




CAI
No.

BOSTON
MEDICAL LIBRARY
ASSOCIATION,
19 BOYLSTON PLACE.









Digitized by the Internet Archive
in 2012 with funding from
Open Knowledge Commons and Harvard Medical School

NINETY-SIXTH

ANNUAL CATALOGUE

OF THE

MEDICAL SCHOOL

(BOSTON)

OF

HARVARD UNIVERSITY.

1878-79.

[Reprinted from the Catalogue of the University.]



CAMBRIDGE:

PUBLISHED BY CHARLES W. SEVER,

University Bookstore.

1878.



Cambridge:
Press of John Wilson & Son.

THE MEDICAL SCHOOL.

BOSTON.

INSTRUCTION in this School is given by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed throughout the academic year. The year begins on the Thursday following the last Wednesday in September,* and ends on the last Wednesday in June. There is a recess at Christmas, beginning December 23, and ending January 2; and a spring recess, beginning on the Wednesday before Fast Day, and ending on the following Tuesday.

The course of instruction has been greatly enlarged, so as to extend over three years, and has been so arranged as to carry the student progressively and systematically from one subject to another, in a just and natural order.

In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory work is substituted for, or added to, the usual didactic lectures, and is as much required of every student as attendance at lectures and recitations.

Instead of the customary oral examination for the degree of Doctor of Medicine, held at the end of the three years' period of study, a series of written examinations on all the main subjects of medical instruction has been distributed for regular students through the whole three years. Every candidate for the degree must pass a satisfactory examination in every one of the principal departments of medical instruction, at some time during his period of study.

Members of any one department of Harvard University have a right to attend lectures and recitations in any other department, without paying additional fees. Students in the Medical School, who wish to avail themselves of this opportunity of pursuing scientific or other studies, may do so without loss of time counted as medical study, to such extent and in such manner as the Medical Faculty shall in each case prescribe. Undergraduates intending to study medicine are advised to pay special attention to the study of Natural History, Chemistry, Physics, and the French and German languages, while in College.

* That the time of study shall count as a full term, students must present themselves within the first week of the term.

FACULTY.

- CHARLES W. ELIOT, LL.D., *President.*
 CALVIN ELLIS, M.D., *Dean, and Jackson Professor of Clinical Medicine.*
 JOHN B. S. JACKSON, M.D., *Shattuck Professor of Morbid Anatomy, and Curator of the Anatomical Museum.*
 OLIVER W. HOLMES, M.D., *Parkman Professor of Anatomy.*
 HENRY J. BIGELOW, M.D., *Professor of Surgery.*
 FRANCIS MINOT, M.D., *Hersey Professor of the Theory and Practice of Physic.*
 JOHN P. REYNOLDS, M.D., *Professor of Obstetrics.*
 HENRY W. WILLIAMS, M.D., *Professor of Ophthalmology.*
 DAVID W. CHEEVER, M.D., *Professor of Clinical Surgery.*
 JAMES C. WHITE, M.D., *Professor of Dermatology.*
 ROBERT T. EDES, M.D., *Professor of Materia Medica.*
 HENRY P. BOWDITCH, M.D., *Professor of Physiology.*
 FREDERICK I. KNIGHT, M.D., *Instructor in Percussion, Auscultation, and Laryngoscopy.*
 CHARLES B. PORTER, M.D., *Demonstrator of Anatomy and Instructor in Surgery.*
 JOHN C. WARREN, M.D., *Instructor in Surgery.*
 REGINALD H. FITZ, M.D., *Assistant Professor of Pathological Anatomy.*
 WILLIAM L. RICHARDSON, M.D., *Instructor in Obstetrics.*
 THOMAS DWIGHT, M.D., *Instructor in Histology.*
 EDWARD S. WOOD, M.D., *Professor of Chemistry.*
 HENRY H. A. BEACH, M.D., *Assistant Demonstrator of Anatomy.*
 WILLIAM H. BAKER, M.D., *Instructor in Gynecology.*
 WILLIAM B. HILLS, M.D., *Instructor in Chemistry.*

OTHER INSTRUCTORS.

- GEORGE F. H. MARKOE, *Instructor in Materia Medica.*
 FRANK W. DRAPER, M.D., *Lecturer on Forensic Medicine.*
 CHARLES F. FOLSOM, M.D., *Lecturer on Hygiene.*
 HENRY P. QUINCY, M.D., *Assistant in Histology.*
 EDWARD N. WHITTIER, M.D., *Assistant in Clinical Medicine.*
 ELBRIDGE G. CUTLER, M.D., *Assistant in Pathological Anatomy.*
 GEORGE M. GARLAND, M.D., *Assistant in Physiology.*

The following gentlemen will give special clinical instruction :—

- FRANCIS B. GREENOUGH, M.D., and EDWARD WIGGLESWORTH, M.D., *in Syphilis.*
 JOHN O. GREEN, M.D., and C. J. BLAKE, M.D., *in Otology.*
 CHARLES P. PUTNAM, M.D., and JOSEPH P. OLIVER, M.D., *in Diseases of Children.*
 SAMUEL G. WEBBER, M.D., and JAMES J. PUTNAM, M.D., *in Diseases of the Nervous System.*

STUDENTS.

Course for Graduates.

| | |
|--|--------------------------|
| Carlton, Charles Augustus, M.D. (<i>Dart. Coll.</i>), | <i>Salem.</i> |
| Crowell, Thomas Alexander, M.D. (<i>Jeff. Med. Coll.</i>), | <i>Lincolnton, N.C.</i> |
| Dudley, Henry Watson, M.D., | <i>Abington.</i> |
| Dunlap, William Herbert, S.B., M.D. (<i>Syracuse Univ.</i>), | <i>Syracuse, N.Y.</i> |
| Forsaitb, Francis Flint, A.B. (<i>Dart. Coll.</i>), M.D. (<i>Berkshire Coll.</i>), | <i>Weymouth.</i> |
| Gleason, Jubal Converse, A.B. (<i>Amherst Coll.</i>), M.D., | <i>Rockland.</i> |
| Green, Charles Montraville, M.D., | <i>Boston.</i> |
| Pinkham, Joseph Gurney, A.M. (<i>Haverford Coll.</i>), M.D. (<i>Long Isl. Coll. Hosp.</i>), | <i>Lynn.</i> |
| Stockwell, Charles Bliss, A.B. (<i>Olivet Coll.</i>), M.D., | <i>Port Huron, Mich.</i> |
| Tower, Charles Carroll, A.B., M.D., | <i>S. Weymouth.</i> |
| Townsend, William Wilder, A.B., M.D. (<i>Howard Univ.</i>), | <i>Washington, D.C.</i> |

Fourth Class.

| | |
|---------------------------------|-------------------|
| Emerson, William Carroll, A.B., | <i>Haverhill.</i> |
|---------------------------------|-------------------|

Third Class.

| | |
|---|------------------------------|
| Abbott, Charles Edward, | <i>Andover.</i> |
| Allen, Dudley Peter, A.B. (<i>Oberlin Coll.</i>), | <i>Oberlin, O.</i> |
| Batthey, Henry Halsey, | <i>Rome, Ga.</i> |
| Bowers, Walter Prentice, | <i>Clinton.</i> |
| Broyer, Constant, | <i>Melbourne, Australia.</i> |
| Burns, Robert, | <i>Lancaster, N.H.</i> |
| Clarke, Samuel Bartlett, | <i>Salem.</i> |
| Cleaves, James Edwin, A.B., | <i>Medford.</i> |
| Davis, William, A.B., | <i>Plymouth.</i> |
| Dixon, Robert Brewer, | <i>Damariscotta, Me.</i> |
| Drew, Frank Haynes, | <i>Boston.</i> |
| Durell, Thomas Moulton, | <i>Somerville.</i> |
| Eaton, Wyllis Gilbert, A.B. (<i>Dart. Coll.</i>), | <i>Lowell.</i> |
| Ernst, Harold Clarence, A.B., | <i>Boston.</i> |
| Fuller, Fred, A.B. (<i>Colby Univ.</i>), | <i>Boston.</i> |
| Gardner, Guy Hubbard, | <i>Winchester.</i> |
| Grandin, Egbert Henry, A.B., | <i>New York, N.Y.</i> |
| Hall, David Graham, | <i>Boston.</i> |
| Hartley, Richard Cook Borden, | <i>Fall River.</i> |
| Hill, Charles Edwin, A.B. (<i>Yale Coll.</i>), | <i>E. Killingly, Conn.</i> |
| Hinds, Francis Edward, | <i>Boston.</i> |

| | |
|--|--------------------------|
| Holbrook, William Edward, A.B. (<i>Amherst Coll.</i>), | <i>Palmer.</i> |
| Hooker, Charles Parker, | <i>Springfield.</i> |
| Jaques, Henry Percy, A.B., | <i>Boston.</i> |
| Johnson, Frederick William, A.M. (<i>Amherst Coll.</i>), | <i>Boston.</i> |
| Keating, James Edward, | <i>Milford.</i> |
| Kyle, Flavill Winslow, | <i>Boston.</i> |
| Larrabee, Walter Willis, | <i>Boston.</i> |
| Lombard, Frederic Howard, A.B., | <i>Boston.</i> |
| Mallett, Charles Howard, | <i>Bath, Me.</i> |
| Monks, George Howard, A.B., | <i>Boston.</i> |
| Mullen, Francis Henry, | <i>Boston.</i> |
| Noyes, Ernest Henry, A.M. (<i>Bowd. Coll.</i>), | <i>Newburyport.</i> |
| Otis, Walter Joseph, | <i>Chicago, Ill.</i> |
| Parsons, Azariah Worthington, | <i>Somerville.</i> |
| Peckham, Cyrus Tracy, A.B., | <i>Ledyard, Conn.</i> |
| Randall, James Munroe, | <i>Woburn.</i> |
| Robbins, Elliot Daniel, | <i>Boston.</i> |
| Rogers, Gorham Davis, | <i>Newbury.</i> |
| Ruddock, Edward Josiah, A.B. (<i>Amherst Coll.</i>), | <i>Greenfield.</i> |
| Scully, Francis Patrick, | <i>Medford.</i> |
| Simmons, William Turner, | <i>Boston.</i> |
| Smith, Thomas Perkins, A.B. (<i>Bates Coll.</i>), | <i>Ashland, N.H.</i> |
| Spring, Willis Parsons, A.B. (<i>Oberlin Coll.</i>), | <i>Redwing, Minn.</i> |
| Standish, Myles, A.M. (<i>Bowd. Coll.</i>), | <i>Cambridge.</i> |
| Stetson, Edwin Flye, | <i>Damariscotta, Me.</i> |
| Strong, Charles Pratt, A.B., | <i>E. Bridgewater.</i> |
| Swarts, Gardner Taber, | <i>Providence, R.I.</i> |
| Terry, Herbert, S.B. (<i>Cornell Univ.</i>), | <i>Fairhaven.</i> |
| Wade, Edric Allan, | <i>Lawrence.</i> |
| Walton, George Lincoln, A.B., | <i>Westfield.</i> |
| Warren, Lewis Jonathan, A.B. (<i>Yale Coll.</i>), | <i>Killingly, Conn.</i> |
| Webber, Fred Ward, | <i>Cambridge.</i> |
| Wolcott, Willard, | <i>Hartford, Conn.</i> |
| Young, John Francis, | <i>Boston.</i> |

Second Class.

| | |
|---|----------------------------|
| Adams, George Edwin, | <i>Lowell.</i> |
| Baker, John Walter, | <i>Chelsea.</i> |
| Bill, George Edwin, A.B. (<i>Tufts Coll.</i>), | <i>Waltham.</i> |
| Blanchard, Benjamin Seaver, | <i>Boston.</i> |
| Bradford, Carey Carpenter, A.B. (<i>Brown Univ.</i>), | <i>W. Woodstock, Conn.</i> |
| Bridgman, George Herbert, A.B. (<i>Dart. Coll.</i>), | <i>Keene, N.H.</i> |
| Briggs, Edward Cornelius, D.M.D., | <i>Boston.</i> |
| Burr, Buchanan, | <i>Astoria, N.Y.</i> |

| | |
|---|---------------------|
| Call, Charles Henry, | Lowell. |
| Cates, Abraham Barker, A.M. (<i>Colby Univ.</i>), | Vassalboro', Me. |
| Cunningham, William Frost, | Charlestown. |
| Currier, Charles Gilman, A.B., | Boston. |
| Cushing, Hayward Warren, A.B., | Boston. |
| Cutter, Edward Jones, A.B., | Nashua, N.H. |
| Dewey, Charles Ayrault, A.B. (<i>Univ. of Rochester</i>), | Rochester, N.Y. |
| Doggett, Frederic Fobes, A.B., | Quincy. |
| Donovan, Benedict, | Boston. |
| Dow, George William, A.B. (<i>Brown Univ.</i>), | Lawrence. |
| Elliot, Edward Pearson, A.B., | Somerville. |
| Ellis, Fred Warren, | Monson. |
| Fisk, Samuel Augustus, A.B. (<i>Yale Coll.</i>), | Northampton. |
| Fraser, Donald Allan, | Boston. |
| Gildee, James Bennett, | Lowell. |
| Goddard, Thacher, | Boston. |
| Hammond, Charles Bartlett, A.B. (<i>Dart. Coll.</i>), | Nashua, N.H. |
| Harrington, Frank Bishop, A.B. (<i>Tufts Coll.</i>), | Salem. |
| Hodges, William Donnison, | Nahant. |
| Jackson, William Benjamin, | Lowell. |
| Jarvis, William Furness, | Boston. |
| Jefferson, Herbert Perry, | Lowell. |
| Kibbey, William Beckford, | Washington, D.C. |
| Kingman, Rufus Anderson, | Boston. |
| Kittredge, Joseph, | N. Andover. |
| Litchfield, William Harvey, | Hull. |
| Lobsitz, Leopold, | Springfield. |
| McDonough, Thomas Patrick, | Milford. |
| Millet, Charles Sumner, | E. Bridgewater. |
| Morton, Nathaniel Bowditch, | Boston. |
| Noonan, Michael Charles, | Lowell. |
| Osman, Charles Franklin, | Boston. |
| Pierce, Matthew Vassar, A.B., | Boston. |
| Pomroy, Herbert Jason, | Providence, R.I. |
| Ryder, Godfrey, Jr., A.B., | Medford. |
| Sherman, Thomas Foster, A.B., | Boston. |
| Simmons, Moyses Rogers, | Hanover. |
| Smith, John Joseph, A.B. (<i>Holy Cross Coll.</i>), | Somerville. |
| Sprague, William Lawrence, A.B., | Boston. |
| Squires, Harry Sanford, | Troy, N.Y. |
| Stickney, George Augustus, | Haverhill. |
| Swift, William Nye, A.B., | New Bedford. |
| Temple, William Franklin, A.B. (<i>Dart. Coll.</i>), | Boston. |
| Terrell, Frederick, A.B. (<i>Ind. Asbury Univ.</i>), | San Antonio, Texas. |

| | |
|------------------------------------|---------------------|
| Thurlow, John Howard, | <i>Boston.</i> |
| Titcomb, George Eugene, | <i>Exeter, N.H.</i> |
| Tower, Charles Bates, | <i>Cambridge.</i> |
| Twitchell, George Pierce, | <i>Keene, N.H.</i> |
| Underhill, Caleb Brooks, | <i>Somerville.</i> |
| Wakefield, Alley Talbot, A.B., | <i>Cambridge.</i> |
| Walker, James Wisé, A.B., | <i>Boston.</i> |
| Warren, Edward Winslow, A.B., | <i>Boston.</i> |
| West, Edward Graeff, A.B., | <i>Exeter, N.H.</i> |
| Weston, Charles Galen, | <i>Revere.</i> |
| White, Charles Warren, Jr., | <i>Boston.</i> |
| White, Herbert Warren, | <i>Randolph.</i> |
| Whitman, Royal, | <i>Boston.</i> |
| Whitney, Herbert Baker, A.B., | <i>Leominster.</i> |
| Witherlee, Charles Bryant, A.B., | <i>Castine, Me.</i> |
| Withington, Charles Francis, A.B., | <i>Boston.</i> |
| Woodman, Walter, A.B., | <i>Cambridge.</i> |

First Class.

| | |
|--|---------------------------|
| Adams, Henry Fiske, | <i>Peterboro', N.H.</i> |
| Applegate, William A., | <i>Yellow Springs, O.</i> |
| Atwood, Frank Sumner, | <i>Salem.</i> |
| Bartlett, Frederic Russell, | <i>Worcester.</i> |
| Beckwith, Fred Jason, A.B. (<i>Yale Coll.</i>), | <i>New London, Conn.</i> |
| Bigelow, Samuel Lee, | <i>Worcester.</i> |
| Bloom, Isadore Nathan, A.B. (<i>Yale Coll.</i>), | <i>Louisville, Ky.</i> |
| Boutwell, Henry Winslow, | <i>Medford.</i> |
| Bradley, Charles How, | <i>Haverhill.</i> |
| Brainerd, John Bliss, | <i>St. Albans, Vt.</i> |
| Briard, William Henry Lighthill, | <i>Cambridge.</i> |
| Brown, William Francis, A.B. (<i>Boston Coll.</i>), | <i>Boston.</i> |
| Browne, William Tyler, PH.B. (<i>Yale Coll.</i>), | <i>Lisbon, Conn.</i> |
| Buck, Howard Mendenhall, A.B., | <i>Boston.</i> |
| Burdick, Allen, | <i>St. Albans, Vt.</i> |
| Carter, Edward Nathaniel, | <i>Belleville, Ill.</i> |
| Church, Moses Davis, | <i>Valley Falls, R.I.</i> |
| Clark, Joseph Eddy, | <i>Boston.</i> |
| Clarke, Maurice Dwight, A.B. (<i>Amherst Coll.</i>), | <i>E. Cambridge.</i> |
| Coe, Henry Clark, A.B. (<i>Yale Coll.</i>), | <i>Boston.</i> |
| Coggeshall, Henry Tisdale, | <i>Newport, R.I.</i> |
| Cushman, George Thomas, | <i>Boston.</i> |
| Denny, Charles Frederic, | <i>Somerville.</i> |
| Deroin, Francis Xavier, | <i>S. Ely, Canada.</i> |
| Doble, Ernest Edgar, | <i>W. Quincy.</i> |

| | |
|--|-----------------------------|
| Drake, Henry Scudder, A.B. (<i>Brown Univ.</i>), | <i>Middleboro'.</i> |
| Dunbar, Franklin Asaph, A.B., | <i>Cambridge.</i> |
| Dyer, Willard Knowlton, | <i>Boston.</i> |
| Egan, John James, | <i>Boston.</i> |
| Ellicott, Edward Somerville, A.B., | <i>Boston.</i> |
| Faulkner, Harry Winthrop, | <i>Billerica.</i> |
| Faunce, Robert Harris, | <i>Sandwich.</i> |
| Galligan, Edward Francis, | <i>Taunton.</i> |
| Galligan, Eugene Thomas, | <i>Taunton.</i> |
| Gay, Frederick Lewis, | <i>Boston.</i> |
| Gerould, Joseph Bowditch, B.S. (<i>Dart. Coll.</i>), | <i>Keene, N.H.</i> |
| Getchell, Albert Colby, A.B. (<i>Colby Univ.</i>), | <i>Waterville, Me.</i> |
| Godding, Clarence Miles, A.B. (<i>Brown Univ.</i>), | <i>Providence, R.I.</i> |
| Goodell, George Zina, | <i>Salem.</i> |
| Gould, Charles Asahel, | <i>Newtonville.</i> |
| Griffin, Arthur George, | <i>Litchfield, N.H.</i> |
| Hall, Josiah Newhall, B.S. (<i>Mass. Agr. Coll.</i>), | <i>Revere.</i> |
| Harrington, Charles, 2d, A.B., | <i>Salem.</i> |
| Harrower, David, Jr., 2d, | <i>S. Kingston, R.I.</i> |
| Hastings, Edward Holland, | <i>Walpole, N.H.</i> |
| Hayes, Edward Stephen, | <i>Leavenworth, Kansas.</i> |
| Hayward, Walter Sumner, A.B. (<i>Brown Univ.</i>), | <i>Brockton.</i> |
| Hewins, Parke Woodbury, A.B., | <i>Taunton.</i> |
| Holden, William Daniel, | <i>Haverhill.</i> |
| Holyoke, Frank, | <i>W. Medford.</i> |
| Homans, John 2d, | <i>Boston.</i> |
| Howe, James Sullivan, | <i>Bolton.</i> |
| Huse, Charles Archelaus, A.B. (<i>Brown Univ.</i>), | <i>Worcester.</i> |
| Huse, George Wood, A.B., | <i>Newburyport.</i> |
| Jarvis, Leonard, B.S. (<i>Dart. Coll.</i>), | <i>Claremont, N.H.</i> |
| Jewett, Milo Augustus, | <i>Milwaukee, Wis.</i> |
| Johnson, Herbert Shattuck, A.B. (<i>Amherst. Coll.</i>), | <i>Lowell.</i> |
| Kettle, Lorenzo Nelson, | <i>Boston.</i> |
| King, James Henry, A.B. (<i>Univ. of Vt.</i>), | <i>Benson, Vt.</i> |
| Knapp, Philip Coombs, Jr., A.B., | <i>Boston.</i> |
| Lombard, Warren Plimpton, A.B., | <i>W. Newton.</i> |
| Manton, Walter Porter, | <i>Boston.</i> |
| Mason, Alverdo H., | <i>E. Braintree.</i> |
| Mayberry, Edwin Nelson, | <i>Weston.</i> |
| McCarthy, Daniel George, | <i>Boston.</i> |
| McIntyre, James Clarke, | <i>Boston.</i> |
| McKaye, Henry Goodwin, | <i>Boston.</i> |
| McMichael, Willis Brooks, A.B. (<i>Boston Univ.</i>), | <i>Boston.</i> |
| Mead, Julian Augustus, A.B., | <i>W. Acton.</i> |
| Metcalf, Simeon McCausland, | <i>Somerville.</i> |

| | |
|---|------------------|
| Millerick, Daniel Edward, A.B. (<i>Holy Cross Coll.</i>), | Boston. |
| Morrill, Fred. Hiram, | Nashua, N.H. |
| Nelson, Samuel Newell, A.B., | Milford. |
| Newell, Otis Kimball, | Boston. |
| Nickerson, Asa Harden, | Providence, R.I. |
| Noble, Arthur Green, | Boston. |
| Otterson, William David, | Nashua, N.H. |
| Palmer, Lewis Merritt, A.M. (<i>Bates Coll.</i>), | Litchfield, Me. |
| Perkins, Henry Phelps, Jr., | Lowell. |
| Perry, Arthur Pedro, | Newtonville. |
| Potter, William Henry, A.B., | Boston. |
| Richardson, Dana Putnam, | Leominster. |
| Russell, Eben George, | E. Deering, Me. |
| Sampson, Frederic Albert, | Lawrence. |
| Sawin, Charles Dexter, B.S. (<i>Mass. Inst. Tech.</i>), | Boston. |
| Shepard, George Clarence, A.B., | Boston. |
| Sherman, Frank Morton, | Watertown. |
| Spicer, William Francis, Jr., | Winchester. |
| Spofford, Amos Little, B.S. (<i>Mass. Agr. Coll.</i>), | Georgetown. |
| Squibb, Edward Hamilton, B.S., | Brooklyn, N.Y. |
| Stearns, Charles Goddard, A.B. (<i>Amherst Coll.</i>), | Boston. |
| Stevens, John Cornell, | New York, N.Y. |
| Sturgis, Russell 3d, A.B., | Boston. |
| Taylor, Frederic Weston, A.B., | Cambridge. |
| Vickery, Herman Frank, A.B., | Weymouth. |
| Weld, Charles Goddard, | Boston. |
| Wetherbee, Roswell, | Acton. |
| Wetherell, Arthur Bryant, | Southampton. |
| Whitridge, Roland Barker, | Boston. |
| Wilcox, Reynold Webb, A.B. (<i>Yale Coll.</i>), | Madison, Conn. |
| Wilson, John Harpin, | Dubuque, Iowa. |
| Wood, Henry Austin, A.B., | Upton. |
| Woodward, Lemuel Fox, B.S., | Worcester. |
| Wyman, Morrill, Jr., | Cambridge. |

SUMMARY.

| | |
|-----------------------------|-----------|
| Graduates' Course | 11 |
| Fourth Class | 1 |
| Third Class | 55 |
| Second Class | 69 |
| First Class | 104 |
| Total | <hr/> 240 |

THE MEDICAL SCHOOL.

REQUISITES FOR ADMISSION.

All candidates for admission, excepting those who have passed an examination for admission to Harvard College, must present a degree in Letters or Science from a recognized college or scientific school, or pass an examination, on the Monday preceding the last Wednesday in June or September at 10 A.M., in the following subjects:—

1. **LATIN.** The translation of easy Latin prose. French or German will be accepted, however, as a substitute for Latin.

2. **PHYSICS.** Candidates will be required to show such a knowledge of this subject as may be obtained from Balfour Stewart's elementary works on Physics.

The examinations will be conducted in writing; and, in judging the work of the candidate, the spelling, grammar, and construction will be considered.

Graduates in medicine will not be required to pass this examination on joining the school.

DIVISION OF STUDIES.

First year. — Anatomy, Physiology, and General Chemistry.*

Second year. — Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, and Clinical Surgery.

Third year. — Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

COURSE OF INSTRUCTION.

The following methods of instruction are adopted in the several departments:—

Anatomy. — Lectures; various practical exercises, including abundant dissection under the direction of the Demonstrator; recitations from text-books; histology.

Physiology. — Lectures, recitations, and practical demonstrations in the

* Any student who shall have previously passed in the Undergraduate Department or Scientific School of Harvard University an examination in General Chemistry (including qualitative analysis) will be exempt from examination in this branch, and may pursue the study of Medical Chemistry during his first year.

laboratory. To students of the second and third classes, opportunities are given for original investigations in the laboratory.

Chemistry is taught mainly by practical work in the laboratory, the student having his own desk and apparatus. General Chemistry and qualitative analysis are taught during the first year. Beside the laboratory work, there is a lecture and a recitation every week. In the second year, medical chemistry is taught by lectures and laboratory work.

Pathological Anatomy is taught by lectures, recitations, and practical instruction in pathological histology. The collection of the Warren Anatomical Museum is used to illustrate the lectures; and many morbid specimens are shown in a fresh state. Students also receive practical instruction in the method of making autopsies, and are admitted to those made at both hospitals. Special classes in pathological histology, including the diagnosis of tumors, are formed for those who are provided with a microscope. Such students are required to prepare the various objects. The school possesses a number of microscopes for the use of those students whose means will not permit the purchase of an instrument.

Materia Medica and Therapeutics.—*Materia Medica* is taught by lectures and practical demonstrations. *Therapeutics*, or the physiological action of drugs and their application to disease, is taught in the third year by lectures, recitations, and hospital exercises.

The Theory and Practice of Medicine.—Lectures, recitations, and hospital visits.

Clinical Medicine.—Daily instruction is given in this department by hospital visits and other exercises. Students are furnished with cases for personal examination, and are called upon to report them before the class, where they are criticised. These examinations are held both in the wards and in the amphitheatre. Another exercise, known as the "Clinical Conference," affords an opportunity for more thorough preparation of cases, more time being allowed for their study. The full written report of a case is read by the student who has examined it. It is afterwards criticised by the class, by the Professor of Clinical Medicine, and other teachers in the school. In addition to this, a regular course of supplementary instruction is given in Auscultation and Percussion, and in Laryngoscopy, which affords students an abundant opportunity for acquiring a thoroughly practical knowledge of these methods of exploration.

Surgery.—Lectures and recitations. There are also courses on Surgical Anatomy, Minor Surgery, Surgical Histology, Bandaging, and Operative Surgery. In the latter, students of the third class are supplied with material for repeating the usual surgical operations.

Instruction in Clinical Surgery is given at the Massachusetts General Hospital and City Hospital throughout the year, as follows:—

FIRST HALF-YEAR.—Clinical Lectures on cases, per week, 2; Surgical

Visits in the hospital wards, per week, 2; public operating days, per week, 2. Total number of exercises per week, 7.

SECOND HALF-YEAR. — Clinical Lectures on cases, per week, 1; Surgical Visits in the hospital wards, per week, 3; public operating days, per week, 3. Total number of exercises per week, 7.

The Professor of Clinical Surgery holds an exercise twice a week, in winter, at the City Hospital. On one day, a clinical lecture is given over surgical cases brought into the operating theatre, illustrated by explorations and operations. On the other day, a bedside clinic is held in the wards. A third exercise is held each week in winter, in the form of a surgical conference, at which third year students make a full written report of a surgical case, which is then criticised by their fellow-students and by the Professor. Every candidate for a degree is required to report a clinical case in surgery.

Obstetrics. — Lectures and recitations. Students are instructed in the usual operations on the manikin, and will have opportunities to take charge of cases of obstetrics in their third year. A course of operative obstetrics, with practical illustrations on the cadaver, is given.

Diseases of Women and Children. — Lectures and Clinical Instruction.

Ophthalmology. — A complete course is delivered upon the diseases of the eye, including clinical instruction and the use of the ophthalmoscope.

Dermatology is taught by lectures and clinical illustrations. The large number of out-patients at the Massachusetts General Hospital furnishes ample opportunities for illustration.

Syphilis. — Recitations and clinical instruction.

Otology. — Lectures and clinical instruction.

Laryngoscopy, Auscultation, and Percussion. — Lectures and Demonstrations.

Diseases of the Nervous System. — Lectures and Demonstrations.

Hygiene. — Lectures.

Forensic Medicine. — Lectures.

TEXT-BOOKS.

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

| <i>Text-Books.</i> | <i>Collateral Reading.</i> |
|---------------------------------|---------------------------------|
| | ANATOMY. |
| Gray, Wilson, Leidy, Turner. | Quain (edition of 1876). |
| Hodges's Practical Dissections. | Holden's Osteology. |
| Holden's Manual. | Stricker's Manual of Histology. |
| Holden's Landmarks. | Frey's Histology. |
| | Frey's Microscopic Technology. |
| | Tyson's Cell Doctrine. |

PHYSIOLOGY.

| | |
|--|---|
| Dalton's Human Physiology. | Pavy on Food and Dietetics. |
| Foster's Text-book of Physiology. | Fick, Compendium der Physiologie. |
| Huxley's Elementary Lessons in Physiology. | Fick, Medicinische Physik. |
| | Sanderson's Hand-book for the Physiological Laboratory. |
| | Flint's Physiology of Man. |
| | Carpenter's Principles of Human Physiology. |

GENERAL CHEMISTRY.

| | |
|--|---------------------------------|
| Thorpe's Manual of Inorganic Chemistry. | Miller's Elements of Chemistry. |
| Clowe's Elementary Treatise on Practical and Qualitative Inorganic Analysis. | |

MEDICAL CHEMISTRY.

| | |
|--|--|
| Tyson's Guide to the Practical Examination of the Urine. | Ralfe, Outlines of Physiological Chemistry. |
| Reese's Manual of Toxicology. | Gorup-Besanez, Physiologische Chemie. |
| | Neubauer und Vogel, Analyse des Harns. |
| | Taylor on Poisons. |
| | Tardieu, Étude médico-légale et clinique sur l'Empoisonnement. |

MATERIA MEDICA.

| | |
|-----------------------------|-----------------------------|
| Parrish's Pharmacy. | United States Dispensatory. |
| United States Pharmacopœia. | |

PATHOLOGICAL ANATOMY.

| | |
|--|---|
| Wagner's Manual of General Pathology. | Virchow's Cellular Pathology. |
| Orth's Compend of Diagnosis in Pathological Anatomy. | Rindfleisch's Pathological Histology. |
| | Jones and Sieveking's Pathological Anatomy (Payne's edition). |
| | Wilks's Pathological Anatomy (Moxon's edition). |

THERAPEUTICS.

| | |
|----------------------------|--|
| H. C. Wood's Therapeutics. | Bartholow's Materia Medica and Therapeutics. |
| | Stillé's Therapeutics and Materia Medica. |
| | Chamber's Manual of Diet. |

OBSTETRICS.

| | |
|---------------------------------|----------------------------------|
| Playfair's System of Midwifery. | Schroeder's Manual of Midwifery. |
| | Cazeaux's Midwifery. |
| | Winckel's Diseases of Child-bed. |
| | Barker's Puerperal Diseases. |
| | Barnes's Obstetric Operations. |

THEORY AND PRACTICE.

| | |
|-------------------------------|---|
| Flint's Practice of Medicine. | Roberts's Hand-book of Theory and Practice of Medicine. |
| | Niemeyer's Text-book of Practical Medicine. |
| | Jaccoud, <i>Traité de Pathologie Interne.</i> |
| | Bennett's Clinical Lectures on the Principles and Practice of Medicine. |
| | Bristowe's Theory and Practice of Medicine. |

SURGERY.

| | |
|--------------------------------|---|
| Bryant's Practice of Surgery. | Heath's Minor Surgery and Bandaging. |
| Billroth's Surgical Pathology. | Guérin, <i>Éléments de Chirurgie Opératoire.</i> |
| | Holme's System of Surgery. |
| | Cooper's Surgical Dictionary (1872). |
| | Holden's Landmarks, Medical and Surgical. |
| | Braune's Atlas of Topographical Anatomy, translated by Bellamy. |

The tabular views on the following pages will illustrate the distribution of studies throughout the year :—

FIRST HALF-YEAR, 1878-79.

FIRST YEAR.

| Hour. | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. | Saturday. |
|-------|------------------------------|---|------------------------------|------------------------------|------------------------------|-------------------|
| 9 | Laboratories | Laboratories | Laboratories | Laboratories | Laboratories | Laboratories |
| 10 | Laboratories | Chemistry, L. or R., 1st 10 w'ks. | Laboratories | Laboratories | Chemistry, R. | Physiology, R. |
| 11 | Physiology, L. | Physiology, L. | Chemistry, L. | Laboratories | Physiology, L. | |
| 12 | Histology. | Laboratories | Laboratories | Histology. | Laboratories | Museum. |
| 1 | Anatomy, L. | Anatomy, L. | Anatomy, L. or R. | Anatomy, L. | Anatomy, R. | |
| 5 | Prac. Anat. after Jan. 1. | Prac. Anat. after Jan. 1. | Prac. Anat. after Jan. 1. | Prac. Anat. after Jan. 1. | Prac. Anat. after Jan. 1. | |

SECOND YEAR.

| Hour. | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. | Saturday. |
|-------|----------------------------------|---|-----------------------------|-----------------------------|---|---|
| 9 | M. G. H. Med. Visit. | B. C. H. Med. Visit. Bost. Disp. | Clinical Medicine, L. | M. G. H. Med. Visit. | Bost. Disp. | |
| 10 | Path. Anat. L. Aus. & Per. | Clin. Surg. L. after Dec. 1. Aus. & Per. | Aus. & Per. | Aus. & Per. | B. C. H. Surg. Visit. Aus. & Per. | M. G. H. Surg. Visit. Aus. & Per. |
| 11 | Clin. Surg. L. | | | Chemistry, L. | B. C. H. Op. | M. G. H. Op. |
| 12 | | | | Mat. Med. | Chemistry, R. | Museum. |
| 3 | Path. Hist. | Path. Anat. R. | Path. Anat. L. | Path. Hist. | Path. Anat. R. | |
| 4 | | Surgery, R. | | | Clin. Conf. | |
| 5 | Prac. Anat. till Jan. 1. | Prac. Anat. till Jan. 1 | Prac. Anat. till Jan. 1. | Prac. Anat. till Jan. 1. | Prac. Anat. till Jan. 1. | |

THIRD YEAR.

| Hour. | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. | Saturday. |
|-------|---|---|-----------------------|---|---|---|
| 9 | M. G. H. Med. Visit. Eye and Ear Infirmary. | B. C. H. Med. Visit. Bost. Disp. | Clinical Medicine, L. | M. G. H. Med. Vis. Eye and Ear Infirmary. | B. C. H. Ophthal and Otology. Bost. Disp. | Diseases of Nervous Sys. |
| 10 | Theo and Prac. L. | Clin. Surg. L. after Dec. 1. | Dermatol. Clinical. | Theo. and Prac. L. | B. C. H. Surg. Visit. | M. G. H. Surg. Visit. Diseases of Children. |
| 11 | Clin. Surg. L. | Diseases of Nerv. Sys. | Surgery, L. | Surgery, L. | B. C. H. Op Diseases of Children. | M. G. H. Op. |
| 12 | | Till Dec. Surgery, L. In Jan. Hygiene, L. | | Obstetrics, R. | Venereal Diseases. | Museum. |
| 2 | Gynæcol. L. | | Gynæcol. R. | | | |
| 3 | Obstetrics. L. | Theo. and Prac. R. | Obstetrics, L. | Ophthal. | Theo. and Prac. R. | |
| 4 | Therap. L. | Dermatol. L. | Therap. R. | Therap. L. | Clin. Conf. | |

SECOND HALF-YEAR, 1878.

FIRST YEAR.

| Hour. | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. | Saturday. |
|-------|------------------------|--------------------------|-----------------------|------------------------|-----------------------|----------------|
| 9 | Histology, till April. | Laboratory. | Laboratory. | Histology, till April. | Laboratory. | Laboratory. |
| 10 | Histology, till April. | Laboratory. | Physiology. Conf. | Histology, till April. | Chemistry. R. | Physiology. R. |
| 11 | Chemistry. L. | Physiology. L. | Laboratory. | Laboratory. | Physiology. L. | |
| 12 | Embryology, in May. | Laboratory. | Laboratory. | Embryology, in May. | Laboratory. | Museum. |
| 1 | Anatomy. L. till May. | Anat. L. or R. till May. | Laboratory. | Anatomy. L. till May. | Anatomy R. till May. | |
| 3 | Laboratory. | Laboratory. | Laboratory. | Laboratory. | Laboratory. | |
| 5 | Prac. Anat. till May. | Prac. Anat. till May. | Prac. Anat. till May. | Prac. Anat. till May. | Prac. Anat. till May. | |

SECOND YEAR.

| Hour. | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. | Saturday. |
|-------|---|--|---------------------------------------|-------------------------|---|---|
| 9 | M. G. H. Med. Visits. | B. C. H. Med. Visit. Bost. Disp. | | M. G. H. Med. Visit. | B. C. H. Bost. Disp. | Clin. Med. |
| 10 | Clin. Med. Aus. & Per. | B. C. H. Clin. Surg. till April 1. After Ap. 1, Med. Visit. Aus. & Per. | M. G. H. Surg. Vis. Aus. & Per. | Aus. & Per. | B. C. H. Surg. Visit. Aus. & Per. | M. G. H. Surg. Visit. Aus. & Per. |
| 11 | Path. Anat. L. | | Chemistry. R. | Materia Medica. | B. C. H. Op. | M. G. H. Op. |
| 12 | Surg. Conf. till April 1. Regional Anat. after April 1. | Chemistry. L. | Reg. Anat. after Ap. 1. | M. G. H. Surg. Con. | | Museum. |
| 3 | Path. Hist. | Path. Anat. R. | Path. Anat. L. | Path. Hist. | Path. Anat. R. | |
| 4 | | Surgery R. | Clin. Conf. | | | |

THIRD YEAR.

| Hour. | Monday. | Tuesday. | Wednesday. | Thursday. | Friday. | Saturday. |
|-------|--|---|---|--|--|--|
| 9 | M. G. H. Med. Visit. Eye and Ear Infirmary. | B. C. H. Med. Visit. Bost. Disp. | Clinical Dermatol. Clinical Gynæcol. | M. G. H. Med. Vis. Dis. of Nerv. Sys. | B. C. H. Ophthal. Clin. Otol. Eye and Ear Infirmary. | Clin. Med. Clin. Gynæ. |
| 10 | Clin. Med. | B. C. H. Clin. Surg. till April 1. After Ap. 1, Med. Vis. | M. G. H. Surg. Vis. | Ophthal. | B. C. H. Surg. Visit. Bost. Disp. | M. G. H. Surg. Visit. Dis. of Children. |
| 11 | Theo. and Prac. L. | | M. G. H. Op. | Theo. and Prac. L. | B. C. H. Op. | M. G. H. Op. |
| 12 | Surg. Conf. till April 1. | | Hygiene after Apr. 1. | Ment. Dis till May. | | Museum. |
| 3 | Obstetrics. R. | Theo. and Prac. R. | Obstetrics L. | Obstetrics L. | Theo. and Prac. R. | |
| 4 | Therap. L. | Dermatology | Clin. Conf. | Therap. R. | Therap. L. | Syphilis after Ap. 15. |

CLINICAL ADVANTAGES.

The Medical department of the University is established in Boston, in order to secure those advantages for Clinical Instruction and for the study of Practical Anatomy which are found only in large cities.

There are Hospital visits or operations daily.

The Massachusetts General Hospital. — During the past year, 1,847 patients were treated in the wards, and 18,004 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. The opportunities for becoming acquainted with general surgery are very great. 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, Laryngoscopy, Electro-therapeutics.

The Hospital is adjacent to the Medical College, and its wards are open to the students on four days in the week.

The City Hospital. — During the past year, 4,334 cases were treated in its wards, and 9,658 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. These include general surgical, and also ophthalmic operations. 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 in the first half-year, and three times a week in the second half-year, 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 Massachusetts Charitable Eye and Ear Infirmary. — The eight 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.

The Boston Dispensary. — Forty-one thousand patients were treated at this Public Charity during the past year. Students have excellent opportunities to see minor surgery, and many of the diseases of children, and to practise auscultation and percussion.

Hospital Appointments.—Twenty or more students are selected annually for House Officers of the various Hospitals. Appointments to the Boston Lying-in Hospital are for a term of four months.

EXAMINATIONS.

The regular examinations are held in the following order:—

At the end of the first year: Anatomy, Physiology, and General Chemistry.*

At the end of the second year: Medical Chemistry, Materia Medica, and Pathological Anatomy.

At the end of the third year: Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

The regular examinations are held at the end of each year in June; and a week before the opening of the School in September, on the studies of the preceding year.†

No student shall be allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty. No student shall be allowed to present himself for examination in any branch, without notifying the Dean by letter that he intends to do so, one month before the time when the examination is to be held.

The examinations are conducted mainly in writing. No student will receive his degree until he has passed a satisfactory examination in all the above-mentioned subjects, and presented a certificate from the Demonstrator of Anatomy that he has satisfactorily dissected the three parts of the body. Those who fail in any subject may present themselves in that subject again, at the next regular examination. The regular examinations for the year 1878-79 will begin June 9th and September 22d.

The examinations for admission are held at the Medical School in June and September, on the Monday preceding the last Wednesday in those months, at 10 A.M.

DIVISION OF STUDENTS.

Students are divided into three classes, according to their time of study and proficiency.

Students may be admitted to advanced standing in the regular course; but all who apply for admission into the second or third year's class must pass an examination at the beginning of the year in the branches already pursued by the class to which they seek admission, and furnish a satisfactory ‡ certificate of time spent in medical studies. No student shall advance with his class, or be admitted to advanced standing, until he has

* See foot-note on page 11.

† The June examination is for those only who are members of the School at the time, and for those entitled to apply for the degree.

‡ Certificates from teachers who practise any peculiar or exclusive system of medicine are not accepted.

passed the required examination in the studies of the year, or a majority of them; nor shall he become a member of the third class until he has passed all the examinations of the first, in addition to a majority of those of the second, year.

Students who do not intend to offer themselves for a degree will, however, be received for any portion of the course.

Any student may obtain, without an examination, a certificate of his period of connection with the School.

REQUIREMENTS FOR A DEGREE.

Every candidate must be twenty-one years of age, and of good moral character; must give evidence of having studied medicine three full years; have spent at least one continuous year at this School; have presented a satisfactory thesis; and have passed the required examinations.

Theses of conspicuous merit are mentioned with honor, or read, at the University Commencement.

The degree of Master of Arts is open to graduates of the School who are also Bachelors of Arts, and who pursue an approved course of study in Medicine for at least one year after taking the degree of Doctor of Medicine.

LIBRARIES.

The library at the Medical College is open to the student on the deposit of five dollars, to be refunded to him when he may desire, after returning all books.

The College Library at Cambridge is open to the students of the Medical School.

The Boston Public Library, which contains a large collection of medical books, may also be used by students recommended by the Dean.

BOYLSTON MEDICAL SOCIETY.

This society, composed of medical students, meets at stated intervals for the discussion of medical topics, and is presided over by a physician selected by the members. Prizes, in money or books, are awarded annually to the writers of essays judged worthy of such distinction by a committee of physicians selected for that purpose by the society.

FEEES AND EXPENSES.

For matriculation, five dollars; for a year, two hundred dollars (if in two payments, at the first, one hundred and twenty dollars; at the second, eighty dollars); for a half-year alone, one hundred and twenty dollars; for graduation, thirty dollars. 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 Massachusetts, is required. A copy of such bond will be sent on application to the Secretary of the Faculty. To

students depositing these bonds, term-bills will be presented at 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 shall 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 subsequently received their bond from the Treasurer. No degree can be conferred till all dues to the School are discharged. The student's general expenses may be reduced, in accordance with his means, to the standard which prevails in other cities. The janitor of the Medical College will always have a list of boarding-houses in the vicinity of the college building, varying in their rates of charges from five to ten dollars a week.

PECUNIARY AID.

Four yearly scholarships have been established, of the value of \$200 each, open to meritorious students who have been at the School for one or two years. Only those needing assistance are expected to apply, and from such those holding the highest rank will have the preference.

Laboratory assistants to the Professors of Physiology and Chemistry are annually appointed from such deserving students as need aid. Students holding these positions are exempt from the payment of the fee for tuition during their term of service.

Students on joining the school must enter their names with the Secretary of the Faculty.

COURSE OF STUDY FOR GRADUATES.

For the purpose of affording to those who are already graduates in medicine additional facilities for pursuing clinical, laboratory, and other studies, for which they had not previously found leisure, in such subjects as may specially interest them, and as a substitute in part for the opportunities heretofore sought for in Europe, the Faculty have established a post-graduate course, of which the following is a programme. The fee in each branch is for a single half-year.

Histology.—The various methods of examining the different tissues are employed, and opportunities for original research are offered. Fee twenty dollars.

Physiology.—Opportunities for original investigation in the Physiological laboratory. Fee thirty dollars.

Medical Chemistry.—Practical instruction in the Chemical laboratory in the analysis of the urine and other animal fluids in health and disease, and of poisons; examination of blood-stains and other objects connected with medico-legal investigations, with the application of the microscope to these processes. General analysis, also, if desired. Laboratory fee thirty dollars.

Pathological Anatomy. — Practical instruction in Pathological Histology and the examination of specimens in the Microscopical laboratory; and opportunity for witnessing and making autopsies. Fee twenty dollars.

Surgery. — A practical course of operative surgery, and instruction in the application of bandages and apparatus. Fee twenty-five dollars.

Auscultation, Percussion, and Laryngoscopy practically taught, and diseases of the larynx demonstrated by the aid of the oxyhydrogen light. Fee twenty dollars.

Ophthalmology. — Clinical instruction, lectures on diseases of the eye, and demonstrations of the methods of performing operations. Exercises in the use of the ophthalmoscope. Fee twenty-five dollars.

Otology. — Lectures and clinical instruction on diseases of the ear. Fee fifteen dollars.

Dermatology. — Clinical instruction in diseases of the skin, illustrated by patients in this department of the Massachusetts General Hospital Lectures. Fee twenty-five dollars.

Syphilis. — Clinical instruction at the Boston Dispensary, and at the City Hospital (second half-year). Fee fifteen dollars.

Diseases of the Nervous System. — Practical illustrations of the application of various forms of electricity. Lectures. Fee fifteen dollars.

Gynæcology. — Clinical instruction in diseases of women. Fee ten dollars.

Obstetrics. — Cases supplied. A course of operative obstetrics. Fee twenty dollars.


Those pursuing this course may elect the studies to which they will give their attention, and allot the time they will devote to each. They will be exempt, unless at their option, from examinations, and may obtain a certificate of attendance on this course of advanced study. On payment of the full fee for the course, they will have the privilege of attending any of the other exercises of the Medical School, the use of its laboratories and library, and all other rights accorded by the University.

Graduates of other medical schools may obtain the degree of M.D. at this University after a year's study in the graduates' course. The required examinations may be passed in such order as is desired, but only at the stated seasons.

| | |
|---------------------------------|-------|
| The fee for a year is | \$200 |
| “ for a half-year | 120 |

For any of the special courses, such fees as are above specified.

For further information or catalogues, address DR. R. H. FITZ, *Secretary*, 108 Boylston Street, Boston, Mass.

 The Medical College is on North Grove Street, Boston.

EXAMINATION PAPERS.

(June Examination, 1878.)



First Year's Studies.

ANATOMY. — PROF. HOLMES.

Describe :—

1. Adipose tissue.
2. Mucous membranes.
3. Muscular fibre.
4. The scapula.
5. The intervertebral disks.
6. The obliquus externus.
7. The inferior dental artery.
8. The thyroid axis.
9. The Eustachian valve.
10. The pulmonary veins.
11. The long saphenous vein.
12. The fourth ventricle.
13. The optic nerve.
14. The phrenic nerve.
15. The superficial cervical plexus.
16. The pharynx and œsophagus.
17. The suprarenal capsules.
18. The gall-bladder.
19. The duct of the testis.
20. The Graafian vesicle and corpus luteum.

PHYSIOLOGY. — PROF. BOWDITCH.

1. Whence is the force manifested by living bodies derived ?
2. Describe the three classes of organic nutriments, and give examples of each derived from both the animal and vegetable kingdoms.
3. How does the application of heat, as in cooking, affect the digestibility of meat ?
4. Describe the digestion and absorption of fat. Illustrate by a diagram of a villus.
5. Point out the resemblances between blood and muscular tissue.
6. What are some of the causes of variation in the rate of the normal heart beat ?
7. How do the arteries, capillaries, and veins differ from each other in respect to the tension and rapidity of the blood flowing through them ?
8. Describe the resemblance and the difference between a muscle and a steam engine regarded as machines for performing mechanical work.

9. What are the functions of ciliated epithelium in the human body?
10. Describe the glycogenic function of the liver.
11. Why does moisture in the air make warm weather more oppressive?
12. Why does a child need more food in proportion to its size than an adult?
13. What is the rate of transmission of nerve-force, and how is it determined?
14. What is the function of the third pair of cranial nerves?
15. Explain myopia and hypermetropia, and give a diagram showing the course of the rays of light.
16. What is the function of the Eustachian tube?
17. What three motor nerves are brought into action in mastication?
18. What is the cause of death in asphyxia?
19. What is the probable function of the cerebellum?
20. What are the layers of the blastoderm, and what organs and tissues are formed from each?

GENERAL CHEMISTRY.—INSTRUCTOR HILLS.

[In addition to the following questions, a written report of the analysis of a solution containing inorganic substances was required.]

1. State the laws of definite and multiple proportions, and give examples illustrating each. How does Dalton's atomic theory explain them?
2. Describe the preparation and properties of hydrogen, nitrogen, chlorine, nitrogen monoxide, nitric acid.
3. Composition, mode of preparation, properties, and uses of Epsom salts, corrosive sublimate, vermilion, alum, litharge;
4. Chloral hydrate, oxalic acid, potassium ferrocyanide, collodion, benzole.
5. Describe the properties of tin, and give the composition of its chief alloys.
6. Write the reaction of ammonium sulphide on an aluminic and on a ferric salt, and explain the cause of the difference.
7. How would you distinguish chemically between solutions of magnesium sulphate, zinc sulphate, and oxalic acid?
8. A solution contains the nitrates of lead, calcium, and potassium. Write brief notes of the analysis.
9. Barium chloride gives no precipitate in a neutral solution, but silver nitrate gives a white one; what acid radicals may be present?
10. To what class of compounds do the alcohols belong; the fat acids; the simple ethers; the compound ethers; to what type may these compounds be referred?
11. Give a brief sketch of the general chemistry of the soaps, solid fats, fixed and volatile oils.
12. What is the source of tartaric acid? How is it obtained in the free state? Write the symbol of the acid and of a few important tartrates, and state their uses.

Second Year's Studies.

MEDICAL CHEMISTRY.—PROF. WOOD.

[In addition to the following questions, a written report of the analysis of a specimen of urine, and of a mixed organic and inorganic poison, was required.]

1. What causes may give rise to dark-colored urine ?
2. Character of the urine in interstitial nephritis ?
3. Character of the urine in hæmoglobinuria ? How detect the hæmoglobin ?
4. What inferences may be drawn from urine having the following characteristics ? Why ?

(a) Amount of urine in 24 hours = 1770 cub. cent. Color = slightly pale. Reaction = acid. Sp. Gr. = 1014. Amount of sediment = considerable.

Uph. = n. \bar{U} . = —. Cl. = sl. —. E.P. = sl. —.
 Ind. = sl. —. \bar{U} . = n. Sf. = n. A.P. = sl. —.
 Albumen = 0.3%
 Bile and sugar absent.

Sediment = Much blood, little free renal epithelium, hyaline and granular casts, few blood and epithelial casts, very few fatty casts.

(b) Amount of urine in 24 hours = 2400 cub. cent. Color = very pale. Reaction = acid. Sp. Gr. = 1010. Amount of sediment = considerable.

Uph. = —. Cl. = —. \bar{U} . = —. E.P. = —.
 Ind. = n. Sf. = n. \bar{U} . = sl. +. A.P. = +.
 Albumen = 0.75%
 Bile and sugar absent.

Sediment = hyaline and granular casts, normal blood and pus, and an excess of vaginal epithelium.

5. Character of the sediment in a case of urethritis ?
6. How distinguish between hexagonal uric acid crystals and cystin ? Between prismatic crystals of triple phosphate, calcic oxalate, uric acid, and hippuric acid ?
7. Analysis of a mixed uric acid and CaO calculus ?
8. How recognize a case of chronic arsenical poisoning ?
9. What analogies do we find, chemically and physiologically, between phosphorus, arsenic, and antimony ?
10. How far are morphia and atropia antagonistic ?
11. Give all of the tests for morphia and meconic acid.
12. How recognize a case of digitalis poisoning ? How detect it in animal acids and tissues ?

MATERIA MEDICA.—INSTRUCTOR MARKOE.

1. What is the U. S. Pharmacopœia, and how does it differ from a dispensatory ?
2. What is a Galenical preparation ?
3. In \mathfrak{z} j. how many grams ?
4. In f \mathfrak{z} j. how many c.c. ?
5. In one grain how many milligrams ?

II. Give the botanical and geographical sources, active principles, important preparations, and doses of Opium;

III. 1. Cinnamon; 2. Cardamon;

IV. Camphor;

V. 1. Gentian; 2. Nux Vomica.

VI. Give the officinal Latin name, composition, and doses (in metric system) of: 1. Compound Cathartic Pill; 2. Huxham's Tincture of Bark; 3. Dover's Powder.

VII. 1. By what tests would you prove a sample of ether to be of proper strength and clean enough for use as an anæsthetic? 2. What is the per cent of alcohol in Sherry, Hock, Ale, Whiskey, and Brandy?

VIII. Give the doses (in metric system) of: 1. Potassii Iodid.; 2. Ext. Veratri Viridis Fl.; 3. Ext. Ergotæ Fl.; 4. Ferri Sulphas; 5. Ferri et Quiniæ Citras; 6. Cupri Sulphas (emetic); 7. Ext. Sennæ Fl.; 8. Tinct Ferri Chloridi; 9. Resina Podophylli; 10. Elaterium.

IX. 1. Write a prescription for an emulsion containing 25% of Cod Liver Oil. 2. Correct the following: \mathcal{R} Tinct. Ferri Chloridi, $f\mathfrak{z}$ iv. Ext. Cinchonæ Fl., $f\mathfrak{z}$ j. Syrup Zingiber ad., $f\mathfrak{z}$ iv. Misce. 3. Tinct. Opii, 30 c.c. Chloroformi, 20 c.c. Mist. Cretæ, 40 c.c. M. Sig. Two tablepoonfuls. 4. \mathcal{R} Resinæ Podophylli, gr. xx. Ext. Belladonnæ, gr. xv. Ext. Colocynth. Comp., gr. xxx. M. ft. pil. No. x. Sig. One at night. 5. \mathcal{R} Sodii Boratis, 4 gm. Acidi Tannici, 5 gm. Muc. Acaciæ, 30 gm. Aquæ Rosæ ad., 100 c.c. M. Sig. "Gargle."

PATHOLOGICAL ANATOMY.—PROF. FITZ.

1. Explain the use of the term "shock."
2. Under what conditions is amyloid material found?
3. The method of origin of thrombi.
4. The anatomical changes met with in pernicious anæmia.
5. Hygroma of the dura mater; its method of origin.
6. The appearances which suggest that intracranial hæmorrhage is the result of violence.
7. The anatomical changes giving rise to insufficiency of the valves of the heart.
8. The origin and appearances of abscesses in the heart.
9. The relation between anatomical changes and the terms "croup" and "diphtheria."
10. The method of origin of pulmonary abscesses.
11. The relation between phthisis and tuberculosis of the lungs.
12. The alterations of the stomach occurring in infective diseases.
13. The causes and appearances of strangulation of the intestine.
14. The causes of enlargement of the spleen.
15. The appearance of lymphosarcoma of the spleen.
16. The processes giving rise to a change in the color of the liver.
17. The appearances of acute miliary tuberculosis of the liver.
18. The causes and significance of a small kidney.
19. The appearances suggesting amyloid degeneration of the kidney.
20. The method of formation of diverticula of the bladder.

Third Year's Studies.

THERAPEUTICS. — PROF. EDES.

1. Under what circumstances would you wish to use a non-saccharine diet? *What would such a diet consist of?* Mention some anti-scorbutics.
2. What is the physiological action of alcohol in its various forms and doses? Is it a food? Why?
3. Digitalis.
4. How does cod liver oil act? Iron? Write prescriptions for them (two each).
5. Strychnia, chloral hydrate, bromide of potassium.
Compare their physiological, toxic, and therapeutic actions.

OBSTETRICS. — PROF. REYNOLDS.

1. What do the terms "External conjugate," "Diagonal conjugate" and "True conjugate," mean? Describe the method of taking each of these measurements, stating accurately the points to be chosen at either end.
2. Give the position and the function of the Wolffian body. How early in intra-uterine life has it ceased to exist? What remains of this structure persist in adult life?
3. Describe the form and dimensions of a virgin uterus. Give the alterations in shape which pregnancy has effected at term; the proportion which the fundus then bears to the rest of the organ; the contour of the anterior wall, that of the posterior surface; the position of the tubes, of the round ligaments. What is the general outline at six months?
4. At the close of nine lunar months, what information will be gained from external palpation, provided the case presents no unusual obstacles? Give the details of this procedure.
5. Describe the four varieties of presentation of the trunk. How will you diagnose them one from another (it being understood that the arm has not come down)? An arm having prolapsed in this presentation, how will you make out to which side of the child it belongs?
6. How will a primary apoplectic attack during labor differ from a paroxysm of eclampsia?
7. For what purposes may ergot be used in the practice of obstetrics? What condition of the woman renders this drug inoperative?
8. Six weeks before the expected date of delivery, a primipara has well-marked albuminuria. What prophylactic management and treatment will you direct?
9. Describe in detail the operation of craniotomy, and state the indications for resorting to it. Under what conditions is decapitation to be preferred to craniotomy?
10. Give the forward flexions of the unimpregnated uterus, using their appropriate names; and state the causes, symptoms, differentiations, means of diagnosis, prognosis, and treatment of each.

SURGERY.—PROF. BIGELOW.

1. Housemaid's knee.
 2. Hydrocele.
 3. Cancer of the breast.
 4. Hard and soft chancre.
 5. How to pass the catheter.
 6. Dislocation of the hip.
 7. Amputation at the shoulder joint.
 8. Cataract.
 9. Antiseptic method; its theory.
 10. „ „ ; its application.
-

CLINICAL SURGERY.—PROF. CHEEVER.

[In addition to the following questions, the clinical report of a surgical case is required, to be presented on or before June 1.]

[One hour and a half is assigned for answering the following questions.]

1. A boy of five years had a heavy gate fall upon his leg. Fracture of both bones, and a small compound opening. Joints not involved. The leg was set. The opening closed without suppuration. A large effusion of blood remained in the calf. He did well for ten days. Then he had high temperature, quick pulse, rapid breathing, soft cough, nose bleed, constant diarrhœa, no marked chills, no eruption, no change in the leg. He died in less than a week after these symptoms. There was no autopsy. There were none of the physical signs of pneumonia or pleurisy or pericarditis. What do you think he died of?

2. A young man used a strong injection in the acute stage of a gonorrhœa. There followed frequent and painful micturition, straining at stool, weight and bearing down, a hard and tender lump in the perineum. What is your diagnosis, treatment, and prognosis of this condition?

THEORY AND PRACTICE.—PROF. MINOT.

1. Give an account of diabetes mellitus.
2. What are the diagnostic signs of typhus as distinguished from typhoid fever?
3. What are the symptoms and the treatment of cerebro-spinal meningitis.
4. Give an account of relapsing fever.
5. Give an account of pulmonary apoplexy.
6. What are the symptoms and the treatment of angina pectoris?
7. Of what diseases or conditions is jaundice a symptom?
8. What are the causes, symptoms, and treatment of intestinal hemorrhage?
9. Give an account of paralysis agitans.
10. What are the principal causes of neuralgia?

CLINICAL MEDICINE. — PROF. ELLIS.

[Give the differential diagnosis, the prognosis, and the treatment of as many of these cases as the time will allow, discussing them in the order in which they are arranged. Assume that symptoms not mentioned are wanting; but, as omissions, intentional or not, may occur, state them, if essential. Success will depend more upon the quality than upon the quantity of the work. The intelligent discussion of the cases will have more weight than a hasty and inconclusive though correct diagnosis.]

1. A clergyman 60 years old, of great intellectual power, gave the following account of his case. No cerebral symptoms except sleeplessness, to which he had been subject since he began to preach, but it was under control, unless he was over-excited by mental labor, the effects of which were most marked when it occupied the evening. Eyes weak for forty years, but no change during this time, the affection being such as to prevent their use in the evening. Though the voice is now clear, its use in lecturing or preaching is, at times, when he is debilitated, somewhat painful and requires much exertion. Appetite good, but two or three hours after eating he has a kind of epigastric pain or feeling of heat, not dependent upon the amount or character of the food, unless it be worse when he eats little. Ice-water seems to touch a "raw spot." Bowels constipated since early childhood. Muscular strength good. For many years he has been much troubled by a sensation over the whole body as if pricked by innumerable needles, and this still returns from time to time when he is debilitated, though very limited in extent. In 1874, while much exhausted by mental labor, went to a watering-place where he was put upon low diet, reducing remedies, and frequent baths. At the end of four months, while seated at the breakfast table was attacked with vertigo, and began to talk with great volubility, but incoherently. For three days, which were a blank to him, his condition excited much alarm, but at the end of this time his mind became clear, and there has been no return of the symptoms since. Numbness of the hands and feet at the time of the attack and of feet occasionally now, when exhausted, accompanied perhaps by prickling or a feeling as if wet.

Within the past two years has had five attacks of pain in the upper part of the abdomen without any assignable cause, very severe, accompanied by distention and general perspiration. One of these came on after conducting an examination four hours in length, and another after eating hastily; but, with these exceptions, no cause could be assigned. The pain generally began at nine P.M. and lasted till midnight. No other symptoms were noticed before, during or after the attacks of pain.

2. Married woman 43 years old. Mother's family "consumptive" Mother and sister died of catarrhal pneumonia, father of cancer. Never had a physician till Sept. 3, 1877, though for a year has had some dull pain in the left side of the abdomen and a burning sensation in the lower part of the chest not particularly connected with meals. In September, 1877, had a severe attack of pain in the region of the stomach, which passed off without vomiting. On Jan. 9, 1878, after a severe shock on the previous day from falling on the ice, rode perhaps a mile in an omnibus, and was again attacked with pain, which lasted but a few hours, but was sufficiently severe to call for a subcutaneous injection of morphine. On February 19, had another attack of a similar character, accompanied by vomiting of what was called phlegm. These symptoms continued very troublesome until March 1. The pain returned at first every third day and almost always at night, then every second day, and then every day; and as it became more frequent it showed a disposition to come on

in the morning, but always about three hours after a meal, but not after each meal. As opiates were used to quiet it, the duration cannot be stated. Vomited but once when there was no pain, and then after taking some beef tea, the vomitus being green and bitter. No blood at any time. Often noticed eructations of gas after the pain. When seen, patient had been nourished mostly by injections for eight days, though she had borne a little rice and barley water. Had been obliged to lie upon the left side, as a pulling sensation was felt if she lay upon the right side or back. No chill nor fever. During this attack, transient yellowness of skin was reported, but none of conjunctiva. The color appeared and disappeared suddenly. The urine, though high-colored, never had a greenish tinge. No acceleration of pulse even when pain was most severe. Patient looked well. A bitter taste in mouth. Tongue covered with a thin whitish fur. Appetite good. Bowels always regular before the attack. Catamenia ceased nearly two years before illness. Had lost some flesh, but strength was good. No pain nor other abnormal condition in epigastrium.

3. Married woman 40 years old, who had never been pregnant. Never very strong. Gave a very unsatisfactory account of herself; but the following facts were obtained from her and the attending physician. At the age of 21, was very nervous, and was troubled with indigestion, and for eighteen years had had tenderness in the region of the left breast. For a number of years had been treated more or less for uterine disease. For a year, and perhaps longer, had noticed what appeared to be a deposit of pus in the urine, and since then had had symptoms referable to the urinary tract. Micturition frequent, intervals varying from one to five hours, but rarely so short as an hour. Daily amount of urine varied from one to seventeen ounces. Pain in the hypogastrium and in the region of the left kidney. This pain in some instances increased when the urine became clearer, and diminished with the increasing opacity, and when there was a return of pain it would perhaps be felt over the whole abdomen. Her condition varied from day to day, improving as the pain diminished. Chilliness, but never any severe chills. Some elevation of temperature at times, amounting perhaps to 102° in the evening. During September and October, the fever was pretty continuous. Constantly increasing weakness was the prominent sign, accompanied by more or less fever. On December 2, fluid having been detected in the left side of the chest, from sixteen to twenty ounces were drawn off, and there was slight improvement. An examination of the urine a year ago showed much pus and albumen, the amount of the latter varying with that of the pus. S. G. 1012. Several large casts were found for the first time a month ago. Complained of soreness through the abdomen to the back. Had lost much flesh, and was confined to her bed by weakness. The small amount of food taken was well borne. Laxative medicine was required every other day. No catamenia for five or six months.

PAPERS USED AT THE EXAMINATION
FOR ADMISSION. — JUNE, 1878.

—◆—
LATIN.

TRANSLATE :—

Quae cum ita sint, Catilina, perge quo coepisti : egredere aliquando ex urbe ; patent portae ; proficiscere : nimium diu te imperatorem tua illa Manliana castra desiderant, Educ tecum etiam omnes tuos ; si minus, quam plurimos ; purga urbem. Magno me metu liberabis, dum modo inter me atque te murus intersit : nobiscum versari jam diutius non potes ; non feram, non patiar, non sinam. Magna dis immortalibus habenda est atque huic ipsi Jovi Statori, antiquissimo custodi hujus urbis, gratia, quod hanc tam taetram, tam horribilem tamque infestam rei publicae pestem toties jam effugimus : non est saepius in uno homine summa salus periclitanda rei publicae. — CICERO, CAT. I. 5.

OR :—

Hisce omnibus, Catilina, cum summa rei publicae salute, cum tua peste ac pernicie cumque eorum exitio, qui se tecum omni scelere paricidioque junxerunt, proficiscere ad impium bellum ac nefarium. Tu, Juppiter, qui iisdem quibus haec urbs auspiciis a Romulo es constitutus, quem Statorem hujus urbis atque imperii vere nominamus, hunc et hujus socios a tuis ceterisque templis, a tectis urbis ac moenibus, a vita fortunisque civium [omnium] arcebis, et homines bonorum inimicos, hostes patriae, latrones Italiae, scelerum foedere inter se ac nefaria societate conjunctos, aeternis suppliciis vivos mortuosque mactabis. — CICERO, CAT. I. 13.

TRANSLATE :—

Diverso interea miscentur moenia luctu,
Et magis atque magis, quamquam secreta parentis
Anchisae domus arboribusque oblecta recessit,
Clarescunt sonitus, armorumque ingruit horror.
Excutior somno, et summi fastigia tecti
Ascensu supero, atque arrectis auribus adsto :
In segetem veluti cum flamma furentibus austris
Incidit, aut rapidus montano flumine torrens
Sternit agros, sternit sata laeta boumque labores,
Praecipitesque trahit silvas, stupet inscius alto
Accipiens sonitum saxi de vertice pastor.

VIRGIL, AEN. II. 298-308.

OR :—

Portus ab accessu ventorum immotus et ingens
Ipse ; sed horrificis juxta tonat Aetna ruinis,
Interdumque atram prorumpit ad aethera nubem,
Turbine fumantem piceo et candente favilla,
Attollitque globos flammaram et sidera lambit ;
Interdum scopulos avolsaque viscera montis

Erigit eructans, liquefactaque saxa sub auras
 Cum gemitu glomerat, fundoque exaestuat imo.
 Fama est Enceladi semiustum fulmine corpus
 Urgeri mole hac, ingentemque insuper Aetnam
 Impositam ruptis flammam exspirare caminis ;
 Et fessum quotiens mutat latus, intremere omnem
 Murmure Trinacriam, et caelum subtexere fumo.
 Noctem illam tecti silvis immania monstra
 Perferimus, nec, quae sonitum det causa, videmus.
 Nam neque erant astrorum ignes, nec lucidus aethra
 Siderea polus, obscuro sed nubila caelo,
 Et Lunam in nimbo nox intempesta tenebat.

VIRGIL, AEN. III. 570-587.

FRENCH.

TRANSLATE :—

Si j'étais aussi jeune que vous, j'aimerais à chanter, à jouer, à danser ; mais je suis vieux, moi, et aujourd'hui, mes enfants, je ne chante plus, je ne danse plus, je ne joue plus comme vous.

Je me flatte de réussir dans une grande entreprise d'intérêt général.

Répondant toujours, confondant tout, c'était bien l'enfant le plus désagréable de notre classe.

Auparavant, nous demeurions à Philadelphie ; mais maintenant nous habitons la Nouvelle Orléans.

Le vieux comte de Nordstern aimait beaucoup la vérité et la justice. Quelques hommes méchants étaient pour cette raison si animés contre lui, qu'ils jurèrent ensemble de le faire mourir. Ils payèrent effectivement un meurtrier qui devait l'assassiner la nuit suivante.

Le noble comte ne s'attendait pas au danger qui le menaçait. Ses neveux, enfants très-aimables, vinrent le soir auprès de lui. Content et satisfait au milieu d'eux, il leur donna des pommes, des poires, et des noix. Lorsqu'ils furent sortis, il voulut se livrer au repos, se recommanda à la protection de Dieu et s'endormit dans la plus grande sécurité. Cependant à minuit le meurtrier, qui s'était secrètement introduit dans le palais, entra doucement dans la chambre. Le bon comte dormait. Une petite lampe de nuit brûlait auprès de son lit. Armé d'un poignard, le meurtrier lève le bras et s'approche de lui.

Mais tout à coup un craquement si bruyant se fit entendre dans la chambre que le comte se réveilla. Il se lève, voit le meurtrier, saisit un pistolet qui était suspendu près de son lit à la muraille, et le couche en joue. Le scélérat eut peur, laissa tomber son poignard et demanda grâce. Il fut obligé de se constituer prisonnier et de découvrir ses complices. Le comte vit bientôt ce qui avait produit le bruit qu'il avait entendu. Il s'aperçut qu'un des enfants avait par hasard laissé tomber une coquille de noix sur le parquet, et que le meurtrier avait marché dessus. Bon Dieu, s'écria-t-il, c'est ainsi que sous ta providence une coquille de noix a sauvé ma vie et livré des malfaiteurs au glaive de la justice.

GERMAN.

TRANSLATE INTO ENGLISH:—

1. Es war einmal ein Müller, der war arm, aber er hatte eine schöne Tochter. Nun traf es sich, daß er mit dem Könige zu sprechen kam, und um sich ein Ansehen zu geben, sagte er zu ihm: „ich habe eine Tochter, die kann Stroh zu Gold spinnen.“ Der König sprach zum Müller: „das ist eine Kunst die mir wohl gefällt; wenn deine Tochter so geschickt ist, wie du sagst, so bring sie morgen in mein Schloß, da will ich sie auf die Probe stellen.“ Als das Mädchen kam, führte er es in eine Kammer, die ganz voll Stroh lag, gab ihr Rad und Haspel und sprach: „jetzt mach' dich an die Arbeit, und wenn du diese Nacht durch bis morgen früh dieses Stroh nicht zu Gold verspinnen hast, so mußt du sterben.“ Darauf schloß er die Kammer selbst zu, und sie blieb allein darin.

2. Es war einmal ein kleiner Knabe, der hatte sich erkältet; er war ausgegangen und hatte nasse Füße bekommen. Niemand konnte begreifen, woher er sie erhalten hatte, denn es war ganz trockenes Wetter. Nun entkleidete ihn seine Mutter, brachte ihn zu Bette und ließ die Theemaschine herein bringen, um ihm eine gute Tasse Fliederthee zu bereiten, denn der Thee erwärmt. Zu gleicher Zeit kam auch der alte, freundliche Mann zur Thüre herein, der ganz eben im Hause wohnte und allein lebte; denn er hatte weder Frau noch Kinder, liebte aber die Kinder und wußte so viele Märchen und Geschichten zu erzählen, daß es eine Lust war.

 PHYSICS.

1. Explain the division of matter into substances, molecules, and atoms. Illustrate by an example.
2. Define stable and unstable equilibrium. Give examples of each.
3. What is the essential difference between a solid and a liquid?
4. Define the unit of work, and show how to find the amount of work done in lifting a body to any given height.
5. Define the coefficient of linear expansion of a substance.
6. Principal differences between high-pressure and low-pressure engines.
7. Define the following terms: a ray of light, a pencil of rays, divergent pencil, convergent pencil, pencil of parallel rays.
8. Where does the focus of divergent rays proceeding from a point near a concave spherical mirror lie?
9. Explain magnetic induction.
10. What is the distinction between electro-positive and electro-negative elements?





