

ANNUAL ANNOUNCEMENT  
OF THE  
DENTAL SCHOOL  
OF  
HARVARD UNIVERSITY.

1893-94.



PUBLISHED BY  
Harvard University,  
CAMBRIDGE, MASS.



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1893.

**JULY.**

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**AUGUST.**

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**SEPTEMBER.**

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**OCTOBER.**

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1894.

**JANUARY.**

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**MARCH.**

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**APRIL.**

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**JULY.**

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**AUGUST.**

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**SEPTEMBER.**

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**OCTOBER.**

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**NOVEMBER.**

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**DECEMBER.**

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## THE DENTAL SCHOOL,

BOSTON.

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The Dental Department of the University is established in Boston, in order to secure in connection with the Medical Department those advantages for Clinical instruction which are found only in large cities.

Instruction in this School is given throughout the academic year, by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed. The year begins on the Thursday following the last Wednesday in September, and ends on the last Wednesday in June. There is a recess beginning December 23, and ending January 2; and a spring recess, beginning on the Wednesday before Fast Day and ending on the following Tuesday, both inclusive. The course of instruction is progressive, and extends over three years, the teaching of one year not being repeated in the next.

The studies of the first year are Anatomy, Physiology, and Chemistry, in connection with the classes in these subjects of the Harvard Medical School, the student receiving the same instruction by the same professors at the same time and place with the medical students and at the end of the year passing with them the same examinations.

It is the object of the Faculty to present a complete course of instruction in the theory and practice of Dentistry; and for this purpose a well-appointed laboratory and infirmary are provided, and such arrangements made as insure an ample supply of patients. Clinical instruction is given by the professors and other instructors; and, under the direction of demonstrators, patients are assigned to the students, insuring to all opportunity of operating at the chair, and becoming by actual practice familiar with all the operations demanded of the dentist.

The Infirmary remains open, and one of the Clinical Instructors and the Demonstrator are in attendance, daily, throughout the academic year, offering to students unsurpassed facilities for acquiring practical knowledge and manipulative dexterity.

Students have access to the hospitals of the city; to the dissecting-room and museum of the Medical School; and also, *without additional charge, to the instruction and examinations given in any other department of the University, with the exception of exercises carried on in the special laboratories.*

## CALENDAR.



*The meetings of the PRESIDENT AND FELLOWS are held on the second and on the last Monday of every month.*

1893.

- Sept. 28, Thursday.*     **Academic Year begins** in all departments of the University.
- Sept. 28, Thursday.*     Examinations for admission to the Law School.
- Sept. 28, 29, Thursday and Friday.*     Examinations for admission to advanced standing in the Law School.
- Oct. 11, Wednesday.*     Stated Meeting of the Board of Overseers.
- Oct. 31, Tuesday.*     Last day for receiving applications of Candidates for Final Honors in 1894.
- Oct. 31, Tuesday.*     Last day for receiving dissertations for the Bowdoin and Chauncey Wright Prizes.
- Nov. 23, Thursday.*     Thanksgiving day; a holiday.
- Dec. 1, Friday.*     Last day for receiving applications for aid from the Loan Fund.
- Dec. 15, Friday.*     Last day for receiving from first-year Students applications for Price Greenleaf Aid.

RECESS FROM DEC. 23, 1893, TO JAN. 2, 1894, INCLUSIVE.

1894.

- Jan. 10, Wednesday.*     Stated Meeting of the Board of Overseers.
- Feb. 1, Thursday.*     Second half-year begins in the Medical School.
- Feb. 12, Monday.*     **Second half-year begins** (except in the Medical School).
- Feb. 22, Thursday.*     Washington's Birthday; a holiday.
- March 1, Thursday.*     Last day for receiving applications of candidates for Final Honors in Natural History in 1895.
- March 31, Saturday.*     Last day for receiving applications for all Graduate Fellowships and Scholarships, and for College Scholarships to be assigned to Graduate Students.
- March 31, Saturday.*     Last day for re-engaging College Rooms for 1894-95.
- March 31, Saturday.*     Last day for receiving applications of candidates for Second-Year Honors.

*April 4, Wednesday.* Last day for receiving dissertations for the Boylston Medical Prizes.

RECESS FROM THE WEDNESDAY BEFORE FAST DAY TO THE FOLLOWING TUESDAY INCLUSIVE.

- April 11, Wednesday.* Stated Meeting of the Board of Overseers.  
*April 25, Wednesday.* Last day for receiving names of competitors for the Boylston Prizes for Elocution.  
*April 28, Saturday.* Applications from Graduate Students for admission to examination for any degree should be made on or before this date.  
*May 1, Tuesday.* Last day for receiving from persons intending to enter College applications for Price Greenleaf Aid for 1894-95.  
*May 1, Tuesday.* Last day for receiving dissertations for the Toppan, Dante, Sargent, and Sumner Prizes.  
*May 1, Tuesday.* Last day for receiving theses of Candidates for the degree of Ph.D. or S.D.  
*May 2, Wednesday.* Last day for receiving applications for College Rooms for 1894-95.  
*May 4, Friday.* Assignment of College Rooms for 1894-95.  
*May 10, Thursday.* Speaking for the Boylston Prizes.  
*May 30, Wednesday.* Memorial Day; a holiday.  
*May 30, Wednesday.* Last day for receiving from undergraduates applications for College Scholarships, and for Price Greenleaf Aid for 1894-95.  
*June 4, Monday.* Examinations in the Dental School begin.  
*June 6, Wednesday.* Examinations in the Medical School begin.  
*June 22, Friday.* Seniors' Class Day.  
*June 26, 28, 29, 30, Tuesday to Saturday.* Examinations for admission to Harvard College, and to the Lawrence Scientific School.  
*June 27, Wednesday.* **Commencement.** Stated Meeting of the Board of Overseers.

SUMMER VACATION OF THIRTEEN WEEKS, FROM COMMENCEMENT DAY TO SEPTEMBER 27.

*June 28, Thursday.* Examinations for admission to the Law and Medical Schools.

<i>July 5, Thursday.</i>	Summer School opens.
<i>Sept. 24, Monday.</i>	Examinations in the Dental School begin.
<i>Sept. 20, 21, 22, 24, Thursday to Monday.</i>	Examinations for admission to Harvard College, and to the Lawrence Scientific School.
<i>Sept. 24, Monday.</i>	Examinations for admission to the Medical School.
<i>Sept. 24, Monday.</i>	Examinations for admission to the Dental School.
<i>Sept. 24, Monday.</i>	Examinations in the Medical School begin.
<i>Sept. 26, Wednesday.</i>	Annual Meeting of the Board of Overseers.
<i>Sept. 27, Thursday.</i>	<b>Academic Year begins</b> in all departments of the University.
<i>Sept. 27, Thursday.</i>	Examinations for admission to the Law School.
<i>Sept. 27, 28, Thursday and Friday.</i>	Examinations for admission to advanced standing in the Law School.
<i>Oct. 10, Wednesday.</i>	Stated Meeting of the Board of Overseers.
<i>Oct. 31, Wednesday.</i>	Last day for receiving applications of candidates for Final Honors in 1895.
<i>Oct. 31, Wednesday.</i>	Last day for receiving dissertations for the Bowdoin and Chauncy Wright Prizes.
<i>Dec. 1, Saturday.</i>	Last day for receiving applications for aid from the Loan Fund.

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#### ABBREVIATIONS.

C. College House.	H'y. Holworthy Hall.
D. Divinity Hall.	M. Matthews Hall.
D. H. Divinity House.	S. Stoughton Hall.
F. Foxcroft House.	T. Thayer Hall.
G. Grays Hall.	W. Weld Hall.
H. Hollis Hall.	W. H. Walter Hastings Hall.
H'ke. Holyoke House.	

NOTE. — Dormitories within the College grounds are known as Halls; those outside the College grounds, but owned by the University, are called Houses; while others, the property of private owners, are called Blocks or Buildings.



## ADMINISTRATIVE OFFICERS.

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### THE UNIVERSITY.

*President*: CHARLES W. ELIOT, LL.D.

Office, 5 University Hall, Cambridge.

*Treasurer*: EDWARD W. HOOPER, A.B., LL.B.

*Deputy Treasurer*: ALLEN DANFORTH, A.M.

The office of the Corporation (and Treasurer and Deputy Treasurer) is at 50 State St., Boston. Office hours, 10 a.m. to 2 p.m.

*Secretary*: FRANK BOLLES, LL.B.

Office, 5 University Hall, Cambridge. Office hours, 9 a.m. to 4 p.m. (from Aug. 1 to Sept. 15, 9 a.m. to 1 p.m.); Saturdays, 9 a.m. to 12 m.

*Bursar*: CHARLES F. MASON, A.B.

Office, Wadsworth House, Cambridge. Office hours, 9 a.m. to 1 p.m.

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### THE FACULTIES, THE COLLEGE, AND THE PROFESSIONAL SCHOOLS.

*Dean of the Faculty of Arts and Sciences*: CHARLES F. DUNBAR, LL.D.

Office, 10 University Hall, Cambridge. Office hours, Wednesday and Friday, 4 to 5 p.m.

*Dean of Harvard College*: LE BARON R. BRIGGS, A.M.

Office, 5 University Hall, Cambridge. Office hours, Monday, Tuesday, and Friday, 10 to 12.30.

*Regent of Harvard College*: GEORGE A. BARTLETT.

Office 5 University Hall.

*Dean of the Lawrence Scientific School*: NATHANIEL S. SHALER, S.D.

Office, 1 Museum.

*Dean of the Graduate School*: J. M. PEIRCE, A.M.

Office, 10 University Hall, Cambridge. Office hours, Tuesday, 10 to 12.

*Dean of the Divinity Faculty*: C. C. EVERETT, D.D.

Office, 1 Divinity Library. Office hours, Monday, Wednesday, and Friday, 12 m.; Tuesday, Thursday, and Saturday, 10 a.m.

*Dean of the Law Faculty*: C. C. LANGDELL, LL.D.

Office, Austin Hall, Cambridge.

*Dean of the Medical Faculty:* HENRY P. BOWDITCH, A.M., M.D.

*Secretary of the Medical Faculty:* CHARLES P. WORCESTER, A.B., M.D.

The offices of the Dean and Secretary of the Medical Faculty are at the Medical School, corner of Boylston and Exeter Streets, Boston. Office hours of the Dean, 12 to 1 p.m., of the Secretary, 2 to 3 p. m., except Saturdays.

*Dean of the Dental Faculty:* THOMAS H. CHANDLER, A.M., D.M.D.

The Dental School is on North Grove Street, Boston. The office of the Dean is at 161 Newbury Street, Boston. Office hours, 9 a.m. to 4 p.m.

*Dean of the School of Veterinary Medicine:* CHARLES P. LYMAN, F.R.C.V.S.  
Office at the Veterinary Hospital, 50 Village Street, Boston.

*Dean of the Bussey Institution:* FRANCIS H. STORER, S.B., A.M.

The Bussey Institution is in Jamaica Plain. The nearest railway and telegraph station is Forest Hills, on the Providence Division of the Old Colony Railroad.

# THE DENTAL SCHOOL,

BOSTON.

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## FACULTY.

CHARLES W. ELIOT, LL.D., *President.*

THOMAS H. CHANDLER, D.M.D., *Dean, and Professor of Mechanical Dentistry.*

HENRY P. BOWDITCH, M.D., *Professor of Physiology.*

J. COLLINS WARREN, M.D., *Professor of Surgery.*

THOMAS DWIGHT, M.D., LL.D., *Professor of Anatomy.*

THOMAS FILLEBROWN, M.D., D.M.D., *Professor of Operative Dentistry.*

CHARLES A. BRACKETT, D.M.D., *Professor of Dental Pathology.*

WILLIAM B. HILLS, M.D., *Associate Professor of Chemistry.*

EUGENE H. SMITH, D.M.D., *Instructor in Orthodontia.*

EDWARD C. BRIGGS, M.D., D.M.D., *Assistant Professor of Materia Medica and Therapeutics.*

JERE E. STANTON, M.D., D.M.D., *Instructor in Oral Anatomy and Physiology and in Bacteriology.*

## OTHER INSTRUCTORS.

FOREST G. EDDY, D.M.D., *Instructor in Operative Dentistry.*

GEORGE H. MONKS, M.D., *Instructor in Surgical Pathology.*

GEORGE L. WALTON, M.D., *Instructor in Neurology.*

EZRA F. TAFT, D.M.D., *Instructor in Operative Dentistry.*

FREDERIC S. HOPKINS, D.M.D., *Instructor in Operative Dentistry.*

WILLIAM P. COOKE, D.M.D., *Instructor in Crown and Bridge Work.*

DWIGHT M. CLAPP, D.M.D., *Clinical Lecturer in Operative Dentistry.*

EDWIN C. BLAISDELL, D.M.D., *Instructor in Operative Dentistry.*

HENRY W. GILLETT, D.M.D., *Instructor in Operative Dentistry.*

WILLIAM H. POTTER, D.M.D., *Clinical Lecturer in Operative Dentistry.*

WALDO E. BOARDMAN, D.M.D., *Instructor in Operative Dentistry, and Curator of Museum.*

FREDERICK BRADLEY, D.M.D., *Instructor in Operative Dentistry.*

LEONARD N. HOWE, D.M.D., *Instructor in Operative Dentistry.*

- HENRY L. UPHAM, D.M.D., *Instructor in Operative Dentistry.*  
ARTHUR H. STODDARD, D.M.D., *Instructor in Mechanical Dentistry.*  
ELLIS P. HOLMES, D.M.D., *Instructor in Operative Dentistry.*  
HENRY A. KELLEY, D.M.D., *Instructor in Operative Dentistry.*  
PATRICK W. MORIARTY, D.M.D., *Demonstrator of Mechanical  
Dentistry.*  
SIDNEY R. BARTLETT, D.M.D., *Instructor in Mechanical Dentistry.*  
HARRY O. BIXBY, D.M.D., *Instructor in Mechanical Dentistry.*  
BENJAMIN H. CODMAN, D.M.D., *Instructor in Operative Dentistry.*  
ARTHUR W. ELDRED, D.M.D., *Instructor in Mechanical Dentistry.*  
ARTHUR J. OLDHAM, D.M.D., *Instructor in Mechanical Dentistry.*  
JOSEPH T. PAUL, D.M.D., *Demonstrator of Operative Dentistry.*  
FRED H. WOODCOCK, D.M.D., *Instructor in Mechanical Dentistry.*

#### STANDING COMMITTEES.

*Executive Committee*—Dean, Drs. Fillebrown, Brackett, Smith, Briggs,  
Stanton.

*Admission Examination*—Dean, Brackett, Stanton.

*Building*—Fillebrown, Bowditch, Smith.

*Advertising and Catalogue*—Dean, Fillebrown, Smith.

*Courses of Study*—Dean, Brackett, Stanton.

## STUDENTS.

## THIRD YEAR.

NAME.	RESIDENCE.	PRESENT ADDRESS.
Arnold, Eugene Everett,	<i>Pawtucket, R. I.</i>	
Crane, Charles Winfield,	<i>Beverly,</i>	
Cummings, Charles Oscar, A.B. ( <i>Dartmouth Coll.</i> ) 1890,	<i>Claremont, N. H.</i>	
Dickerman, Frank Roberts,	<i>Taunton,</i>	
Field, George William, Jr.	<i>London, England,</i>	
Gray, George Rufus,	<i>Worcester,</i>	
Grove, Joseph Geiger,	<i>Delaware, O.</i>	
Hanau, Max,	<i>Worms am Rhine, Germany,</i>	
Jackson, Arthur,	<i>Boston,</i>	
Lamere, Arthur John,	<i>Lowell,</i>	
Macloon, George Rogers,	<i>Deering, Me.</i>	
Pearson, Richard, M.B.B.S. ( <i>Durham Univ.</i> ) 1889.	<i>London, England,</i>	
Quinby, Edward Melville, L.D.S., M.R.C.S.	<i>Liverpool, England,</i>	
Quirk, Charles Hudson, M.D. ( <i>Harv.</i> ) 1892,	<i>Buenos Aires, Argen. Rep.</i>	
Richardson, Frederick King,	<i>Duluth, Minn.</i>	
Sansom, William Bertram, L.D.S.	<i>London, England,</i>	
Smith, John Joseph,	<i>Warren, R. I.</i>	
Snow, Wallace,	<i>Boston,</i>	
Wilkinson, Frank Merrett,	<i>Kooringa, So. Australia,</i>	

## SECOND YEAR.

Ashley, Frederick Merton,	<i>Somerville,</i>
Belliveau, Joseph Bergin,	<i>Melrose,</i>
Boylston, Joseph,	<i>No. Duxbury,</i>
Haley, Harry West,	<i>Biddeford, Me.</i>
Hayden, Thomas Bernard,	<i>Roxbury,</i>
Percival, Frederick William,	<i>Peterboro, England,</i>
Quinn, Thomas Edward,	<i>Putnam, Conn.</i>
Smith, Arthur Galusha,	<i>Peoria, Ill.</i>
Taft, George Lund,	<i>Cambridge,</i>
Veo, Lewis Napoleon,	<i>Lowell,</i>
Walton, William Joseph,	<i>Dorchester,</i>
Williams, Percy Martin,	<i>Wallingford, Vt.</i>

## FIRST YEAR.

Barnard, Francis Homer, Jr.	<i>Duluth, Minn.</i>
Barrows, Edward Doane,	<i>West Hampden, Me.</i>
Bartlett, Robert Lander,	<i>Lynn,</i>
Carr, Clarence Augustus,	<i>Newport, R. I.</i>
Carter, Cecil Francis,	<i>London, England,</i>
Estey, Harold Watson,	<i>Roslindale,</i>
Gettings, David Edward,	<i>Boston,</i>
Hall, John Calvin,	<i>Chelsea,</i>
Horne, Robert Gilkey,	<i>Watertown,</i>
Howland, Joseph Briggs,	<i>Brockton,</i>
McIntyre, George Francis,	<i>Worcester,</i>
McMeekin, Robert John,	<i>Boston,</i>
Meador, Frederick Everett,	<i>Wolfeboro,</i>
Milliken, Richard Dyer,	<i>Saco, Me.</i>
Moffatt, Robert Tucker,	<i>Boston,</i>
Munroe, Charles Everett.	<i>Norfolk Downs,</i>
O'Brien, Henry Clinton.	<i>Boston,</i>
Pierce, Frank Sylvester,	<i>Worcester,</i>
Rice, Francis Wheeler,	<i>Portland, Me.</i>
Sweet, Walter Irving,	<i>Providence, R. I.</i>
Wolfe, Oliver Perry,	<i>No. Weymouth,</i>
Woodcock, Arthur Hale,	<i>Worcester,</i>

## REQUIREMENTS FOR ADMISSION

All candidates for admission, except those who have passed an examination for admission to Harvard College, or the Lawrence Scientific School, must present a degree in Letters, Science, or Medicine, from a recognized college or scientific school, or pass an examination in the following subjects :

1. **ENGLISH.** Every candidate will be required to write, legibly and correctly, an English composition of not less than two hundred words, and also to write English prose from dictation.

2. **PHYSICS.** A competent knowledge of Physics (such as may be obtained from Balfour Stewart's Elements of Physics).

**ELECTIVE SUBJECTS.** Each candidate for admission must also pass an examination in *one* of the following subjects: Latin, French, German, the Elements of Algebra, or Plane Geometry.

Students may be admitted to advanced standing upon passing a satisfactory examination in a *majority* of the studies already pursued by the class, but before taking the degree examinations in *all* the studies must have been satisfactorily passed.

*Graduates* of recognized Dental Schools will be admitted without examination to the courses of Operative and Mechanical Dentistry, but attendance on such courses does not entitle to examination for the degree nor to a certificate of attendance.

The examinations for admission are conducted in writing. In judging the work of the candidate, the spelling, grammar and construction are considered.

*The examination for admission* is held at the Dental School in North Grove St., Boston, on the Monday preceding the last Wednesday in September, beginning at 10 A.M.

*No person will be examined for admission at any other than the regularly appointed time.*

The entrance and first-year examinations will be allowed to foreign students who have passed *equivalent* examinations abroad, upon presentation of proper certificates from the examining boards vouching for the facts.

All persons intending to take the entrance examination must send their names to the Dean for registry at least two weeks previous to the day on which the examination is to take place.

## COURSE OF INSTRUCTION.

The following are the methods of study adopted in the various departments:—

*For the First Year.*—Anatomy-dissection, physiology, histology, and embryology; general chemistry, hygiene, and medical chemistry during the second half-year.

*For the Second Year.*—Oral pathology, operative dentistry, mechanical dentistry; general and dental materia medica and therapeutics; oral anatomy and physiology, bacteriology, and surgical pathology; practical work every forenoon in the mechanical laboratory and every afternoon in the operative infirmary, and crown and bridge work.

*For the Third Year.*—Operative dentistry, mechanical dentistry, orthodontia, neurology, practical work in operative infirmary and mechanical laboratory.

## INSTRUCTION FOR 1893-94.

## Anatomy.

Descriptive Anatomy. *Four times a week.* Professor DWIGHT.

Practical Anatomy, with Exercises in Dissection. *Eight hours daily from October 15 till May.* Demonstrations and recitations. Drs. DEXTER and ———.

## Physiology.

Systematic and Experimental Physiology. *Four times a week during first half-year. Five times a week during second half-year.* Professors BOWDITCH and ———.

Laboratory Exercises in Experimental Physiology. *Four times a week in sections.* Dr. ———.

## Chemistry.

Descriptive and Analytical Chemistry. *Twice a week, with an additional weekly exercise during the first ten weeks.* Professor HILLS.

Medical Chemistry. *Twice a week during second half-year.* Professor HILLS.

Clinical Chemistry. *Twice a week.* Professor WOOD.

Practical Exercises in the Laboratory in Analytical and Medical Chemistry. *Daily.* Professors WOOD and HILLS, and Dr. HARRINGTON, WORCESTER and WENTWORTH.



**Hygiene.**

Lectures and Demonstrations. *Once a week during the second half-year.* Dr. HARRINGTON.

**Operative Dentistry.**

Lectures. *Once a week.*

Clinical Lectures. *Once a week for ten weeks.*

Practical Work. *First year, six hours a week for half-year; second and third years, fifteen hours a week throughout the year.*

**Mechanical Dentistry.**

Lectures. *Once a week.*

Practical Work. *Eighteen hours a week throughout the year.*

**Surgery.**

Surgery. Lectures. *Once a week for three months; twice a week for five months.* Professor WARREN.

Surgery and Surgical Pathology. Lectures. *Twice a week till January.* Professor WARREN.

**Clinical Surgery.**

Lectures. *Once a week till January.* Professor WARREN. *Once a week from October till March.* Professor PORTER. *Once a week from March till June.* Professor WARREN.

**Operative Surgery.**

Operations are performed before the students one day each week throughout the year in the Amphitheatres at the Massachusetts General Hospital and Boston City Hospital.

Operative Surgery and Surgical Anatomy. *Exercises illustrated upon the cadaver twice a week in March and April.* Professor PORTER.

The Surgical Cases at the Eye and Ear Infirmary and at the Boston Dispensary are shown by the surgeons in charge.

**Dental Pathology.**

Lectures. *Once a week.*

**Oral Anatomy and Physiology.**

Lectures and Demonstrations. *Once a week.*

**Surgical Pathology.**

Lectures. *Once a week for ten weeks.*

**Materia Medica.**

Lectures. *Once a week for twenty-four weeks.*

**Orthodontia.**

Lectures and Demonstrations. *Once a week.*

**Neurology.**

Lectures. *Once a week for six weeks.*

**METHODS OF INSTRUCTION.**

*Anatomy.* — Lectures, demonstrations, various practical exercises, including dissection under the direction of the Demonstrator; recitations.

*Physiology.* — Lectures, recitations, conferences, and practical demonstrations. Opportunities for work in the physiological laboratory of the new Medical School are offered to students who are qualified to carry on original investigations.

*Chemistry* is taught mainly by practical work in the laboratory, each student having his own desk and apparatus. Descriptive chemistry and qualitative analysis are taught during the first half of the first year. Besides the laboratory work, there are two lectures every week. In the second half of the first year medical chemistry is taught by lectures, recitations, and exercises in the laboratory, where each student will be taught the chemistry and microscopy of the urine and the tests for the important poisons.

*Surgery.* — Lectures and recitations in oral surgery illustrated by colored drawings and by recent and morbid specimens. All approved instruments and apparatus are exhibited and explained. Operations are performed on the living subject at the hospitals, and upon the dead body. Instruction is given in the use of anaesthetics.

Instruction in clinical surgery is given at the Massachusetts General Hospital and City Hospital every week.

*Surgical Pathology.* — Lectures and recitations embracing the subjects of shock, inflammation, repair, suppuration, ulceration, mortification, embolism, pyaemia, erysipelas, and tetanus.

*Operative Dentistry.* — The instruction in this department is both didactic and practical. The Professor and other Instructors endeavor to demonstrate all known methods of performing operations upon the teeth and other tissues involved.

The treatment of decay, the materials used for filling teeth, the most approved instruments and appliances used in operating upon the teeth, are appropriately discussed. Clinics are held at the Infirmary, and every available means used to make the student practically acquainted with all the modern improvements of this important branch of dental science; but no student will be permitted to operate at the chair until he has by observation and practice on extracted teeth satisfied the Professor of his fitness.

*Oral Anatomy and Physiology.* — Lectures and recitations upon the minute anatomy of the teeth and their histological development, and the surgical pathology of the tissues in and about the mouth. A part of this course will be devoted to the study of bacteria. Material is furnished for the examination of the tissues in a healthy and diseased condition, with instruction in its preparation. Instruction is given in the use of the microscope, and the preparation of objects for examination.

*Dental Pathology.* — In the beginning of the course of lectures the general principles of pathology, including etiology, nosology, semeiology, diagnosis, and prognosis are outlined. The various pathological conditions in their relations to one another and their modifications of structure and function are taught. This prepares the way for the special pathology of the region with which the dentist has most to do. The diseases of the dental and contiguous tissues are considered in detail, with reference to their nature, causes, manifestations and terminations, and their relations with systemic conditions.

*Materia Medica and Therapeutics.* — Lectures, recitations, and demonstrations of crude drugs and their preparations. This is a complete course, as taught in the medical school to medical students. Remedies are classified, however, to meet the special requirements of the dental practitioner, and the student is particularly instructed upon those remedies which, as a specialist, he will be called upon most to use.

*Mechanical Dentistry.* — Lectures and practical work in the laboratory; the manner in which mineral teeth are constructed, the principles and method of carving and furnace-work, and all compounds used for artificial teeth; also metallurgy, and the manner in which gold and silver plates are prepared and adapted to the mouth; the use of rubber and other articles as bases. It is the aim to teach not only the mere mechanical processes of dentistry, but that combination of art with mechanism which enables the practitioner to effect so much in restoring the symmetry

of the face and usefulness of the teeth, where they have been lost or impaired by accident or disease.

*Orthodontia* is taught by lectures and by practical work in the infirmary. Models of cases are shown, and students are made familiar with the principles underlying the irregularities and the various appliances for their correction.

*Neurology.*—A course of six lectures on neurology will include a brief review of the anatomy and physiology of the nervous system, the anatomy of the trifacial nerve being made the subject of special study.

The nervous disturbances liable to be set up by dental irritation, and, conversely, those likely to produce odontalgia, will be considered as fully as the limited nature of the course permits, special attention being paid to trifacial neuralgia.

*Clinical Lectures on Operative Dentistry.*—These exercises include: operations on patients, demonstrations and exhibition of models, showing the individual methods of the lecturers with descriptions and explanations.

### TEXT-BOOKS.

The following works are recommended as text-books, and for collateral reading and consultation:—

#### Anatomy.

*Text-Books.*—Gray (11th edition). Quain (10th edition). Wilson, Holden's Landmarks. Dwight's Frozen sections of a Child. Treves' Applied Anatomy.

*Collateral Reading.*—Harrison Allen's Anatomy. Tillaux, Anatomie Topographique. Holden's Osteology. Humphry's Human Skeleton. Morris, on the Joints. Weisse's Practical Human Anatomy. McClellan's Regional Anatomy.

#### Histology and Embryology.

*Text-books.*—Stöhr's Lehrbuch der Histologie, or Schaefer's Essentials of Histology.

*Collateral Reading.*—Quain's Anatomy (10th edition). Lee's microscopist's Vade-mecum, Schiefferdecker and Kossel's Gewebelehre. Minot's Human Embryology. Foster and Balfour's Embryology.

#### Physiology.

*Text-Books.*—Foster's Text-book of Physiology. Martin, The Human Body. Kirke's Handbook of Physiology. Waller, Human Physiology.

*Collateral Reading.*—Fick, Compendium der Physiologie. Halliburton's Text-book of Chemical Physiology and Pathology. McGregor-Robertson's Elements of Physiological Physics. Landois' Manual of Human Physiology. Stirling's Practical Physiology.

**General Chemistry.**

*Text-Books.* — Witthaus' Medical Student's Manual of Chemistry.

*Collateral Reading.* — Miller's, Roscoe and Schorlemmer's, or Fownes' Chemistry. Douglass and Prescott's, or Fresenius' Qualitative Analysis.

**Medical Chemistry.**

*Text-Books.* — Tyson, Practical Examination of Urine. Wharton and Stillé's Medical Jurisprudence, Vol. II., on Poisons, 4th edition.

*Collateral Reading.* — Ultzmann and Hoffmann's Atlas der Harnsedimente. Roberts' Urinary and Renal Diseases. Neubauer and Vogel, Analysis of the Urine. Hoppe-Seyler, Physiologische Chemie. Taylor on Poisons. Wormley's Micro-Chemistry of Poisons.

**Dental Chemistry.**

*Text-Book.* — Mitchell's Dental Chemistry.

**Surgery.**

*Text-Books.* — An American Text-Book of Surgery. Holmes's System of Surgery. The International Encyclopedia of Surgery. Van Buren and Keyes's Genito-urinary Organs and Syphilis. Jacobson's Surgical Operations. Treves' Manual of Operative Surgery. Garretson's Oral Surgery.

**Materia Medica and Therapeutics.**

Edes' Materia Medica and Therapeutics. Potter's Materia Medica. Bartholow's Hypodermatic Medication.

**Dental Pathology.**

Wedl's Dental Pathology. Magitot's Dental Caries.

**Surgical Pathology.**

Billroth's Surgical Pathology.

**Oral Anatomy and Physiology.**

Black's Dental Anatomy. Tomes' Dental Surgery. Miller's Microorganisms of the Human Mouth.

**Orthodontia.**

Farrar's Irregularities of the Teeth. Talbot's Irregularities. Guilford's Orthodontia.

**Operative Dentistry.**

Fillebrown's Operative Dentistry. Taft's Operative Dentistry. American System of Dentistry.

**Mechanical Dentistry.**

Richardson's Mechanical Dentistry. Kingley's Oral Deformities. Harris' Principle and Practice.

**Crown and Bridge Work.**

Evans.

**Anaesthesia.**

Anstie's Stimulants and Narcotics. Turnbull's Anaesthetic Manual.

**CLINICAL ADVANTAGES.**

The Dental Department of the University is established in Boston, in order to secure those advantages for Clinical Instruction which are found only in large cities.

*Dental Statistics.*—The clinics of the Dental Hospital afford a sufficient number of patients to give every student abundant practice in all branches of dentistry throughout the year. During 1892-93 over 4,000 patients were treated for various dental lesions and over 23,000 operations were performed, an average of 118 patients for each student.

Artificial plates (an average of 8½ sets for each student) . . .	285
Cases of Orthodontia . . . . .	70
Obturator . . . . .	6
Other cases . . . . .	102

Each student is assigned a chair, and is expected to improve his opportunity and operate three hours every day, five days in the week, giving each student during each year 480 hours of practice in operative dentistry.

In the mechanical department the student gives three hours a day for six days each week, giving 576 hours' practice each year.

The Museum contains nearly 2,000 specimens, and offers unusual facilities for study of the teeth. The pathological anatomy of the teeth is shown by nearly 1,000 specimens, among which are over two hundred dissected teeth showing formations of secondary dentine in the pulp cavity, and also many other rare specimens of great value.

There are 600 other specimens of human and comparative anatomy, illustrating a wide range of knowledge.

There are Hospital visits or operations daily.

*The Massachusetts General Hospital.*—During the past year, 3409 patients were treated in the wards, and 25,819 in the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, on four days in the week. Operations are numerous,



and are performed in the amphitheatre, which is provided with seats for 400 persons. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, and Ophthalmology.

*The City Hospital.*—During the past year, 7910 cases were treated in its wards, and 15,560 in its various out-patient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, 800 street accidents are yearly treated. Surgical operations are performed in the amphitheatre. Diseases of the eye, the ear, and the skin are largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons twice a week.

In these two hospitals, the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching nearly two thousand a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

*The Boston Dispensary.*—42,116 patients were treated at this Public Charity during the past year. A new building has lately been erected at a cost of \$50,000, where students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of medicine and surgery.

*The Massachusetts Charitable Eye and Ear Infirmary.*—The fourteen thousand patients annually treated at this institution present every variety of disease of the ear and eye, and supply a large number of operations.

*The Marine Hospital at Chelsea* receives from the shipping of the port a large number of patients, who furnish examples of the diseases of foreign countries and of distant parts of the United States. Many cases of venereal disease, in its various forms, are treated annually.

## LIBRARIES.

The College Library at Cambridge is open to students and also the library of the Boston Medical Library Association which has a dental section containing a large and very complete collection of dental literature.

The Boston Public Library is open to students who are inhabitants of Boston. Students who are not inhabitants of Boston, who have filed bonds at the Treasurer's office, or deposited with the treasurer the sum of fifty dollars, may also use this Library.

### INSTRUMENTS.

With the exception of extracting instruments, lathes, and vulcanizers, each student will be required to furnish his own instruments, and appliances for both laboratory and operating room.

### EXAMINATIONS.

The regular examinations, conducted in writing and orally, are held at the end of each year in June in the following order, viz :—

At the end of the first year in the studies of that year,—anatomy, two hours, including dissection; physiology, three hours; and chemistry, three hours. A certificate from the Demonstrator of Anatomy will be required of each student that he has satisfactorily performed the required dissections.

At the end of the second year in the studies of that year,—dental pathology, two hours; materia medica and therapeutics, two hours; oral anatomy, three hours; physiology and bacteriology, two hours; surgical pathology, three hours.

At the end of the third year in operative dentistry, two hours; mechanical dentistry, two hours; and in orthodontia, one hour. These examinations will include actual operations performed during the course, and the preparation of specimens of mechanical dentistry.

Applicants for advanced standing must pass all the examinations of the years which they desire to omit, or furnish proof that they have passed equivalent examinations.

No student will be allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty. Students intending to present themselves for examination must notify the Dean by letter of such intention, two weeks before the time when the examination is to be held.

Those who fail in any subject may present themselves in that subject again at the next regular examination. The regular examinations for the year 1893-94 will begin June 4 and September 24, 1894.

### DIVISION OF STUDENTS.

Students are divided into three classes according to their lines of study and proficiency, and during their last year will receive largely increased opportunities of clinical instruction and practice in the practical work of operations on the natural teeth and mouth.

*In order that the time of study shall count as a full year, students of all classes must present themselves within the first week of the School year and register their names with the Dean.*



### REQUIREMENTS FOR THE DEGREE.

The degree of Doctor of Dental Medicine (*Dentariæ Medicinæ Doctor*) may be conferred upon any candidate of adult age, and of good moral character, who has passed *all the required examinations*, and convinced the Professors and Instructors of Operative and Mechanical Dentistry of his ability to meet satisfactorily the requirements of his art. He must also give evidence of having studied medicine or dentistry three full years, the last continuous year of which must have been spent at this School.

He must also deposit with the Dean, to be placed in the Museum of the School, a specimen of mechanical dentistry, or of practical or pathological anatomy, prepared during the course under the eye of the instructor.

No student may advance with his class until he has passed a satisfactory examination in a majority of the studies already pursued by his class.

Admission to advanced standing does not diminish the time (three years) to be spent in professional studies.

The course is a graded one of three continuous years. *Graduates* from other reputable dental schools will be permitted to enter the Senior class after passing the required examinations, or without examination, by special vote of the Faculty.

### FEES AND EXPENSES.

There are no fees for matriculation, for the diploma, or for the demonstrators. For the first year a student is a member of the School, the fee is \$200, in two payments of \$120 and \$80, at the beginning of each term; for the second year, \$150, in two payments of \$100 and \$50, payable at the beginning of each term; for any subsequent year, \$50, payable at the beginning of the year.

Students who do not file a bond are required to deposit \$15 to cover breakages, &c. in the Chemical Laboratory; also a deposit of \$6 for parts for dissection. The unused balance is returned at the end of the year.

*Graduates* of recognized Dental Schools will be admitted to the courses of Operative and Mechanical Dentistry for the whole or any portion of the academic year on payment of fifty dollars for each course. By attending these courses the student does not become a candidate for the degree nor is he entitled to a certificate of attendance.

Of students *who do not pay in advance*, a bond for \$300 executed by two sufficient bondsmen, one of whom must be a citizen of the United States, is required. A copy of such bond will be sent, on application to the Treasurer of the University. The bond of the "American Surety Company," if made in a form satisfactory to the Treasurer of the University,

will also be accepted. To students depositing these bonds, term-bills will be presented a week before the end of the first term, to be paid within two weeks; and also one week or more before Commencement, to be paid on or before the beginning of the next academic year. Such students will be held responsible for the payment of fees until they shall have notified the Dean of their intention to withdraw from the School, and have received their bond from the Treasurer. *No degree can be conferred till all dues to the School are discharged.*

Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Faculty, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction — this remission to date from the reception by the Dean of a written notice of the student's withdrawal from the School.

The student's expenses may be reduced, in accordance with his means, to the standard which prevails in other cities. The Janitor of the Medical School keeps a list of boarding-houses in which the charges are from five dollars per week upwards, according to accommodation furnished.

Students, on joining the School, must enter their names with the Dean of the Faculty.

For further information address THOS. H. CHANDLER, *Dean*, 161 Newbury St., Back Bay, Boston, Mass.

The following Tabular View illustrates the distribution of studies throughout the year.

1892-93, FROM SEPTEMBER 29 TO JUNE 23.

First Class.

MEDICAL SCHOOL, BOYLSTON ST.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.		
9	Anatomy, L. Prof. Dwight. Lect.-room C.	Anatomy, L. Prof. Dwight. Lect.-room C.	<sup>1</sup> Anatomy, L. Prof. Dwight. Lect.-room C.	<sup>1</sup> Anatomy, L. Prof. Dwight. Lect.-room C. <sup>2</sup> Physiol. C. Lect.-room A.	Anatomy, R. Dr. Munro. Lect.-rooms C and D.			
10	<sup>1</sup> Hygiene, L. Dr. Harrington.	{ *Histol. Laborat. Prof. Minot and Dr. Quincy. }	Histology. L. Prof. Minot.	{ Histol. Laborat. Prof. Minot and Dr. Quincy. }	<sup>1</sup> Histology. L. Prof. Minot.	Physiol., R. Prof. Bowditch. Lect.-rm. A.		
11	Physiology. L. Prof. Bowditch. Lect.-room A.		Physiology. L. Prof. Bowditch. Lect.-room A.		Physiology. L. Prof. Bowditch. Lect.-room A.	Physiology. L. Prof. Bowditch. Lect.-room A.	Chemistry L. or R. 5 weeks. Prof. Hills. Lect.-r'm A. * Laborat'y.	
12		Chemistry, L. Prof. Hills. Lect.-room A.		Chemistry, L. Prof. Hills. Lect.-room A.		* Laborat'y.		
2	*Laboratory.	Physiology. Dem. Lect.-room A.	{ Dr. Up- ham. Practical Dentistry. Dtl. Hosp. No. Grove St. }	*Laboratory.	{ Dr. Cod- man. Practical Dentistry. Dtl. Hosp. N. Grove St. }			
3	<sup>2</sup> Bacteriology L. Asst. Prof. Ernst. Lect.-room A.							
4	Laboratory.							
5	*Anatomy. Dem. Dr. Dexter. Lect.-room D. Pract. Anat. Asst. Prof. M. H. Richard- son. Lect.-room C.	*Anatomy. Dem. Dr. Dexter. Lect.-room D.	*Anatomy. Dem. Dr. Dexter. Lect.-room D. Pract. Anat. Asst. Prof. M. H. Richard- son. Lect.-room C.	*Anatomy. Dem. Dr. Dexter. Lect.-room D.	*Anatomy. Dem. Dr. Dexter. Lect.-room D. Pract. Anat. Asst. Prof. M. H. Richard- son. Lect.-room C.			

\* In sections.

† During first half-year.

‡ During second half-year.

The studies of the first year are pursued at the Medical School, corner Boylston and Exeter Streets.

## Second Class.

DENTAL HOSPITAL, NORTH GROVE ST.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Surg. Path., L. Dr. Monks. 10 weeks. Lect.-room B. Dr. Cooke. * Crown and Bridge work. Clin. Lect. or Dem.	Mat. Medica. and Thera., L. Asst. Prof. Briggs. Lect.-room A.	Op. Dent., L. Prof. Fille- brown. Lect.-room A.	Prac. Mechan. Dentistry. Lab. Dr. Moritz.	Oral Anat. & Physiology, L. Dr. Stanton. Lect.-room A.	Mechan. Dent., L. Prof. Chand- ler. Lect.-rm. A.
10	Prac. Mechan. Dentistry. Lab. Dr. Eldred.	Prac. Mechan. Dentistry. Lab. Dr. Bartlett.	Prac. Mechan. Dentistry. Lab. Dr. Woodcock		Prac. Mechan. Dentistry. Lab. Dr. Bixby.	Prac. Mech. Dentistry. Lab.
10½				Dent. Path., L. Dr. Brackett.		
11½						
12	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Laboratory. Prac. Mechan. Dentistry. Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Mori- arty, Dem.
2	Fract. Op. Dentistry. Dr. Holmes.	Pract. Op. Dentistry. Dr. Kelley.	Pract. Op. Dentistry. Dr. Howe.	Pract. Op. Dentistry. Dr. Blaisdell.	Pract. Op. Dentistry. Dr. Hopkins.	
4	Dr. Paul. Dem.	Dr. Paul. Dem.	Dr. Paul. Dem.	Dr. Paul. Dem.	Dr. Paul. Dem.	
5						

\* During second half-year.

## Third Class.

DENTAL HOSPITAL, NORTH GROVE ST.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	*Neurology, L. 6 weeks. Dr. Walton. Lect.-room A. *Dent. Chem. L. Dr. Worcester. 10 weeks. Lect.-room B. Dr. Clapp. 4 weeks in Dec. Dr. Potter. 5 weeks in Jan.	Prac. Mechan. Dentistry. Lab. Dr. Bartlett.	Op. Dent., L. Prof. Fil- brown. Lect.-room A.	Orthodontia. L. or Dem. Dr. Smith. Lect.-room A.	Prac. Mechan. Dentistry. Lab. Dr. Bixby. *Dr. Stoddard.	Mechan. Dent. L. Prof. Chand- ler. Lect.-rm. A.
10	Prac. Mechan. Dentistry. Lab. Dr. Eldred.		Prac. Mechan. Dentistry. Lab. Dr. Woodcock	Prac. Mechan. Dentistry. Lab. Dr. Moritz.		Prac. Mech. Dentistry. Lab.
12	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Mori- arty, Dem.
2	Pract. Op. Dentistry. Dr. Gillett.	Pract. Op. Dentistry. Dr. Taff.	Pract. Op. Dentistry. Dr. Eddy.	Pract. Op. Dentistry. Dr. Bradley.	Pract. Op. Dentistry. Dr. Board- man.	
4	Dr. Paul. Dem.	Dr. Paul. Dem.	Dr. Paul. Dem.	Surgery, L. Prof. Warren. Dr. Paul. Dem.	Dr. Paul. Dem.	
5						

\* During second half-year.

LIST OF GRADUATES

OF

THE DENTAL SCHOOL OF HARVARD UNIVERSITY.

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1869.

Thomas Fillebrown, M.D.	Boston.
Robert Tanner Freeman,	*1873.
Thomas Haley,	*1892.
Edward Page, M.D.	Charlestown.
Samuel Julius Shaw,	Boston.
Joseph Jenkins Vincent,	Brockton.

1870.

John Thomas Codman,	Boston.
William Francis Davis,	Adams.
George Franklin Grant,	Boston.
Samuel Franklin Ham,	Portsmouth, N. H.
Daniel Grout Harrington,	Boston.
Thomas Wilson Hogue,	Bournemouth, England.
Timothy Otis Loveland,	Boston.
William Henry Noyes,	Newburyport.
George Luther Parmele, M.D.	Hartford, Conn.
William Henry Thornton,	Providence, R. I.
Frank Edward Ward,	New Bedford.
Charles Wilson,	Boston.

1871.

Charles Monroe Bailey,	Minneapolis, Minn.
George Hayward Baker,	Woonsocket, R. I.
Charles Edwin Hussey,	Biddeford, Me.
Albert Benton Jewell,	Newton.
Philip Benjamin Laskey,	Marblehead.
William Pitt Morgan,	Saginaw City, Mich.

\* Deceased.

## 1872.

George Henry Ames,	Providence, R. I.
Sidney Chapin Bancroft,	Washington, D. C.
Charles Samuel Bartlett,	Boston.
James Dias Bell,	London, England.
Edwin Perley Bradbury,	Boston.
James Adkins Clark, M.D.	*1875.
James William Curtis,	Brunswick, Me.
George William Geist,	Frankfurt am Main, Germany.
John Warner Keyes,	Kearney, Neb.
George Edward Langdon Noyes,	Newburyport.
Frederic Miller Robinson,	Boston.
Samuel Saiza Silva,	Southbridge.
Benjamin Henry Torrens,	Fredericton, N. B.
Winslow Lewis Tucker A.M. (Harv.)	Boston.
Cecil Porter Wilson,	Boston.

## 1873.

Charles Albert Brackett,	Newport, R. I.
Edward Augustus Dimmick,	Barbadoes, W. I.
George Henry Knowles,	Central Falls, R. I.
William Herbert Rollins, M.D. (Harv.)	Boston.
Charles Herman Wolfe,	Worms am Rhein, Germany.

## 1874.

Willis Porter Battles,	Providence, R. I.
Edward Dwight Carr,	Truxton, N. Y.
Edward Eastman Frost,	Worcester.
George Leonard Mason,	New York, N. Y.
Horatio Cook Meriam,	Salem.
Frederic Augustus Merrill,	Boston.
Eugene Hanes Smith,	Boston.
Franklin Baker Stewart,	*1877.

## • 1875.

Forest Greenwood Eddy,	Providence, R. I.
John Willard Hazleton,	Salem.
Joseph Traverse Morong,	*1880.
Wilbur Bates Parker,	Boston.
Eben Francis Whitman,	Boston.

\* Deceased.

## 1876.

Thomas Bradley,	New York, N. Y.
Oscar Berlin Brann,	Portland, Me.
George Peters Caldwell, M.D.	St. John, N. B.
George Cunningham, B.L., B.S.C., B.A., L.D.S.	Cambridge, England.
Edgar Morton Jewett,	Portsmouth, N. H.
George Otis Lawrence,	San Francisco, Cal.
Jesse Robbins,	Salem.
Charles Claude Rogers, L.D.S., M.R.C.S.	London, England.
Ezra Fletcher Taft, A.B.	Boston.
Julius George William Werner,	Boston.

## 1877.

Allston Gray Bouvé,	Boston.
Henry Francis Dunkel,	Gunnison, Col.
Edward Bigelow Hitchcock, M.D.	Newton.
Washburn Eddy Page,	Boston.
Frank Perrin,	Boston.
Lucius Tracy Sheffield,	New York, N. Y.
Richard Theodore Stack, A.B., M.D., CH.M.	Dublin, Ireland.
Frank Herbert Williams,	Boston.

## 1878.

Edward Cornelius Briggs, M.D. (Harv.)	Boston.
Joseph Mason Bright,	Bangor, Me.
Harry Fairfield Hamilton,	Boston.
Manning Kennard Rand,	Boston.
Daniel Frank Whitten,	*1891.
Herbert Chauncey Woodward,	Paris, France.

## 1879.

Frederic Eugene Banfield,	Boston.
Walter Bryant Currier,	Middletown Springs, Vt.
Thomas Clarence Gillingham,	Boston.
Edward Samuel Niles,	Boston.
John William Smith,	*1889.

## 1880.

Frederic Eugene Ayer,	Chicago, Ill.
Albert James Colgan,	Wollaston.
Arthur Ernestine Lewis,	Plymouth.
John Scott Mason,	Boston.
Walter Clarence Pond, B.P.H.	Boston.

\*Deceased



1881.

William Parker Cooke,	Boston.
George Alfred Dennett,	Boston.
James Alfred Reilly,	Boston.
Edmond Rosenthal,	Liège, Belgium.
Otis Franklin Smith,	Boston.

1882.

Dwight Moses Clapp,	Boston.
George Eubank,	Birmingham, Ala.
Edward Earl Hopkins,	Boston.

1883.

Elliot Bowdoin Bacheller,	Lowell.
Edwin Carter Blaisdell,	Portsmouth, N. H.
Frederic William Hill,	London, England.
Edward Albert Lowe,	Lowell.
Samuel Sterrett Macfarlane,	Pittsburgh, Pa.
Myron William Smith,	*1886.
Joseph Ellsworth Waitt,	Boston.
George Arthur Williams,	Liverpool, England.

1884.

Charles Lincoln Abbott,	Kansas City, Mo.
Frederic William Bevington,	Lawrence.
Henry Parsons Cooke,	Worcester.
Charles Percy Curtis,	Rome, Italy.
Arthur Crowell Gerry,	Lowell.
George Henry Gerry,	Lowell.
Charles Franklin McDonald,	Boston.
Ned Albert Stanley,	New Bedford.
Jere Edmund Stanton, M.D.	Boston.
Alfred Horace Tester, L.D.S.	Tunbridge Wells, England.

1885.

Charles Henry Abbot,	Berlin, Germany.
Edward Merrill Currier, M.D.	Boston.
Charles Eugene Estabrook,	Halifax, England.
Thomas James Giblin,	Boston.
Henry Webster Gillett,	Newport, R. I.
Walter Harrison, L.D.S.	Brighton, England.
William Henry Potter, A.B. (Harv.)	Boston.
James Shepherd,	Boston.

\* Deceased.

## 1886.

Lyman Fisher Bigelow,	Boston.
Waldo Elias Boardman,	Boston.
William Thomas Borton,	St. Petersburg, Russia.
Frederick Bradley,	Newport, R. I.
Henry Michael Clifford,	Boston.
Isidor Fürst,	Hamburg, Germany.
Leonard Nutter Howe,	Boston.
Frederic Milton Mayo,	Boston.
Wilhelm Leopold Olander,	Helsingfors, Finland.
Charles Hutchins Taft, A. B. (Harv.)	Cambridge.
Henry Lauriston Upham,	Boston.

## 1887.

Peter Crank, L. D. S.	Adelaide, So. Australia.
Carroll Ketcham Huntley,	Boston.
Leslie Maxwell, L. D. S.	Hastings, England.
Edwin Leslie Shattuck,	London, England.
Frank Ellsworth Sprague,	Nashua, N. H.
Henry James Stark,	*1889.
Edgar Fremont Stevens,	Boston.
Arthur Henry Stoddard,	Boston.
Charles Henry Veo,	Lowell.
John Daniel Wilson,	Boston.
Harry Eugene Windsoy,	Providence, R. I.
Thomas Weston Wood, A. M.	Boston.
Harvey Warner Woodberry,	Duluth, Minn.
Charles Frederick Wright, L. D. S.	London, England.

## 1888.

George Pierce Geist,	Frankfurt am Main, Germany.
Frederick Payne Graves,	Saco, Me.
Ellis Proctor Holmes,	Boston.
Henry Allen Kelley,	Portland, Me.
Thomas George Read, L. D. S.	London, England.
Frederick Arnold Stevenson,	Montreal, Canada.
Charles Bryant Titcomb,	San Francisco, Cal.

## 1889.

Fred. Anthony Arnold,	Newport, R. I.
Henry Jefeins Borton,	Boston.
Charles Poor Briggs, A. B., M. D. (Harv.),	Boston.

\* Deceased.

William Frederick Gay,	Boston.
Paul Grünewald,	Frankfurt am Main, Germany.
Frank Irving Hammond,	Providence, R. I.
Frederick Sylvanus Hopkins,	Boston.
Daniel Albion Jones,	New Haven, Conn.
William Russell Jones,	New York, N. Y.
William Lombardino,	Berlin, Germany.
Patrick William Moriarty,	Boston.
William Curran O'Leary,	Boston.
Arthur Henry Osgood, A.B. (Harv.)	Boston.
Caleb Heath Shepard,	Bath, Me.
Frederic Ervin Twitchell,	Minneapolis, Minn.
Eugene Jakob Wetzel,	Mülhausen, Switzerland.
James Robert White,	No. Adams.

## 1890.

Sidney Roland Bartlett, S.B.	Boston.
Harry Oliver Bixby,	No. Cambridge.
Benjamin Howard Codman,	Boston.
Edwin Hartley Dixon,	New York, N. Y.
Arthur Warren Eldred,	Worcester.
Charles Manning Keep, M.D. (Harv.)	Boston.
Charles Elmer Luce,	Stuttgart, Germany.
Kotai Masuda,	Boston.
Arthur Judson Oldham,	Wellesley Hills.
Hermann Paal,	Osnabrück, Germany.
Charles Ernest Perkins,	Brockton.
Oscar Pulvermacher,	Berlin, Germany.
Edward Rolfe,	Boston.
Elbridge Abbott Shorey,	Dover, N. H.
Frank Turner Taylor,	Boston.

## 1891.

Paul Boitel,	Bâle, Switzerland.
Georges Antoine Brouillet,	Boston.
Alexander Humboldt Fisher,	Boston.
Adin Albert Goldsmith, D.D.S. (Univ. of Penn.),	London, England.
Amos Irving Hadley,	New Bedford.
George Meads Holden,	Lowell.
Shimpei Nobutsune Isawa,	Tokio, Japan.
George Martin, D.D.S. (Univ. of California),	Berlin, Ger.

Clarence Moore Noble,	Providence, R. I.
Hugh Owen,	Auckland, New Zealand.
Joseph Totten Paul,	Boston.
George Barnum Perry,	Chicago, Ill.
William Fuller Sharp, D.D.S. (Univ. of California),	San Francisco, Cal.
Fred Homer Woodcock,	London, England.

## 1892.

Edward Stanley Bryant,	Brockton.
Allen Stanley Burnham,	Gloucester.
Charles Edward Bugbee Chase,	Everett.
Willard Eben Curtice,	Allston.
Kirk Addison Davenport, D.D.S. (Univ. of Penn.),	Paris, France.
Ernest Frederick Gabell,	Brighton, England.
Theodore Hallett,	Yarmouth.
Herbert Frederic Hill,	Lincoln, England.
Albert Edward Hulme,	Andover.
Richard Carl Moritz,	Boston.
Harry Snow Parsons, M.D.	Boston.
Henry Robinson Peach,	Marblehead.
Henry Edward Rose,	Birmingham, England.
Nathan Prindle Wyllie,	Boston.

## 1893.

Charles Oscar Cummings, A.B.	Medford.
Frank Roberts Dickerman,	Taunton.
George William Field,	London, England.
George Rufus Gray, D.D.S.	Worcester.
Joseph Geiger Grove,	Delaware, Ohio.
Max Hanau,	Worms am Rhein, Germany.
Arthur John Lamere,	Lowell.
Richard Pearson, M.B., B.S. (Durham Univ.)	London, England.
Edward Melville Quinby, L.D.S., M.R.C.S.	Liverpool, England.
Charles Hudson Quirk, M.D. (Harv.)	Buenos Aires, Argentine Rep.
Frederick King Richardson,	Duluth, Minn.
William Bertram Sansom, L.D.S.	London, England.
John Joseph Smith,	Warren, R. I.
Frank Merrett Wilkinson,	London, England.

## EXAMINATION PAPERS.

(*June Examination, 1893.*)

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### First Year's Studies.

ANATOMY. — Professor DWIGHT.

1. Describe the superior surface of the ethmoid.
2. What are the chief features of the posterior fossa of the skull?
3. How does the first rib differ from one of the middle ribs?
4. How to distinguish the upper and lower ends of the fibula?
5. What muscles and ligaments are attached to the tuberosity of the ischium?
6. How is the extensor communis digitorum manus inserted?
7. Origin, course, and insertion of peroneus longus.
8. What features does the posterior surface of the liver present?
9. What is the shape of the cricoid cartilage? What articulates with it?
10. What constitutes the root of the lung?
11. Origin, course, and termination of the vas deferens.
12. Where is the basilar artery? How does it arise? How does it end?
13. What veins empty into the inferior vena cava?
14. What nerves supply the larynx? Where do they arise? What is their course?
15. Origin and termination of the great splanchnic nerve.
16. Give the distribution of the anterior crural nerve.

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PHYSIOLOGY. — Professor BOWDITCH.

[Number the answers to the questions without copying the questions themselves. Do not number the pages of the book. Answer the questions in order, writing on each page in succession.]

1. Why is hunger temporarily relieved by swallowing indigestible substances?
2. What is the nutritive value of alcohol?
3. To what extent may the skin act as an absorbing organ?
4. Explain the importance of the lime salts in the coagulation of the blood.
5. How may the relative proportions of the blood globules and the blood plasma be determined?

6. What are the causes of the normal variations in the rate of the heart beat?
7. Why does not the "secondary" muscular contraction throw light on the nature of voluntary contraction?
8. What is the function of the recurrent laryngeal nerve?
9. Why do dogs breathe rapidly in warm weather?
10. Why may section of a sensitive nerve cause apparent motor paralysis?
11. What is meant by cerebral localization? Illustrate.
12. What is the respiratory quotient, and what is its significance?

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GENERAL CHEMISTRY. — Professor HILLS.

1. Dissolve (*a*) sodic carbonate in water; (*b*) sodic carbonate in dilute hydrochloric acid. In what respects do the two processes differ from each other? How can you show that there is a difference?
2. State the law of conservation of mass.
3. What is the unit to which molecular weights are referred?
4. Write equations illustrating the action of an acid on (*a*) a metal; (*b*) a metallic oxide; (*c*) a metallic hydrate.
5. What information does the equation  $\text{CH}_4 + 2\text{O}_2 = \text{CO}_2 + 2\text{H}_2\text{O}$  give in regard to the process it represents?
6. What are the causes of the *temporary* and *permanent* hardness of water? How may the two kinds of water be made soft?
7. What are the sources of carbon dioxide? What is the amount of carbon dioxide in the atmosphere normally?
8. Describe two.  $\text{H}_2\text{SO}_4$ ;  $\text{I}_2$ ;  $\text{P}_4$ .
9. Describe two. Argentic nitrate; mercuric chloride; tartar emetic. What is the chemical name of tartar emetic?
10. Color and solubility (in water) of lithic carbonate, magnesian carbonate, zincic oxide, zincic sulphate, potassic permanganate, potassic dichromate, mercuric iodide, chromic anhydride, ferric chloride, ferrous sulphate.

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MEDICAL CHEMISTRY. — Professor HILLS.

1. Define the following terms, illustrating your definitions by means of chemical formulae: (*a*) homologous series; (*b*) isomerism; (*c*) amine; (*d*) amido-acid; (*e*) phenol.
2. What is the average quantity of urine passed in twenty-four hours by a healthy male adult? By a child seven years of age? How does the quantity of urine secreted during the day compare with that secreted during the night, in health?
3. What are the important chemical properties of urea? Name some of the probable antecedents of urea in the body.

4. What is the chief urinary pigment? From what is it derived? Name the intermediate substances formed in the conversion.

5, 6. (*This counts as two questions.*) Describe the nitric acid test for albumin in the urine. What precautions must be observed in performing this test? What are the possible fallacies, and how may any error arising therefrom be avoided?

7. What substances may occur, in the sediment of urine, in the form of dumb-bells? How may they be distinguished? How distinguish acid sodic urate and acid calcic phosphate?

8. Occurrence of cholesterin in the body? What are its microscopic characters?

9. What different classes of transformations are included under the general term "fermentation"?

10. What are ptomaines? To what is their formation attributed? Describe their general characteristics.

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### Second Year's Studies.

#### DENTAL PATHOLOGY.—Professor BRACKETT.

1. Define pathological state.
2. Pyorrhoea alveolaris,
3. Etiology of undue hemorrhage following extraction.
4. The prognosis of osteoma.
5. General definition of predisposing cause of disease, with illustrations.
6. Etiology of dental caries.
7. Define hypertrophy; give illustrations with etiology in each case.
8. The more frequent antral affections and their etiology.
9. The semiology of dying pulp.
10. Epulis.
11. What pathological states precede suppuration?
12. How do you judge of the advisability of using conservative treatment of the dental pulp when exposed?
13. Diagnosis of ranula.
14. Etiology of gum recession.
15. Characteristics of teeth in which pulp calcifications are most likely to occur.
16. Neuralgia.
17. Simple enumeration, without description, of the diseases to which bone is subject.
18. What causes the sensitiveness of dentine?
19. Give a comprehensive definition of abscess.
20. Of the permanent teeth, which are the most frequently attacked by caries, and why?



## MATERIA MEDICA. — Assistant Professor BRIGGS.

1. Write a prescription for an ounce mixture of tannic acid, glycerine, and peppermint water.
  2. Name and describe an astringent.
  3. Give the law of the application of acids to secreting glands.
  4. Contraindications for the use of morphine.
  5. Name four antipyretics and give indications for their use?
  6. Contrast the action of ether and chloroform.
  7. Name and describe one antiseptic.
  8. Indications for the use of gutta-percha and cement filling.
  9. Belladonna.
  10. Caffeine.
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## SURGICAL PATHOLOGY. — Dr. MONKS.

1. What is shock, and what is reaction? What are some of the circumstances which may modify the severity of shock?
  2. What are some of the differences between a chancroid (that is, "a soft chancre") and a true chancre (that is, the initial lesion of syphilis)? Mention some of the unusual ways in which syphilis has been said to be acquired.
  3. Mention some of the different varieties of tumors.
  4. Describe the terminations of otitis.
  5. Describe a case of simple erysipelas.
  6. Give an outline of the process which takes place in the development of acute inflammation of the soft parts.
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## ORAL ANATOMY AND PHYSIOLOGY. — Dr. J. E. STANTON.

1. Describe the development of the jaws.
2. Give a description of and the origin of the primary germinal layers, and what they ultimately become in adult life.
3. Describe calcification, and how the insoluble salts of lime act associated with organic compounds.
4. How do the additional molars find room in the lower jaw?
5. To what is the sensitiveness of normal dentine due?
6. Describe the development and eruption of a permanent tooth, and how the roots of a temporary tooth are absorbed.
7. Give a description of the teeth and jaws at birth.
8. Give a minute description of the pulp and dental periostium.
9. Describe carefully the dental tubuli and their contents.
10. What is the present classification of bacteria? How do they germinate, and what is the resistance of spores?



## CROWN AND BRIDGE. — Dr. W. P. COOK.

1. Give the names of the various dental crowns and bridges.
  2. Describe the insertion of a wood pivot crown.
  3. Describe the Bonwill, Logan, and How crowns.
  4. Describe a method of inserting a banded Logan. When and why use such a crown?
  5. Describe the making of a Stoddard crown. What are its advantages?
  6. Describe the Buttner system.
  7. Describe the making and insertion of a Richmond porcelain face crown.
  8. Describe the making and insertion of a removable crown. Richmond preferred.
  9. Describe the E. Parmley Brown system of crown and bridge work.
  10. Describe: (1) A Genese crown. (2) A removable pin crown. (3) Give their good points.
  11. Would you ever crown a fractured root? If so, how? Illustrate by description of a molar.
  12. Describe the Howland, Weston, and New Richmond crowns.
  13. Describe the Low system.
  14. Describe a method of restoring the tip of a fractured central incisor.
  15. Describe: (1) A bar bridge. (2) A removable bridge.
  16. Describe a method of repairing a fractured incisor on a bridge case without removal of the bridge.
  17. How would you insert a superior lateral incisor, the root having been extracted, and the adjoining central and cuspid being free from decay?
  18. When would you use amalgam, gold-foil, gutta-percha, cement, in crown work?
  19. Describe a method of inserting a crown where vulcanite is used.
  20. Give the advantages and disadvantages of: (1) Stationary bridge work. (2) Removable bridge work.
- Illustrate the above questions by simple drawings.

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**Third Year's Studies.**
**MECHANICAL DENTISTRY. — Professor CHANDLER.**

1. What are the three ingredients composing the body of dental porcelain, exclusive of coloring matter?
2. What are the materials used in coloring porcelain teeth?
3. Describe celluloid, from the cotton to the dental plate.
4. Describe vulcanite, from the tree to the dental plate.
5. What are the materials besides rubber that go to the production of vulcanite?

6. How prepare an 18 kt. plate from pure gold?
7. What are the usual fluxes in refining gold, and the purposes for which they are used?
8. What is meant by biscuiting and the object of it?
9. Give a brief history of the invention of continuous gum work.
10. Describe the making of a set of teeth by this method.
11. Describe a siphon and tell what makes it act.
12. Why do we use a blow-pipe in soldering?
13. Why use a flux?
14. Aluminium. What is it, and whence obtained?
15. The different methods of using it in dentistry?

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SURGERY. — Professor CHEEVER.

1. Alveolar abscess : causes, course, treatment.
2. Cyst of the antrum : appearances, treatment.
3. Sinuses of the jaws : causes, results, treatment.
4. Acute glossitis : appearances, treatment.

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OPERATIVE DENTISTRY. — Professor FILLEBROWN.

1. (a) What are the names of each class of cavities as used for record? (b) What are the essential qualities of a cavity for holding a metallic filling? (c) What conditions are best suited for gold, amalgam, cement, gutta percha?
2. What are the good and the objectionable qualities of gold as a filling, also of amalgam, cement, and gutta-percha?
3. What is the treatment for cure of alveolar abscess?
4. (a) What is phagedenic pericementitis? (b) Describe treatment. (c) What is the principal cause of the disease and the most essential part of the treatment?
5. What are the conditions needed in the operator for successful extraction of teeth? (a) What important precaution to be observed? (b) What conditions forbid extraction? (c) What are the characteristics of teeth which are difficult to extract? (d) What are the indications for extraction? (e) Under what circumstances should temporary teeth be extracted, and when not? (f) What conditions of the patient require caution, and treatment? (g) What accidents are likely to occur? (h) Name remedies for hemorrhage and describe their application.
6. Describe methods for packing gold for fillings.
7. (a) What conditions contra-indicate anaesthesia or require caution? (b) What is the mode of death from gas, ether, and chloroform? (c) Describe means of resuscitation when respiration fails?

8. What condition of the cavity is essential to obtain the best effects of obtundents?

9. Describe the preparation of teeth for approach to proximal cavities :  
(a) In front teeth, upper and under? (b) In back teeth?

10. Describe methods of temporary and permanent separation of teeth.

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ORTHODONTIA. — Dr. E. H. SMITH.

1. What evils are associated with irregularities of the teeth?

2. What influence has heredity on irregularities of the teeth, and what on variability of form, and mention other causes?

3. What danger attends the process of widening the alveolar arch, and how prevented?

4. Describe devices for obtaining resistance while moving bicuspid and cuspids posteriorly; the advantage and disadvantage of each.

5. What do you understand by torsion of the teeth? How corrected and devices for so doing?

6. What is prognathism and its cause; and what are the devices for its correction?

7. Cite a case where you would extract the superior permanent lateral and one where you would extract the permanent cuspid in a condition of irregularity of the anterior teeth.

8. Describe cases of irregularity of teeth corrected by grinding and polishing.

9. What is a Magill band? When and where used?

10. Describe the different retaining devices. Mention the most efficient, and explain Dr. Farrar's system of regulating.









