	1899
Lewis, Marion L. (*see* Chamberlain).		
Lewis, Rondel M.	V.	1900
Lewis, Theodore J.	II.	1876
Lewis, Wilfred	II.	1875
Lewis, William W.	II.	1898
Libby, Dorville, Jr.	VI.	1895
Liliencrantz, Edith	IV.	1900
Lincoln, Alfred V., Jr.	II.	1895
Lincoln, Charles T.	V.	1901
Lincoln, Francis C.	III.	1900
Lincoln, G. Russell	III.	1871
Lindsay, William B.	V.	1881
Lingley, Robert R.	II.	1900
Linzee, John W., Jr.	I.	1889
Lippincott, Jesse T.	X.	1898
Litchfield, Paul W.	X.	1896
Little, Edmund C.	IV.	1898
*Littlefield, Frank W. (Dec. 8, '00)	III.	1900
Littlefield, Homer	VI.	1900
Littlefield, Robert S.	XIII.	1901
Livermore, William D.	V.	1887
Locke, Bradford H.	III.	1872
Locke, Charles E.	III.	1896
Locke, Frank L.	I.	1886
Locke, William W.	XI.	1892
Logan, Andrew J.	I.	1895
Logan, John W.	II.	1893
Lohbiller, Harry J.	II.	1901
Lombard, Percival H.	VI.	1898
Lonngren, John E.	II.	1896
Loomis, Allen	XIII.	1899
Loomis, Henry M.	V.	1897
Lootz, Alf C.	I.	1896
Lord, Charles E.	VI.	1898
*Lord, Frank H. (Dec. 31, '90)	II.	1885
Loring, Ernest J.	IV.	1895
Loring, Frederic R.	VII.	1879
Loring, Harrison, Jr.	II.	1889
Loring, Ralph S.	I.	1901
Loring, Robert	X.	1894
Lothrop, Thomas Mark	II.	1895
Loud, Ralph W.	I.	1899
Lovejoy, Frank W.	X.	1894
Loveland, Benjamin A.	I.	1897
Loveland, James W.	V.	1888
Loveman, Lee R.	VI.	1899
Low, Albert H.	V.	1876
Low, John F.	V.	1882
Low, Wilson H.	V.	1886
Lowell, Guy	IV.	1894
Lufkin, Elgood C.	II.	1886
Lukes, Joseph B.	VI.	1892
Lunan, Thomas M.	V.	1901
*Lund, Amy Stantial (Feb., '88)	V.	1884
Lund, James	V.	1881
Lunt, Robert S.	X.	1897
Luyties, Otto G.	II.	1901
Lyle, David A.	III.	1884
*Lyman, George W. (July, '98)	VI.	1896
Lynch, Patrick M.	I.	1894
Lynde, James P.	IX.	1886
Lyon, Joseph P.	I.	1892
Lyon, Tracy	II.	1885
Lythgoe, Hermann Charles	V.	1869
McAlpine, William H.	XI.	1896

* Deceased.

NAME.	COURSE.	CLASS.
McCann, Frank G.	II.	1896
McCarthy, George H.	IX.	1897
McCaw, Wallace E.	VI.	1892
MacClure, Colbert A.	IV.	1894
McConnell, George B.	I.	1890
McConnell, Walter G.	XIII.	1898
McCormick, Edmund B.	II.	1897
McCrea, *Almeron* W.	IV.	1899
McCrudden, Francis H.	V.	1900
McDaniel, Allen B.	IV.	1901
McDonald, Harry P., Jr.	I.	1901
Macfarlane, William W.	V.	1879
McGoodwin, Henry K.	IV.	1894
McGowan, Francis X.	II.	1900
Macintire, Benjamin G.	V.	1901
McIntyre, James S.	IV.	1898
McJennett, William D.	X.	1894
McJunkin, Paul	VIII.	1898
Mackay, Angus R.	III.	1894
McKenna, Alexander G.	V.	1891
McKibben, Frank P.	I.	1894
McKim, Alexander Rice	I.	1886
*McLaughlin, G. V. (Aug. 14, '92)	V.	1888
MacLeod, Grace	V.	1901
McManus, James T. R.	I.	1895
McMillan, John P.	X.	1897
McNeil, Hector	I.	1901
Macpherson, Herbert A.	XIII.	1900
McQuesten, George E.	VI.	1893
MacRae, Hugh	III.	1885
Madero, Salvador S.	III.	1901
Maguire, Thomas F. J.	VI.	1897
Mahoney, Joseph M.	VI.	1897
Mahony, Marion L.	IV.	1894
Main, Charles T.	II.	1876
Maki, Heiichiro	VI.	1893
Maltby, Margaret E.	VIII.	1891
Manahan, Elmer G.	XI.	1892
Manahan, *John* H.	VI.	1896
Manley, Laurence B.	I.	1892
Manley, Sumner M.	II.	1900
Mann, Arthur S.	II.	1888
Mann, Bertram H.	VI.	1890
Mann, Frederick M.	IV.	1894
Manning, Harry G.	II.	1882
Mansfield, Arthur N.	VIII.	1891
Mansfield, Edward S.	VI.	1896
Mansfield, George W.	III.	1882
Mansfield, Harvey M.	III.	1883
Mansfield, R. Herbert, Jr.	VI.	1892
Manson, Edmund S., Jr.	VIII.	1897
*Marble, Dwight N. (Sept. 8, '00)	VI.	1895
March, Clement	I.	1891
Marcus, Henry C.	III.	1901
Marcy, Willard A.	II.	1893
Marmon, Walter C.	II.	1895
Marquand, Philip	I.	1891
Marshall, Herman W.	VII.	1897
Marshall, William A.	X.	1898
Martin, Charles E.	IV.	1901
Martin, Henry	V.	1885
Martin, Walter I.	I.	1901
Mason, Earl P.	II.	1897
Mason, Sampson D.	I.	1870
Masters, Frank B.	II.	1895
Matheson, William S.	II.	1899
Mathews, Albert P.	VII.	1892
Mathews, George E.	IV.	1898
Matthes, François E.	I.	1895
Matthes, Gerard H.	I.	1895
Maxfield, Daniel E.	II.	1900
May, George H.	V.	1892
*May, William C. (May 11, '78)	V.	1873
Mayer, *Durand*	VI.	1898
Mayer, Virginius A.	VI.	1894
Mead, George H.	X.	1900
Meade, Charles A.	I.	1894
Melcher, Arthur C.	V.	1900
Melluish, James G.	IX.	1896
Merrell, Charles G.	V.	1888
Merrell, Irving Seward	II.	1896
Merriam, Harry B.	I.	1886
Merriam, Henry P.	VI.	1886
Merrick, Charles V.	IV.	1900
Merrick, Frederic I.	IV.	1901
*Merrick, George E. (April 23, '92)	V.	1890
Merrill, *Albert* S.	X.	1900
Merrill, Allyne L.	II.	1885
*Merrill, Eben G. (Oct. 12, '87)	I.	1885
Merrill, Frank H.	X.	1893
Merrill, George A.	XI.	1892
Merrill, Leslie E.	II.	1901
Merrill, N. Frederick	V.	1870
*Merriss, George F. C. (Mar. 4, '99)	I.	1895
Merryweather, George E.	II.	1896
Meserve, Charles A.	V.	1895
Messenger, William H.	II.	1892
*Metcalf, Arthur H. (Oct. 24, '00)	II.	1879
Metcalf, Frederick	II.	1890
Metcalf, Leonard	I.	1892
*Meyer, Jos. A., Jr. (Dec. 20, '94)	IV.	1891
Mildram, Samuel H.	I.	1889
Millen, Loring R.	III.	1880
Miller, Benjamin	VI.	1901
Miller, Edward F.	II.	1886
Miller, Edwin C.	II.	1879
Miller, Franklin T.	XIII.	1895
Miller, Herbert S.	VI.	1892
Miller, Lewis A.	I.	1901
Miller, Lilly (*see* Kendall).		
Miller, Stuart M.	X.	1901
Miller, William T.	Elective.	1880

* Deceased.

NAME.	COURSE.	CLASS.
Milliken, Carl S.	VII.	1899
*Milliken, Sumner M. (Jan. 12, '02)	I.	1898
Mills, Arthur L.	I.	1876
Minot, Charles S.	V.	1872
Mitchell, Benjamin M.	II.	1893
Mitchell, George LeR.	VI.	1901
Mitchell, Guy E.	II.	1891
Mixter, Samuel J.	VIII.	1875
Moat, Charles P.	V.	1896
Moebs, Joseph J.	I.	1898
Mommers, Richard	V.	1898
Moody, Burdett	I.	1890
Moody, George B.	XIII.	1900
Moody, Herbert R.	V.	1892
Moore, Clarence A.	X.	1899
Moore, Frank A.	IV.	1888
Moore, Fred F.	I.	1891
Moore, Frederick Campbell	X.	1892
Moore, Frederick Clouston	II.	1891
Moore, Henry C.	II.	1888
Moore, John D. J.	II.	1895
Moore, Leslie R.	V.	1894
Moore, Philip W.	II.	1901
Moore, Stephen W.	II.	1890
Moran, George A.	V.	1897
Morey, Richard	I.	1895
Morgan, Carl L.	VI.	1899
Morgan, Frank H. (Dec. 5, '89)	V.	1878
Morgan, Harold L.	VI.	1900
Mork, Harry S.	V.	1899
Morrill, Asa Hall	I.	1892
Morrill, Edward F.	VI.	1898
Morris, Charles, Jr.	VI.	1896
Morris, Henry C.	III.	1901
Morrison, Frank C.	I.	1882
Morse, Benjamin E.	II.	1899
Morse, Frank B.	I.	1873
Morse, Harry L.	II., VI.	1899
Morse, Philip S.	III.	1884
Morss, Everett	III.	1889
Morss, Henry A.	VI.	1893
Morton, Robert B.	VI.	1901
Moseley, Alexander W.	II.	1891
Mosman, Philip A.	III.	1887
Mossman, William	VI.	1891
Motch, Edward R.	II.	1897
Motch, Stanley	III.	1899
Mott, William E.	I.	1889
Mott-Smith, Morton C.	VI.	1900
Moulton, Walter A.	III.	1900
Mower, George A.	II.	1881
Mudge, Benjamin C.	I.	1877
Muhlig, James F.	II.	1898
Mulhall, Harold T.	VI.	1897
Mulliken, Samuel P.	V.	1887
Mumford, Edgar H.	II.	1886
Munroe, James P.	III.	1882
Murray, Ray	I.	1901
*Myrick, Willis H. (Oct. 17, '75)	II.	1874
Nash, Luther R.	VI.	1894
Nathan, A. F., Jr.	X.	1899
Neall, Newitt J.	VI.	1900
Neave, Charles	VI.	1890
Neidich, Samuel A.	II.	1898
Nelson, Willard B.	VI.	1898
Nesbit, Arthur F.	VI.	1895
Nevin, Charles K. B.	IV.	1896
Newbegin, Parker C.	I.	1894
Newbury, George K.	XIII.	1898
Newell, Allan H.	II.	1890
Newell, Frederick H.	III.	1885
Newell, Herbert D.	I.	1896
Newell, John L.	X.	1895
Newell, Lester A.	III.	1899
Newell, William S.	XIII.	1899
Newhall, Charles S.	III.	1896
Newhall, Henry B., Jr.	VI.	1898
Newhouse, Henry L.	IV.	1894
Newkirk, Walter M.	II.	1892
Newlin, William J.	II.	1901
Newman, Frank E.	IV.	1892
Nichols, Everell J.	I.	1878
Nichols, Henry W.	XII.	1893
Nichols, William R. (July 14, '86)	V.	1869
Nickerson, Addison D.	I.	1888
Nickerson, Clarendon	X.	1898
Nickerson, William E.	V.	1876
Nims, Lester A.	I.	1901
Nims, Norman G.	IV.	1890
Noa, Frederic M.	IX.	1894
Noble, Howard A.	II.	1897
Norris, Albert P.	V.	1897
Norris, Almon E.	II.	1890
Norris, Clarence G.	I.	1890
Norris, George L.	III.	1887
Norris, Webster	III.	1881
North, Edward, 2d	III.	1900
Norton, Charles L.	VI.	1893
Norton, Francis C.	IX.	1893
Norton, Fred E.	II.	1891
Nowell, John C.	VI.	1894
Noyes, Arthur A.	V.	1886
Noyes, Harry L.	I.	1890
Noyes, Joseph K.	I.	1890
Nute, Joseph E.	I.	1885
Nutter, Alfred deW.	I.	1901
Nutter, Charles L.	II.	1893
Ober, Arthur J.	I.	1892
Ober, Julius E.	V.	1901
O'Grady, Marcella I. (*see* Boveri).		
O'Hearn, Timothy C.	X.	1899
O'Leary, William H. J.	VI.	1899

* Deceased

NAME.	COURSE.	CLASS.
Olin, Edwin R.	X.	1897
Ordway, Evelyn W.	V.	1881
Ordway, Daniel L.	V.	1901
Orr, Hugh	IV.	1897
Osgood, Edwin P.	XI.	1897
Osgood, Harry E.	II.	1900
Osgood, Henry D.	XI.	1898
Osgood, Isaac	II.	1900
Otis, Hamilton	I.	1892
*Owen, E. H., Jr. (July 3, '90)	II.	1879
Owen, Fred B.	VI.	1896
Owen, George, Jr.	II.	1894
*Oxford, Geo. H. K. (May 2, '99)	VI.	1891
Oxnard, Benjamin A.	III.	1875
Oxnard, Horace W.	I.	1900
Packard, Alpheus A.	XIII.	1898
Packard, Edwin A.	II.	1899
Packard, George A.	III.	1890
Page, Charles B.	XIII.	1899
Page, Walter	XIII.	1898
Paine, Cecil E.	II.	1893
Paine, Charles B.	IV.	1897
Palmer, Helen C.	V.	1887
Palmer, William I.	VI.	1891
Palmer, Worthington	IV.	1899
*Paraschos, N. T. (Mar. 22, '93)	I.	1892
Parce, Joseph Y., Jr.	II.	1893
Park, Charles F.	II.	1892
Park, Franklin A.	II.	1895
Parker, Edwin M.	IV.	1894
Parker, Theodore	I.	1881
Parker, Will R.	VI.	1899
Parker, William E.	I.	1899
Parker, Winthrop D.	IV.	1895
*Parker, W. Thornton, Jr. (June 7, '00)	IX.	1897
Parks, Oren E.	I.	1893
Parmelee, Charles L.	I., XI.	1895
Parrish, J. Scott	II.	1892
Parrock, Percy H.	II.	1901
Parsons, Archibald L.	I.	1897
*Parsons, Charles O. (Oct. 5, '94)	III.	1873
Patch, James A.	X.	1900
Patch, Maurice B.	III.	1872
Patch, Walter W.	I.	1894
Patten, William F.	VI.	1895
Patterson, George W., Jr.	VI.	1887
Paul, Charles E.	II.	1900
Pauly, Karl A.	VI.	1896
Peabody, Cecil H.	II.	1877
Pearse, Langdon	I.	1901
Pearson, Edwin R.	VI.	1888
Pease, Charles H.	II.	1898
Peavey, LeRoy D.	I.	1898
Pechin, John Shelley	II.	1897
Peck, Arthur S.	VIII.	1900
Peirce, Vernon M.	I.	1897
Penard, Thomas E.	VI.	1900
PenDell, Charles W.	VI.	1898
Pennell, Walter O.	VI.	1896
Pennock, George A.	II.	1899
Perkins, Frank Edson	IV.	1892
Perkins, George H.	II.	1899
Perkins, Herbert B.	I.	1874
Perkins, John McC., Jr.	VI.	1901
Perley, Clarence W.	VII.	1896
Perley, William M.	V.	1898
Perry, Frank B.	II.	1898
Perry, John C.	II.	1892
Perry, Oliver H., Jr.	XIII.	1901
Perry, Thomas D.	II.	1900
Persons, Ashton C.	V.	1901
Peters, Anthony W.	I.	1901
*Peters, Quintard (Aug. 2, '94)	IX.	1887
Peterson, Charles A.	VI.	1888
Pettee, Charles L. W.	V.	1897
Peyton, William R.	II.	1890
Phalen, William C.	V.	1899
Phelan, Joseph W.	V.	1894
Phelps, Earle B.	V.	1899
Philbrick, Joseph E.	X.	1901
Philbrick, Shirley S.	II.	1898
Phillipps, George	III.	1873
Phillips, Harry M.	II.	1893
Phillips, Henry A.	IV.	1873
Phillips, Henry M.	VI.	1892
Phipps, David W.	Phil.	1876
Pickering, William H.	VIII.	1879
Pickernell, Frank A.	VI.	1885
Pickert, Leo W.	V.	1893
Pierce, Arthur G.	VI.	1892
Pierce, Arthur W.	VI.	1892
Pierce, Edward F.	XIII.	1899
Pierce, Edward L.	II.	1886
Pierce, Herbert F.	I.	1888
Pierce, Richard H.	VI.	1885
Pigeon, William G.	IV.	1900
Pike, Clayton W.	VI.	1889
Pike, Otto S.	II.	1897
*Pike, William A. (Oct., '95)	I.	1871
Pillsbury, Joel H.	I.	1896
Pingree, Edwin D.	II.	1896
Pinkham, Ralph H.	I.	1899
Piper, Walter E.	V.	1894
Pitcher, Edmund H.	II.	1900
Player, Preston	II.	1901
Plimpton, Arthur L.	I.	1877
Plimpton, Thomas D.	II.	1875
Plummer, Howard C.	III.	1900
Poland, William B.	I.	1890
Pollock, Clarence D.	I.	1894
Pond, Frank H.	II.	1874

* Deceased.

NAME.	COURSE.	CLASS.
Pool, George B.	VI.	1888
Pope, Macy S.	I.	1892
Porter, Arthur F.	V.	1898
Porter, John L.	XI.	1900
Potter, Philip A.	II.	1901
Potter, William C.	III.	1897
Power, Charles W.	VI.	1889
Powers, Walter C.	X.	1895
Pratt, Dana M.	I.	1892
Pratt, George H.	V.	1871
Pratt, Gilbert H.	V.	1897
Pratt, Robert W.	I.	1898
Pratt, William H.	VI.	1894
Prentiss, Frederick H.	II.	1878
Prentiss, Wm. A.	Sci. and Lit.	1875
Prescott, Charles O.	V.	1884
Prescott, Samuel C.	V.	1894
Pressey, Henry A.	I.	1896
Price, Paul L.	IV.	1900
Price, Raymond Beach	X.	1894
Price, Willard A.	I.	1899
Prichard, Charles F.	II.	1876
Priest, Benson B.	I.	1898
Priest, George H.	X.	1899
Proctor, Richard W.	V.	1894
Proulx, Elzear J.	I.	1901
Puckey, Francis W.	IV.	1901
Puffer, William L.	III.	1884
Pugh, Achilles H., Jr.	X.	1897
Pulsifer, Louis W.	IV.	1894
Purinton, Arthur J.	II.	1884
Putnam, James R.	II.	1901
Putnam, John L.	VI.	1896
Putnam, William E., Jr.	IV.	1898
Quevedo, Narciso T.	II.	1894
Raeder, Henry	I.	1876
Ramsey, Allan	VII.	1891
Rand, William P.	IV.	1900
Randall, Newbert M.	III.	1885
Ranlett, Arthur G.	III.	1892
Ranno, Fred W.	I.	1889
Rapp, Walter L.	IV.	1900
Rash, Frank D.	III.	1901
Rawson, Harry D.	IV.	1896
Ray, John Stites	II.	1888
Raymond, Edward B.	VI.	1890
Raynolds, James W.	III.	1896
Read, Carleton A.	II.	1891
Read, Walter A.	XIII.	1901
Real y Gaillard, Juan	I.	1899
Reardon, Thomas F. E.	VI.	1901
Redman, Arville C.	I.	1900
Reed, James H., Jr.	VI.	1893
Reed, Samuel G.	II.	1894
Reed, Walter W.	VI.	1895
Reed, William E.	VI.	1897
Regestein, Ernest A.	VI.	1899
Reimer, Arthur A.	I.	1900
Renshaw, Clarence	VI.	1899
Resor, William S.	VI.	1893
Reynolds, Albert A.	V.	1899
*Reynolds, George F. (Jan. 9, '91)	II.	1886
Reynolds, Howard S.	VI.	1894
Reynolds, Robert D.	II.	1894
Rhodes, Frederick L.	VI.	1892
Rhodes, William S.	XII.	1897
Rice, Calvin W.	VI.	1890
Rice, Carrie (*see* Clark).		
Rice, Henry L.	X.	1893
Rich, Charles L.	I.	1876
Rich, William J.	III.	1884
Richards, Charles Russell	II.	1885
Richards, Ellen H.	V.	1873
Richards, Franklin B.	III.	1884
Richards, Frederick L.	X.	1895
Richards, Louis J.	XI.	1897
Richards, Robert H.	III.	1868
Richards, Thomas G.	II.	1894
Richardson, Charles F.	II.	1886
Richardson, Chester A.	I.	1900
Richardson, Daniel A.	II.	1896
Richardson, Edward B.	VI.	1898
Richardson, Frank D.	II.	1893
Richardson, George L.	I.	1889
Richardson, Herbert A.	V.	1887
Richardson, William C.	II.	1891
Richmond, Gerald M.	VI.	1899
Richmond, Harold A.	II.	1893
Richmond, Henry P.	IV.	1898
Richmond, Knight C.	II.	1890
Rickards, Burt R.	V.	1899
Ricker, Charles W.	VI.	1891
Rickey, Walter J.	II.	1895
Riddle, Herbert H.	IV.	1899
Riddle, Lewis W.	XIII.	1899
Riggs, George F.	I.	1879
Riker, George H.	X.	1899
Riley, Joseph C.	II.	1898
Ripley, Henry F.	II.	1894
Ripley, Henry L.	I.	1873
Ripley, Philip F.	V.	1900
*Ripley, William T. (Aug. 26, '93)	II.	1882
Ripley, William Z.	I.	1890
Ritchie, Edward W.	IV.	1898
Ritchie, James.	I.	1878
Robb, Russell	VI.	1888
Robbins, Arthur G.	I.	1886
Robbins, Franklin H.	II.	1894
Roberts, Edwin H.	II.	1896
Roberts, Harold B.	II.	1890
Roberts, Odin B.	II.	1888
Roberts, Robert P.	III.	1900

* Deceased.

NAME.	COURSE.	CLASS.
Roberts, Thomas M.	VI.	1898
Roberts, William J.	I.	1891
Robertson, Andrew R.	II.	1892
Robertson, Samuel B.	I.	1899
Robinson, C. Snelling	III.	1884
Robinson, Dwight P.	VI.	1892
Robinson, Edward	II.	1890
Robinson, Elmer H.	VI.	1897
Robinson, Ethel B.	VII.	1891
Robinson, Ralph C.	V.	1901
Robinson, Theodore W.	III.	1884
*Robinson, Thos. W. (Nov. 3, '80)	III.	1876
Rockwell, George A.	X.	1895
Rockwell, J. Arnold, Jr.	VII.	1896
Rogers, Allen H.	III.	1890
Rogers, Arthur S.	VI.	1894
Rogers, Minnie H.	IX.	1890
Rogerson, John R.	I.	1897
Rollins, Edward W.	III.	1871
Rollins, James W., Jr.	I.	1878
Rooke, Warren A.	IV.	1897
Root, Ralph	III.	1900
Root, William Lacy	X.	1896
Roots, Willard H.	IX.	1891
Rose, Frederick H.	II.	1891
Rosewater, William M.	II.	1892
Ross, Henry F.	III.	1882
Ross, John A., Jr.	XIII.	1901
Ross, John H.	Sci. and Lit.	1882
Rossmassler, Carl	XIII.	1901
Rotch, A. Lawrence	II.	1884
Rounds, George W.	VI.	1889
Rourke, Louis K.	I.	1895
Rowe, Allan W.	X.	1901
Rowell, George F.	I.	1892
Royce, James C.	II.	1897
Ruckgaber, A.	VI.	1896
Ruggles, Horace F.	II.	1892
Russ, Ernest F.	IX.	1898
*Russel, Richard L. (July 31, '94)	I.	1889
Russell, A. LeBaron	IX.	1896
Russell, Benjamin F. W.	IV.	1898
Russell, George E.	I.	1900
Russell, L. Kimball	V.	1886
Russell, Walter B.	II.	1897
Rust, Harold N.	VI.	1895
Rutherford, Eugene W.	II.	1898
Rutherford, Norman F.	VI.	1896
Ryder, Josiah Peterson	V.	1884
Sabine, Annie W. (*see* Siebert).		
Sackett, Ward M.	VI.	1892
Sadtler, Samuel S.	V.	1895
Safford, Frederick H.	VI.	1888
Sage, Henry Judson	VI.	1892
Sager, Lawrence K.	VI.	1896
Sager, Oscar F.	II.	1892
St. Clair, Samuel W.	IV.	1901
Sammet, George V.	V.	1901
Samuels, Edwin F.	II.	1899
Sanborn, Clifford B.	IX.	1895
Sanborn, Frank E.	II.	1889
Sanders, Warren W.	V.	1900
Sanderson, Nathan H.	I.	1896
Sargent, Albert F., Jr.	I.	1892
Sargent, Francis T.	II.	1875
Sargent, Homer E., Jr.	VI.	1898
Sargent, Welland F.	I.	1875
*Saunders, Robert T. (Sept. 15, '96)	I.	1892
Sauveur, Albert	III.	1889
Savage, S. Anthony	II.	1894
Sawin, Charles D.	Sci. and Lit.	1878
Sawin, Luther R.	V.	1897
Sawtelle, Harry F.	I.	1898
Sawtelle, William O.	VIII.	1899
Sawyer, Albert H.	IX.	1894
Sawyer, Alfred H.	II.	1888
Sawyer, Charles A.	Sci. and Lit.	1876
Sawyer, Haven	II.	1899
Sax, Moritz	IV.	1896
Sayer, Frederick L.	II.	1888
Sayward, William H., Jr.	VII.	1894
Sayward, William J.	IV.	1901
Schaller, Frederick F.	VI.	1896
Schiertz, Ferdinand Alfred	III.	1894
Schlesinger, Bart E.	V.	1901
Schmidt, Albert G. A.	II.	1900
Schmidt, Louis	V.	1890
Schmitz, Frank C.	I.	1895
Schneller, George O.	II.	1900
Schoentgen, Edward P.	IV.	1895
*Schroeder, Ernest H. ('00)	IV.	1898
Schuttler, Carl	II.	1897
Schwamb, Peter	II.	1878
Schwartz, David	V.	1897
Schwarz, Franz H.	II.	1887
Schwarz, Theodore E.	III.	1876
Scofield, Donald C.	IV.	1896
Scott, Henry F.	II.	1898
Scott, Robert W.	II.	1883
Scott, Walter	II.	1901
Scott, Walter O.	V.	1894
Scovel, John C., Jr.	II.	1896
Scudder, Heyward	V.	1898
Searle, Lewen F.	I.	1900
Sears, Henry D.	VI.	1887
Sears, Henry K.	IX.	1896
Sears, Joseph H.	V.	1898
Sears, Mortimer A.	III.	1896
Sears, Stanley C.	III.	1901
Sears, Walter H.	I.	1868
Seaver, Edward, Jr.	II.	1901
Seaver, Kenneth	I.	1900

* Deceased.

NAME.	COURSE.	CLASS.
Seavey, John Frank	II.	1886
Seavey, Norman E.	VI.	1899
Seidensticker, Lewis J.	V.	1898
Selfridge, Russell	IX.	1892
Sellew, William H.	II.	1897
Sexton, Frederic H.	III.	1901
Shailer, Robert A.	I.	1873
Shapley, Henry T.	X.	1900
Shattuck, A. Forrest	V.	1891
Shaw, Albion W.	VI.	1898
Shaw, Edward S.	I.	1874
Shaw, Walter K.	II.	1888
Shed, Nathaniel W.	V.	1881
Shedd, Albert R.	II.	1898
Shepard, Edward V.	I.	1889
Shepard, Frank E.	II.	1887
Shepard, George F., Jr.	IV.	1896
Shepard, Walter	I	1872
Shepard, William E.	VI.	1886
Shepherd, Frank C.	XI.	1892
Sheppard, Robert K.	X.	1895
Sheridan, Richard G. B.	XIII.	1895
Sherman, Adelaide (*see* Blackmer).		
Sherman, Charles E.	IV.	1900
Sherman, Charles W.	I.	1890
Sherman, Edward C.	I.	1898
Sherman, George W.	X.	1894
Sherman, Henry A.	III.	1897
Sherman, John Carleton	VI.	1895
Sherman, LeRoy K.	I.	1892
Sherrill, Miles S.	V.	1899
Shivers, Clifford H.	IV.	1901
Shockley, William H.	III.	1875
Shumaker, Louis W.	VI.	1900
Shuman, Jesse W.	VI.	1897
Shurtleff, Arthur A.	II.	1894
Shute, George P.	X.	1901
Shute, Harry D.	VI.	1892
Sibley, Edward W.	II.	1899
Siebert, Annie W. S.	VIII.	1888
Silsbee, Francis H.	II.	1874
Silverman, Mortimer	VI.	1900
Simmons, Alfred L.	I.	1895
Simonds, Frederic P.	IV.	1894
Simonds, Roland E.	II.	1901
Simpson, Edmund T.	V.	1890
Simpson, James E.	III.	1886
Simpson, Robert C.	XIII.	1900
Sites, Frederick R.	I.	1899
Sjöström, Ivar L.	I.	1888
Skene, Norman L.	XIII.	1901
Skinner, Charles J.	I.	1898
Skinner, Fenwick F.	I.	1893
Skinner, Hervey J.	V.	1899
Skinner, Theodore H.	IV.	1892
Slater, Howard C.	II.	1890
Sloan, Alfred Pritchard, Jr.	VI.	1895
*Small, Nathaniel C. (July 14, '80)	V.	1880
Smalley, Frank N.	V.	1896
Smetters, Samuel T.	I.	1896
Smith, A. Blakeley	IX.	1893
Smith, Arthur C.	V.	1892
Smith, Charles Alfred	I.	1899
*Smith, Charles Aug. (Feb. 4, '84)	I.	1868
Smith, Charles E.	I.	1900
Smith, Charles H.	II.	1898
Smith, Charles P.	II.	1887
Smith, Clarence W.	V.	1888
Smith, Edward M.	II.	1888
Smith, Fred Haskell	X.	1896
Smith, Frederick D.	I	1893
Smith, Frederick W.	I.	1901
Smith, George A.	V.	1883
Smith, Harrison W.	II.	1897
Smith, Harry E.	V.	1887
Smith, Herbert E.	IV.	1896
Smith, Horace T.	V.	1898
Smith, Howard E.	XI.	1896
Smith, James W.	XIII.	1897
Smith, J. Waldo	I.	1887
Smith, Lawrence S.	II.	1900
Smith, Oren B., Jr.	III.	1897
Smith, Percy M.	II.	1897
Smith, Sumner I.	VI.	1901
*Smith, Walter W. (July 30, '96)	II.	1871
Smith, William Franklin	II.	1897
Smith, William G.	I.	1898
Smith, William Lincoln	VI.	1890
Smyser, Albert E.	II.	1896
Smyser, Frederic W.	II.	1896
Smyser, James S.	II.	1896
Snead, William R.	IV.	1881
Snelling, Grenville T.	IV.	1882
Snow, Frederick W.	III.	1900
Snow, Walter B.	II.	1882
Snow, William G.	II.	1889
Snyder, Frederick T.	VI.	1891
Soley, William A.	III.	1894
Solomon, John I.	VI.	1893
Sonnemann, George A.	III.	1890
Soule, Lawrence C.	X.	1899
Soule, Richard H.	II.	1872
Southard, Francis M.	VI.	1894
Souther, Henry	III.	1887
Southworth, Frederic W.	IV.	1900
Southworth, Harry C.	III.	1877
Southworth, Martin O.	VI.	1890
Spalding, Frederic P.	I.	1878
Spaulding, Frank A.	I.	1898
Spaulding, Henry P.	VI.	1892
Spaulding, Hollon C.	II.	1887
Spear, Walter E.	XI.	1897

* Deceased.

NAME.	COURSE.	CLASS.
Speer, J. Ramsey	II.	1893
Spencer, Theodore	VI.	1891
Sperry, Austin	II.	1894
Sperry, Marcy L.	II.	1900
Spiess, Arthur D.	IV.	1897
Spofford, Charles M.	I.	1893
Spooner, George H.	VI.	1891
Sprague, Timothy W.	III.	1887
Spring, Russell C.	IV.	1897
Stafford, C. Edward	III.	1873
*Stantial, Amy M. (*see* Lund).		
Stantial, Frank G.	V.	1879
Stantial, Otis T.	III.	1885
Stanwood, James B.	II.	1875
*Stanwood, James H. (May 24, '96)	I.	1887
Staples, William D.	VI.	1898
Starbuck, George F.	II.	1897
Starr, Herbert H.	I.	1899
Stearns, Frederick B.	IV.	1899
Stearns, Harold E.	II.	1881
Stearns, Herbert R	I.	1900
Stearns, Ralph H.	XI.	1901
Stearns, Walter M.	VI.	1896
Stearns, William S.	I.	1879
Stebbins, Alfred, Jr.	III.	1884
Stebbins, Charles B.	XIII.	1897
Stebbins, Theodore	VI.	1886
Steffens, William F.	I.	1898
Steiner, Klaus J.	III.	1897
Stetson, Frank O.	V.	1888
Stevens, Gorham P.	IV.	1898
Stevens, Harold C.	I.	1896
Stevens, John Conyngham	XI.	1894
Stevens, Walter F.	II.	1895
Stevens, William L.	III.	1900
Stevens, William W.	IV.	1898
*Stewart, Charles E. (Oct. 7, '77)	I.	1877
Stewart, Lewis	IV.	1900
Stickney, Delia	V.	1889
Stickney, Joseph W.	VI.	1896
Stiles, Percy G.	VII.	1897
Stimpson, Thomas F.	III.	1877
Stix, Solomon H.	IV.	18,.
Stockton, Philip	I.	1899
*Stoddard, Arthur B. (Aug. 31, '00)	V.	1891
Stoddard, Henry F.	II.	1887
Stone, Charles A.	VI.	1888
Stone, Charles F.	III.	1871
Stone, Charles H.	V.	1896
Stone, Esther	IV.	1896
*Stone, G. Goodwin (Mar. 4, '93)	III.	1889
Stone, Jacob, Jr.	IV.	1899
Stone, Joseph	I.	1868
Stone, Willard W.	I.	1900
Storrow, Samuel	I.	1890
Story, Isaac M.	I.	1878
Stose, George W.	I.	1893
Stoughton, Augustus B.	II.	1886
Stoughton, Bradley	III.	1896
Stoughton, Grace Van Everen	V.	1896
Stowe, Lovell B.	VI.	1893
Stratton, Charles H.	IV.	1900
Street, Gerald B.	II.	1899
Streng, Lewis S.	VI.	1898
Strickland, William R.	I.	1898
Studley, Fred B.	VI.	1893
Sturges, Benton	IX.	1890
Sturgis, Elliot T.	III.	1884
Sturm, Meyer J.	IV.	1896
Sturtevant, Edward	IX.	1898
Sturtevant, Thomas J.	VI.	1890
Sturtevant, William I.	VI.	1901
Sucro, William G.	I.	1901
Suhr, Carl F.	II.	1900
Sullivan, Henry H.	II.	1900
Sully, John M.	III.	1888
Sulzer, Albert F.	X.	1901
Sumner, George W.	VI.	1896
Susmann, Julius H.	III.	1876
Suter, Russell	I.	1900
Sutermeister, Edwin	V.	1899
Sutliff, Walter H.	IV.	1899
Sutter, Frederick C.	VI.	1893
Swain, George F.	I.	1877
Swallow, Ellen H. (*see* Richards).		
Swan, Clifford M.	V.	1899
Swan, James	II.	1891
Swanton, Frederick W.	VI.	1890
Swanton, Henry A.	II.	1894
Swanton, Walter I.	I.	1893
Sweet, Kilburn S.	I.	1893
Sweetland, Ralph	II.	1889
*Sweetser, Arthur W. (Apr. 10, '78)	I.	1874
Sweetser, Ralph H.	III.	1892
Sweetser, William J.	II.	1901
Swift, Charles W.	II.	1899
Swift, Frank R.	X.	1899
Swift, William E.	I.	1895
Swope, Gerard	VI.	1895
Sykes, Henry H.	VI.	1891
Taber, George Aymar	I.	1894
Taft, Charles Chester	X.	1895
Taft, Harrison S. XIII. 1897	II.	1896
Taintor, Charles Wilson	VI.	1893
Taintor, Giles	VI.	1887
Talbot, Henry P.	V.	1885
Talbot, Marion	IX.	1888
Tallant, George P.	IX.	1892
Tallmadge, Thomas E.	IV.	1898
*Taney, Edmund L. (May 1, '90)	I.	1878
Tappan, Frederick	VI.	1899
Tappan, Lewis Hooper	II.	1896

* Deceased.

NAME.	COURSE.	CLASS.
Taylor, Alexander J.	XI.	1901
Taylor, Charles M.	II.	1893
Taylor, Denzil H.	I.	1899
Tayl . , Edward M.	II.	1898
Taylor, George	II.	1894
*Taylor, Harry B. (June 8, '97)	V.	1891
Taylor, John	VI.	1897
Taylor, Mark E.	II.	1898
Taylor, Robert R.	IV.	1892
*Taylor, William B. (June 29, '99)	II.	1896
Taylor, William M.	II.	1886
Tenney, Albert B.	II.	1894
Tenney, Frank	III.	1883
Tenney, Winthrop P.	VI.	1893
Thalheimer, William C.	I.	1892
Thanisch, Frank A.	III.	1896
Thayer, Harry M.	V.	1900
Thayer, Horace R.	I.	1898
Thomas, Alfred C.	VI.	1893
Thomas, Edward G.	II.	1887
Thomas, James W.	II.	1895
Thomas, Percy H.	VI.	1893
Thomas, William H., Jr.	V.	1896
Thompson, Albert W.	II.	1896
Thompson, Frederick	I.	1887
Thompson, Herbert A.	VIII.	1891
Thompson, Maurice de K., Jr.	VIII.	1898
Thompson, Sanford E.	I.	1889
Thompson, Walter S.	I.	1887
Thomson, Lucy D.	IV.	1896
Thomson, Mary J.	V.	1898
Thomson, Samuel F.	I.	1896
Thorndike, Sturgis H.	I.	1895
Thorp, Frank H.	V.	1889
Thropp, Joseph E., Jr.	III.	1894
Thurber, Clinton D.	I.	1900
Thurber, William B.	IX.	1889
Tidd, Arthur W.	I.	1894
Tidd, Winthrop L.	II.	1893
Tietig, Rudolph	IV.	1898
Tilden, Bryant P.	III.	1868
Tilley, John	III.	1896
Tillinghast, Charles F.	II.	1895
Tillinghast, Theodore F.	I.	1870
Tinkham, Edgar L.	VI.	1897
Tinkham, Samuel E.	I.	1873
Tolman, James P.	III.	1868
Tomfohrde, John F.	II.	1893
Tompkins, Charles H.	III.	1883
Tone, Jay E.	X.	1897
Torossian, Toros H.	I.	1894
Torrey, Charles A., Jr.	V.	1899
Towne, John H.	IX.	1890
Towne, Linwood O.	III.	1878
Towne, Walter I.	VI.	1888
Townsend, Walter D.	III.	1876
Tozier, Henry H.	V.	1896
Trask, Edgar P.	XIII.	1899
Treat, George W.	I.	1898
Trenholme, Arthur K.	IV.	1901
Tripp, Charles A.	VI.	1893
Trout, Charles E.	I.	1896
*Trowbridge, A., Jr. (Dec. 5, '78)	II.	1871
Trowbridge, Walter B.	II.	1892
True, Percival E.	X.	1900
Truesdell, Arthur E.	VI.	1889
Trumbull, Morris K.	I.	1897
Tuck, Theodore C.	I.	1900
Tucker, Albert W.	III.	1899
Tucker, Atherton H.	IV.	1898
Tucker, Charles W.	V.	1896
Tucker, Edward A.	I.	1895
Tucker, Frank S.	II.	1898
Tucker, Greenleaf R.	V.	1887
*Tucker, H. Judson (Aug. 17, '96)	VI.	1887
Tucker, Hugh M.	II.	1895
Tucker, Ross F.	IV.	1892
Tucker, William A.	III.	1893
Tudbury, Warren C.	I.	1900
Tufts, Charles G.	X.	1901
Tufts, John L.	V.	1899
Turnbull, Charles D.	II.	1886
Turner, Edmund K.	I.	1870
Tweedy, George A.	III.	1900
Twombly, Alexander H.	II.	1887
Twombly, Fred H.	IX.	1898
Tyler, Alice Brown	V.	1884
Tyler, Clifford M.	II.	1891
Tyler, Harry W.	V.	1884
Tyler, Lucius S.	VI.	1897
Ulmer, George F.	V.	1898
Underhill, Arthur P.	VI.	1896
Underhill, William W.	II.	1889
Underwood, George R.	V.	1883
Usher, Susannah	VII.	1898
Vaillant, George W.	III.	1892
Van Alstine, David	II.	1886
Van Everen, Grace A. (*see* Stoughton).		
Vanier, George P.	III.	1885
Varney, Theodore	VI.	1894
Verges, Luis F.	I.	1891
Very, Frank W.	V.	1873
Videto, Theodore Ernest	IV.	1897
Vielé, Francis S.	VI.	1891
Vielé, Maurice A.	II.	1886
Vinal, Ralph S.	IV.	1897
Vining, John F.	IV.	1892
Vining, Louis B.	VI.	1893
Vining, Robert M.	II.	1899
Vogel, Emil F.	I.	1900
von Holst, Hermann V.	IV.	1896
Voorhees, Gardner T.	II.	1890

* Deceased.

NAME.	COURSE.	CLASS.
Vorce, Clarence B.	I.	1888
Vose, Ralph	VI.	1887
Waddell, Frederick C.	I.	1899
Wadleigh, George R.	II.	1897
Wadsworth, Augustus B.	VII.	1893
Wadsworth, George R.	I.	1898
Wait, Henry H.	VI.	1891
Waite, Charles N.	V.	1876
Waite, Loren G.	VI.	1895
Waitt, Arthur M.	II.	1879
Waitt, Henry M.	I.	1876
Walcott, William W.	IX.	1901
Waldron, Samuel Payson	I.	1893
Wales, Thomas C., Jr.	VI.	1892
Walker, Charles R.	V.	1893
Walker, Elton D.	I.	1890
Walker, Etheredge	III.	1899
Walker, Francis	IX.	1892
Walker, George L.	I.	1893
Walker, Harry L.	IV.	1900
Walker, Robert T.	IV.	1890
Wall, William G.	VI.	1896
Wallace, Charles F.	VI.	1892
Wallace, Frederic A.	II.	1893
Wallace, Robert B.	XIII.	1899
Wallis, Robert N.	IX.	1893
Walls, John A.	VI.	1899
Walters, Edward P.	V.	1899
Walther, William J.	I.	1899
Walton, Evelyn M. (*see* Ordway).		
Walton, James H., Jr.	V.	1899
Walworth, Arthur C., Jr.	II.	1900
Walworth, Joseph E.	V.	1895
Ward, Clarence S.	III.	1872
Ward, Nahum	V.	1884
*Ware, Robert C. (June 25, '83).		
Phil. 1876. Sci. and Lit.		1874
Warner, Charles H.	VI.	1889
Warner, George M.	VI.	1891
Warner, Murray	II.	1892
Warren, A. Sydney	III.	1888
Warren, Edward R.	VII.	1881
Warren, Frank D.	II.	1900
Warren, Henry E.	VI.	1894
Warren, H. L. J.	III.	1875
Warren, John E.	II.	1898
Warren, Joseph A.	XI.	1892
*Washburn, Thurlow (Oct. 12, '99)	III.	1897
Wason, Leonard C.	VI.	1891
Wason, Rigby	VI.	1894
Wason, Robert S.	V.	1896
Wastcoat, Richard	I.	1900
Waterman, Charles C.	VI.	1892
Waterman, Harry C.	IV.	1893
Waterman, Henry A.	II.	1896
Waterman, Richard, Jr.	IX.	1892
Waterson, Karl W.	VI.	1898
Watkins, Frederick A.	II.	1899
Watkins, Willard H.	V.	1895
Watrous, Charles A.	IV.	1899
Watts, Francis H.	I.	1897
Wayne, Jacob Lloyd	VI.	1896
Webb, Henry S.	VI.	1892
Webster, Edwin S.	VI.	1888
Webster, Fred B.	XIII.	1901
Webster, William R.	III.	1875
Wedlock, William H.	I.	1900
Weed, Henry T.	V.	1891
Weeks, Irving C.	IX.	1900
Weeks, Isaiah S. P.	I.	1871
Weil, Asher L.	II.	1901
Weil, Charles L.	II.	1888
Weimer, Edgar A.	II.	1898
Wells, Albert J.	II.	1896
Wells, Edward C.	II.	1892
Wells, Walter W.	VI.	1899
Wells, Webster	I.	1873
Wendell, George V.	VIII.	1892
Wentworth, Charles A.	I.	1896
Wentworth, John F.	XIII.	1901
Wessel, John F.	VI.	1898
Wesson, David	V.	1883
Wesson, Paul B.	II.	1898
Westcott, Frank T.	I.	1892
Westcott, William R.	VI.	1894
Weston, David B.	V.	1895
Weston, William H.	III.	1891
Wetherbee, Charles P.	II.	1891
Weymouth, Thomas R.	VI.	1897
Wheeler, Ralph N.	I.	1895
Wheeler, Robert C.	I.	1894
Whipple, George C.	I.	1889
Whipple, William	II.	1901
Whitaker, Channing	II.	1869
Whitaker, Lewis R.	I	1899
Whitaker, S. Edgar	VI.	1893
*White, A. C. (Dec. 27, '03)	VIII.	1882
White, Anne E. (*see* Carpenter).		
White, Arthur B.	I.	1900
White, Franklin W.	VII.	1890
White, Harry K.	IV.	1899
White, Harry R.	XIII.	1901
White, William	V.	1899
Whiting, Jasper	III.	1889
Whitman, Ralph	I.	1901
Whitmore, Walter G.	VI.	1887
Whitney, Frank P.	VI.	1889
Whitney, Granger	III.	1887
Whitney, Lambert N.	VI.	1896
Whitney, Walter C.	I.	1900
Whitney, William A.	I.	1887
Whitney, William M.	II.	1884

* Deceased.

NAME.	COURSE.	CLASS.
Whitney, Willis R.	V.	1890
Whiton, David T.	II.	1897
Whitten, Roscoe B.	IV.	1898
Whitten, William H., Jr.	VIII.	1896
Whittier, Randal . . I.	1873 V.	1871
Wiard, Edward S.	III.	1899
*Wiggin, Frank E. (Dec. 21, '90)	I.	1877
Wiggin, Thomas H.	I.	1895
Wight, Roger W.	XIII.	1901
Wilcox, Herbert A.	III.	1887
Wilder, Clifton W.	II.	1898
Wilder, C. Morris	VI.	1886
Wilder, Parker H.	VI.	1893
Wilder, Ralph E.	I.	1898
Wilder, Salmon W., Jr.	X.	1891
Wilder, Stephen H. . . Sci. and Lit.		1874
Wildes, Waldo G.	I.	1901
Wilkes, Charles M.	IV.	1881
Willard, Charles F.	II.	1901
Willard, Daniel W.	II.	1870
Williams, Arthur S.	VI.	1888
Williams, Charles G.	I.	1895
Williams, Emile F.	I.	1878
Williams, Francis C., Jr.	I.	1884
Williams, Francis H.	V.	1873
Williams, Robert C.	III.	1889
Williams, Robert L.	II.	1901
Williams, Roger J.	IX.	1895
Williams, Sidney	I.	1887
Williams, Walter S.	X.	1895
Willis, John H.	IV.	1896
Williston, Arthur L.	II.	1889
Wilson, Alice V.	V.	1900
Wilson, Archibald H.	II.	1901
Wilson, Arthur R.	I.	1890
Wilson, Elwood J.	III.	1886
Wilson, Fred A.	II.	1891
Wilson, George T.	II.	1901
Windett, Victor	II.	1889
Wing, Charles F., Jr.	VI.	1899
Wing, David L.	IX.	1898
Winkley, William H.	XIII.	1895
Winslow, Arthur	III.	1881
Winslow, Charles-Edward A.	VII.	1898
Witherell, Frederick W.	XI.	1900
Witherell, Percy W.	VI.	1899
Wolfe, John J. C.	II.	1895
Wonson, Samuel L.	I.	1901
*Wood, Charles (Nov. 28, '95)	I.	1886
Wood, Charles Hancock	II.	1891
Wood, Florence A. (*see* Ewing).		
Wood, Frederick W.	III.	1877
Wood, Henry B.	I.	1876
Wood, Howard I.	V.	1901
Wood, Kenneth F.	II.	1894
Wood, Leonard P.	I.	1901
Wood, Louis F.	V.	1873
Wood, Willard L., Jr.	VI.	1899
Wood, Willett A.	VI.	1896
Wood, William R.	XIII.	1897
Wood, Winthrop B.	I.	1898
Woodbridge, Jonathan E.	VI.	1893
Woodbury, Charles H.	II.	1886
Woodman, Alpheus G.	V.	1897
Woodman, Andrew W.	I.	1890
Woodman, Caroline A.	VII.	1889
Woodman, George M.	I.	1897
Woods, Henry T.	II.	1893
Woodsome, James C.	VI.	1901
*Woodward, A. E. (Sept., '91)	III.	1888
Woodwell, Julian E.	II.	1896
Woodworth, Edward Harold	V.	1897
Woodyatt, Ernest	IV.	1897
Woollett, John W.	I.	1899
Woolworth, James G.	V.	1878
Worcester, Vernor F.	II.	1886
Worthington, Arthur M.	VII.	1892
Worthington, Erastus, Jr.	I.	1885
*Wrightington, C. N. (May 6, '01)	II.	1894
Wrinkle, Laurence F. J.	III.	1870
Wuichet, Walter G.	II.	1889
Wyman, William I.	XIII.	1900
Yoder, Luther K.	II.	1895
Yoerg, Henry	II.	1895
Yorke, George M.	VI.	1893
Young, Conrad H.	II.	1896
Young, Fred R.	III.	1886
Young, John E.	I.	1888
Zapf, Alfred E.	IV.	1895
Zeigler, Percy R.	II.	1900
Zimmermann, Walter G.	II.	1898

* Deceased.

Titles of Theses

OF SUCCESSFUL CANDIDATES FOR GRADUATION, JUNE, 1901.

Candidates for the Degree of Master of Science.

ELBERT GROVER ALLEN, S.B.

Experiments on the Wave-form of a Rotary Converter.

GEORGE BURDETT FORD, A.B., S.B.

A Design for an Administration Building for the United States Government at a Pan-American Exposition; to be located centrally at the Head of a Grand Court of Honor.

ISAAC OSGOOD, S.B.

An Apparatus for Studying the Alternating Current Arc.

PAUL LEON PRICE, PH.M., S.B.

A Design for a Steel Dome, with Details of Construction.

Candidates for the Degree of Bachelor of Science.

CLAYTON ALBISTON.

An Investigation of the Relation between Cutting Speed and Tool Pressure on Lathe Tools. (*With H. R. Gilson.*)

WILLIAM TRUMAN ALDRICH.

A Design for a Country Residence.

GEORGE WINTHROP ALLEN.

An Investigation of the Transverse Strength of Granite. (*With A. K. Isham.*)

CHARLES LOUIS BATES ANDERSON.

Experiments on the Loss of Head due to Sudden Enlargement in Pipes forming an Angle. (*With R. Murray.*)

ROBERT ANDREW.

A Determination of the Proper Coefficients for Use with Triangular Weirs of 60° and 30° Openings.

WILLIAM CORNELL APPLETON.

A Design for the United States Building for a Pan-American Exposition.

WILLIAM COLLINS ARSEM.

A Systematic Method of Procedure for the Qualitative Detection of the Rare Earths.

GEORGE DESLER ATWOOD.

Tests on a Bulkeley Injector Condenser.

CHARLES ISRAEL AUER.

An Investigation of the Character of Silver and Gold Amalgams.

FREDERIC CHESLEV AYERS.

Design of a Bucket- and Suction-dredge.

ROBERT WILLIAM BAILEY.

Design of a Steel Caisson for a Dry-dock.

FREDERIC HERBERT BASS.

A Project for the Drainage of the Fresh Pond Marshes lying in Cambridge, Arlington, and Belmont.

FRANCIS KERNAN BAXTER, JR.

A Study of the Concentration of a Graphite Ore.

EDWARD PIERREPONT BECKWITH.

An Experimental Study of some Chemical and Physical Properties of the Becquerel Rays.

EDWARD BROWNE BELCHER.

An Investigation of a Gasolene Automobile Engine.

WARREN IRA BICKFORD.

A Study of a Wagner Single-phase Induction Motor. (*With R. B. Morton.*)

LYMAN HERBERT BIGELOW.

A Plan for Abolishing the Grade Crossings on the Old Colony Railroad at Harrison Square and Vicinity. (*With T. F. Lange.*)

ARTHUR HENRY BIRKS.

A Design for a Three-hinged Arch Steel Highway Bridge.

HUSE TEMPLETON BLANCHARD.

A Design for an Art Museum.

WILLIAM GROVE BLAUVELT, A.B.

A Test of an Electric Railway.

ROY HALE BOLSTER.

An Investigation of the Variation of the Tensile Strength of Bare Aluminum Wire while carrying Current. (*With T. F. E. Reardon.*)

FREDERICK HENRY BOND, JR.

A Design for a Casino.

FREDERIC ROY COURTENAY BOYD.

An Investigation of a 16-kilowatt Constant Current Transformer. (*With M. B. Foster.*)

JOHN BOYLE, JR.
Experiments on the Treatment of Prepared Jewellers' Sweeps.

JOHN PORTER BRIGGS.
Compressive Tests on Wood containing Varying Degrees of Moisture. (*With L. du Pont.*)

EDMOND FRANCIS BRIGHAM.
The Tensile Strength of Certain Bronzes.

MATTHEW CHAUNCEY BRUSH.
A Series of Road-tests on a Schenectady Compound Passenger Locomotive. (*With W. F. Davidson.*)

EDWIN PARKS BURDICK.
A Design for a Skew Railroad Bridge, on a Curve.

CHARLES WALKER CADE.
A Study of the Atwood Power Gauge.

FRANCES ELMORE CADY.
A Study of Alternating Current Wave-form by the Braun Tube.

ANTOINE BLACKWELL CAMPAU.
A Design for a Country House for a Painter.

CHARLES FRANCIS FAULKNER CAMPBELL.
A Comparison of Webster and Burke as Orators.

GEORGE WILLIAM CARTER.
A Study of a Three-phase Motor. (*With C. R. Hammond.*)

ALBERT ÆNEAS CASANI.
A Plan for Abolishing the Grade Crossing on the Boston and Maine Railroad at Saugus. (*With F. J. Dulude.*)

JOSEPH PRIESTLEY CATLIN.
An Efficiency-test of an Electric Railway Plant. (*With W. E. Farnham.*)

HOWARD TRUEMAN CHANDLER.
A Series of Tests upon the Heating and Ventilating Plant of a Theatre, combined with a Design for a System of Ventilation for an Office Building. (*With G. T. Wilson.*)

LEONARD DEXTER CHANDLER.
The Speed-variation and the Action of the Reciprocating Parts of a 36-horse-power Otto Gas Engine. (*With C. F. Johnson.*)

EBEN LORD CHAPMAN.
A Test of an American Impulse Water Wheel.

FRANK DAVID CHASE.
A Plan for Abolishing the Grade Crossing on the Boston and Maine Railroad at Franklin Park, Revere. (*With W. G. Sucro.*)

CHESTER NILES CHUBB.

A Plan for Abolishing the Grade Crossing on the Boston and Albany Railroad at Ashland. (*With F. W. Claflin.*)

EDWIN FAYETTE CHURCH, JR.

A Determination of the Strength and Stability of the United States Floating Dock at Algiers, La.

FRED WINSLOW CLAFLIN.

A Plan for Abolishing the Grade Crossing on the Boston and Albany Railroad at Ashland. (*With C. N. Chubb.*)

FREDERICK GARDNER CLAPP.

A Study of the Geological History of the Charles River.

FREDERICK WARD COBURN.

The Relations between the Micro-structure and Physical Properties of Car-axle Steel. (*With A. W. Higgins.*)

FRANK ARNOLD COLBY.

A Design for a Symphony Hall to seat an Audience of 500 Persons.

FREDERICK CUSHING CROSS.

A Study of the Fitchburg System of Poor-relief.

LOUIS AUSTIN CROWELL.

A Determination of the Coefficient of a Two-foot Suppressed Weir. (*With W. I. Martin.*)

WALTER MOLBRAY CURTIS.

The Line of Resistance of the Masonry Arch. (*With A. C. Jewett.*)

NEWMAN LORING DANFORTH.

A Design for an Electrically Illuminated Fountain.

HARRY EDSON DART.

A Photometric Investigation in Interior Illumination. (*With C. K. Flint.*)

WILLIAM FREDERICK DAVIDSON.

A Series of Road-tests on a Schenectady Compound Passenger Locomotive. (*With M. C. Brush.*)

ARTHUR COLBEY DAVIS.

A Systematic Series of Lecture Experiments on the Aromatic Compounds.

WALTER POORE DAVIS.

The Cyanide Treatment of Raw and Weathered Ores containing Arsenical-Pyrites.

CLINTON MERRILL DEARDEN.

An Investigation of the Effect of Inductance on the Character of Spark-spectra with Particular Reference to the Spectrum of Tellurium.

WILFORD WILLIS DEBERARD, B.S.

A Discussion of the Improvement of the Salem Water Supply.

CHARLES HAMILTON DENNISON.

A Study of the Bechi Test for Cotton-seed Oil.

RICHARD ERNEST DOW.

A Study of the Influence of Conditions on the Yield of Benzaldehyde Obtainable in the Oxidation of Toluene by Air.

WILLARD WELLMAN DOW.

The Consolidation of Iron and Steel Plants into the United States Steel Corporation.

FRANCIS BLAIR DRISCOLL.

A Comparison of Elevated Railway Structures in Boston, Chicago, New York, and Kansas City.

NORMAN ARMIN DUBOIS.

An Investigation of the Constitution of Ferric Chloride in Aqueous Solution.

FREDERICK JOSEPH DULUDE.

A Plan for Abolishing the Grade Crossing on the Boston and Maine Railroad at Saugus. (*With A. A. Casani.*)

LAMMOT DU PONT.

Compressive Tests on Wood containing Varying Degrees of Moisture. (*With J. P. Briggs.*)

FRANK NELSON EMERSON, A.B.

A Design for a City Hall.

MANSFIELD ESTABROOK, A.B.

A Study of Stresses in Eccentrically Loaded Brick Piers.

WILLIAM ELLIS FARNHAM, PH.B.

An Efficiency-test of an Electric Railway Plant. (*With J. P. Catlin.*)

EDWARD PICKERING FLEMING.

The Cyaniding of a Silicious Gold Ore.

CHARLES KIMBALL FLINT.

A Photometric Investigation in Interior Illumination. (*With H. E. Dart.*)

LEONARD S FLORSHEIM.

An Investigation of Turn-tables.

EUGENE STILLMAN FOLJAMBE.

Speed- and Power-trials of the Steamship "Gloucester." (*With R. W. Wight.*)

HARRY GILMAN FOLSOM.

Test of a Small Single-phase Induction Motor.

MORTIMER BRISTOL FOSTER.

An Investigation of a 16-kilowatt Constant Current Transformer. (*With F. R. C. Boyd.*)

FREDERICK WILLIAM FREEMAN.
The Relations between the Physical Properties and the Micro-structure of a Low-carbon Steel when Annealed in Air, Carbon Dioxide, Carbon Monoxide, and Water Gas.

ANNA BILLINGS GALLUP.
An Investigation by Means of the Sphygmomanometer of the Effect of Mental Work upon Arterial Blood-pressure.

WILLIAM WARREN GARRETT.
The Lixiviation of a Low-grade Copper Ore. (*With F. D. Rash.*)

HENRY ROBBINS GILSON.
An Investigation of the Relation between Cutting-speed and Tool-pressure on Lathe Tools. (*With C. Albiston.*)

ROBERT RHEA GOODRICH, S.B.
An Investigation of the Variation in the Coefficient of Friction between Leather Belting and Cast Iron with Different Speeds of Slip. (*With M. W. Hogle.*)

HARRY LAMAR GRANT.
A Determination of the Air-consumption of a Pneumatic Chipping Hammer.

GRETA GRAY.
A Design for a Villa by the Sea.

GUSTAF EDWARD GUSTAFSON.
A Study of the Water Power of the Charles River. (*With A. G. Hayden.*)

DENNIS FREDERICK HALEY.
Treatment of Tailings from a Ball-Norton Magnetic Concentrator. (*With J. H. Hirt.*)

GEORGE ANTHONY HALL.
A Study of the Development of National Banks in Massachusetts since 1880.

CLIFFORD ROBSEN HAMMOND.
A Study of a Three-phase Motor. (*With G. W. Carter.*)

ERNEST CHIPMAN HARPER, B.A.
A Study of a Bascule Bridge with Rolling Counterweights.

CHARLES HARDY HARRIS.
An Investigation of an Eddy-current Brake. (*With J. C. Woodsome.*)

ARTHUR GUNDERSON HAYDEN.
A Study of the Water Power of the Charles River. (*With G. E. Gustafson.*)

HARRY RAYMOND HEALEY.
A Study of the Thermal Properties of Gasolenes and Kerosenes.

GARABED GEORGE HEGHINIAN, A.B., S.B

Specifications for an Open Freight Barge.

LOUIS RICHARD HENRICH.

A Design for a Congregational Church.

ALBERT WILLIS HIGGINS.

The Relations between the Micro-structure and Physical Properties of Car-axle Steel. (*With F. W. Coburn.*)

JULES HECTOR HIRT.

Treatment of Tailings from a Ball-Norton Magnetic Concentrator. (*With D. F. Haley.*)

HARRY AUGUSTINE HODGDON.

A Design of a Heating and Ventilating System for the Rhode Island State House. (*With A. H. Wilson.*)

MILTON WARD HOGLE.

An Investigation of the Variation in the Coefficient of Friction between Leather Belting and Cast Iron with Different Speeds of Slip. (*With R. R. Goodrich.*)

WILLIAM GORDON HOLFORD.

A Design for a Gymnasium for a Small University.

LEWIS WINSLOW HORNE.

Speed- and Power-trials of the Steamship "James S. Whitney." (*With R. S. Littlefield.*)

AUSTIN TABER HYDE.

An Investigation of Willson's Process for Obtaining Ammonia from the Atmosphere by Means of Nitrides.

GEORGE TAYLOR HYDE, B.S.

A Design for a Bell Tower of Steel and Terra Cotta Construction.

FREDERICK DUBOIS INGALLS.

A Design and Study for the Heating and Ventilation of a Theatre.

ALONZO KEYT ISHAM.

An Investigation of the Transverse Strength of Granite. (*With G. W. Allen.*)

ARTHUR CRAWFORD JEWETT.

The Line of Resistance of the Masonry Arch. (*With W. M. Curtis.*)

CARL FRANCIS JOHNSON.

The Speed-variation and the Action of the Reciprocating Parts of a 36-horse-power Otto Gas Engine. (*With L. D. Chandler.*)

WILL GHOST KELLEY.

Test of a Thomson Three-phase Recording Wattmeter. (*With H. H. Kennedy.*

HERBERT HARLEY KENNEDY.

Test of a Thomson Three-phase Recording Wattmeter. (*With W. G. Kelley.*)

KING HARDING KNOX.

A Test of a Constant Current Transformer. (*With W. I. Sturtevant.*)

DONALD ALEXIS KOHR, PH.B.

An Indirect Determination of the Solubility of difficultly Soluble Salts, by the Help of the Mass-action Law.

THEODORE FERDINAND LANGE.

A Plan for Abolishing the Grade Crossings on the Old Colony Railroad at Harrison Square and Vicinity. (*With L. H. Bigelow.*)

ELLIS FULLER LAWRENCE.

A Design for a Combined Art Museum and Library for a Small City.

JAMES BRADFORD LAWS.

A Statistical Study of the Negroes of Cinclare Central Factory and Calumet Plantation, Louisiana.

CHARLES THAYER LINCOLN.

The Synthesis and Properties of Phenolquinolineïne.

ROBERT STANLEY LITTLEFIELD.

Speed- and Power-trials of the Steamship "James S Whitney." (*With L. W. Horne.*)

HARRY JOHN LOHBILLER.

Experiments on the Flow of Gases in a Chimney.

RALPH STOODLEY LORING.

An Investigation of Wind-bracing in Two Steel-frame Buildings

THOMAS MASON LUNAN.

The Estimation of Small Quantities of Arsenic in Fabrics.

OTTO GERHARD LUYTIES.

Some Experiments on Pivot Friction.

ALLEN BOYER MCDANIEL.

A Study of Wind-pressure and Wind-bracing in Tall Buildings.

HARRY PEAKE MCDONALD, JR.

A Design for a Structural and Ornamental Iron-works.

GRACE MACLEOD.

A Study of the Condensation of Chloroform and Benzene in the Presence of Aluminium Chloride.

HECTOR MCNEIL.

A Study of a Ferry Bridge.

HENRY CHARLES MARCUS.

On the Milling of a Nova Scotia Gold Ore, with Canvas-table Treatment of Fine Tailings.

CHARLES EVERETT MARTIN.
A Design for a Steel-framed Grand-stand.

WALTER IRVING MARTIN.
Determination of the Coefficient of a Two-foot Suppressed Weir. (*With L. A. Crowell.*)

FREDERIC ICKES MERRICK.
A Design for a City Residence.

LESLIE EATON MERRILL.
Comparative Tests of Standard Injectors under Varying Conditions. (*With R. E. Simonds.*)

BENJAMIN MILLER.
A Test of the Plant of the United States Steel Co. (*With J. McC. Perkins, Jr.*)

LEWIS ARTHUR MILLER.
A Study of the Rolling lift Bridge at the South Terminal, Boston.

STUART BERWICK MILLER.
A Study of the Specific Heats of Glycerine Lyes and Crude Glycerine.

GEORGE LEROY MITCHELL, B.S.
An Investigation of a Telephone Transmitter.

PHILIP WYATT MOORE.
Tests on an Oil Engine. (*With P. H. Parrock.*)

ROBERT BASS MORTON, B.S.
A Study of a Wagner Single-phase Induction Motor. (*With W. I. Bickford.*)

RAY MURRAY.
Experiments on the Loss of Head due to Sudden Enlargement in Pipes forming an Angle. (*With C. L. B. Anderson.*)

WILLIAM JESSE NEWLIN, B.A.
An Investigation of Chimney Draft.

LESTER ALBERT NIMS.
An Investigation of Systems of Water Supply for Railroads.

ALFRED DEWITT NUTTER.
A Design for a Steel Truss Bridge over the Boston and Maine Railroad in Chelsea.

JULIUS EDWARD OBER.
The Coagulation of Colloidal Arsenious Sulphide Solutions.

DANIEL LEIGHTON ORDWAY.
The Coagulation of Colloidal Metal Solutions.

PERCY HARRY PARROCK.
Tests on an Oil Engine. (*With P. W. Moore.*)

LANGDON PEARSE, A.B.
Investigation of a Two-hinged Steel Arch for a Highway Bridge.

JOHN MCCLARY PERKINS, JR.
A Test of the Plant of the United States Steel Co. (*With B. Miller.*)

OLIVER HAZARD PERRY, JR.
Progressive Speed-trials of the Ocean Tug "James Woolley."

ASHTON CLIFFORD PERSONS.
The Action of Zinc on Organic Halides in the Presence of Ethyl Acetate.

ANTHONY WINFRED PETERS.
The Determination of the Coefficient of Discharge of an Inward-projecting Tube. (*With E. J. Proulx.*)

JOSEPH ERNEST PHILBRICK.
The Determination of Sulphur in Crude Illuminating Gas.

PRESTON PLAYER, A.B.
Experiments on Explosive Mixtures of Gas and Air under Different Initial Pressures. (*With W. Whipple.*)

PHILIP ARTHUR POTTER.
The Influence of Moisture on the Transverse Strength of Spruce Timber.

ELZEAR JOSEPH PROULX.
The Determination of the Coefficient of Discharge of an Inward-projecting Tube. (*With A. W. Peters.*)

FRANCIS WILLARD PUCKEY.
A Design for a Suburban Residence on Long Island.

JAMES RUSSELL PUTNAM.
An Investigation of the Flow of Air through Orifices. (*With W. J. Sweetser.*)

FRANK DILLMAN RASH, A.B.
The Lixiviation of a Low-grade Copper Ore. (*With W. W. Garrett.*)

WALTER AUGUSTINE READ.
Rudder Experiments on the Steamer "Guardian." (*With J. A. Ross, Jr.*)

THOMAS FREDERICK EUGENE REARDON.
An Investigation of the Variation of the Tensile Strength of Bare Aluminium Wire while carrying Current. (*With R. H. Bolster.*)

RALPH CHANDLER ROBINSON.
A Systematic Method of Procedure for the Qualitative Detection of Mercury, Gold, Platinum, Palladium, Osmium, Selenium, and Tellurium.

JOHN ALEXANDER ROSS, JR.
Rudder Experiments on the Steamer "Guardian." (*With W. A. Read.*)

CARL ROSSMASSLER.
The Effect of Bilge-keels on Rolling, as determined from the Study of a Model.

ALLAN WINTER ROWE.
The Analytical Constants of Tallow, Neat's-foot, and Horse Oils.

SAMUEL WINTHROP ST. CLAIR.

A Design for a Villa on a Tropical Island.

GEORGE VICTOR SAMMET.

An Experimental Investigation of the Relation of the Heat of Solution of Dissociated Substances to the Effect of Temperature on their Solubility and Dissociation.

WILLIAM JAMES SAYWARD, B.S.

A Design for a Savings Bank for a City of 30,000 Inhabitants.

BART ERNEST SCHLESINGER, A.B.

The Electrolysis of Hydrochelidonic and Adipic Acids.

WALTER SCOTT.

A Dynamometer Test of a Motor Carriage.

STANLEY COLLAMORE SEARS.

The Formation Temperature of a Blast-furnace Slag as affected by the Combined Replacement of Lime and Silica by Alumina.

EDWARD SEAVER, JR.

Transverse Tests on Composite Beams of Concrete and Twisted Steel.

FREDERIC HENRY SEXTON.

The Effect of Heat Treatment upon the Physical Properties and Microstructure of Cast Steel.

CLIFFORD HOPKINS SHIVERS.

A Design for a Sanitarium for Consumptives in the Mountains.

GEORGE PERCIVAL SHUTE.

The Analysis of Chimney Gas by Means of the Gas-balance.

ROLAND EMERSON SIMONDS.

Comparative Tests of Standard Injectors under Varying Conditions. (*With L. E. Merrill.*)

NORMAN LOCKE SKENE.

Progressive Speed-trials and Service-test of a Gasolene Launch.

FREDERICK WILLIAMSON SMITH, B.A.

A Design for a Turn-table and Round-house.

SUMNER IVES SMITH.

An Investigation of the Relation of the Voltage, Capacity, and Efficiency of Storage Batteries to the Temperature.

RALPH HAMILTON STEARNS.

A Study of the Flow of Water in the Proposed Cape Cod Canal.

WILLIAM ISAAC STURTEVANT.

A Test of a Constant Current Transformer. (*With K. H. Knox.*)

WILLIAM GEORGE SUCRO.

A Plan for Abolishing the Grade Crossing on the Boston and Maine Railroad at Franklin Park, Revere. (*With F. D. Chase.*)

ALBERT FREDRICK SULZER.
The Analysis of Varnishes.

WILLIAM JORDAN SWEETSER.
An Investigation of the Flow of Air through Orifices. (*With J. R. Putnam.*)

ALEXANDER JENIFER TAYLOR, C.E.
A Design for a System of Sewage-disposal for Saxonville.

ARTHUR KINGSLEY TRENHOLME, A.B.
A Design for a Club-house.

CHARLES GILMAN TUFTS.
A Study of Cholesterol and Phytosterol.

WILLIAM WRIGHT WALCOTT.
A Study of Infant Mortality in Massachusetts, 1870–99.

FRED BIBBER WEBSTER.
The Axial Oil Machine. (*With A. L. Weil.*)

ASHER LOWENSTEIN WEIL.
The Axial Oil Machine. (*With F. B. Webster.*)

JOHN FRANK WENTWORTH.
A Design of a Speed Launch.

WILLIAM WHIPPLE.
Experiments on Explosive Mixtures of Gas and Air under Different Initial Pressures. (*With P. Player.*)

HARRY RANSOM WHITE.
Speed- and Power-trials of the Steamship "Boston."

RALPH WHITMAN.
A Study of the Different Forms of Cranes.

ROGER WILLARD WIGHT.
Speed- and Power-trials of the Steamship "Gloucester." (*With E. S. Foljambe.*)

WALDO GILMAN WILDES.
A Comparison of Trusses and Plate Girders for Spans of less than 100 feet.

CHARLES FRANKLIN WILLARD.
Progressive Speed-trials of Tug "Violet H. Raber."

ROBERT LONGFELLOW WILLIAMS.
A Comparison between Governing a Steam-engine by Throttling and by Varying the Cut-off.

ARCHIBALD HENRY WILSON.
A Design of a Heating and Ventilating System for the Rhode Island State House. (*With H. A. Hodgdon.*)

GEORGE TRUMAN WILSON.

A Series of Tests upon the Heating and Ventilating Plant of a Theatre, combined with a Design for a System of Ventilation for an Office Building. (*With H. T. Chandler.*)

SAMUEL LAMSON WONSON, A.B.

A Design for a Three-hinged Masonry Arch.

HOWARD IRVING WOOD.

A Systematic Method of Procedure for the Qualitative Detection of Beryllium, Indium, Uranium, Titanium, and Zirconium in the Presence of Common Metals.

LEONARD PERCY WOOD.

An Electrically Driven Chronograph.

JAMES CHADBOURNE WOODSOME.

An Investigation of an Eddy-current Brake. (*With C. H. Harris.*)

Candidates Awarded the Degree of Bachelor of Science during the Year 1900-1901.

HARRY BISHOP CHALMERS.

A Comparison of Various Methods of testing the Strength of Glue.

JOSEPH SIMONDS CROSWELL.

A Study of the Coefficient in the American Roller Bearing.

CLARA ISABEL DURGIN.

An Attempt to prepare Tetramethylene from Ethylene Bromacetate.

PHILIP ROLAND FRENCH.

The Occurrence of Formic Aldehyde as a Common By-product in Organic Oxidation.

ALBERTO PRIMITIVO GONZALEZ.

An Investigation of the Coking Properties of a Mexican Coal. (*With S. S. Madero.*)

JOHN HEBER LARRABEE.

A Design for a Swing Drawbridge.

BENJAMIN GOULD MACINTRE.

A Study of the Decomposition of Benzene Diazonium Salts with Pyrocatechiu.

SALVADOR SILVESTRE MADERO.

An Investigation of the Coking Properties of a Mexican Coal. (*With A. P. Gonzalez.*)

HENRY CURTIS MORRIS.

A Study of the Roasting of Different Grades of Tellurium Ores.

BURT RANSOM RICKARDS.

A Study of Certain Processes of Fermentation and a Method for the Identification of the more Important Carbohydrates and Glucosides.

ALICE VIRGINIA WILSON, A.B.

An Attempt to prepare Hexamethylene.

ALPHABETICAL LIST OF OFFICERS AND STUDENTS.

ABBREVIATIONS.— Prof. = Professor; Assoc. Prof. = Associate Professor; Asst. Prof. = Assistant Professor; Inst. = Instructor; Asst. = Assistant; Sp. = Special (Student). Numerals denote the year of regular students. For list of officers see pages 18 to 26. For list of students see pages 192 to 236.

Abbot, J. R. . . . . Sp.
Abbott, A. H. 1
Abbott, F. H. 1
Ackerman, A. C. . . Sp.
ADAMS, C. L. . . . *Inst.*
Adams, C. R. 1
Adams, C. W. 1
Adams, I. E. . . . . Sp.
Adams, I. R. 4
Adams, L. W. 3
Adams, R. E. 2
Adams, W. H. 3
Aguilar, J. H. . . . Sp.
Aldrich, C. S. 3
Aldrich, W. T. . . . Sp.
Allen, A. B. 3
Allen, C. 1
Allen, C. B. 4
ALLEN, C. F. . . . *Prof.*
Allen, C. M. 4
Allen, E. G. 1
Allen, R. H. 1
Allyn, A. W. 4
Alsberg, J. . . . . Sp.
Amberg, A. J. 1
Ames, H. A. . . . . Sp.
Ancona, J. F. . . . Sp.
Anderson, A. E. F. . . 2
Anderson, F. S. . . . Sp.
Andrews, F. H. 1
Andrews, W. A. . . . 2
Annett, C. B. 4
Anson, C. L. 1
Anthony, W. S. . . . Sp.
Appleton, A. L. 4
Armstrong, A. C. . . . 1
Armstrong, S. E. . . . Sp.
Arnold, P. M. . . . Sp.
Asbury, L. H. . . . Sp.
Astell, G. B. 1
Atkins, G. E. 2
Atwood, C. E. 1
Atwood, H. N. 1
Atwood, I. F. 3
Avery, C. H. . . . . Sp.
Avery, F. D. 4
Ayer, J. 1
Ayers, S. H. 1
Aylsworth, J. W. . . . 3

Babcock, F. G. . . . Sp.
Babson, R. D. 3
Backup, C. W. 1
Bacon, H. M. . . . Sp.
Baetjer, H. 4
Bailey, E. G. 2
BAILEY, F. H. *Asst. Prof.*
BAIRD, W. . . . *Prof.*
Baker, A. P. . . . . Sp.
Baker, E. S. . . . . Sp.
Baker, E. S. 2
Baker, H. S. 3
Baker, J. C. 2
Baker, R. H. 2
Baker, S. K. 3
BALCOM, R. W. . . . *Asst.*
Balkam, A. T. 1
Ball, S. Y. 3
Ball, W. G. 1
Ballard, J. W. 2
Ballou, R. H. 3
Banash, I. J. 1
Barber, C. E. 1
Barber, W. A. 1
BARDWELL, F. L. *Asst. Prof.*
Barlow, J. E. 1
Barnaby, G. A. . . . Sp.
Barnd, J. V. 1
Barnes, J. P. 1
Barrett, C. F. 2
Barrier, E. A. 1
Barrows, A. H. . . . Sp.
Barrows, G. H. 1
Barry, J. G. 1
Bartberger, E. W. . . Sp.
Barter, H. A. . . . . Sp.
Bartlett, A. W. 2
BARTLETT, D. P.
Assoc. Prof.
Bartlett, E. H. 1
Bartlett, G. M. 1
Bartlett, H. E. 4
Bartlett, S. R. . . . Sp.
BARTON, G. H. *Asst. Prof.*
Bary, D. B. . . . . Sp.
Bascom, C. P. 2
Bassett, J. H. 1
Bassett, W. M. 4
Bateman, G. W. 3
BATES, A. . . . . *Prof.*
Bates, C. L. 3
Bates, G. W. 2
Bates, J. R. 3
Baum, K. M. 2
Baxter, S. E. . . . . Sp.
Bay, W. J. 3
Beard, R. S. 1
Becker, W. F. 1
Beckler, E. A. 4
Bedford, T. P. . . . Sp.
Bee, A. W., Jr. 2
Beerman, B. 1
Beers, W. H. 1
Belcher, D. M. 4
BECKWITH, E. P. . . *Asst.*
Belding, A. F. 1
Bell, H. T. . . . . Sp.
Bell, R. E. 1
Bellows, R. P. . . . Sp.
Bendann, R. 1
Bender, E. F. 1
Bennett, A. F. 3
Bennett, F. G. . . . Sp.
Benson, S. W. 2
Bent, W. G. 1
BERRY, C. W. . . . *Inst.*
Berry, H. E. 1
Best, E. May W. . . . 4
Beverstock, C. W. . . . 3
Bickford, F. C. 1
BICKFORD, W. I. . . *Asst.*
BIGELOW, R. P. . . *Inst.*
Biggi, F. A. 2
Bilyea, C. T. . . . . Sp.
Birks, A. H. . . . . G.
Bixby, L. . . . . Sp.
Bixby, R. 1
BLACHSTEIN, J. . . . *Inst.*

Blair, P. A. 1
Blatt, H. O. 3
Blodgett, E. L. 1
Blodgett, G. R. . . . Sp.
Blood, Alice F. 3
Blum, B. 2
Boardman, C. H., Jr. . . 4
Boggs, C. R. 1
Boggs, W. B. 2
Bolster, May M. . . . Sp.
Bolster, R. H. . . . Sp.
Bonnemort, C. J. . . . 4
Booth, A. R. G. 4
Borden, N. E. 4
Borie, R. 1
Bosworth, H. O. . . . 4
Bouscaren, L. G. . . . 2
Bowers, D. H. C. . . Sp.
Bowman, M. B. 1
Boyden, C. . . . . Sp.
BOYLE, J., JR. . . . *Asst.*
Boynton, A. S. 1
Bradley, F. 4
Bradley, F. S. . . . Sp.
Bradley, G. E. . . . Sp.
BRADLEY, H. C. . . *Inst.*
Bradley, S. 2
Bradshaw, G. B. . . Sp.
Brainerd, C. LeR. . . . 4
Braley, Jessie N. . . Sp.
BREED, C. B. . . . . *Inst.*
Breed, H. . . . . Sp.
Brewer, C. D. . . . Sp.
Bridges, D. W. 1
Bridges, J. S., Jr. . . Sp.
Briggs, E. N. 1
Briggs, G. W. 2
Brigham, C H. . . . Sp.
Bright, G. . . . . Sp.
Broad, C. E. 2
Brodie, M. 4
Brooks, E. M. 1
Brown, F. Z. . . . . Sp.
Brown, H. M. . . . Sp.
Brown, J. H. . . . . Sp.
Brown, J. S. 1
Brown, J. L. 2
Brown, J. H., Jr. . . . 1
Brown, Martha B. . . Sp.
Brown, M., Jr. 3
Brown, R. V. 4
Brown, S. E. . . . . Sp.
BROWN, W. F. . . . *Inst.*
Brown, W. S. 2
Brownell, F. W. . . . 1
Bruce, Barbour . . . Sp.
Bruton, A. W. 3
Bryan, C. A. 3
Bryant, B. F. W. . . . 1
Buck, R. W. . . . . Sp.
Buckingham, G. H. . . 1
Buckley, J. P. 2
Buff, H. A. 1
BUGBEE, E. E. . . . *Asst.*
Buhler, H. W. 3
Bull, F. N. . . . . Sp.
Bull, H. W. . . . . Sp.
Bunting, C. K. H. . . . 1
Burden, F. E. 1
Burdick, H. C. . . . Sp.
Burke, F. H. 3
Burkhardt, E. A. . . . 1
Burnham, A. W. . . . 2
Burnham, L. P. 2
Burnham, W. W. . . . 3
Burns, N. B. 1
BURNS, P. S. . . . . *Inst.*
Burns, W. 1
Burr, C. H. 4
BURRISON, H. K. . . *Inst.*
BURTON, A. E. . . *Prof.*
Burton, E. . . . . Sp.
BUSBY, F. E. . . . *Asst.*
Butman, C. A. 1
Butts, W. M. 1

CADY, F. E. . . . . *Asst.*
Cain, W. B. 1
Caine, S. A. 1
Calkins, E. W., Jr. . . 2
Calley, W. E. . . . Sp.
Calnan, J. W. J. . . Sp.
Canby, H. B. . . . . Sp.
Capelle, G. C. . . . Sp.
Capen, B. W. 4
Card, J. F. 2
Carhart, C. C. 2
Carhart, F. M. 1
Carleton, L. T. 1
Carmichael, G. P. . . Sp.
Cartagena, J. J. . . . Sp.
CARTER, B. E., JR. . *Inst.*
Carty, F. J. 2
Carty, W. M. 2
Casey, G. A. 1
Castleman, P. 1
Cates, L. S. 4
Cerf, H. H. 2
Chace, C. S. 2
Chace, F. M. 2
Chamberlin, N. . . . Sp.
Champagne, G. H. . . . 1
CHANDLER, F. H. . *Prof.*
Chandler, W. D. . . . 2
Chapin, H. G. . . . Sp.
Chapin, H. K. . . . Sp.
Chapman, H. M. . . Sp.
Charles, E. W. 2
Charlesworth, H. P. . . 1
Chase, C. E. 3
Cheney, J. T. . . . Sp.
Chesterman, F. J. . . . 1
Church, A. T. . . . Sp.
Clapp, C. H. 1
CLAPP, F. G. . . . *Asst.*
Clapp, G. H. . . . . Sp.
Clare, C. H. . . . . Sp.
Clark, G. H. 3
Clark, M. H. 3
Clark, W. A. 1
Clark, W. M. . . . Sp.
Clarke, L. C., Jr. . . . 2
Clarke, W. A. 1
CLIFFORD, H. E. *Asst. Prof.*
Cline, M. 1
Clough, L. 2
Coats, A. B. 1
Cobb, A. R. 3
Cobb, F. A. 2
Cobb, N. H. . . . . Sp.
Coburn, L. G. 4
Cockrill, E. 2
Codd, Eliza 2
Coffin, E. M. 1
Coffin, Marian C. . . Sp.
Cole, C. S. . . . . Sp.
Cole, E. G. . . . . Sp.
Cole, S. L. 1
Collier, A. L. 4
Collins, D. 1
Collins, R. V. 2
Comer, E. A. . . . . Sp.
Comins, W. H. 4
Comstock, D. F. . . . 2
Cook, R. A. 3
Cook, W. L. 3
COOLIDGE, W. D. . . *Inst.*
Cooper, C. H. 3
Cooper, E. B. . . . Sp.
Copeland, D. 3
Coupe, A. L. 2
Courtney, A. S. 2
Cowdry, I. H. 1
Cowper, H. M. . . . Sp.
Cox, C. B. 3
Cox, F. G. 3
Craig, C. R. 1
Crane, H. G. 2
Crary, F. 2
Craven, W. S. 3
Cronenbold, E. J. . . . 3

Cronin, W. L. 2
Cronin, W. W. 2
Cronkhite, L. W. . . . 1
Crosby, F. B. 3
Crosby, G. 1
Crosby, H. 3
CROSBY, W. O. *Asst. Prof.*
CROSS, C. R. . . . *Prof.*
Cross, H. N. 3
Cross, W. P. 3
Crowell, H. C. 3
Crowell, J. W. 2
Crowell, P. S. . . . Sp.
Crowell, W. R. 2
Crowell, W. W. . . . Sp.
Crull, C. G. 2
Cuesta Gallardo, E. . . 1
Culver, Llora R. . . . 4
Cumming, S. P. 1
Cummins, H. O. . . . 4
Cunningham, J. E. . . . 2
Curl, C. M. . . . . Sp.
Currey, H. Y. 4
CURRIER, C. F. A. . *Prof.*
Currier, J. S. 2
Currier, W. F. . . . Sp.
Curtis, C. C. . . . . Sp.
Curtis, G. A. 2
Curtiss, J. L. . . . . Sp.
Cushman, J. A. 3
Cutter, E. H. 4
Cutting, R. C. 2

Dahlgren, W. . . . Sp.
Daloz, L. E. . . . . Sp.
Daly, J. C., Jr. 1
Danforth, C. E. 1
Daniels, J. 1
Daniels, A. W. . . . Sp.
DART, H. E. . . . *Asst.*
DAVIS, A. C. . . . *Asst.*
Davis, Anne H. . . . Sp.
Davis, D. L. 1
Davis, E. L. 1
Davis, F. H. 2
Davis, F. W. 3
Davis, G. H., Jr. . . . 1
Davis, H. H. 4
Davis, H. R. . . . . Sp.
Davis, J., Jr. . . . . Sp.
Davis, R. 1
Davis, W. R. 3
Dawson, A. E. 1
Dean, A. M. 1
Dean, C. L. 1
Dean, H. L. 1
Deane, A. M. . . . Sp.
DEARDEN, C. M. *Asst.*
Delano, W. P., Jr. . . . 1
Denham, H. S. . . . Sp.
Derby, R. B. . . . . Sp.
DERR, L. . . *Asst. Prof.*
Desloge, F. V. . . . Sp.
DESPRADELLE, D. . *Prof.*
DEWEY, D. R. . . *Prof.*
Dewis, C. S. . . . . Sp.
Dexter, Katharine . . Sp.
Dickerman, A. C. . . . 1
Dickie, J. F. 1
Dickson, P. R. . . . Sp.
DIKE, F. H. . . . . *Inst.*
Dimock, R. E. . . . Sp.
DIPPOLD, G. T. . . *Prof.*
Dodge, A. W. . . . Sp.
Doherty, H. V. 2
Dolan, J. S. . . . . Sp.
Dole, M. W. 2
Donald, H. W. 1
Donovan, J. J. 2
Donovan, W. H. . . . 3
Dooley, J. J. 3
Doran, J. F. . . . . Sp.
Dorr, E. N. . . . . Sp.
Doten, W. L. 2
Douglas, J. F. 1
Dow, D. F. . . . . Sp.
Downes, A. C. 2
Doyle, E. L. . . . . Sp.
Drake, F. E. 1
Drake, H. P. 3
Draper, H. K. . . . Sp.
Draper, J. H. . . . Sp.
Drew, A. G. . . . . Sp.
Drew, C. H. . . . . Sp.
DRISCOLL, F. B. . . *Asst.*
DRISKO, W. T. . . . *Inst.*
Drury, W. M. 3
Dudley, H. H. 3
Dunham, G. E. 1
Dunham, M. C. 3
Dunn, J. F. 2
Durant, F. C . . . . Sp.
Durbin, J. W. 4
Durgin, W. A. 4
Dwight, J. 1
Dwyer, E. 1

Eager, F. J. 4
Eager, W. H. 2
Eames, J. J. 4
Easterbrook, C. C. . . . 2
Eastham, B. C. . . . Sp.
Eastman, G. W. 2
Eastwood, E. O . . . Sp.
Eaton, L. D. 1
Eaton, R. W. 3
Eckel, G. R. 1
Eddy, W. O. 3
Edes, E. L. 2
Edmunds, H. M. . . . 1
Edwards, R. S. . . . Sp.
Egerton, C. O. 3
Eichler, W. G. 1
Eisele, H. 1
Elliot, J. K. 2
Elliott, F. S. 1
ELLIS, C. . . . . *Asst.*
Elmer, C. W. . . . Sp.
Elwell, D. 2
Emerson, C. J. 2
Emerson, M. L. 2
Emerson, N. D. 2
Emerson, R. D. 1
Endres, K. W. 3
ERHARDT, J. . . . . *Inst.*
Estabrook, T. W. . . . 1
Evans, W. A. 2
Eveland, A. J. . . . Sp.
Everett, H. A. 4

Fairfield, G. A. 2
Fales, H. H. 3
Falvey, F. A. 1
Farmer, W. H. 4
Farnham, F. R. 3
Farrell, F. S. 2
Farrell, F. W. 2
Farrington, R. D. . . . 1
Faulkner, R. 2
FAUNCE, L. . . *Assoc. Prof.*
FAY, H. . . . *Asst. Prof.*
Faymouville, LeR. B. . . 1
Fellows, O. D., Jr. . . . 2
Ferguson, W. B. . . . 3
Ferrin, H. A. 4
Ferris, C. Y. 2
Ferris, M. Y. 3
Ferry, A. C. 2
Ferry, M. 3
Fick, O. W. 1
Field, F. J. 4
Field, H. C. . . . . Sp.
Field, R. M. 3
Field, W. P. . . . . Sp.
Figyelmessy, H. . . . Sp.
Files, T. H. 1
Finnegan, J. B. 2
Fish, H. C. 3
Fisher, A., Jr. 1
Fisher, D. H. . . . Sp.
Fitch, C. H. . . . . Sp.

Fitch, W. S. 4
Fitz, R. . . . . Sp.
FitzGerald, J. M. . . . 4
Fitzler, H. 3
Flagg, H. H. 1
Fletcher, H. H. 4
Fletcher, S. A. 3
Flinn, H. M. . . . Sp.
Flynn, J. H., Jr. . . . 1
Fogg, B. G. . . . . Sp.
Foley, D. A. B. . . . Sp.
Foley, L. H. 1
FOLJAMBE, E. S. . *Asst.*
Folsom, R. M. 1
Foote, T. W. 4
Forbes, E. D. 3
Ford, Lynette . . . Sp.
FOSDICK, C. M. . . *Asst.*
Foster, S. A. 3
Foster, W. H. . . . Sp.
Fouhy, J. F. 1
Foulds, R. S. 1
Fowler, E. 1
Fowler, R. 1
Fowler, T. V., Jr. . . Sp.
Francis, G. W. . . . Sp.
Franklin, D. R. 4
Franklin, R. S. . . . Sp.
Fraser, F. J. 1
Fraser, Linda S. . . . 2
Freeman, A. E. 1
FREEMAN, F. W. . *Asst.*
Fremmer, J. A. 2
Friend, A. W. 4
FRIZZELL, J. A. . . *Asst.*
Frost, R. L. 4
Fruit, J. C. 4
Fuentes, A. C. 1
FULLER, C. E. *Asst. Prof.*
Fuller, G. 1
Fuller, L. N. 1
Fuller, P. W. 1
Funk, G. C. 1

Gaenslen, G. R. 3
Gage, C. E. 1
Galaher, F. B. 4
Gale, R. F. 1
Galusha, D. L. 2
Gammons, H. T. . . . 1
Gammons, J. M. . . . 3
Gannett, F. 4
Garber, F., Jr. . . . Sp.
Garcelon, G. H. . . . 3
Gardner, A. 4
GARDNER, H. W. . . *Inst.*
Gardner, R. S. 1
Gardner, S. A., Jr. . Sp.
GARRETT, W. W. . *Asst.*
Gates, T. P. . . . . Sp.
Geckler, B. E. 1
George, H. A. . . . Sp.
GEORGE, N. R. . . . *Inst.*
Geraghty, F. 1
Gerhard, N. P. 1
Geromanos, H. W. . . 4
Gerry, A. P. 1
Gerry, W. F. . . . . Sp.
Gibbs, A. S. . . . . Sp.
Gibson, Jessie G. . . . 3
Gifford, R. P. 4
Gifford, R. S. 1
Gilbert, A. C. 1
Gilker, W. M. 3
GILL, A. H. . *Asst. Prof.*
Gill, W. J., Jr. 2
Gillett, W. L. 3
Gilman, W. C. 1
Gilmer, T. M. . . . Sp.
Gilmore, L. E. 1
Gilson, A. P. 1
Gilson, J. L. . . . . Sp.
Gladding, J. N. 1
Gleason, Caroline L. . Sp.
Gleason, G. H. . . . Sp.
Glenn, C. S. . . . . Sp.
Glidden, J. T. 1
Glover, G. C. . . . Sp.
Goddard, H. W. . . Sp.
Goldenburg, M. 4
Goldthwait, F. W. . . . 2
Goldthwaite, L. F. . . . 1
Goodale, P. A. 1
GOODELL, R. R. . . *Inst.*
Goodrich, R. R. . . . G.
Goodwin, C. C. 3
Goodwin, E. G. 3
GOODWIN, H. M. *Asst. Prof.*
Goodwin, W. F. . . . Sp.
Gorfinkle, E. 4
Gouinlock, W. S. . . . 1
Gould, H. H. . . . Sp.
Gould, LeR. B. 3
Gover, M. H. . . . Sp.
Graber, H. T. 4
Grady, R. C. 1
Graesser, C. T. 1
Graham, Minnie A. . Sp.
Granger, E. 2
Grant, E. C. 1
Grant, K. C. 4
Grant, L. R. . . . . Sp.
Gray, C. R. 3
Greeley, W. R. 4
Green, C. F. 3
Green, T. 1
Green, W. 1
Greene, B. W. B. . . . 4
Greene, C. M. . . . Sp.
Greene, E. F. 3
Greene, G. M. . . . Sp.
Gregson, R. B. 1
Grice, J. M. . . . . Sp.
Griffin, C. J. 3
Grover, H. H. . . . Sp.
Guerin, H. J. 1
Guibord, F. W. 1
Guild, F. E. 1
Gunn, S. . . . . Sp.
Gurza, J. . . . . Sp.

Haar, S. 2
Haddock, I. T. . . . Sp.
Hadley, R. E. 1
Hadley, W. E. 2
Hale, Mary D. . . . Sp.
Haley, H. M. 2
Haley, J. F. 1
Hall, A. P. 4
Hall, B. . . . . Sp.
Hall, G. G. 2
Hall, J. . . . . Sp.
Hall, W. A. 1
HALL, W. T. . . . *Inst.*
Hallack, C., Jr. . . Sp.
Ham, Clara E. 3
Hamblet, A. M. 4
Hamblin, R. S. . . . Sp.
Hamilton, T. M. . . Sp.
Hammett, L. W. . . . 1
Hammond, L. C. . . . 4
Hansen, A. E. 4
Hansen, P. . . . . Sp.
Hanson, R. E. . . . Sp.
Haraden, J. A. 2
Hardenbergh, C. M. . . 3
Harding, R. M. 2
Hardy, H. L. 1
Harlow, J. E. 3
Harnett, J. H. . . . Sp.
Harrah, E. 2
Harrigan, W. A. . . Sp.
Harrington, C. O. . . Sp.
Harris, F. P. . . . . Sp.
Harris, G. M. 3
Harris, H. G. . . . Sp.
Harris, W. A. 1
Hart, H. R. 1
Hartshorne, R. G. . . . 2
Harwood, L. M. . . Sp.
Haskell, A. A. 4

Haskell, R. . . . . Sp.
Hastings, A. N. 1
Haven, G. B. . . . *Inst.*
Havens, R. E. 2
Hawkes, C. W. 1
Hayden, F. D. . . . Sp.
Hayden, R. . . . . Sp.
Hayes, J., Jr. 1
Haynes, C. R. 2
Hayward, C. R. 2
Hayward, H. W. . *Asst.*
Hazeltine, R. 2
Hazlewood, S. . . . Sp.
Healy, A. 3
Helpern, M. 1
Henrich, L. R. . . . G.
Hepburn, W. H. . . Sp.
Hermann, L. A. . . . Sp.
Hervey, E. M. 4
Hickok, H. M. . . . Sp.
Higgins, F. L. . . . Sp.
Higgins, W. S. 1
Hill, Beulah C. 4
Hill, E. B. 1
Hill, E. L. 1
Hill, F. M. 1
Hill, G. 2
Hill, H. A. 2
Hill, P. G. 2
Hiller, E. O. 2
Hine, D. 1
Hinkley, P. E. 1
Hirons, F. C. . . . . Sp.
Hixon, H. 1
Hoard, P. D. . . . . Sp.
Hodge, W. E. 2
Hodson, C. W. . *Asst.*
Hofman, H. O. . . *Prof.*
Holbrook, A. R. 2
Holbrook, E. A. 2
Holcombe, A. M. . . . 2
Holford, W. G. . . . G.
Holliday, J. H., Jr. . . 1
Hollis, C. B. 4
Hollnagel, H. P. . . Sp.
Holmes, A. F. 2
Holmes, V. F. 4
Holz, H. A. . . . . Sp.
Homans, G. M. . . . Sp.
Homer, C. L. 2
Hood, A. H. 1
Hood, R. M. 3
Hooker, H. K. 4
Hool, G. A. 1
Hopkins, L. O. . . . Sp.
Horstmann, W. H. . . Sp.
Horton, F. W. 2
Hosmer, G. L. . . . *Inst.*
Houck, C. A. 1
Hough, T. . *Asst. Prof.*
Hovgaard, W. . . *Prof.*
Howard, J. W. 3
Howard, L. T. 2
Howe, J. C. 4
Howes, C. P 3
Howes, R. H. . . . Sp.
Howland, A. H. . . . 1
Hoy, C. 2
Hudson, H. N. 3
Hull, F. B. 4
Humphrey, C. T. . . . 1
Humphrey, E. R. . . Sp.
Humphrey, W. H. . . . 1
Hunnewell, Mary P. . Sp.
Hunt, F. L. 1
Hunt, H. N. 4
Hunter, C. F. 2
Hunter, F. H. 4
Hunter, L. L. . . . Sp.
Huntington, C. McK. . . 1
Huntington, C. D. . . Sp.
Hurley, E. J. 2
Hutchinson, J. A. . . . 4
Hyde, G. T. . . . . G.
Hyde, S. T. 1

Ingalls, R. P. 1
Ingram, R. O. 2
Ireland, J. D. . . . Sp.

Jackson, A. A. . . . Sp.
Jackson, R. F. . . . Sp.
Jacobs, A. H. 2
Jacobson, H. F. . . . Sp.
James, W. H. . . *Asst.*
Jameson, F. A. . . . Sp.
Jason, G., Jr. 1
Jenkins, A. D. . . . Sp.
Jenkins, E. F. . . . Sp.
Jewett, K. DuB. . . Sp.
Jewett, T. E. 1
Johansson, F. V. E. . . 1
Johnson, B. L. 1
Johnson, C. H. 1
Johnson, F. 3
Johnson, N. M. 2
Johnston, C. W. . . . 1
Johnston, W. A. *Asst. Prof.*
Jones, G. B. 1
Jones, J. L. 3
Jones, J. R. 3
Jordan, R. R. . . . Sp.
Joseph, J. S. 3
Joslin, G. B. 1
Josselyn, E. D., Jr. . . 1
Joyce, C. M. 3
Judson, H. C. . . . Sp.

Kaiser, G. K. 2
Kalmus, H. T. 2
Kattelle, W. R. . . . G.
Kaufman, L. R. . . Sp.
Kearny, P. J. 3
Keen, W. T. . . . . Sp.
Keen, W. H. 1
Keenan, J. A. 2
Kehew, F. D. 3
Kehl, H. L. . . . *Asst.*
Keith, E. . . . . Sp.
Keith, H. H. W. . . . 1
Keller, D. K. 2
Kellogg, C. W., Jr. . . 4
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Kendall, H. S. 2
Kenison, E. . . . *Inst.*
Kennedy, H. H. . *Asst.*
Kenway, H. W. 1
Kern, LeR. E. . . . Sp.
Kerr, N. F. . . . . Sp.
Kershaw, G. E. . . . Sp.
Keyes, H. F. . . . . Sp.
Kibbey, R. 1
Killion, L. J. 1
Kimball, A. W. 3
Kimball, E. E. 4
King, C. 2
King, R. J. 3
Kirkwood, H. A. . . Sp.
Kliever, A. L. . . . Sp.
Knight, E. W. 4
Knights, C. F. . . . Sp.
Knowles, E. F. 1
Knowlton, C. D. . . . 2
Koch, H. G. 4
Kramer, H. 2
Kriegsman, E. F. . . . 1
Kruse, R. L. . . . . Sp.
Kudlich, A. H. . . . Sp.

Lacey, F. H. . . . . Sp.
Lackman, H. W. . . . 2
Lage, A. M. 4
Lage, R. 3
Lamb, A. B. . . . . Sp.
Lamb, S. R. 1
Lambie, J. McC. . . . 1
Lambirth, J. R. . . *Inst.*
Lane, F. G. 4
Laney, L. K. . . . . Sp.
Lang, A. E. 3
Lang, C. 2

Langley, A. H. . . . Sp.
Langworthy, F. H. . . . 1
Lanza, G. . . . . *Prof.*
Larrabee, H. D. 4
Latham, B. W. 3
Latshaw, W. H. M. . Sp.
Lauffer, R. A. 2
Lawrence, A. W. 1
Lawrence, E. F. . . . G.
Lawrence, R. R. . . *Inst.*
Lawrence, W. H.
Assoc. Prof.
Laws, F. A. . *Asst. Prof.*
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Lawton, R. M. 3
Lazenby, P. H. . . . Sp.
Leary, J. F. . . . . *Asst.*
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Leavitt, C. E. 1
Leavitt, P. A. . . . Sp.
Lee, J. J. . . . . Sp.
Lee, L. H. . . . . Sp.
Leh, H. M. . . . . Sp.
Leland, W. S. . . . *Inst.*
Lenth, G. C. D. 3
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Levine, H. 2
Lewis, H. F. 1
Lewis, W. K. 1
Libbey, G. E. . . . Sp.
Lind, S. C. . . . . Sp.
Lindsly, A. J. . . . Sp.
Lindsly, B. E. 1
Litchman, H. B. . . Sp.
Littlefield, C. E. . *Asst.*
Littlefield, E. . . . . Sp.
Livermore, R. 3
Locke, C. E. . . . . *Inst.*
Lockett, K. 4
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Lombard, A. E. 4
Lombard, E. 1
Lombard, N. 1
Longuemare, T. A. . . Sp.
Loomis, W. W. 1
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Lord, R. H. W. 1
Loring, Alice G. . *Asst.*
Lothrop, P. D. . . . Sp.
Loughlin, G. F. 3
Loughlin, J. S. 1
Lounsbury, W. C. . . Sp.
Lovejoy, R. F. 1
Low, H. R. 3
Lowe, R. B. 4
Lowry, H. K. . . . Sp.
Luce, R. F. 1
Lum, E. 1
Luquer, L. . . . . Sp.
Lutze, F. C. 1
Lynch, J. E., Jr. . . . 1
Lynch, W. D. 2
Lynde, H. M. 1
Lyon, J. L. . . . . Sp.
Lyon, W. V. 1

Mabrey, F. D. . . . Sp.
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McBurney, H. 4
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McCarthy, C. E. . . . 4
McClung, S. A., Jr. . Sp.
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McCornack, W. R. . . . 3
McDougall, T. G. . . . 2
McEntee, W. 3
MacGregor, R. J. . . . 3
Machado, J. M. 1
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McIntyre, F. W. . . Sp.
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Madero, A. . . . . Sp.
Madero, E. . . . . Sp.
Magee, G. M. . . . Sp.
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Magnuson, M. G. . . Sp.
Magne, F. J. 4
Mahar, J. J. 4
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Manning, C. P. . . . Sp.
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Manson, G. B. 3
Manta, P. P. 1
Manter, C. H. 1
Marcy, G. D'W. . . . 1
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Marsh, R. O. . . . . Sp.
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Marvin, J. R. 4
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Mason, E. W., Jr. . . Sp.
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Mason, S. N. 3
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May, H. S. . . . . Sp.
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Merrill, H. C. 3
Merrill, J. L. 2
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Merrow, H. K. 1
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Metcalf, E. H. 2
Metcalfe, J. G. 2
Meyer, E. L. 1
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Morrill, R. W. . . . Sp.

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Nichols, R. P. 1
Nicholson, D. H. . . . 1
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Nields, B., Jr. 3
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Nyce, J. C. 2

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O'Connor, M. A. . . Sp.
Odell, J. R. 4

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Olmsted, H. W. 1
Onodera, S. . . . . Sp.
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Osborn, H. 3
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Paquet, V. H. 1
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Parker, L. H. 1
Parker, P. R. 3
Parsons, G. F. 1
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Patch, R. R. 1
Patten, Jane B. . . . Sp.
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Payne, J. H. 1
Peabody, A. 2
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Pearson, A. W. . . . Sp.
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Peiler, K. E. 2
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Pemberton, H. A. . . . 3
Pendill, P. B. . . . Sp.
Perkins, A. 1
Perkins, G. B. 1
Perry, E. DeW. 1
Perry, G. W. 1
Perry, R. A. 1
Phalen, W. C. . . . G.
PHELAN, J. W. . . . *Inst.*
Philbrick, B. G. 4
Philbrick, J. 4
Phillips, L. 2
Phinney, R. M. 2
Physeck, P. H. . . . Sp.

Picard, D. C. . . . . Sp.
PICKERING, O. W. . . *Asst.*
Pierce, F. M. . . . . Sp.
Pierce, H. L. 2
Pirie, F. A. . . . . Sp.
Pitner, P. J. . . . . Sp.
Pitts, E. P. 4
Pitts, J. A. 2
Place, A. E. . . . . Sp.
Place, C. R. 4
Poillon, E. C. 1
Pollard, E. T. 4
Pond, H. B. 4
Poole, F. P. 1
Poor, E. J. 1
Pope, R. A. . . . . Sp.
POPE, T. E. . . . *Prof.*
Porter, A. P. 2
Porter, C. H. 4
PORTER, D. . . . *Prof.*
Porter, S. G. . . . . Sp.
Potter, A. A. . . . . Sp.
Potts, T. M. 1
Pousland, D. P. 1
Powell, G. H. 2
Prentiss, G. W. 1
Prescott, A. G. 1
PRESCOTT, S. C. . . *Inst.*
Prichard, C. R. 1
Prince, A. S. 1
Proctor, R., Jr. . . . Sp.
Proudfoot, G. McI. . . . 2
Puckey, F. W. . . . G.
PUFFER, W. L. *Assoc. Prof.*
Pulsifer, H. B. 3
Pulsifer, Julia . . . Sp.
Putnam, Amy . . . Sp.

RAMBEAU, A. . . *Prof*
Randall, F. E. 4
Rapier, J. B. . . . . Sp.
Rapp, L. B. 3
Rathbun, Eleanor P. . . 4
Rathbun, F. D. . . . Sp.
Raymond, F. . . . . Sp.
Raymond, Grace H. . Sp.
Read, A. M. . . . . Sp.
Read, E. M., Jr. . . . 1
Redfield, J. H. 4
Reed, F. C. 3
Reed, R. C. 2
Reeder, E. C. . . . Sp.
Regan, F. W. 1
Regan, J. W. 3
Regestein, W. P. . . Sp.
Reid, J. E. . . . . Sp.
Reinhardt, J. B. 1

Reynolds, D. S. . . . Sp.
Reynolds, I. W. 4
Rhodes, G. I. 1
Rice, E. A. 2
Rice, P. B. 3
Rice, R. G. 2
Rice, W. M. . . . . Sp.
Rich, C. J. 1
Rich, E. B. 2
Rich, W. C. 1
Richards, A. W. . . . 2
RICHARDS, ELLEN H. *Inst.*
Richards, G. C. . . . Sp.
Richards, N. A. 1
RICHARDS, R. H. . *Prof.*
Richardson, F. L. W. Sp.
Richardson, H. K. . . . 2
Richardson, M. C. . . . 2
Richmond, W. S. . . . 1
Ricker, E. F. 3
Ricketts, A. H. . . . Sp.
Riddell, G. C. 3
Riebel, E. C. . . . Sp.
Riley, F. B. 1
RILEY, J. C. . . . *Inst.*
Rinearson, W. C., Jr. . 1
RIPLEY, W. Z. . . *Prof.*
Rippey, A. E. 1
Ritchie, A. E. 4
Rivitz, S. M. . . . . Sp.
Robbe, L. E. 1
ROBBINS, A. G. *Asst. Prof.*
Robbins, F. A., Jr. . . 4
Robbins, J. D. . . . Sp.
Roberts, A. A. 1
Roberts, A. O. 2
Robertson, W. F. . . Sp.
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Robinson, E. S. 1
Robinson, J. A. 3
Rockwood, E. F. . . . 2
Rodgers, C. L. . . . Sp.
Rogers, Anne F. . . Sp.
Rogers, G. 4
Rogers, G. D. . . . Sp.
Rogers, J. E. 1
Rogers, R. H. . . . Sp.
Roland, J. W. 2
ROLFE, G. W. . . *Inst.*
Rollins, H. T. 2
Root, F. T. 4
Roper, W. F. . . . Sp.
Ropes, Fanny 2
Ross, G. A. . . . Sp.
Rott, W. C. 3
Rowe, H. W. 2
RUNKLE, J. D. . . *Prof.*
Runnels, S. C. 1
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Russell, A. E. 1
Russell, E. H., Jr. . . . 1
Russell, H. H. 1
Russell, L. A. 2
RUSSELL, L. K. . . . *Inst.*
Ruxton, E. J. 3

Sabin, J. H. . . . . Sp.
Sammet, C. F. 3
Sammis, T. A., Jr. . . Sp.
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SANBORN, J. P. . . . *Asst.*
Sanborn, J. R. 2
Sarratea, R. B. . . . Sp.
Saville, C., Jr. 2
Sawin, F. V. B. 1
Sawyer, A. H. . . . Sp.
Sawyer, C. A., Jr. . . . 4
Sawyer, R. W. 1
Scannell, F. T. . . . Sp.
Schaefer, H. C. . . . Sp.
Schaefer, H. F. 1
Scherrer, H. A. 3
Schlemm, L. E. . . . Sp.
Schlesinger, B. E. . . G.
Schlesinger, Marion McB. Sp.
Schmidt, C. A. 3
Schofield, L. 1
Scholtes, A. J. . . . Sp.
Schonthal, D. C. . . . 1
Schumacher, W. P. . . 2
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Schwartz, M. H. . . . 2
Scofield, E. C. 3
Scott, G. W. 1
Scott, J. R. . . . . Sp.
Scudder, O. P. 3
Seabury, G. T. 4
Sears, T. E. 3
Sears, W. H. 4
SEAVER, H. L. . . . *Inst.*
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SEDGWICK, W. T. . *Prof.*
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Senger, R. W. 1
Sephton, Cecilia H. . Sp.
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SEXTON, F. H. . . . *Asst.*
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Seyms, R. W. 1
Shapira, S. 1
Shaw, B. A. . . . . Sp.
Shaw, C. R. 1
Shaw, G. H. . . . . Sp.
Shaw, H. P. 1
Shaw, J. W. 2
Shaw, R. G., Jr. . . . 2
Shaw, T. 1
Sheafe, C. R. 2
Sheafe, J. S. 3
Shedd, C. L. . . . . Sp.
Sherlock, R. E. . . . Sp.
Sherman, F. A. 3
Sherman, H. L. 4
Sherrill, H. W. . . . Sp.
Sibbett, G. E. . . . Sp.
Siebrecht, H. B. . . . 1
Silverman, A. J. . . . 1
Simmons, H. R. . . Sp.
Simon, J. B. . . . . Sp.
Simonds, C. D. . . . Sp.
Simonds, F. W. 1
Simons, R. B. 2
Simpson, H. G. 3
Simpson, W. E. 1
Sisson, C. H. 4
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Small, H. A. C. . . . Sp.
Smart, C. E. 2
Smart, W. F. 1
Smith, A. H. 1
Smith, A. L. 1
Smith, A. D. 1
Smith, A. D. 2
Smith, C. 1
Smith, C. A. 4
Smith, C. J. . . . . Sp.
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Smith, E. F. 2
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Smith, H. M. 3
SMITH, H. W. . . . *Inst.*
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SMITH, J. W. . . . *Inst.*
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Smith, M. F. . . . . Sp.
Smith, P. M. 2
Smith, P. R. . . . . Sp.
SMITH, R. H. . . . *Inst.*
Smith, S. A. 1
Smith, T. L. 1
Sneeringer, W. J., Jr. . Sp.
Snow, E. B., Jr. . . . 1
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Soares, P. de M. S. . . 1
Sohier, W. . . . . Sp.
Solomon, B. D. 3
Spalding, G. R. 3
Spalding, W. L. 1
Spargo, J. N. 2
Spaulding, H. S. . . . 1
Spear, G. M. . . . . Sp.
Speare, A. H. 1
Spencer, A. E. 1
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Spilman, J. A. 3
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Staples, W. A. . . . Sp.
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Starr, C. D. 4
Stebbins, C. H. 2
Stebbins, H. W. 4
Stebbins, R. P. 1
Steel, E. T., 2d 1
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Steinrok, C. L. 2
Stetson, E. E. 2
Stetson, H. C. 2
Stevens, H. L. 2
Stevens, H. W. . . . Sp.
Stevens, S. S. 1
Stevenson, Lucy M. . . 3
Stickney, W. . . . . Sp.
Stiles, H. A. . . . . Sp.
Stimson, H. S. B. . . . 4
Stockman, O. S. 4
Stoddard, Ava M. . . . 3
Stoddard, Edna D. . . . 3
Stone, Mary G. . . . Sp.
Stover, C. C. 4
Stow, K. T. . . . . Sp.
Stramblad, T. A. . . . 1
Stresau, R. 2
Strickland, S. T. . . . 1
Strong, H. D. . . . Sp.
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Stutz, W. F. 2
Sullivan, P. J. 1
Sullivan, R. T. . . . Sp.
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Sweet, A. J. . . . . Sp.
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Taylor, W. C. 4
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Teague, W. O. 4
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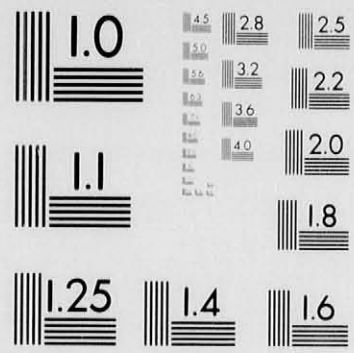
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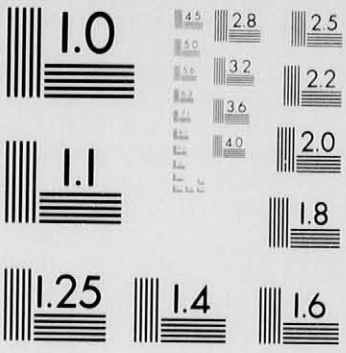
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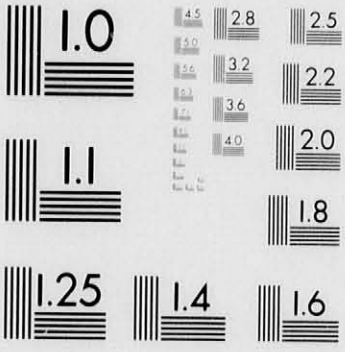
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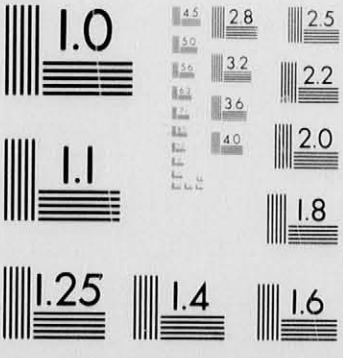
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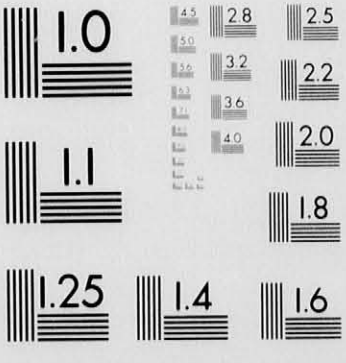
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