## ANNUAL ANNOUNCEMENT

OF THE

# DENTAL SCHOOL

OF

# HARVARD UNIVERSITY

### 1895-96



CAMBRIDGE

Published by the University

1895



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#### THE DENTAL SCHOOL.

The Dental Department of the University is established in Boston.

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 of one week beginning on the Sunday next preceding the 19th of April, or on Sunday the 19th of April when that day falls on Sunday, and ending on the following Saturday, both days 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 pursued in connection with the classes in 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 a 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. 1895.\* Sept. 23, Monday. Examinations for admission to the Medical and Dental Schools. Academic Year begins in all departments of Sept. 26, Thursday. the University. Examinations for admission to the Law School. Sept. 26. Thursday. Sept. 26, 27, Thursday Examinations for admission to and Friday. advanced standing in the Law School. Stated Meeting of the Board of Overseers. Oct. 9, Wednesday. Oct. 31. Thursday. Last day for receiving applications of Candidates for Final Honors in 1896. Last day for receiving dissertations for the Oct. 31, Thursday. Bowdoin Prize. Thanksgiving day; a holiday. Nov. 28, Thursday. Nov. 30, Saturday. Last day for receiving applications for the Cheever (Medical) Scholarship. Last day for receiving applications for aid from Nov. 30, Saturday. the Loan Fund. Dec. 14, Saturday. Last day for receiving from first-year Students applications for Price Greenleaf Aid.

RECESS FROM DEC. 23, 1895, TO JAN. 2, 1896, INCLUSIVE.

1896.

Jan. 8, Wednesday.	Stated Meeting of the Board of Overseers.
Jan. 30, Thursday.	Second half-year begins in the Medical School.
Feb. 10, Monday.	Second half-year begins (except in the Medical School).
Feb. 22, Saturday.	Washington's Birthday; a holiday.
Feb. 29, Saturday.	Last day for receiving applications of caudi- dates for Final Honors in Natural History in 1897.
March 31, Tuesday.	Last day for receiving applications for all Graduate Fellowships and Scholarships, and for College Scholarships to be as- signed to Graduate Students.

\* Entrance Examinations to the Dental School will be held Tuesday, June 25th, 1895.

CALENDAR.

March 31, Tuesday.	Last day for re-engaging College Rooms for 1896-97.
April 1, Wednesday.	Last day for receiving applications of candidates for Second-Year Honors.
April 1, Wednesday.	Last day for receiving dissertations for the Boylston Medical Prizes.
April 8, Wednesday.	Stated Meeting of the Board of Overseers.
RECESS FROM	April 19 to April 25, inclusive.
April 29, Wednesday.	Last day for receiving names of competitors for the Boylston Prizes for Elocution.
April 30, Thursday.	Applications from Graduate Students for admis- sion to examination for any degree should be made on or before this date.
May I, Friday.	Last day for receiving from Divinity School Students applications for Scholarships and other Pecuniary Aid for 1896–97.
May 1, Friday.	Last day for receiving from persons intending to enter College applications for Price Greenleaf Aid for 1896-97.
May I, Friday.	Last day for receiving dissertations for the Dante, Sargent, Paine, Toppan, Sumner, Sales, and Bennett Prizes.
May 1, Friday.	Last day for receiving theses of Candidates for the degree of Ph.D. or S.D.
May 2, Saturday.	Last day for receiving applications for College Rooms for 1896-97.
May 4, Monday.	Assignment of College Rooms for 1896-97.
May 14, Thursday.	Speaking for the Boylston Prizes.
May 27, Wednesday.	Last day for receiving from undergraduates applications for College Scholarships, and for Price Greenleaf Aid for 1896-97.
May 30, Saturday.	Last day for receiving applications for Medical School Scholarships for 1896–97.
May 30, Saturday	Memorial Day; a holiday.
June 1, Monday.	Last day for receiving applications for Scientific School, Law School, and Veterinary School Scholarships for 1896-97.
June 1, Monday.	Examinations in the Dental School begin.
June 3, Wednesday.	Examinations in the Medical School begin
June 19, Friday.	Seniors' Class Day.
June 23, Tuesday.	Examinations for admission to the Dental and Veterinary Schools.

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June 23, 25, 26, 27, Tu	esday to Saturday. Examinations for admission to Harvard College, and to the Lawrence
June 24, Wednesday.	Scientific School. Commencement. Stated Meeting of the Board of Overseers.
SUMMER VACATION OF	THIRTEEN WEEKS, FROM COMMENCEMENT DAY TO SEPTEMBER 23.
June 25, Thursday.	Examinations for admission to the Law and Medical Schools.
July 6, Monday.	Summer School opens.
Sept. 17, 18, 19, 21, 1	"hursday to Monday. Examinations for admis-
	sion to Harvard College, and to the Law- rence Scientific School.
Sept. 21, Monday.	Examinations for admission to the Medical School.
Sept. 21, Monday.	Examinations in the Medical School begin.
Sept. 21, Monday.	Examinations for admission to the Dental School.
Sept. 21, Monday.	Examinations in the Dental School begin.
Sept. 22, Tuesday.	Examinations for admission to the Veterinary School.
Sept. 24, Thursday.	Academic Year begins in all departments of the University.
Sept. 24, Thursday.	Examinations for admission to the Law School.
Sept. 24, 25, Thursday	and <i>Friday</i> . Examinations for admission to advanced standing in the Law School.
Sept. 30, Wednesday.	Annual Meeting of the Board of Overseers.
Oct. 14, Wednesday.	Stated Meeting of the Board of Overseers.
Oct. 31, Saturday.	Last day for receiving applications of candidates for Final Honors in 1897.
Oct. 31, Saturday.	Last day for receiving dissertations for the Bowdoin Prize.
Nov. 26, Thursday.	Thanksgiving day; a holiday.
Nov. 30, Monday.	Last day for receiving applications for aid from the Loan Fund

# ADMINISTRATIVE OFFICERS.

#### 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 : \_\_\_\_\_.

Assistant Secretary : RICHARD COBB, A.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.

Barsar: CHARLES F. MASON, A.B. Office, Wadsworth House, Cambridge. Office hours, 9 a.m. to 1 p.m.

# 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, 10 a.m. to 12 m.

Dean of Harvard College: LE BARON R. BRIGGS, A.M. Office, 5 University Hall, Cambridge. Office hours, Monday, Tuesday, and Friday, 10 a.m. to 12.30 p.m.

Regent of Harvard College: GEORGE A. BARTLETT, A.M. 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 a.m. to 12 m.

Dean of the Divinity Faculty : C. C. EVERETT, D.D., LL.D. Office, 1 Divinity Library.

- Secretary of the Divinity Faculty: ROBERT S. MORISON, A.M., D.B. Office, Divinity Library. Office hours, Daily, 9 a.m. to 1 p.m.
- Deon of the Law Faculty : C. C. LANGDELL, LL.D Office, Austin Hall, Cambridge.
- Dean of the Medical Faculty: WILLIAM L. RICHARDSON, A.M., M.D. Office at the Harvard Medical School, corner of Boylston and Exeter Streets, Boston. Office hours, Tuesday and Friday, 12.15 to 1 p.m.
- Secretary of the Medical Faculty: CHARLES P. WORCESTER, A.B., M.D. Office at the Harvard Medical School, corner of Boylston and Exeter Streets, Boston. Office hours, Monday and Wednesday, 2 to 3 P.M.
- Decn 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 Boston and Providence Bailroad.

### THE DENTAL SCHOOL.

#### BOSTON.

#### \* 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.

CHARLES S. MINOT, S.D., Professor of Histology.

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

HAROLD C. ERNST, M.D., Assistant Professor of Bacteriology.

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

WILLIAM P. COOKE, D.M.D., Instructor in Crown and Bridge Work. FRANKLIN DEXTER, M.D., Demonstrator of Anatomy.

#### **\*OTHER INSTRUCTORS.**

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

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.

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

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.

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

\* These lists are for 1894-95 and are subject to some changes for the coming year.

FREDERICK BRADLEY, 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.
CHARLES M. KEEP, M.D., D.M.D., Instructor in Operative Dentistry.
FREDERIC S. HOPKINS, D.M.D., Instructor in Operative Dentistry.
PATRICK W. MORIARTY, D.M.D., Demonstrator of Mechanical Dentistry.

ARTHUR J. OLDHAM, D.M.D., Instructor in Mechanical Dentistry. HARRY O. BIXBY, D.M.D., Instructor in Mechanical Dentistry. ARTHUR W. ELDRED, D.M.D., Instructor in Mechanical Dentistry. CHARLES E. PERKINS, D.M.D., Instructor in Operative Dentistry. FRANK T. TAYLOR, D.M.D., Instructor in Operative Dentistry. JOSEPH T. PAUL, D.M.D., Demonstrator of Operative Dentistry. FRED H. WOODCOCK, D.M.D., Instructor in Mechanical Dentistry. HARRY S. PARSONS, D.M.D., Instructor in Mechanical Dentistry. NATHAN P. WYLLIE, Assistant Demonstrator of Operative Dentistry.

#### STANDING COMMITTEES.

Executive Committee - Dean, Drs. Fillebrown, Brackett, Smith, Briggs, Stanton.

Admission Examination-Dean, Drs. Brackett, Stanton.

Building-Drs. Fillebrown, Bowditch, Smith.

Advertising and Catalogue - Dean, Drs. Fillebrown, Smith.

Courses of Study-Dean, Drs. Brackett, Stanton.

Museum - Drs. Fillebrown, Smith.

#### STUDENTS.

#### STUDENTS.

#### THIRD YEAR.

NAME. Arvedson, Ernst Sixten, Barnard, Francis Homer, Barrows, Edward Doane, Bartlett, Robert Lander, Carr, Clarence Augustus, A.M. (Brown) 1890, Coleman, Walter Strout, Dickinson, Dwight Ward, Edgelow, Percy, Furfey, James Austin, Littig, Marquis, Meader, Frederick Everett,

Milliken, Richard Dyer, Moffatt, Robert Tucker, Monroe, Charles Everett, O'Brien, Henry Clinton, O'Connor, Patrick Henry, Page, Ernest Hosea, Rice, Francis Wheeler, Scheuermann, Leopold, Smith, Murdoch Campbell,

Sweet, Walter Irving,

RESIDENCE.PRESENT ADDRESS.\*Linköping,Sweden, 74 Boylston St.Duluth, Minn.Brookline. [Allston.West Hampden, Me. 69 Franklin St.LynnLynn.

Newport, R. I. Deering, Me. Amherst, London, Beverley, Davenport, Ia. Wolfeboro, N. H.

Saco, Me. Boston, Norfolk Downs, Boston, Marysville, Cal. Berkshire, Portland, Me. Berlin, Lynn,

[Somerville. 48A Oliver St.. 50 Chambers St. 690 Tremont St. 50 Bowdoin St. Beverley. 18 Hancock St. 1 Sunderland St., Roxbury. 55 Clarendon St. 164 Newbury St. Norfolk Downs. 76 Com'nwealth Av. 18 Hancock St. 112 Dartmouth St. Ashland. 86 Charles St. 40 High Park Ave., Lynn. 157 Warren Ave.

Providence, R. I.

#### SECOND YEAR.

Allen, Fred Wilde,	Braintree,	Braintree.
Bienemann, Edgar Caspar,	Brighton, Eng.	5 Columbus Sq.
Chase, Asher Harriman St. Clair,	Everett,	10 Dean St., Everett.
Chute, Ernest Howard,	Dedham,	Dedham.
Cross, Harold DeWitt,	Nashua, N. H.	Nashua, N. H.
Emery, John Walter,	W. Medford,	W. Medford.
Farrington, Edwin Linwood,	Lowell,	Lowell.
Fernald, Adelbert,	Jackson, N. H.	6 St. Botolph St.
Gilbert Guy Webster,	Andover,	Andover.

\* Addresses are in Boston, unless stated to be elsewhere.

#### THE DENTAL SCHOOL.

Gilman, Harry Sargent, Hardy, Harvey Winchester, Haynes, Harry Morrill, Horne, Robert Gilkey, McMeekin, Robert John, Martin, James Francis, Matthews, Edward Wakefield, Moore, William Everett, Ross, Thomas Kennedy, York, Charles Frederick,

Manchester,
Natick,
Portland, Me
Watertown,
Boston,
Springfield,
Yarmouth,
Taunton,
Everett,
Rocknort

### FIRST YEAR. Oxford.

Barnard, Frank Pliny, Berry, Charles William, (Dartmouth), Blake, Ralph Vincent, FH.G. Brown, Clifton Gustavus, Collins, Timothy Francis, Coxeter, John Sibley, Currier, Horrace, Davis, Robert Irving, Davis, Walter Sheldon, Dickinson, John Dana, Duckering, William West,

Fallon, William Edward,

Faunce, Walter Joseph, Fitzgerald, Terence Richard, Forrest, George Lincoln, Furlong, Paul Ritson, Garfield, Roy Mason, Gordon, Charles Sumner, Greenwood, George True, Henry, Edward Everett, Hunt, Ralph Solon, Kent, Edward Allen,

Kenney, Arland Martin,

Lakin, Charles Ansel.

B.S. Dover, N. H. New Bedford, Stoughton, So. Boston, Newtonville, Boston, Chelsea,

Worcester, Watertown, Roxbury,

Charlestown,

Jamaica Plain, Dorchester, Holbrook, W. Chelmsford, Worcester, Worcester, Fitchbury, Wellesley Hills, Orange, W. Medway,

Dorchester,

Worcester,

17 Pinckney St.
15 Bowdoin St.
241 Columbus Ave.
Watertown.
Boston Art Club.
39 Malden St.
192 W. Canton St.
Taunton.
Everett.
Rockport.

#### 119 Warren Ave.

483 Mass. Ave. Waltham. Stoughton. So. Boston. Newtonville. 153 Huntington Ave. Chelsea. Braintree. [town. 9 Winter St., Water-39 Fort Ave.. Roxbury. 37 Winthrop St., Charlestown. Jamaica Plain. Dorchester. Holbrook. 478 Columbus Ave. Worcester. 231 W. Newton St. 4 Bradford St. Wellesley Hills. 366 Columbus Ave. 7 Brookside Ave.. Jamaica Plain. Glen Road. Dorchester. Stoughton Hall. Cambridge.

Lee, Thomas Jefferson,	Brighton,	Brighton.
Lunan, William,	Andover,	231 W. Newton St.
McMahon, Thomas Richard,	Charlestown,	51 Allston St.,
		Charlestown.
Mooney, Joseph Thomas,	Boston,	11 James St.
Morris, John Joseph,	E. Boston.	93 Trenton St., E.
		Boston.
Owen, James Martin,	Boston,	109 Chandler St.
Parkhurst, Charles Erwin,	Somerville,	79 Walnut St.,
		Somerville.
Rafferty, John Henry,	Somerville,	Somerville Ave.,
		Somerville.
Reuterswärd, Oscar,	Boston,	419 Mass. Ave.
Shrieves, Edwin Bennett,	Wilmington, 0.	159 W. Canton St.
Vaughan, Clarence Bartlett,	Boston,	231 W. Newton St.
Veo, Frank Hosea,	Newtonville,	Hotel Pelham.
Warren, George Alfred,	Newton Highlands,	Newton Highlands.
White, Walter Harris,	Malden,	11 Perkins Ave.,
		Malden.
Williams, Ernest Blake,	Malden,	11 Perkins Ave.,
		Malden.
Woodman, Herbert Clarence,	Boston,	20 Copley St.

#### SUMMARY.

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FIRST YEAR STUDENTS .	·	•	•	•	•	·	•	•	•	•	•	·	•	·	40
SECOND YEAR STUDENTS	•	•	•	•	•		•	•	•	•	•	•	•	•	19
THIRD YEAR STUDENTS.		•	•	•	•	•	•	•	•	•					21

#### 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 Gage's Elements of Physics or any other High School 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, North Grove St., Boston, on the last Tuesday in June and 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, medical chemistry, and bacteriology.

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 1894-95.

#### 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, CONANT, MUNRO, BROOKS, C. A. PORTER, and TENNEY.

#### Physiology

Systematic and Experimental Physiology. Four times a week during first half-year. Five times a week during second half-year. Professors BOWDITCH and W. T. PORTER.

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

#### Chemistry.

Descriptive and Analytical Chemistry. Twice a week, during first halfyear. Professor HILLS.

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

Practical Exercises in the Laboratory in Analytical and Medical Chemistry. *Daily*. Professor HILLS, Drs. WORCESTER and OGDEN.

#### THE DENTAL SCHOOL.

#### Histology and Embryology.

Lectures. Twice a week during the first term, once a week during the second term. Professor MINOT.

Laboratory Exercises. Two hours a week. Professor MINOT and Dr. AMES.

#### Bacteriology.

Lecture. Once a week, second half-year. Asst. Professor ERNST. Laboratory. Three hours a week for six weeks, second half-year. Asst. Professor ERNST.

#### Operative Dentistry.

Lectures. Once a week. Professor FILLEBROWN.

Clinical Lectures. Once a week for ten weeks. Drs. CLAPP and POTTER. Practical Work. First year, six hours a week for half-year; second and third years, fifteen hours a week throughout the second and third year.

#### Mechanical Dentistry.

Lectures. Once a week. Professor CHANDLER.

Practical Work. Eighteen hours a week throughout the second and third year.

#### Surgery.

Lectures. Once a week for one month. 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 C. B. 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. Professor BRACKETT.

#### Oral Anatomy and Physiology.

Lectures and Demonstrations. Once a week. Dr. STANTON.

#### Surgical Pathology.

Lectures. Once a week for ten weeks. Dr. MONKS.

#### Materia Medica.

Lectures. Once a week. Asst. Professor E. C. BRIGGS.

#### Orthodontia.

Lectures and Demonstrations. Once a week. Dr. SMITH.

#### Neurology.

Lectures. Once a week for four weeks. Dr. WALTON.

#### Crown and Bridge Work.

Lectures and Demonstrations. Once a week. Dr. COOKE.

#### 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.

Histology and Embryology.— Lectures and special laboratory exercises for practical instruction in general histology, and upon the structure and development of the teeth and mouth.

Bacteriology. - Lectures and practical work in laboratory.

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. Material is furnished for the examination of the tissues in a healthy and diseased condition, with instruction in its preparation.

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.

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

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 mechani-

#### TEXT-BOOKS.

cal 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 four 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. 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.

Blodgett's Dental Pathology. DeBary's Lectures on Bacteria. Miller's Microörganisms of the Human Mouth.

#### Surgical Pathology.

Billroth's Surgical Pathology.

#### Oral Anatomy and Physiology.

Black's Dental Anatomy. Tomes' Dental Surgery.

#### 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' Principles and Practice.

#### Crown and Bridge Work.

Evans.

#### Anaesthesia.

Anstie's Stimulants and Narcotics. Turnbull's Artificial Anaesthesia.

#### 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.

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.

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

Dental Statistics. --- For the year 1893-94 :

Operative department : ---

0

	No.	of	patients	treate	ed	•	•	•	•	•	•	•	•	•		•	5,932
	66	" "	Operatio	ns.	•		•	•	•	•		•					17,629
	66	6.6	Fillings	-Gol	ld.						•	•		•			1,997
	66	\$ 6	66	An	alg	am	1				•	•					853
	4.6	6.6	6.6	Cei	ner	ıt											942
	44	4.6	4.4	Gu	tta	Pe	re	ha		•							254
)th	er Sı	ırgi	cal cases	:													
	No.	of,	Staphyle	orraph	ıy								•.				2
	66	"	Uranopl	asty .	•	•	•								•		<b>2</b>
	6.6	66	Epulis.		•												3
	"	66	Fracture	e of S	up.	Μ	ax	τ.									1
	44	66	Abscess	es ope	nin	g i	n	fa	ce								3
	66	"	Necrosis		• •				•			•	•		•		4

Mechanical department : ---

No. o	f sets of Artificial Teeth 5	32
٤، ۴	' Splints for fractured jaws	7
دد د	" " cleft palate operations	2
66 6.	Obturators for perforated palates	<b>2</b>
66 61	" " cleft palate	4
	'Artificial Noses	3
Orthodont	ia :—	
No. o	f sets of teeth regulated	53
	' number of appliances	79
Crown and	l Bridge Work : —	
No. o	f Crowns and Caps	<b>3</b> 0
		8
		63

The Museum contains over 3000 specimens, and offers unusual facilities for study of the teeth. The pathological anatomy of the teeth is shown by more than 1600 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.

The Massachusetts General Hospital. — During the past year, 3406 patients were treated in the wards, and 27,989 new patients in the outpatient departments. Total out-patient attendance, 90,614. 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, 8763 cases were treated in its wards, and 15,592 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.

#### **EXAMINATIONS**

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. It includes the library of the Harvard Dental School, the American Academy of Dental Science, and the Massachusetts Dental Society.

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.

#### EXAMINATIONS.

The regular examinations, conducted in writing and orally, are held at the end of each year in June and in September 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; chemistry, three hours; histology, one hour; and bacteriology, one hour. 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, three hours; orthodontia, one hour; and in crown and bridge, one hour. These examinations will include actual operations performed during the course, and the preparation of specimens of mechanical dentistry.

Students shall not be entitled to enter the third year class in practical operative dentistry, until they are able to properly cleanse teeth, properly excavate and form cavities for filling and manipulate plastic fillings, and have made reasonable proficiency in treating pulps and pulp canals.

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. Examinations for advanced standing are held in September only.

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.

Those who fail in any subject may present themselves in that subject again at the next regular examination. The regular examinations for the year 1894–95 will begin June 3 and September 23, 1895.

#### 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 month of the School year and register their names with the Dean.

#### REQUIREMENTS FOR THE DEGREE.

The degree of Doctor of Dental Medicine (*Dentariae Medicinae 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.

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.

#### 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.

#### 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 Com pany," 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, and at the beginning of each School year, 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.

#### TABULAR VIEW.

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

#### FROM SEPTEMBER 20, 1894 TO JUNE 23, 1895.

#### First Class.

MEDICAL SCHOOL, BOYLSTON ST.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Anatomy, L. Prof. Dwight. Lectroom C.	Anatomy, L. Prof. Dwight.	<sup>1</sup> Anatomy, L. Prof. Dwight. Lectroom C.	<sup>1</sup> Anatomy, L. Prof. Dwight. Lectroom C.	Anatomy, R. Dr. Munro. Lectrooms C and D.	
10	<sup>1</sup> Hygiene, L. Dr. Harring- ton.	Laboratory.	<sup>1</sup> Histology. L. Prof. Minot.	Laboratory.	<sup>1</sup> Histology. L. Prof. Minot.	Physiol., R. Prof. Bow- ditch. Lectrm.A.
11	Physiology. L. Prof. Bow- ditch. Lectroom A.		Physiology. L. Prof. Bow- ditch. Lectroom A.		Physiology. L. Prof. Bow- ditch. Lectroom A.	Histol. Laborat. Prof. Minot and Dr. Ames.
12	*Laboratory.	Chemistry, L. Prof. Hills. Lectroom A.		Chemistry, L. Prof. Hills. Lectroom A.		*Laborat <b>'y</b> .
2	( <sup>2</sup> Dr. Tay- lor.	<sup>2</sup> Chemical Laboratory. Prof. Hills.	2Dr.Up.	<sup>2</sup> Chemical Laboratory. Prof. Hills.		* Laborat'y.
3	Practical Dentistry. Dtl. Hosp. N. Grove St.		Practical {Dentistry.} Dtl.Hosp. No.Grove St.		<sup>2</sup> Bacteriology L. Asst. Prof. Ernst. Lectroom A.	
4						
5	*Anatomy. Dem. Dr. Dexter. Lectroom D. Pract. Anat. Asst. Prof. M. H. Richard- son. Lectroom C.		*Anatomy. Dem. Dr. Dexter. Lectroom D. Pract. Anat. Asst. Prof. M. H. Richard- son. Lectroom C.	*Anatomy. Dem. Dr. Dexter. Lectroom D.	*Anatomy. Dem. Dr. Dexter. Lectroom D. Pract. Anat. Asst. Prof. M. H. Richard- son. Lectroom C.	

<sup>1</sup> First half-year only. <sup>2</sup> Second half-year only. <sup>x</sup> In sections.

\* Anatomy, Chemistry, and Physiology.

L. Lecture.

R. Recitation.

Dem. Demonstration.

Beginning October 3 and continuing for one week, there will be a lecture in Chemistry for the first class at 2 P.M. each day.

C. Conference.

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	Crown and Bridge work. Clin. Lect. or Dem.	Mat. Medica. aud Thera., L. Asst. Prof. Briggs. Lectroom A.	Op. Dent., L. Prof. Fille- brown. Lectroom B.	Orthodontia. L. or Dem. Dr. Smith. Lectroom B.	Oral Anat. & Physiology,L. Dr. Stanton. Lectroom A.	Mechan. Dent., L. Prof. Chand- ler. Lectrm. A.
10	Prac. Mechan. Dentistry. Lab. Dr. Eldred.	Prac. Mechan. Dentistry. Lab. Dr. Parsons.	Prac. Mechan. Dentistry. Lab. Dr.Woodcock	Prac. Mechan. Dentistry. Lab. Dr. Oldham.	Prac.Mechan. Dentistry. Lab. Dr. Bixby.	Prac. Mech. Dentistry. Lab.
10 <u>1</u>				Dent. Path.,L. Dr. Brackett.		
11 <sup>1</sup> / <sub>2</sub>						
12	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Moriarty. Dem.	Dr. Mori- arty, Dem.
2	Fract. Op. Dentistry. Dr. Holmes.	Pract. Cp. Dentistry. Dr. Keep.	Pract. Op. Dentistry. Dr. Perkins.	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.	1.0
5	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	
					1	

#### TABULAR VIEW.

#### Third Class.

#### DENTAL HOSPITAL, NORTH GROVE ST.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Crown and Bridge work. Clin. Lect. or Dem. Dr. Cook. Lectroom B.	Surg. Path. Dr. Monks. 10 weeks. Lectroom A. Dr. Clapp. 4 weeks in - Dec. Dr. Potter. 5weeks in Jan. Lectroom B.	Op. Dent., L. Prof. Fille- brown. Lectroom B.	Orthodontia. L. or Dem. Dr. Smith. Lectroom B.	*Neurol'gy,L. 4 weeks. Dr. Walton. Lectroom A. Prac. Mechan. Dentistry. Lab. Dr. Bixby. *Dr.Stoddard.	Mechan. Dent. L. Prof. Chand ler. Lectrm. A
10	Prac. Mechan. Dentistry. Lab. Dr. Eldred.	Prac. Mechan. Dentistry. I.ab. Dr. Parsons.	Prac. Mechan. Dentistry. Lab. Dr.Woodcock	Prac. Mechan. Dentistry. Lab. Dr. Oldham.		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. Taft.	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	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	Dr. Wyllie. Asst. Dem.	

\* During second half-year. † Medical School.

#### LIST OF GRADUATES

OF

### THE DENTAL SCHOOL OF HARVARD UNIVERSITY.

#### 1869.

Thomas Fillebrown, M.D. Robert Tanner Freeman, Thomas Haley, Edward Page, M.D. Samuel Julius Shaw. Joseph Jenkins Vincent,

Boston. \*1873. \*1892. Charlestown. Boston. 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,	*1894.
Charles Wilson,	Boston.

Charles Monroe Bailey, George Hayward Baker, Charles Edwin Hussey, Albert Benton Jewell, Philip Benjamin Laskey, William Pitt Morgan.

1871.

Minneapolis, Minn. Woonsocket, R. I. Biddeford, Me. Newton. Marblehead. Saginaw, W. S., Mich.

\* Deceased.

#### LIST OF GRADUATES.

#### 1872.

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

#### 1874.

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

Forest Greenwood Eddy, John Willard Hazleton, Joseph Traverse Morong, Wilbur Bates Parker, Eben Francis Whitman,

#### 1875.

\* Deceased.

Providence, R. I. Salem. \*1876. Boston. Boston.

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#### THE DENTAL SCHOOL.

#### 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. II.
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.	Cambridge.
Julius George William Werner,	Boston.

#### 1877.

Aliston Gray Douve,	DOSTOIL.
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. (Harvard),	Boston.
Joseph Mason Bright,	Bangor, Me.
Harry Fairfield Hamilton.	Boston.
Manning Kennard Rand,	Boston.
Daniel Frank Whitten,	*1891.
Herbert Chauncey Woodward.	Paris, France.

#### 1879.

Frederis Eugene Banfield. Walter Bryant Currier, Thomas Clarence Gillingham. Edward Samuel Niles. John William Smith.

Alleton Grey Bouy

#### 1880.

Frederick Eugene Ayer. Albert James Colgan, Arthur Ernestine Lewis. John Scott Mason, Virgil Clarence Pond, в. рн. San Francisco, Cal. Wollaston. Plymouth. Boston. Boston.

Roston

Boston.

Boston.

Boston.

\*1889.

Maynard, Mass.

\* Deceased.

#### 1881.

William Parker Cooke, George Alfred Dennett,		Boston. Boston.
James Alfred Reilly,		Boston.
Edmond Rosenthal,		Brussels, 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,		Oxford, England.
Edward Albert Lowe,		Lowell.
Samuel Sterrett Macfarlane,		Pittsburg, 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

\* Deceased.

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

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#### THE DENTAL SCHOOL.

#### 1886.

Lyman Fisher Bigelow, Waldo Elias Boardman, William Thomas Borton, Frederick Bradley, Henry Michael Clifford, Isidor Fürst, Leonard Nutter Howe, Frederic Milton Mayo, Wilhelm Leopold Olander, Charles Hutchins Taft, A.B. (Harvard), Henry Lauriston Upham,

Boston. Boston. St. Petersburg, Russia. Newport, R. I. Boston. Hamburg, Germany. Boston. Boston. Helsingfors, Finland. Boston. Boston.

#### 1887.

Peter Crank, L.D.S. Carroll Ketcham Huntley, Leslie Maxwell, L.D.S. Edwin Leslie Shattuck, Frank Ellsworth Sprague, Henry James Stark, Edgar Fremont Stevens, Arthur Henry Stoddard, Charles Henry Veo, John Daniel Wilson, Harry Eugene Windsor, Thomas Weston Wood, A.M. Harvey Warner Woodberry, Charles Frederick Wright, L.D.S.

#### Adelaide, So. Australia. Boston. Hastings, England. London, England. Nashua, N. H. \*1889. Medford. Boston. Boston. Boston. Providence, R. 1. Boston. Duluth, Minn. London, England.

#### 1888.

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

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\* Deceased.

#### 1889.

Fred. Anthony Arnold,	Newport, R. I.
Henry Jefcins Borton,	St. Petersburg, Russia.
Charles Poor Briggs, A.B., M.D. (Harvard	), Boston.
William Frederick Gay,	Boston.
Paul Grünewald,	Frankfürt am Main, Germany.
Frank Irving Hammond,	Providence, R. I.
Frederick Sylvanus Hopkins,	Boston.
Daniel Albion Jones,	New Haven, Conn.
William Russell Jones,	Springfield.
William Lombardino,	Berlin, Germany.
Patrick William Moriarty,	Boston.
William Curren O'Leary,	Boston,
Arthur Henry Osgood, A.B. (Harvard),	Boston.
Caleb Heath Shepard,	*1892.
Frederic Ervin Twitchell,	Willmar, Minn.
Eugene Jakob Wetzel,	Mülhausen, Alsace, Germany.
James Robert White,	No. Adams.

# 1890.

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

# 1891.

Paul Boitel,	Neuchâtel, Suisse, Switzerland.	
Georges Antoine Brouillet,	Boston.	
Alexander Humboldt Fisher,	Boston.	
Adin Albert Goldsmith, D.D.s. (	Univ. of Penn.), London, England.	
Amos Irving Hadley,	Berlin, Germany.	
* Deceased.		

George Meads Holden, Hackettstown, N. J. Shimpei Nobutsune Isawa. Tokio, Japan. George Martin, D.D.S. (Univ. of California), Berlin, Germany. 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, Boston.

# 1892.

Edward Stanley Bryant,	Brockton.
Allen Stanley Burnham,	Gloucester.
Charles Edward Bugbee Chase,	So. Framingham.
Willard Eben Curtice,	Cambridgeport.
Kirk Addison Davenport, D.D.S. (Univ. of Penn	i.), London, England.
Ernest Frederick Gabell,	Red Hill, Surry, England.
Theodore Hallett,	Boston.
Herbert Frederic Hill,	London, England.
Albert Edward Hulme,	Andover.
Richard Carl Moritz,	London, England.
Harry Snow Parsons, M.D.	Boston.
Henry Robinson Peach,	Salem.
Henry Edward Rose,	Birmingham <sub>f</sub> England.
Nathan Prindle Wyllie,	Boston.

# 1893.

Charles Oscar Cummings, A.B.	*1894.	
Frank Roberts Dickerman,	Taunton.	
George William Field,	London, England.	
George Rufus Gray, D.D.s.	Worcester.	
Joseph Geiger Grove,	Delaware, Ohio.	
Max Hanau,	Nürnberg, Germany.	
Arthur John Lamere,	Fitchburg.	
Richard Pearson, M.B., B.s. (Durham Univ.)	, Loudon, England.	
Edward Melville Quinby, L.D.S., M.R.C.S.	Liverpool, England.	
Charles Hudson Quirk, M.D. (Harrard), B	uenos Aires, Argentine Rep.	
Frederick King Richardson,	Duluth, Minn.	
William Bertram Sansom, L.D.S.	London, England.	
John Joseph Smith,	*1894.	
Frank Merrett Wilkinson,	Australia.	
* Deceased.		

## LIST OF GRADUATES.

#### 1894.

Eugene Everett Arnold, Joseph Bergin Belliveau, Joseph Boylston, Thomas Bernard Hayden, Jay Reuben Holton, Joseph Inderbitzen, Arthur Jackson, Frederick William Percival. Thomas Edward Quinn, Fred Gibson Robbins, M.D. (Harvard), Arthur Galusha Smith, George Lund Taft, A.B. (Boston Univ.), Louis Napoleon Veo, William Joseph Walton. Warren, R. I. Boston. Portsmouth, N. H. Boston. St. Louis, Mo. Schweitz, Switzerland. Boston. Peterborough, England. W. Gardiner, Conn. Boston. No. Peoria, Ill. Boston. Boston. Dorchester.

# EXAMINATION PAPERS.

# (Annual Examination, 1894.)

## First Year's Studies.

#### JUNIOR ANATOMY. - Dr. LEONARD.

#### (Two hours.)

1. Name and describe the structures that cover and line bones.

2. Describe a typical dorsal vertebra.

3. Describe the proximal end of the humerus.

4. Describe the astragalus.

5. What are diarthrodial joints? Name the varieties.

6. Describe fully a costo-vertebral articulation.

7. Where are the following named muscles inserted: (a) the abducens, (b) the rhomboideus brevis, (c) the peroneus, (d) the rectus femoris,

(e) the gastrocnemius externus?

8. What passes through the foramen sinistrum of the diaphragm?

9. Give the origin, insertion, and relation of the biceps rotator tibialis.

10. Give full description of the flexor pedis perforans.

11. Describe the lingual papillae.

12. What glands are found in the stomach?

13. What is the structure of a simple tooth?

14. What is the length of the small intestine in the horse?

15. Where are Peyer's patches found? Describe one.

#### PHYS10LOGY. - 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. What is the source of the energy manifested in the animal body?

2. Describe the mechanism of mastication naming the nerves and muscles concerned in the act.

3. What is the value of gelatine as food?

4. How are fats digested?

5. How may the amount of blood in the body be determined?

6. What nerves connect the heart with the central nervous system and how do they influence the action of the heart?

7. What are the forces which determine the flow of the lymph?

8. What evidence is there that muscular contraction plays an important part in the heat production of the body?

9. How are vowel-sounds produced?

10. Upon what conditions may glycosuria depend?

11. How are positive and negative after-images produced?

12. What three sorts of impressions are obtained through the cutaneous nerves?

#### CHEMISTRY. - Professor W. B. HILLS and Dr. WORCESTER.

#### [Three hours.]

1. What is the distinction between a physical and a chemical change? Of the following processes, which are physical, and which chemical: (1) Solution of salt in water; (2) Action of zinc upon dilute sulphuric acid; (3) Magnetizing a bar of iron; (4) Burning of a candle?

2. Define valence; isomerism. Illustrate. What information is given by the equation  $CH_4 + 2O_2 = CO_2 + 2H_2O$ ?

3. From what are the following substances obtained: (a) oxygen; (b) phosphorus; (c) ammonium compounds; (d) oxalic acid; (e) alcohol?

4. Chlorine. Sources? Uses?

5. Iodine. Sources? Properties?

6. Sources of carbon dioxide? What is the amount of carbon dioxide in the atmosphere normally?

7. How do coal gas and water gas differ in composition? Is there any difference in the action of the two kinds on the system? If there is, upon what does the difference depend?

8. Illustrate the distinction between an open and a closed chain of carbon atoms. Why, in a series of homologous compounds, is the common difference always  $CH_2$ ?

9. What is the meaning of the term *saponification*? Under what influences do oils and fats undergo this change?

10. What different classes of transformations are included under the general term, *fermentation*?

11. Through what channels and in what combinations is nitrogen eliminated from the system?

12. What changes does carbolic acid undergo between the time of its absorption into the system and the time of its elimination? Describe the changes which take place, or may take place, in the character of the urine, following its absorption.

13. Origin of urobilin? Name the intermediate substances formed in the conversion. Where do the changes take place?

14. Occurrence, formation, and destination of leucine?

15. What are the probable antecedents of urea in the body?

16. How distinguish between zinc and lead by means of the blow-pipe?

17. How test for hydrogen peroxide, gold, platinum?

18. How soluble is carbolic acid in water?

19. How would you make a 10% aqueous solution of carbolic acid?

20. How may silver be purified from lead and copper contamination? How may gold be purified from silver?

H = 1, O = 16, C = 12.

## BACTERIOLOGY. - Assistant Professor EBNST.

#### [One hour.]

1. What are the classes into which the bacteria are divided? Give the description and method of development of each.

2. What was the main argument in favor of "spontaneous generation" and what is its fallacy?

3. Dry and moist heat, --- what is the difference in their action upon the bacteria, and when should each be employed?

4. Describe the bacillus of diptheria, the appearance under cultivation. and the method of staining.

### Second Year's Studies.

DENTAL PATHOLOGY. -- Professor BRACKETT.

1. What is the principal cause of the non-absorption of the roots of the deciduous teeth at the proper time?

2. Enumerate influences systemically debilitating.

3. Explain the relation of systemic condition to the local expression of disease.

4. The laws of heredity, and the influence of surgical operations as likely to be manifested in subsequent generations.

5. The local etiology of neuralgia.

6. Points in the differential diagnosis between pericementitis and pulp irritation consequent upon ordinary pulp exposure from dental caries.

7. Differential semiology between benign and malignant new growths?

8. Enumerate different pathological states in which the dental pulp may bc.

9. What is the most frequent cause of ranula?

10. From what sources may hard concretions upon the teeth come?

11. Of what is pus composed?

12. In what way is the tissue lost in an excavated ulcer restored?

13. For what reasons is it desirable to avoid the extraction of a deciduous second molar at a period considerably in advance of the age at which the succeeding bicuspid may be expected to erupt?

14. What circumstances and procedures tend to prevent discoloration in a tooth not having a living pulp?

15. The diagnosis of caries of bone.

16. The part of micro-organisms in dental caries.

17. The portion of life in which special nutritives for osseous and dental tissues may be most advantageously used.

18. As far as you can, enumerate all the conditions which may give rise to a discharge of pus in the region of the alveolar processes.

19. In what parts of the dental arch are supernumerary teeth most frequently found?

20. The effect upon the teeth of habitual acidity of the oral fluids.

MATERIA MEDICA. - Assistant Professor BRIGGS.

- 1. Argenti Nitras.
- 2. Treatment of collapse.
- 3. Peroxide of Hydrogen.
- 4. Name and describe two astringents.
- 5. Hydrochlorate of Cocaine.
- 6. Principles involved in treatment of pyorrhoea alveolaris.
- 7. Sodii Bicarbonas.
- 8. Abortive treatment for alveolar abscess.
- 9. Acidum tri-chlor-aceticum.

10. Name and describe an anti-pyretic.

# SURGICAL PATHOLOGY. - Dr. Monks.

1. What is the difference between an innocent and malignant tumor?

- 2. What is the difference between caries and necrosis?
- 3. Describe the development of acute inflammation in the soft parts.

4. What is shock? What is a burn, and how are burns usually classified according to their severity?

5. What is ulceration? Mention some of the characteristics of an ulcer in the spreading, stationary, and healing stages.

6. Mention what facts you may remember about the healing of wounds.

## CROWN AND BRIDGE. - Dr. W. P. Cook.

## [Illustrale the questions by simple drawings.]

1. How would you shape a superior central incisor root for the insertion of: a Wood pivot crown? a Bonwill crown? a New Richmond crown? a Logan crown.

2. Describe a post crown held by friction, by screw, by amalgam.

3. Give the advantages and disadvantages of: (a) a wood pivot crown; (b) a Foster crown; (c) a banded crown. 4. Describe a Downie crown: (a) without band; (b) with band.

5. Describe the Ludwig crown anchor.

6. How would you shape for a banded crown: an incisor? a bicuspid? a molar?

7. When would you use a crown with a platinum band?

8. How would you crown: (a) an incisor split in the centre, the fracture extending to the apex of the root? (b) a lower molar with the lingual side fractured to the edge of the alveolar process?

9. Patient 55 years old with a superior lateral incisor, large gold fillings on mesial and distal surfaces, pulp alive. Give ways of crowning.

10. How would you make a banded porcelain crown, using an English tube tooth?

11. Describe a method of making an all-metal banded molar crown.

12. Describe a method of making a banded molar crown with porcelain grinding surface, the porcelain not attached by solder.

13. Describe: (a) the Bing bridge; (b) Mandrel system.

14. When would you insert: (a) a post bridge? (b) a banded bridge?

15. Describe a movable bar bridge.

16. What are the advantages and disadvantages of post, banded, and removable bridges?

17. Compare the Parker crown and the Buttner system.

18. Describe a case where crowns would be of use in retaining a gold plate.

19. How would you restore a fractured incisor tip: (a) with band? (b) without band?

20. Mention several difficulties in inserting a porcelain tip. In repairing bridge work.

#### Third Year's Studies.

#### MECHANICAL DENTISTRY. - Professor CHANDLER.

1. What is vermilion?

2. Describe vulcanite.

3. Describe celluloid.

4. How calculate the amount of alloy to add to a \$10 gold piece to obtain 18 kt. gold.

5. What is aluminium?

6. How to mount a set of plain teeth using aluminium as a base?

7. How to mount a set of plain teeth using vulcanite as a base?

8. How to mount a set of plain teeth using celluloid as a base?

9. How to mount a set of plain teeth using gold as a base?

10. Name some blow-pipes and tell the principle of their use.

11. The cause and character of congenital cleft palate.

- 12. Describe the process of making an artificial palate.
- 13. To make a dental splint for a simple fracture of lower jaw.
- 14. What is an interdental splint, and how made?
- 15. What is the principle of the Bunsen burner?

SURGERY. --- Professor E. C. WARREN.

- 1. Fluid collections in the antrum : pathology, diagnosis, treatment.
- 2. Necrosis of the jaw: causes, course of the disease, treatment.
- 3. Epulis : varieties, appearances, treatment.

4. Alveolar abscess: causes, course of the disease, treatment.

OPERATIVE DENTISTRY. - Professor Fillebrown.

1. Describe examination of teeth and mouth.

2. Describe separating teeth: (a) opening cavities; (b) forming cavities.

3. Describe filling with gold: (a) noncohesive; (b) cohesive.

4. Describe devitalization of nerve pulp, a removal of same.

5. Give treatment for pulp dead but aseptic, a septic.

6. Mention merits and demerits of filling materials: (a) gold; (b) tin; (c) amalgam; (d) cement; (e) gutta percha.

7. How prepare and fill a root with an open foramen?

8. Describe the extraction of a superior bicuspid tooth, a root of the same when crown is gone.

9. Name the accidents liable to occur when teeth are being extracted.

10. Give symptoms of anaesthesia: (a) signs of danger; (b) means of resuscitation; (c) conditions which demand caution.

## ORTHODONTIA. - Dr. E. H. SMITH.

1. (a) In what way does the deformity known as prognathism differ from that caused by arm- or thumb-sucking?

(b) Describe an appliance for correcting both.

2. Describe an appliance (a) for producing elongation of a tooth; (b) for twisting a tooth.

3. What influence has (a) the premature extraction of the deciduous teeth upon the second set? (b) the presence of deciduous teeth upon their successors? Give examples.

4. What changes take place in the alveolus during the movement of teeth?

5. How would you distinguish between physiological and pathological changes while regulating teeth?

6. Describe an appliance operated (a) by pegs; (b) by screws; (c) by springs.

7. Describe devices for widening the arch.

8. (a) Describe a permanent and detachable retainer.

(b) How long should retaining devices be worn?

9. Describe an appliance for removing both the crown and root of a tooth.

10. Describe the relative anchorage value of the different teeth, and give an example of a case where resistance should be obtained from other sources than the mouth or teeth.



