THE LARGEST OLD BOOK STORE IN AMERICA!

LIBRARIES PURCHASED.

We want all the Old Books we can find. If you have a large library or a small parcel of books you do not want, send us your address, and we will call and examine them. We are always prepared to buy and pay the cash at once, whether it amounts to five dollars or five thousand.

SCHOOL BOOK DEPARTMENT.

We have a well-lighted room in our building devoted to the sale of School Books, where you can find all the School Books used in the various schools and colleges, not exactly new, but just as good for use, and much lower in price. You would be astonished to find how much money you could save by buying your School Books at our Store.

MAGAZINE DEPARTMENT.

We have back numbers of all the leading Magazines—Harper, Scribner's, Atlantic, Galaxy, Peterson's, Lippincott, Knickerbocker, Catholic World, Little's Living Age, Godey's Lady's Book, Princeton, etc., etc. If you want to make up your sets, you can do so at about one-third the regular price.

MAILING DEPARTMENT.

If you cannot get to the city, write, stating what book you want, and we will answer immediately. It only costs a trifle extra to send books by mail, and we make a specialty of filling mail orders, fully appreciating the value of prompt and careful attention to the demands of every correspondent.

GENERAL INVITATION.

In conclusion, if you want a book, no matter when or where published, call at our store; we have, without exception, the largest collection of Old Books in America, all arranged in Departments, each Department under the charge of an experienced person, who is always willing and ready to give any information in relation to our immense stock which our customers may desire.

Any person, having the time to spare, is perfectly welcome to call and examine our stock of Two or Three Hundred Thousand volumes, without feeling under the slightest obligation to purchase.

LEARY'S OLD BOOK STORE,
FIRST STORE BELOW MARKET ST. No. 9 South 9th St., Philadelphia, Pa.
THE GIRARD

2020 Chestnut Street

Life Insurance, Annuity, and Trust Co.

OF

PHILADELPHIA.

INcorporated 1836. Charter Perpetual.

Insures Lives and Grants Annuities.
Acts as Executor, Administrator, Guardian, Trustee, or Committee
Receives money on deposit at interest, subject to draft by check without notice.
Stores chests of silver under guarantee.
Rents boxes in burglar-proof vaults for safe keeping of securities and other valuables.

OFFICERS.
President, JOHN B. GARRETT.
Treasurer, HENRY TATNALL.
Actuary, WILLIAM P. HUSTON.
INSTRUMENTS OF PRECISION.

HELLER & BRIGHTLY,
Engineering, Surveying, and Astronomical Instruments,
S. E. cor. Spring Garden and Ridge Avenue,
PHILADELPHIA, PA.

The Field Surveying instruments used in the Civil Engineering Department of the University were furnished by Messrs. Heller & Brightly.

A Pamphlet containing tables and maps useful to Civil Engineers and Surveyors will be mailed to any address, postpaid, on application.

ESTABLISHED 1820.

YOUNG & SONS,
Engineering & Surveying Instruments,
45 North Seventh St.,
PHILADELPHIA.

PATENTED IMPROVEMENTS IN
TRANSIT, SOLAR TRANSITS, LEVEL,
COMPASSES, MINING TRANSITS,
SOLAR COMPASSES, ETC.
R. & J. BECK,
Manufacturing Opticians
1016 CHESTNUT STREET,
PHILADELPHIA.

Microscopes from $25 to $1600.
Accessories, Mounting Materials,
Prepared Objects, etc.
Apparatus for Photo-Micrography.
Complete Outfit, $18.
Clinical Thermometers. The best
made.
SPECTACLES, EYE-GLASSES,
OPERA AND FIELD GLASSES,
THERMOMETERS, BAROMETERS,
URINOMETERS.
Liberal Discount to Professors and Stu-
dents.
Importing Duty Free for Colleges
A SPECIALTY.

Send for Illustrated Catalogue,
which will be mailed FREE to any
address in the world. Mention this
Catalogue.

CORNELIUS & CO.
MAKERS AND IMPORTERS OF
ARTISTIC GAS FIXTURES,
Unique Metal Work, Fine Bronze, Brass, and Porcelain Lamps.
Special Designs furnished. Architect's Designs estimated
upon and Correspondence solicited.

No. 1332 CHESTNUT STREET,
(Opposite U. S. Mint.)

PHILADELPHIA.

WM. D. ROGERS, SON & CO.,
Carriages & Light Road Wagons
OF THE
HIGHEST STANDARD.
Of their own Manufacture exclusively.

Nos. 1007, 1009, and 1011 Chestnut Street,
PHILADELPHIA.
VALUABLE AND STANDARD WORKS
Published by J. B. LIPPINCOTT & CO.,
715 and 717 Market St., Philadelphia.

INVALUABLE WORKS OF REFERENCE.
WORCESTER'S QUARTO DICTIONARY.

LIPPINCOTT'S PRONOUNCING GAZETTEER OF THE WORLD.

LIPPINCOTT'S PRONOUNCING BIOGRAPHICAL DICTIONARY.

CHAMBERS'S ENCYCLOPEDIA.

ENCYCLOPÆDIA OF CHEMISTRY.
Theoretical, Practical, and Analytical. By Writers of Eminence. Richly and profusely Illustrated. 2 vols. Imperial 8vo. Extra cloth. $34.00.

ALLIBONE'S DICTIONARY OF AUTHORS.
A Dictionary of English Literature and British and American Authors, Living and Deceased. By S. Austin Allibone, LL.D. 3 vols. Imperial 8vo. Extra cloth. $32.50.

CHAMBERS'S BOOK OF DAYS.
A Miscellany of Popular Antiquities connected with the Calendar. Including Anecdote, Biography, and History, Curiosities of Literature, Oddities of Life, etc. Edited by Robert Chambers. Profusely Illustrated. 2 vols. Royal 8vo. New style, printed and gilt cloth. $8.00 Library sheep. $9.50.

CHAMBERS'S CYCLOPÆDIA OF ENGLISH LITERATURE.

POPULAR STANDARD WORKS.
Latest and Best Editions.

PRESCOTT'S COMPLETE WORKS.

THACKERAY'S COMPLETE WORKS.

DICKENS'S WORKS.

STUDIES IN MEDIÆVAL HISTORY.

The above works are also bound in a variety of handsome extra styles for sale by all Booksellers, or will be sent by mail postpaid, upon receipt of price by the Publishers.
<table>
<thead>
<tr>
<th>1884</th>
<th>1884</th>
<th>1885</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JAN.</strong></td>
<td><strong>JULY</strong></td>
<td><strong>JAN.</strong></td>
</tr>
<tr>
<td>Monday</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tuesday</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Wednesday</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Thursday</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Friday</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Saturday</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>FEB.</strong></td>
<td><strong>AUG.</strong></td>
<td><strong>FEB.</strong></td>
</tr>
<tr>
<td>Monday</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Tuesday</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Wednesday</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Thursday</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Friday</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Saturday</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td><strong>MAR.</strong></td>
<td><strong>SEPT.</strong></td>
<td><strong>MAR.</strong></td>
</tr>
<tr>
<td>Monday</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Tuesday</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Wednesday</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Thursday</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Friday</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Saturday</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td><strong>APRIL</strong></td>
<td><strong>OCT.</strong></td>
<td><strong>APRIL</strong></td>
</tr>
<tr>
<td>Monday</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Tuesday</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Wednesday</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>Thursday</td>
<td>22</td>
<td>4</td>
</tr>
<tr>
<td>Friday</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>Saturday</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td><strong>MAY</strong></td>
<td><strong>NOV.</strong></td>
<td><strong>MAY</strong></td>
</tr>
<tr>
<td>Monday</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Tuesday</td>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>Wednesday</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Thursday</td>
<td>28</td>
<td>4</td>
</tr>
<tr>
<td>Friday</td>
<td>29</td>
<td>5</td>
</tr>
<tr>
<td>Saturday</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td><strong>JUNE</strong></td>
<td><strong>DEC.</strong></td>
<td><strong>JUNE</strong></td>
</tr>
<tr>
<td>Monday</td>
<td>31</td>
<td>1</td>
</tr>
<tr>
<td>Tuesday</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wednesday</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Thursday</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Friday</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Saturday</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

**Collins, Printer.**
CONTENTS.

Calendar .............................................. 4
Trustees .............................................. 5
Officers of Instruction and Government .......... 6
Constitution of the University ..................... 11
College Department ................................ 12
Department of Arts ................................ 18
Towne Scientific School ............................ 20
Wharton School of Finance and Economy .......... 29
Department of Music ................................ 33
Department of Medicine ............................ 44
Auxiliary Department of Medicine ................ 74
Department of Dentistry ............................ 79
Department of Veterinary Medicine ............... 89
Department of Law ................................ 92
Department of Philosophy .......................... 100
Degrees, Honors, and Prizes, 1882–3 ............... 103
Recapitulation of Professors and Students .......... 112
Index .................................................. 113
CALENDAR.

1883.
Sept. 17, Monday. College Year begins. 10 A. M.
Oct. 1, " First Term begins, Departments of Music and Law.
Nov. 29, Thursday. Thanksgiving Day. (Holiday.)

1884.
Jan. 2, Wednesday. Christmas Recess ends. 9 A. M.
" 30, " Mid-Year Examinations end, College Department.
" 31, Thursday. First Term ends, College Department. Chapel at 10 A. M.
" 31, " First Term ends, Department of Law.
Feb. 1, Friday. Second Term begins, College Department. 10 A. M.
" 22, " Second Terms begins, Department of Law.
March 3, Monday. Washington’s Birthday. Celebration in College Department. 10 A.M. (Holiday.)
April 9, Wednesday. Lectures of the Auxiliary Faculty of Medicine begin. 12 Noon.
" 11, Friday. Good Friday. (Legal Holiday.)
Easter Recess.
" 14, Monday. Final and Term Examinations begin, Departments of Medicine and Dentistry.
" 15, Tuesday. Easter Recess ends, College Department. 9 A. M.
May 1, Thursday. Annual Commencement, Departments of Medicine and Dentistry. 12 Noon.
" 2, Friday. Examination for Resident Physicians, University Hospital. 12 Noon.
" 5, Monday. Spring Session opens, Departments of Medicine and Dentistry. 11 A. M.
" 13, Tuesday. Announcement of Results, Senior Examinations, College Department. 10 A. M.
" 21, Wednesday. Examination begins, Department of Law.
" 31, Saturday. Second Term ends, Department of Law.
June 12, Thursday. Announcement of Results, Annual Examinations, College Department. 10 A. M.
" 13, Friday. Annual Commencement, College Department, Department of Law, and Auxiliary Department of Medicine. 11 A. M.
" 14 to 20. Entrance Examinations, College Department. 9 A.M. each day.
Summer Vacation.
Sept. 8 to 13. Entrance Examinations, College Department. 9 A.M. each day.
" 15, Monday. College Year begins. 10 A. M.
" 15, " Preliminary Course opens, Departments of Medicine, Dentistry, and Veterinary Medicine. 11 A.M.
" 24, Wednesday. Competitive Examination for Medical Scholarships. 12 Noon.
" 25, Thursday. Examinations for Admission to Advanced Standing, and Re-examination of Undergraduates, Departments of Medicine and Dentistry. 12 Noon.
" 26, Friday. Entrance Examination, Departments of Medicine and Veterinary Medicine. 12 Noon.
Oct. 1, Wednesday. Winter Session opens, Departments of Medicine, Dentistry, and Veterinary Medicine. 12 Noon.
" 1, " First Term begins, Department of Law.
" 6, Monday. First Term begins, Department of Music.
Provost of the University,
WILLIAM PEPPER, M.D., LL.D.,
President pro tempore of the Board of Trustees.

TRUSTEES.
THE GOVERNOR OF PENNSYLVANIA, ex-officio President of the Board.
REV. HENRY J. MORTON, D.D.,
FREDERICK FRALEY, LL.D.,
REV. CHARLES W. SCHAFFER, D.D.,
JOHN WELSH, LL.D.,
ALEXANDER HENRY,*
RT. REV. WILLIAM BACON STEVENS, D.D., LL.D.,
JOHN ASHHURST,
WILLIAM SELLERS,
REV. RICHARD NEWTON, D.D.,
ELI K. PRICE, LL.D.,
J. VAUGHAN MERRICK,
FAIRMAN ROGERS,
RICHARD WOOD,
S. WEIR MITCHELL, M.D.,
GEORGE WHITNEY,
JOSHUA B. LIPPINCOtt,
CHARLES C. HARRISON,
JAMES H. HUTCHINSON, M.D.,
REV. GEORGE DANA BOARDMAN, D.D.,
WILLIAM HUNT, M.D.,
HORACE HOWARD FURNESS, LL.D.,
WHARTON BARKER,
SAMIUEL DICKSON.

Rev. JESSE Y. BURK, Secretary,
University.

WHARTON BARKER, Treasurer,
28 South Third St., Philadelphia.

CHAIRMEN OF STANDING COMMITTEES FOR THE YEAR 1883-4.
WAYS AND MEANS: Hon. JOHN WELSH, LL.D., 304 Walnut St.
BUILDINGS, ESTATES, AND PROPERTY: J. B. LIPPINCOtt, Esq., 715 Market St.
LIBRARY: H. H. FURNESS, LL.D., 222 South Seventh St.
DEPARTMENT OF ARTS: FREDERICK FRALEY, LL.D., 1000 Walnut St.
DEPARTMENT OF MEDICINE: S. WEIR MITCHELL, M.D., 1524 Walnut St.
DEPARTMENT OF LAW: ELI K. PRICE, LL.D., 709 Walnut Street.
DEPARTMENT OF FINANCE AND ECONOMY: WHARTON BARKER, Esq., 28 South Third Street.

* Deceased.
### OFFICERS OF INSTRUCTION AND GOVERNMENT.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILLIAM PEPPER, M.D., LL.D.</td>
<td>Provost of the University</td>
<td>1811 Spruce Street</td>
</tr>
<tr>
<td>E. OTIS KENDALL, LL.D.</td>
<td>Vice-Provost</td>
<td>3826 Locust Street</td>
</tr>
<tr>
<td>JOSEPH LEIDY, M.D., LL.D.</td>
<td>Professor of Anatomy</td>
<td>1302 Filbert Street</td>
</tr>
<tr>
<td>HENRY H. SMITH, M.D.</td>
<td>Emeritus Professor of Surgery</td>
<td>1800 Spruce Street</td>
</tr>
<tr>
<td>FRANCIS A. JACKSON, A.M.</td>
<td>Professor of the Latin Language and Literature</td>
<td>University</td>
</tr>
<tr>
<td>E. OTIS KENDALL, LL.D.</td>
<td>Thomas A. Scott Professor of Mathematics</td>
<td>3826 Locust Street</td>
</tr>
<tr>
<td>J. PETER LESLEY, LL.D.</td>
<td>Professor of Geology and Mining</td>
<td>1008 Clinton Street</td>
</tr>
<tr>
<td>P. PEMBERTON MORRIS, A.M.</td>
<td>Professor of Practice, Pleading, and Evidence at Law and in Equity</td>
<td>404 Locust Street</td>
</tr>
<tr>
<td>RICHARD A. F. PENROSE, M.D., LL.D.</td>
<td>Professor of Obstetrics and of the Diseases of Women and Children</td>
<td>1331 Spruce Street</td>
</tr>
<tr>
<td>ALFRED STILLÉ, M.D., LL.D.</td>
<td>Professor of the Theory and Practice of Medicine, and of Clinical Medicine</td>
<td>3900 Spruce Street</td>
</tr>
<tr>
<td>HARRISON ALLEN, M.D.</td>
<td>Professor of Physiology</td>
<td>117 S. 20th Street</td>
</tr>
<tr>
<td>HORATIO C. WOOD, M.D., LL.D.</td>
<td>Professor of Materia Medica, Pharmacy, and General Therapeutics, and Clinical Professor of Nervous Diseases</td>
<td>1925 Chestnut Street</td>
</tr>
<tr>
<td>JOHN J. REESE, M.D.</td>
<td>Professor of Medical Jurisprudence, including Toxicology</td>
<td>316 S. 21st Street</td>
</tr>
<tr>
<td>CHARLES J. STILLÉ, LL.D.</td>
<td>Emeritus John Welsh Centennial Professor of History and English Literature</td>
<td>2201 St. James's Place</td>
</tr>
<tr>
<td>OSWALD SEIDENSTICKER, Ph.D. (Göttingen)</td>
<td>Professor of the German Language and Literature</td>
<td>1016 Cherry Street</td>
</tr>
<tr>
<td>JOHN G. R. McELROY, A.M.</td>
<td>Professor of Rhetoric and the English Language</td>
<td>115 S. 20th Street</td>
</tr>
<tr>
<td>J. I. CLARK HARE, LL.D.</td>
<td>Professor of the Institutes of Law, including, <em>inter alia</em>, International, Constitutional, Commercial, and Civil Law</td>
<td>118 S. 22d Street</td>
</tr>
</tbody>
</table>
D. HAYES AGNEW, M.D., LL.D.,
John Rhea Barton Professor of Surgery, and Professor of
Clinical Surgery. 1611 Chestnut Street.

REV. ROBERT E. THOMPSON, A.M.,
John Welsh Centennial Professor of History and English
Literature, Professor of Social Science, and Librarian. Chelten Hills.

FREDERICK A. GENTH, Ph.D. (Marburg),
Professor of Chemistry and Mineralogy. 1212 Fairmount Avenue.

SAMUEL B. HOWELL, M.D.,
Professor of Mineralogy and Geology. 1513 Green Street.

GEORGE F. BARKER, M.D., Ph.B.,
Professor of Physics. 3909 Locust Street.

E. COPPÉE MITCHELL, LL.D.,
Professor of the Law of Real Estate and Conveyancing and
of Equity Jurisprudence. 518 Walnut Street.

LEWIS M. HAUTF, A.M., C.E.,
Professor of Civil Engineering. University.

WILLIAM PEPPER, M.D., LL.D.,
Professor of Clinical Medicine. 1811 Spruce Street.

WILLIAM GOODELL, M.D.,
Professor of Clinical Gynecology. 500 N. 20th Street.

WILLIAM F. NORRIS, M.D.,
Clinical Professor of Diseases of the Eye. 1526 Locust Street.

GEORGE STRAWBRIDGE, M.D.,
Clinical Professor of Diseases of the Ear. 1500 Walnut Street.

JAMES PARSONS, A.M.,
Professor of Personal Relations and Personal Property. 32 S. Third Street.

THOMAS W. RICHARDS, A.M.,
Professor of Drawing and Architecture. 3332 Chestnut Street.

GEORGE A. KOKENG, Ph.D. (Heidelberg),
Assistant Professor of Chemistry. 4318 Osage Avenue.

SAMUEL P. SADTLER, Ph.D. (Göttingen),
Assistant Professor of Chemistry. 204 N. 34th Street.

JAMES TYSON, M.D.,
Professor of General Pathology and Morbid Anatomy. 1506 Spruce Street.

LOUIS A. DUHRING, M.D.,
Clinical Professor of Skin Diseases. 1417 Spruce Street.

HUGH A. CLARKE,
Professor of the Science of Music. 223 S. 38th Street.

REV. FREDERICK A. MUHLENBERG, D.D.,
Professor of the Greek Language and Literature. 4307 Walnut Street.

JOSEPH T. ROTHROCK, M.D., B.S.,
Professor of Botany. West Chester, Pa.

WILLIAM D. MARKS, Ph.B., C.E.,
Whitney Professor of Dynamical Engineering 4304 Walnut Street.

THEODORE G. WORMLEY, M.D., LL.D.,
Professor of Chemistry and Toxicology. University.

JOHN ASHHURST, Jr., M.D.,
Professor of Clinical Surgery. 2000 W. De Lancey Place.

OTIS H. KENDALL, A.M.,
Assistant Professor of Mathematics. 3826 Locust Street.
JOSEPH G. RICHARDSON, M.D.,
Professor of Hygiene. 3238 Chestnut Street.

CHARLES J. ESSIG, M.D., D.D.S.,
Professor of Mechanical Dentistry and Metallurgy. 1533 Locust Street.

EDWIN T. DARBY, M.D., D.D.S.,
Professor of Operative Dentistry and Dental Histology. 4000 Chestnut Street.

ANDREW J. PARKER, M.D., Ph.D.,
Professor of Comparative Anatomy and Zoology. 315 N. 9th Street.

HENRY W. SPANGLER, Assistant Engineer, U.S.N.,
Assistant Professor of Dynamical Engineering. University.

MORTON W. EASTON, PH.D.,
Professor of Comparative Philology. 224 S. 43d Street.

JAMES TRUMAN, D.D.S.,
Professor of Dental Pathology, Therapeutics, and Materia Medica. 1513 Walnut Street.

FREDERICK A. GENTH, Jr., M.S.,
Assistant Professor of Chemistry. 428 S. 40th Street.

ALBERT S. BOLLES, Ph.D.,
Professor of Mercantile Law and Practice. Aldine Hotel.

RUSH SHIPPEN Huidekoper, M.D., V.S. (Alfort),
Professor of Veterinary Anatomy and Pathology. 4109 Ogden Street.

EDMUND J. JAMES, Ph.D. (Halle),
Professor of Finance and Administration. University.

JOHN BACH McMaster, A.M.,
Professor of American History. 402 Walnut Street.

GEORGE TUCKER BISPHAM, A.M.,
Professor-elect of Practice, Pleading, and Evidence at Law and in Equity. 432 S. 21st Street.

ROBERT MEADE SMITH, M.D.,
Professor of Comparative Physiology. 332 S. 21st Street.

CHARLES T. HUNTER, M.D.,

ROLAND G. CURTIN, M.D.,
Lecturer on Physical Diagnosis, and Asst. Phys. in Univ. Hosp. 22 S. 18th St.

CHARLES K. MILLS, M.D.,
Lecturer on Mental Diseases. 1502 Columbia Avenue.

SAMUEL D. RISLEY, M.D.,
Instructor in Ophthalmology, and Oph'th. Surg. in Univ. Hosp. 1630 Walnut St.

DE FOREST WILLARD, M.D.,
Lecturer on Orthopaedic Surgery. 1818 Chestnut Street.

J. WILLIAM WHITE, M.D.,
Demonstrator of Surgery, and Lecturer on Venereal Diseases, and Assistant Surgeon in University Hospital. 222 S. 16th Street.

BENJAMIN F. BAER, M.D.,
Demonstrator of Clinical Gynaecology. 2004 Chestnut Street.

ELLIOTT RICHARDSON, M.D.,
Lecturer on Clinical and Operative Obstetrics, and Demonstrator of Operative Obstetrics. 1913 Spruce Street.
ADOLPH W. MILLER, M.D.,
Lecturer on Materia Medica and Pharmacy, and Demonstrator of Practical Pharmacy. University.

JOHN MARSHALL, M.D., NAT. SC. D. (Tübingen),
Demonstrator of Practical Chemistry. University.

WILLIAM BARTON HOPKINS, M.D.,
Assistant Demonstrator of Surgery. 2018 Spruce Street.

GEORGE A. PIERSOL, M.D.,
Demonstrator of Normal Histology. 1110 Spring Garden Street.

HENRY F. FORMAD, M.D.,
Demonstrator of Pathological Histology and of Morbid Anatomy, Lecturer on Experimental Pathology, and Librarian of the Still Medical Library. 3535 Locust Street.

WALTER M. L. ZIEGLER, M.D.,
Instructor in Otology, and Aural Surg. in Univ. Hosp. 2007 Columbia Ave.

CARL SEILER, M.D.,
Instructor in Laryngology. 1346 Spruce Street.

EDWARD T. BRUEN, M.D.,
Demonstrator of Clinical Medicine, and Assistant Physician in University Hospital. 1531 Chestnut Street.

ALBERT L. A. TOBOLDT, M.D.,
Assistant Demonstrator of Practical Pharmacy. Cor. 6th and Green Streets.

HARRY R. WHARTON, M.D.,
Demonstrator of Clinical Surgery, and Assistant Demonstrator of Surgery. 1405 Locust Street.

RICHARD H. HARSE, M.D.,
Assistant Demonstrator of Surgery and Anatomy, and Assistant Surgeon in University Hospital. 332 S. 17th Street.

ROBERT HUEY, D.D.S.,
Lecturer on Operative Dentistry. 330 S. 15th Street.

WILLIAM DIEHL, D.D.S.,
Demonstrator of Operative Dentistry. 1513 Walnut Street.

LOUIS STARR, M.D.,
Instructor in Diseases of Children, Asst. Phys. in Univ. Hosp. 1922 Spruce St.

JOHN B. DEAVER, M.D.,
Demonstrator of Osteology and Syndesmology, and Assistant Demonstrator of Anatomy. 1610 Vine Street.

FRANCIS X. DERCUM, M.D.,
Instructor in Nervous Diseases. 636 N. 8th Street.

THOMAS R. NEILSON, M.D.,
Assistant Demonstrator of Anatomy. 348 S. 15th Street.

EDMUND W. HOLMES, M.D.,
Assitant Demonstrator of Anatomy. 1523 Green Street.

WILLIAM M. GRAY, M.D.,
Assistant Demonstrator of Normal Histology. 631 N. 12th Street.

EDWARD T. REICHERT, M.D.,
Demonstrator of Experimental Therapeutics. University.

WILLIAM A. EDWARDS, M.D.,
Assistant Demonstrator of Clinical Medicine. 1210 Spruce Street.

JUDSON DALAND, M.D.,
Assistant Demonstrator of Clinical Medicine. 1811 Spruce Street.
N. ARCHER RANDOLPH, M.D.,
Asst. Demonstrator of Physiology, and Instructor in Physiology. 3706 Locust St.
EDWIN S. CRAWLEY, B.S.,
Instructor in Civil Engineering. 648 N. 15th Street.
WILLIAM L. CAVE, D.D.S.,
Demonstrator of Mechanical Dentistry. 4000 Chestnut Street.
STEPHEN L. WIGGINS, D.D.S.,
Assistant Demonstrator of Operative Dentistry. 3700 Hamilton Street.
J. JUDSON EDWARDS, D.D.S.,
Assistant Demonstrator of Mechanical Dentistry. 38 N. 38th Street.
REV. GEORGE S. FULLERTON, A.M., B.D.,
Instructor in Intellectual and Moral Philosophy. 3208 Race Street.
HENRY F. KELLER, B.S.,
Assistant in Chemistry. 257 N. 6th Street.
LIEUT. JOSEPH B. MURDOCK, U. S. N.,
Assistant in Physics. University.
CHESTER N. FARR,
Instructor in the Theory and Practice of Accounting. 4228 Chester Avenue.
FREDERICK C. SHEPPARD, M.D.,
Assistant Gynaecologist. University.
HENRY A. WASMUTH, E.M.,
Assistant in Geology and Mining. 3709 Woodland Avenue.
GEORGE E. SHOEMAKER, M.D.,
Assistant Demonstrator of Physiology. 117 S. 20th Street.
J. HENDRIE LLOYD, M.D.,
Instructor in Electro-Therapeutics. 200 S. 40th Street.
A. SYDNEY ROBERTS, M.D.,
Instructor in Orthopaedic Surgery. 131 S. 15th Street.
J. P. CROZER GRIFFITH, M.D.,
Assistant Demonstrator of Normal Histology. 110 S. 15th Street.
GEORGE E. DE SCHWEINITZ, M.D.,
Prosector to the Professor of Anatomy. 1330 Spruce Street.
HORACE F. JAYNE, M.D.,
Assistant Instructor in Biology. 1826 Chestnut Street.
HENRY W. STELWAGON, M.D.,
Instructor in Dermatology. 223 S. 17th Street.

JOHN B. WEBSTER,
Clerk to the College Faculty. University.
WM. H. SALVADOR,
Clerk to the Faculty of Medicine. University.
The University of Pennsylvania is the successor of the College of Philadelphia, which was founded chiefly through the influence of Dr. Benjamin Franklin and Dr. William Smith. Dr. Smith was the first Provost, and is conspicuous in American college history for establishing here in 1757 the curriculum of study that was adopted substantially by all the colleges of later foundation. The College of Philadelphia was chartered in 1755, and is therefore the sixth in the order of succession of American colleges. Instruction is given in ten Departments, viz.:—

The College Department, including

<table>
<thead>
<tr>
<th>Department</th>
<th>Established</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Department of Arts</td>
<td>1755</td>
</tr>
<tr>
<td>The Towne Scientific School</td>
<td>1872</td>
</tr>
<tr>
<td>The Department of Music</td>
<td>1877</td>
</tr>
<tr>
<td>The Wharton School of Finance and Economy</td>
<td>1881</td>
</tr>
<tr>
<td>The Department of Medicine</td>
<td>1765</td>
</tr>
<tr>
<td>The Department of Law</td>
<td>1789</td>
</tr>
<tr>
<td>The Auxiliary Department of Medicine</td>
<td>1865</td>
</tr>
<tr>
<td>The Department of Dentistry</td>
<td>1878</td>
</tr>
<tr>
<td>The Department of Philosophy</td>
<td>1882</td>
</tr>
<tr>
<td>The Department of Veterinary Medicine</td>
<td>1883</td>
</tr>
</tbody>
</table>
FACULTY AND INSTRUCTORS.

WILLIAM PEPPER, M.D., LL.D., Provost of the University, and ex-officio President of the Faculty.
E. OTIS KENDALL, LL.D., Vice Provost, ex-officio Dean of the Faculty, and Thomas A. Scott Professor of Mathematics.
FRANCIS A. JACKSON, A.M., Professor of the Latin Language and Literature.
J. PETER LESLEY, LL.D.,* Professor of Geology and Mining.
OSWALD SEIDENSTICKER, Ph.D., Professor of the German Language and Literature.

JOHN G. R. McELROY, A.M., Professor of Rhetoric and the English Language.
J. I. CLARK HARE, LL.D., Professor of Constitutional Law.
REV. ROBERT E. THOMPSON, A.M., John Welsh Centennial Professor of History and English Literature, and Professor of Social Science.
FREDERICK A. GENTH, Ph.D., Professor of Chemistry.
GEORGE F. BARKER, M.D., Ph.B., Professor of Physics.
LEWIS M. HAUPP, A.M., C.E., Professor of Civil Engineering.
THOMAS W. RICHARDS, A.M., Professor of Drawing and Architecture.
GEORGE A. KÖNIG, Ph.D., Assistant Professor of Chemistry, and Acting Professor of Geology and Mining.

SAMUEL P. SADTLER, Ph.D., Assistant Professor of Chemistry.
HUGH A. CLARKE, Professor of the Science of Music.
REV. FREDERICK A. MUHLENBERG, D.D., Professor of the Greek Language and Literature.
JOSEPH T. ROTHROCK, M.D., B.S., Professor of Botany.
WILLIAM D. MARKS, Ph.B., C.E., Whitney Professor of Dynamical Engineering.
OTIS H. KENDALL, A.M., Assistant Professor of Mathematics.
ANDREW J. PARKER, M.D., Ph.D., Professor of Comparative Anatomy and Zoology.

HENRY W. SPANGLER, Assistant Engineer U. S. N., Assistant Professor of Dynamical Engineering.
MORTON W. EASTON, Ph.D., Professor of Comparative Philology, and Instructor in French and in Elocution.
FREDERICK A. GENTH, Jr., M.S., Assistant Professor of Chemistry.
ALBERT S. BOLLES, Ph.D., Professor of Mercantile Law and Practice.
EDMUND J. JAMES, Ph.D., Professor of Finance and Administration.
JOHN B. McM ASTER, A.M., Professor of American History.
EDWIN S. CRAWLEY, B.S., Instructor in Civil Engineering.
REV. GEORGE S. FULLERTON, A.M., B.D., Instructor in Intellectual and Moral Philosophy.
HENRY F. KELLER, B.S., Assistant in Analytical Chemistry.
LIEUT. J. B. MURDOCK, U. S. N., Assistant in Physics.
CHESTER N. FARR, Instructor in the Theory and Practice of Accounting.
HENRY A. WASMUTH, E. M., Assistant in Geology.

FRANCIS A. JACKSON, Secretary of the College Faculty.
JOHN G. R. McELROY, Secretary of the Faculty of Science.
ALBERT S. BOLLES, Secretary of the Faculty of Finance and Economy.

* Absent on leave.
The College Faculty comprises the Faculties of Arts, of Science, of Finance and Economy, and of Music. A particular statement of the instruction given in each Faculty will be found after the following general statement.

INSTRUCTION OPEN TO THE PUBLIC.

Persons of both sexes are admitted without examination to the following courses of lectures given in this Department:—

On German Literature, by Professor Seidensticker.
On the Older English Classics (with Critical Readings), by Professor McElroy.
On Norse History in the Early Middle Ages, by Professor Thompson.
On Physics and Astronomical Physics, by Professor Barker.
On Inorganic and Organic Chemistry, by Professor Sadtler.

The instruction in Analytical Chemistry, including practical work in the laboratory, under Professor Genth, is also open to the public.

The lectures begin about February 1st. The fee for each course is five dollars; for the instruction in Analytical Chemistry, two hundred dollars a year.

Application for admission, or for further information respecting this instruction may be made to the Dean or to the Secretary of any of the Faculties.

FEES.

The Tuition Fee, except for the last three years in the Towne Scientific School and for the course in Music, is one hundred and fifty dollars a year, payable to the Treasurer of the University in two instalments, on October 1st and February 1st. For the last three years in the Towne School it is two hundred dollars a year, payable as above; for the course in Music, thirty dollars a year. An additional fee of five dollars is charged to all students, except those in Music, for the maintenance of the department of Physical Culture. The Graduation Fee (to be paid by special and partial students, as well as by graduates) is twenty dollars. A deposit of twenty dollars is required from all students in the chemical labora-
tories, repayable at graduation (or when the student leaves the University), less the cost of apparatus broken or not returned.

SCHOLARSHIPS.

I. The Penn Scholarships, two in number, are filled by the Governor of the State from time to time as vacancies occur. They exist by virtue of a privilege reserved by Thomas Penn, proprietary of Pennsylvania.

II. A limited number of Free Scholarships (about five in each class) are granted to deserving and needy students in this Department, under the following regulations:

Each candidate must present written testimonials to the Dean of the Faculty, at or before the entrance-examinations in June or September. He must pass these examinations, or (in case he is already in the classes) the annual examinations, with credit. He will then be recommended for admission to the proper committee of the Board of Trustees. The scholarships are granted for one year only, renewable by the decision of the committee, on the recommendation of the Dean.

III. The Public School Prize Scholarships.—Under a contract with the City of Philadelphia, Fifty Free Scholarships have been permanently established in the University for the benefit of pupils from the Public Schools of the city. The candidates for these scholarships are sent up by the Board of Public Education to the annual examinations for admission, in the month of June. They are examined at the same hours and on the same subjects as other candidates, but not necessarily on the same papers. The scholarships are bestowed upon those of their number (not exceeding the number of existing vacancies) who reach the highest grade in their examination, provided that grade be at least sixty-five out of a possible hundred.

Of these,—

The Benjamin Franklin Scholarships, three in number, and the Samuel V. Merrick Scholarship have been endowed.

IV. The income of The Bloomfield Moore Fund is appropriated to enable women who are teaching, or who propose to teach (not exceeding six in any year), to receive free instruction in the subjects open to the public.
ANNUAL EXAMINATIONS

Are held in the month of January, and, for the Senior Class, in May, for the lower classes, in June. At the end of each term, students who attain a certain standing are classed as "distinguished." Students shown by their term-average to be deficient in any of their studies may be conditionally attached to their class, until the deficiency has been fully made up. In case of persistent neglect of study, great irregularity of attendance, or evident inability to keep up with the class, the student may be dropped from the rolls.

PRIZES.

I. THE FACULTY PRIZES:—

1. A prize of twenty dollars for the best Essay in Intellectual and Moral Philosophy by a member of the Junior Class. Subject: *The Philosophy of the Conditioned.*

2. A prize of twenty dollars for the best examination on the *Oration of Æschines contra Ctesiphontem,* to be read with the Professor of Greek by members of the Junior Class.

3. A prize of ten dollars for the best examination by a member of the Freshman Class on Greek Prose Composition with the Accents. The examination will be on *Arnold's Greek Prose Composition,* from the Relative to the end of the book.

4. A first prize of fifteen dollars, and a second prize of ten dollars, for the best examination on the *Lectures on Quaternions* given to the Voluntary Junior Class.

5. A prize of thirty dollars for the best English Essay in History and English Literature by a member of the Senior Class. Subject: *Martin Luther.*

6. A prize of twenty dollars for the best English Essay by a member of the Junior Class. Subject: *Wallenstein.*

7. A prize of fifteen dollars for the best Declamation by a member of the Sophomore Class.

8. A first prize of fifteen dollars, and a second prize of ten dollars, for the best special examinations in the Elements of Latin Prose Composition, by Freshmen on entering College. The examinations must reach a satisfactory standard of excellence. In 1884, they will be upon the first fifty-five exercises in *Arnold's Latin Prose Composition.* Certificates will be presented to all competitors whose examinations reach a satisfactory standard.
9. Two prizes of the same value as those offered for Latin Prose Composition for the best special examinations in Greek Prose Composition. In 1884, the examination will be on *Jones's Greek Exercises*, with the Accents.

10. A prize of twenty dollars to a member of the Scientific Classes for improvement in Drawing, and general good conduct and application.

II. The "Henry Reed Prize," founded by the Alumni of the University in memory of Professor Henry Reed, for the best English Essay by a member of the Senior Class (Department of Arts). It entitles the successful competitor to one year's interest on six hundred dollars (Philadelphia City Loan), and to an accompanying Diploma of Merit. The essays must be handed to the Dean for transmission to the Board of Trustees by the first day of May. Subject: *The Romantic School in English Literature.*

III. The Society of the Alumni Prizes:—

1. A prize for the best Latin Essay, by a member of the graduating class. It entitles the successful competitor to one year's interest on nine hundred dollars (Philadelphia City Loan). The essays must be handed to the Dean by the first day of May, for transmission to a Committee of Examiners appointed by the Society.

2. A prize for the best Original Declamation by a member of the Junior Class. It entitles the successful competitor to one year's interest on three hundred dollars (Philadelphia City Loan).

IV. A prize, founded by Henry La Barre Jayne, of the class of 1879, for the best English Composition by a member of the Freshman Class. It entitles the successful competitor to one year's interest on two hundred dollars. Subject: *Nationality and Religious Belief as Factors in the Colonization of the United States.*

V. "The Joseph Warner Yardley Memorial Prize," founded by the Class of 1877, in memory of their classmate, for the best thesis in Political Economy by a member of the Senior Class. It entitles the successful competitor to one year's interest on five hundred dollars, and to an accompanying Diploma of Merit. Subject: *The Effect of Labor-Saving Machinery on Employment.*
VI. A prize founded by D. Van Nostrand, Esq., for the member of the Junior Class in Civil Engineering who attains the highest general average of scholarship. It consists of certain technical works.

LIBRARIES.

The Library contains (1) The Wetherill Library of Works on Chemical Science; (2) the Colwell Library of Works on Social Science, one of the most complete in the world in its own department; (3) the Carey Library, comprising the library of the late Henry C. Carey, especially rich in the department of statistics; (4) the Allen Libraries of Classical Literature, Bibliography, Shakspere, and Military Science; (5) the Rogers Library of Civil Engineering.

Besides these, there is a large collection of works on History, Science, and General Literature, some of them the gifts of the friends of the University during the last century (Benjamin Franklin, Dr. Richard Peters, Louis XVI.). The income of the Tobias Wagner Library Fund is expended in the purchase of books in the department of History. The Libraries of the Literary and Scientific Societies are of considerable value.

SOCIETIES.

The Philomathean (Literary) Society, founded in 1813, holds meetings weekly during the college-year, in its rooms at the University. All undergraduates of the College Department are eligible to membership. The order of exercises includes orations, essays, and a debate, besides the usual general business, which affords excellent practice in the principles of parliamentary law. A large and valuable library is owned by the Society.

The Scientific Society holds weekly meetings at its rooms in the University throughout the college-year. All undergraduates of the University are eligible to membership. Scientific essays are read, discussions are held, and a general comparison of observations and experiments is had. Besides a considerable scientific library, large collections of minerals, fossils, ornithological specimens, and other objects of scientific interest are owned by the Society. A course of lectures, under the management of the Society, is delivered annually.
DEPARTMENT OF ARTS.

ENTRANCE EXAMINATIONS.

For the FRESHMAN CLASS, candidates are examined in—

ENGLISH.—Grammar and Composition.
Abbott's *How to Parse* or Whitney's *Essentials of English Grammar* indicates the amount required in Grammar. The subject of composition will be taken from the last-named of the following English books, all of which must have been read by each candidate; viz., Milton's *Comus*, The *Sir Roger de Coverley Papers* in the *Spectator*, De Quincey's *Spanish Nun*, and Irving's *Conquest of Granada.*

GEOGRAPHY.—Ancient and Modern Geography. (Mitchell's *New Ancient Geography* and *Ancient Atlas* are recommended.)


GREEK.—Greek Grammar. Arnold's *Greek Prose Composition* (to the end of Exercise 20). Xenophon (*Four Books of the *Anabasis*). Homer (*First three Books of the *Iliad*). For ADVANCED STANDING, candidates must pass satisfactorily in all the subjects pursued by the lower class or classes.

The examinations are held in June and September. Circulars stating the days and the subjects of examination for each day can be had, after April 1st, on application to Mr. J. B. WEBSTER, Clerk to the College Faculty.

COURSE OF STUDY.

FRESHMAN CLASS.

GREEK.—Xenophon's *Hellenics*. *Æschylus*. Arnold's Greek Prose Composition, completed.

LATIN.—Selections from Livy and Horace's Satires.

MATHEMATICS.—Newcomb's *Algebra*, Chauvenet's *Geometry*.

HISTORY.—Freeman's *General Sketch of History*.

ENGLISH.—Prose Composition (Lectures and Abbott's *How to Write Clearly*).

SOPHOMORE CLASS.

PHILOSOPHY.—Logic.

GREEK.—Thucydides (*Sicilian Expedition*). Euripides or Aristophanes. Greek Composition.

LATIN.—Tacitus (*Agricola*, *Germania*, or *Annals*). Cicero (*De Senectute* or *De Officiis*). Horace (*Selected Odes*).
MATHEMATICS.—Chauvenet's *Plane and Spherical Trigonometry*, with applications. Bowser's *Analytical Geometry*.

PHYSICS.—Mechanics.

CHEMISTRY.—Inorganic and Organic Chemistry (*Experimental Lectures, with Examinations*).

ENGLISH.—Elements of Rhetoric (Lectures). Compositions and Declamations. Lounsbury's *English Language*.

**REQUIRED,—**


PHYSICS.—Mechanics, Sound, Heat, Light, Electricity.

CHEMISTRY.—Inorganic and Organic Chemistry, completed (*Experimental Lectures with Examinations*).

ENGLISH.—Compositions and Declamations.

**ELECTIVE,**

GREEK.—Sophocles. Lysias or Isocrates. Theocritus or Pindar.

LATIN.—Selections from Juvenal. Cicero (*De Officiis, De Finibus, or De Amicitia*). Horace (*Epistles*). Reading at Sight.

PURE MATHEMATICS.—Integral Calculus.


FRENCH.—Corneille and Racine.

HISTORY.—*American Politics* (with a critical study of Pamphlets and Political Documents).

**REQUIRED,—**


ASTRONOMY.—Newcomb's Astronomy.

HISTORY.—Medieval and Modern History (*Lectures*).

ENGLISH.—Compositions and Original Declamations.

SOCIAL SCIENCE.—International Law (*Lectures*). Thompson's *Elements of Political Economy*.

**ELECTIVE,**

GREEK.—Demosthenes *de Coronâ*. Plato (*Apology and Crito, or Phædo*). Cicero (*Tusculana*), or Lucretius (*Selections*). Horace (*Ars Poetica*). Reading at Sight.

PURE MATHEMATICS.—Integral Calculus.


ENGLISH.—Chaucer (*The Canterbury Tales*). Spenser (*Selections*). Shakspere (*Three Plays*).

* In Junior and Senior years, Greek is elective with German, Latin with French, and Pure Mathematics with History and English. Arrangements are in progress by which studies in Biology preparatory to the study of Medicine will be offered as electives in these years.
PARTIAL COURSES.

A student may take any portion of the above course which the Faculty may sanction; but admission to a partial course is to be considered an exceptional arrangement, and may be withdrawn when deemed expedient. At the termination of such a course, satisfactorily pursued, a Certificate will be awarded, stating what studies have been pursued.

DEGREES.

The Degree of Bachelor of Arts is conferred upon students who complete the full course.

The degree of Master of Arts is conferred on Alumni of the University, Bachelors of Arts of three years' standing, who have pursued liberal studies since their graduation, and who present a satisfactory Thesis to the Faculty. This Thesis must be sent to the Dean by the first Friday in April.

For further information address Prof. E. O. Kendall, LL.D., Dean of the Faculty.

THE TOWNE SCIENTIFIC SCHOOL.

AIM OF THE SCHOOL.

The aim of this School (endowed in 1875 by John Henry Towne, Esq., of Philadelphia) is to give, in addition to a liberal education, a thorough professional training in the following subjects, CHEMISTRY, METALLURGY and ASSAYING, MINERALOGY and GEOLOGY, CIVIL, DYNAMICAL, and MINING ENGINEERING, MECHANICAL DRAWING and ARCHITECTURE, and STUDIES PREPARATORY TO THE STUDY OF MEDICINE. The Course extends through five years.

ENTRANCE EXAMINATIONS.

For the Freshman Class candidates are examined in the following subjects:—

ENGLISH.—Grammar, Composition, and Etymology (Greek and Latin Roots).
Abbott's How to Parse or Whitney's Essentials of English Grammar indicates the amount required in Grammar, and Sargent's Manual the amount in Etymology. The subject of composition will be taken from the last-named of the following English books, all of which must have been read by each candidate; viz., Milton's Comus, The Sir Roger de Coverley Papers in the Spectator, De Quincey's Spanish Nun, and Irving's Conquest of Granada.
**Geography.**—Modern Geography.


**French.**—Harrison's French Syntax (first forty-five Practical Exercises), and Tikimague (Three Books).

**German.**—Ahn's Method, Fischer's edition (First Course, pp. 1–100 and 135–140; Second Course, pp. 1–64).

For **Advanced Standing**, candidates must pass satisfactorily in all the studies pursued by the lower class or classes.

**Professional Courses.**

At the close of the second year, the student selects one of the following courses:—

I. **Analytical and Applied Chemistry and Mineralogy.**

II. **Geology and Mining.**

III. **Civil Engineering.**

IV. **Mechanical Engineering.**

V. **Drawing and Architecture.**

VI. **Studies Preparatory to the Study of Medicine.**

**Special Courses.**

Special students, not candidates for a Degree, may be received into any of the professional courses, when the Professor in charge of that course is satisfied of their competency to profit by his instruction. They take all the studies that the Professor thinks necessary to complete the course, together with such others as the Faculty may require. At the end of the course, upon passing the examinations required, and presenting a satisfactory thesis, they receive a Certificate of Proficiency. Application should be made to the Professor in charge of the course which the student wishes to take, and definite arrangements may be made with him,—subject, however, to the approval of the Faculty.

**Methods of Study.**

Instruction is thoroughly practical. It is given by lectures and recitations, and in the Laboratories and the Drawing and Model Rooms. These are open to the students all day, and work is required of the higher classes in the afternoon as well as in the morning hours.
In Chemistry, the Sophomores have a course of fully illustrated Lectures, covering the whole ground of Inorganic Chemistry. In the Sub-Junior year, work is begun in the Analytical Laboratories, and Lectures are heard on Mineralogy and Metallurgy. In the Junior and Senior years, studies in Qualitative and Quantitative Analysis and Lectures on Organic Chemistry are combined with the making of Chemical Preparations and practical work in Metallurgy and other Technical subjects.

Students in Geology and Mining Engineering are trained with special reference to the management of mines. The practical study of rocks and minerals in the Laboratory and Museum, as well as in the field; the training in the construction and management of ore-concentrating machinery; the illustrative discussion of difficult problems in the development of mines, such as the rectification of faults in the veins and strata; the drainage and ventilation of mines;—these and similar questions are considered the most essential features of the course. Importance is attached rather to the economical occurrence and distribution of ores throughout the United States, than to the discussion of theories and hypothetical opinions.

Students in Civil Engineering are instructed by recitations, lectures, and practical work, in order to develop the qualities most required of the practical engineer. Afternoons and Saturdays are devoted to drawing and practical work in the shop, or to surveying or visiting public or private works, manufactories, etc.

In visiting shops and manufactories, students are required to collect all the practical information possible, and to embody it in a written report, noting particularly any new or special features for economizing time or materials, improved methods of assembling parts, etc., as well as the general plant, apparatus, and facilities for receiving and shipping materials.

The field practice embraces the various problems in chain surveying, the measurement of areas, and the computation of results; line surveys and location, cross sections and levels for estimating quantities, hydrography, topography with the plane-table, and the solution of such geodetic problems as relate to the orientation of maps.

The Course in Drawing includes the projection of maps; various methods of representing Topography; conventional signs; prob-
lems in shades, shadows and perspective; details of framing; composition; general drawings for constructions in wood, stone, and iron; special designs; working drawings for modelling; plotting; drawing of profiles and cross sections and for theses.

Students of **Dynamical Engineering** are required to give particular attention to the kinematics of mechanism, to the conditions under which work and power act, and the means of regulating and transmitting the same; to the problems of hydraulics and hydraulic motors, and to the mechanical theory of heat with its applications to the steam engine, etc., as will appear from the detailed course of study given elsewhere.

Special attention is given to the execution of drawings, first from designs and models, and afterwards from calculations; and also to the methods of casting and working in iron, and of making and using machine tools.

Adequate instruction is also provided in Marine Engineering and Naval Architecture.

Weekly visits of inspection will be made during two years of the course to blast-furnaces, foundries, machine-shops, and iron and steel rolling-mills.

The instruction in **Physics** extends over three years. In the Sub-Junior year the subjects treated are Elementary Mechanics, Sound, Heat, Light, and Electricity, the exercises consisting of lectures, illustrated by experiments, with recitations. In the Junior year, special instruction is given in advanced physics. The Senior class receives practical instruction in the Physical Laboratory throughout the year. The education of the eye and the hand which is thus given, secures familiarity with apparatus and the knowledge of methods of precise measurement.

The **Course Preparatory to the Study of Medicine** includes not only Biology, but cognate studies specially adapted to train the powers of observation and reflection. It aims to supply the thorough preliminary training demanded by the State Medical Society.

**Library.**

The Rogers Engineering Library is composed of standard works treating of drawing, mathematics, astronomy, physics, surveying and explorations, technical works on roads, strength and properties of materials, railroads, tunnels, canals, water supply, drainage,
architecture, mechanics, navigation, harbor improvements, and park and landscape engineering; together with a valuable collection of Reports of American, English, and French Engineering Societies, periodicals, Coast Survey and hydrographic charts, maps, diagrams, and drawings.

COURSE OF STUDY.

FRESHMAN YEAR.

HISTORY.—Schouler's History of the United States.
ENGLISH.—Prose Composition (Lectures and Abbott's How to Write Clearly).
DRAWING.—Geometrical and Isometrical Drawing (Minifie), and Drawing from the Flat. Free Hand Sketching. Use of the Scale and Protractor. Shading in India Ink. Graphical representations from Geometry.

SOPHOMORE YEAR.

ENGLISH.—Elements of Rhetoric (Lectures). Lounsbury's English Language. Compositions and Declamations.
GERMAN.—Hodges' Course of Scientific German. Guide to German Conversation. Translations into German.
FRENCH.—Böcher's French Plays.
PHYSICS.—Mechanics.
CHEMISTRY.—Inorganic Chemistry (Experimental Lectures).

SUB-JUNIOR YEAR.

STUDIES PURSUED BY THE WHOLE CLASS.

CHEMISTRY.—Exercises in Analytical Chemistry and recitations in Analytical and General Chemistry.
PHYSICAL SCIENCE.—Elementary Mechanics, Sound, Heat, Light, and Electricity.
MINERALOGY.—Crystallography and General Description of Minerals.
MATHEMATICS.—Descriptive Geometry.
FRENCH.—Racine or Corneille. Molière.

1. Studies pursued by the Chemical Section.

MINERALOGY.—Special description of species, and practical exercises in determining minerals by their physical properties.
BOTANY.—Structure of Woods.

2. Studies pursued by the Geological and Mining Section.

GEOLOGY.—Elements of Geology. Construction of parts of mines, of mining machinery, etc., from notes and sketches.
MINERALOGY.—Same as 1st section.
BOTANY.—Structure of Woods.
3. Studies pursued by the Civil Engineering Section.

ENGINEERING.—Railroad Location. Graphical Statics.
MATHEMATICS.—Differential Calculus.
DRAWING.—Topographical Charts. Problems in map projections. Perspective. Details of frames, joints, etc.
ARCHITECTURE.—Classical Architecture.
SURVEYING.—Field Practice; including Chain Surveying, Use of Compass, Transit and Plane Table in measuring lines and areas, Traversing, Location of Roads, Drains, etc., on Topographical Charts. Recitations from Gillespie's *Land and Higher Surveying*, and *Earthwork Formula*.

4. Studies pursued by the Dynamical Engineering Section.

MATHEMATICS.—Differential Calculus.
STATICS.—The application of the principles of Statics to Rigid Bodies. The Elasticity and Strength of Materials. Forms of uniform strength. Theory of framed structures. Stability of structures. Theory of the arch. Strains in parts of mechanism. The Equilibrium and Pressure of fluids, as water, air, steam, etc. The equilibrium of fluids with other bodies; stability of vessels; determinations of specific gravity; use of Hydrometers, Manometers, Gauges, etc. The Equilibrium of Funicular Structures.
SURVEYING.—Same as 3d Section.
DRAWING.—Copies of bolts and nuts; riveting; gudgeons, pivots, axles, shafts, couplings, pillow-blocks; shaft-hangers, pulleys, sheaves, and gear wheels; connecting rods and cranks, working beams, crossheads, pipe-connections, valves, steam cylinders, pistons, stuffing-boxes, glands, etc. etc.

5. Studies pursued by the Architectural Section.

MATHEMATICS.—Differential Calculus.
BOTANY.—Same as 6th Section.
ENGINEERING.—Graphical Statics.

6. Studies in the Course Preparatory to Medical Studies.

CHEMISTRY.—Practical work in the Laboratory.
MINERALOGY.—Same as 1st Section.
BOTANY.—Use of Microscope. Outlines of Vegetable Anatomy.
ZOOLOGY.—General Morphology, Histology, and Invertebrate Zoology.
LATIN.—Grammar.

JUNIOR YEAR.

STUDIES PURSUED BY THE WHOLE CLASS.

PHYSICAL SCIENCE.—Special Advanced Physics.
PHILOSOPHY.—Atwater's *Logic*. Intellectual and Moral Philosophy.
ENGLISH.—Compositions and Declamations.
DESCRIPTIVE AND DETERMINATIVE MINERALOGY.

1. Studies pursued by the Chemical Section.

Qualitative Analysis by the blowpipe, in connection with reactions in the humid way for the rapid determination of Minerals and Ores.

Theoretical Chemistry.

Introduction to Metallurgy.—Theory of Metallurgical Processes; theory and construction of furnaces and other metallurgical apparatus. Dressing of ores considered theoretically and practically.

Assaying of ores and fuels, with special application of volumetric analysis.

Demonstration of the principal metallurgical processes by furnace practice.

Instruction in the practical production of chemical salts, preparations, and simple substances in their greatest perfection and purity; and also according to the principles which govern their manufacture on a large scale.

Qualitative Analysis of more complex substances, with practice in determining the color and condition of products and in the determination of minerals.

Qualitative Analysis and detection of the rarer elements and organic constituents of bodies. Introduction to Quantitative Analysis. Use of the spectroscope in qualitative determinations.

2. Studies pursued by the Geological and Mining Section.

Lithology and Palæontology.—Examination and determination of Rocks and of Fossil Organic forms.

Mining Engineering.—Methods used in searching for and developing deposits of valuable Minerals. Sinking of Shafts. Drifting and Stoping.

Drawing and Modelling.

Dynamical Engineering.—Statics and Dynamics of rigid bodies. Determination of centres of gravity; moments of flexure, rupture, etc. Practical exercises in constructing and drawing machines.

Surveying.—Same as Section 3. At the beginning of summer vacation a complete mine survey will be executed in the coal regions.

Analytical Chemistry, Metallurgical Practice and Assaying.—The same as the Chemical Section.

Field excursions into the neighboring mineral districts for the demonstration of practical Geology.

3. Studies pursued by the Civil Engineering Section.

Mathematics.—Differential and Integral Calculus.

Drawing.—Topography in ink and colors; Studies in Contours; Platting field notes; Shades, Shadows, and Perspective.


Surveying.—Spherical Projections, a complete course in practical topography, including special instruments and field sketching. Field practice. Reconnaisance, Use of Prismatic Compass, Level, Solar Transit, Repeating Theodolites, and Heliotropes. Sketching; Preliminary Surveys for and Locations of Roads, Railroads, or Canals; Hydrography; Laying Out of Parks; Use of Sextant, etc.

Geodesy.—Measurement of Bases, Triangulation, Determination of Meridian, Latitude, Longitude, Time, and Azimuth.

Engineering.—Mechanics of Engineering, embracing the Statics of Rigid Bodies, Determination of the Centres of Gravity, Moments of Flexure, Rupture, Resistance, Torsion, Analysis of Bridge and Roof Trusses, Strength and Properties of Materials, etc.

4. Studies pursued by Dynamical Engineering Section.

Mathematics.—Differential and Integral Calculus.

Kinematics.—Laws of motion. Elementary combinations of Pure Mechanism. Pulleys and belts. Trains of gearings and forms of teeth of wheels. Parallel motions. Link and valve motions, with a consideration of the various forms of valves, illustrated by working models.
DRAWING.—From the model and original design.

CONSTRUCTION AND PRACTICAL APPLICATIONS.—Weekly visits of inspection will be made to blast-furnaces, foundries, iron and steel rolling-mills, ship yards, steam and hydraulic forges, etc.

5. Studies pursued by the Section in Drawing and Architecture.

MATHEMATICS.—Differential and Integral Calculus.


ENGINEERING.—Same as Section 3.

BOTANY.—Same as Section 6.

6. Studies in the Course Preparatory to Medical Studies.

CHEMISTRY.—Laboratory Practice in Qualitative Analysis. Organic Chemistry (Lectures and practical analysis).

BOTANY.—Systematic Botany and Special Morphology.

ZOOLOGY.—Invertebrate Zoology and Embryology.

LATIN.—Caesar (De Bello Gallico).

SENIOR CLASS.

STUDIES PURSUED BY THE WHOLE CLASS.

ENGLISH.—Compositions. Declamations.

HISTORY.—Lectures.

SOCIAL SCIENCE.—International Law. Thompson's Elements of Political Economy.

ASTRONOMY.—Newcomb's Astronomy.

PHYSICAL SCIENCE.—Practical Physics (Instruction in the Physical Laboratory).

GEOLGY.—Structural Geology of North America with reference to that of Europe, and with the principal minerals and fossils, distribution of metals and fuels. History of Geology.

1. Studies pursued by the Chemical Section.

Theoretical Chemistry.

Lectures on the Applications of Organic Chemistry in the Useful Arts.


Determination of the constituents of cast-iron and steel. Practice in Agricultural Chemistry, and Analysis of Manures.


Practical determination of minerals by their physical properties.

2. Studies pursued by the Geological and Mining Section.

GEOLGY.—The Ore and Coal deposits of the United States in their topographical and structural relations.

MINING ENGINEERING.—Ventilation and Drainage of Mines. Description and construction of Mining Machinery.

DYNAMICAL ENGINEERING.—Motors and Principles of Mechanism.

SURVEYING.—The survey made during the previous vacation will be mapped.
METALLURGY AND ANALYTICAL CHEMISTRY.—Same as Section 1.

PRACTICE IN LITHOLOGICAL DETERMINATION by means of microscopic sections and microchemical tests.

CONSTRUCTION AND APPLICATION OF GEOLOGICAL SECTIONS relating to problems of mining.

3. Studies pursued by the Civil Engineering Section.


DRAWING. — Details of Engineering Works, Composition, Plans, Sections, Elevations; Profiles and Cross-sections. Working drawings. Plating field-notes and computations from data.

VISITS OF INSPECTION to public and private works, with reports thereon.


METALLURGY.—Technical Chemistry and Metallurgy.

MODELLING.—Construction of trusses for bridges and roofs, girders, etc. Conducting experiments on strength of beams and trusses. Problems in stone-cutting. Tunnels.

4. Studies pursued by the Dynamical Engineering Section.


CONSTRUCTION and PRACTICAL APPLICATIONS. — Weekly visits of inspection will be made to blast-furnaces, foundries, machine-shops, iron and steel rolling-mills, ship-yards, steam and hydraulic forges, etc. etc.


METALLURGY. — Chemical Technology and Metallurgy.

5. Studies pursued by the Section in Architecture and Drawing.

ENGINEERING. — Calculation of the strength of roofs and bridges. Foundations, retaining walls, arches. Same as Section 3.


BOTANY. — Same as Section 6.
6. Studies in the Course preparatory to Medical Studies.


BOTANY.—Medical and Vegetable Adulterations.


PHYSIOLOGY.—Elementary Physiology. Application of Physics.

DEGREES.

The degree of Bachelor of Science, with mention of the special course pursued, is conferred on students who complete any one of these professional courses, in addition to the studies pursued by the whole class during the five years of the curriculum, and who present a satisfactory thesis. Students who matriculate in 1884 and thereafter, will receive the degree of Mining Engineer, Civil Engineer, Mechanical Engineer, Architect, or Bachelor of Science in Chemistry or in Studies Preparatory to the Study of Medicine.

For further information address Professor E. O. Kendall, LL.D., Dean of the Faculty.

THE WHARTON SCHOOL OF FINANCE AND ECONOMY.

AIM OF THE SCHOOL.

This School (founded by Joseph Wharton, in 1881) aims to give a thorough general and professional training to young men who intend to engage in business or to manage their own or other’s property. It also equips more completely persons who are preparing for the professions of law and journalism, as well as for a more public service. The Founder of the School has remarked that “a great boon would be bestowed upon the nation if its young men of inherited intellect, means and refinement could be drawn into careers of unselfish legislation and administration; and, as the possession of any power is usually accompanied by taste for its exercise, it is reasonable to expect that adequate education in the principles underlying successful civil government would aid in producing such a class of men.”
The Wharton School, therefore, has a well-defined aim not possessed by any other educational institution. Its instruction is of immediate practical importance to persons who are looking forward to a business career, or who wish to know how to manage their own affairs; to the legal student desirous of acquiring the best preparation possible for his work, and to those who are pressing into the ranks of journalism, such instruction is scarcely less important; while to persons who aim to serve the public in a legislative or administrative capacity, it should be indispensable. The success of the lawyer is often due, as much to an extensive acquaintance with business, as to a knowledge of legal principles. For those who are desirous of becoming proficient in economic and financial science—especially for those who expect to teach political science—the Wharton School furnishes a more complete course than is furnished elsewhere. By adding a comprehensive knowledge of business to an extended knowledge of economic principles, the foundation is laid for a correct political economy, which must command the respect of those thoughtful business men who are skeptical concerning the worth of the political economy taught at the present time.

LIBRARIES.

The University possesses one of the largest and most complete libraries of works relating to finance and political economy that is to be found in any educational institution of the world. The foundation was laid by the great collection of the late Stephen Colwell, comprising between seven and eight thousand volumes, and including nearly every important book in this science in the English, French, and Italian languages, besides many in German. This has been supplemented (1) by the gift from Mr. McCalmont, of London, of a collection of some three thousand English pamphlets, covering the period from the close of the seventeenth century till our own time, and bound in chronological order; (2) by the bequest of the library of the late Henry C. Carey, which includes many works and pamphlets that appeared since Mr. Colwell's death, and is especially rich in statistical literature, European government reports, and the like.

Original research by the students, under the direction of the professors, is a part of the work of the School.
COURSE OF STUDY.

The students of the School are divided into two classes, Junior and Senior. The following is the course of study.

JUNIOR YEAR.

FIRST TERM.

The Theory and Practice of Accounting. (Lectures.)


Political Science. (Johnston's History of American Politics. Bagehot's Physics and Politics.)

English. (Reading of English Authors. Compositions and Declamations.)

German. (Reading of German Authors.)

French. (Reading of French Authors.)

Logic.

SECOND TERM.

Exposition of Systems of Book-keeping in Factories, Banks, and other Corporations, and in Municipalities.

History of Trade, Manufactures, and Commerce. (Lectures. Bolles's Industrial History of the United States.)

Moral Philosophy, with special application of its principles to business. (Lectures.)

American History. (Compositions and Lectures.)

English. (Continued.)

German. (Continued.)

French. (Continued.)

SENIOR YEAR.

FIRST TERM.

Legislation and Administration. Statistics. (Lectures.)

Exposition of Leading Principles of Political Economy and their applications. (Compositions and Lectures.)

American Constitutional History. (Von Holst's Constitutional History of the United States.)

Mercantile Practice. (Lectures.)

Practical Book-keeping. (Optional.)

SECOND TERM.


American Constitutional History. (Continued.)

Mercantile Law. (Sharwood's Commercial Law. Parsons's Mercantile Law.)

Constitutional Law. (Sterne's Constitutional History of the United States. Cooley's Principles of Constitutional Law.)

The instruction in political economy during the first year is that which is usually given to the junior and senior classes in colleges. During the second year instruction in this branch of knowledge is given through compositions and discussions by the class, followed by a review, exposition and application of principles by the professor who teaches the subject.

Instruction in European Finance comprises the history, and a description and comparison of the financial systems of the principal countries of Europe. American Finance comprises a history of the
national, state and municipal systems, and a comparison of them with foreign systems.

The subject of Legislation and Administration is treated comparatively, including the practice of all the principal European countries and our own, beside the varying practice of the States of the Union.

Instruction in Statistics embraces an investigation of the sphere and function of statistics, with practical training in the proper method of collecting and arranging them.

Mercantile Practice covers the usages and methods of business, the management of property and the administration of trusts, and is supplemented and completed by an exposition of the leading principles of Mercantile Law.

Practical Book-keeping is taught orally and by requiring the students to keep a set of books according to the most approved forms.

ENTRANCE EXAMINATIONS.

Candidates for admission to the full course are expected to have a preparation equivalent to that of persons who have completed the first two years in the regular four years' course of an American college or scientific school. Those who have graduated in that course may enter the Senior Class without preliminary examination.

Students who do not desire to pursue the full course, and who are properly qualified, may take either a special or a partial course in any subject or subjects taught in the School.

DEGREES.

The degree of Bachelor of Finance (B.F.) is conferred after satisfactory examination on all who have pursued the full course, and on graduates in Arts of the University of Pennsylvania, or of colleges of equal standing, who have pursued the full course for the senior year.

Persons who are desirous of additional information, with the view of entering the School or of preparing therefor, are invited to confer with the Secretary, Professor Albert S. Bolles, who will give such advice and suggestions as are needful in each particular case.
DEPARTMENT OF MUSIC.

The qualifications required to enter the department are, first, a knowledge of the rudiments of music, and, second, the ability to play on some instrument—preferably the piano or organ.

The course extends over two years. The year begins on the first Monday in October, and is divided into three terms of ten weeks each. The first year is devoted to Harmony, the second to Counterpoint and Composition.

Persons of both sexes are admitted. The fees are ten dollars ($10) for each term, payable in advance.

Students who take the whole course will receive a certificate to that effect, if in the judgment of the Professor their acquirements entitle them to it. At any subsequent time, they may receive the degree of Bachelor of Music (Mus. Bac.), on the following conditions:

1. They must be examined in Harmony, Counterpoint, and Composition, by three examiners appointed by the Professor, subject to the approval of the Provost; the examination to be oral or written, or both, at the discretion of the examiners.
2. They must submit to the examiners an original composition in the form of a cantata for solos and chorus, with an accompaniment of at least a quintette of string-instruments.
3. This composition must be of such length as to require at least twenty minutes for its performance; it must contain a four-part fugue; and the accompaniment must be independent, except in the fugue.
4. The composition must be accompanied by a written statement that it is the student’s own unaided effort.

UNDERGRADUATES 1883-4.

SENIORS.

DEPARTMENT OF ARTS.

John Stokes Adams,
Caldwell Keppele Biddle,
Marcus Ingraham Brock,
Thomas Cooke,
John Pusey Croasdale,
Morris Dallett,

Philadelphia.

do.
do.
do.
do.
do.
William Henry Dillingham, West Chester.
John August William Haas, Philadelphia.
Butler Kenner Harding, do.
Charles Hoffman, do.
James Woodside MacBride, do.
Charles Hinkle Marple, Bridgeport.
John Vaughan Merrick, Jr., Roxborough.
Thomas Lynch Montgomery, Philadelphia.
John Mullen, do.
Benjamin Brannan Reath, Jr., do.
Laurence Butler-Ridgely, do.
Waters Dewees Roberts, Riverton, N. J.
Francis Rudderow, Oaks.
James Irvine Scott, Philadelphia.
Lewis Lawrence Smith, Media.
James Dallas Steele, Philadelphia.
Ardemus Stewart, Abington.
Landreth Worthington Thompson, Philadelphia.
John Barton Townsend, Overbrook.
Alexander Waddell, Philadelphia.
Benjamin Harvey Welch, do.
George Emlen West, do.
Milton Cooper Work, do.

TOWNE SCIENTIFIC SCHOOL.

3. Llewellyn Barry, do.
1. William Milliken Bodine, do.
2. Clarence Raymond Claghorn, do.
3. Frank Cooper, do.
5. James Barr Ferree, Germantown.
4. George Ross Green, Philadelphia.
3. Charles Francis Gummey, Jr., do.
3. Napoleon Bonaparte Heller, do.
4. Wilford Lawrence Hoopes, Germantown.
2. Clemens Jones, Philadelphia.
2. William Irvin Seltzer, do.
2. George Sergeant, Jr., Chestnut Hill.

* The numbers prefixed to the names of the Scientific students in the upper classes designate the special courses they are pursuing.
WHARTON SCHOOL OF FINANCE AND ECONOMY.

Edward Potts Cheyney, A.B. (Univ. Pa.) Philadelphia.
Charles Winrod Finck, B.S. (Univ. Pa.) do.
Shiro Shiba, Tokio, Japan.

DEPARTMENT OF MUSIC.

William J. Boehm, Philadelphia.
Albert E. Brown, do.
Samuel J. Diton, do.
Preston W. Oram, do.
Margaret R. Smith, Wallingford.
Elsie Walker, Philadelphia.
Ida Wood, do.
Sarah E. Wright, Seniors, 61.

JUNIORS.

DEPARTMENT OF ARTS.

Harrison White Biddle, Philadelphia.
Samuel Laurence Bodine, do.
George Rosengarten Bower, Riverton, N. J.
James Fry Bullitt, Philadelphia.
Mark Wilks Collet, Germantown.
Howard Lowe Cresswell, Philadelphia.
Valentine Sherman Dobie, do.
Naudain Duer, do.
Randolph Faries, do.
Leonard Finleyer, do.
Edward Pinckney Greene, do.
William Linton Landreth, do.
Robert Grier Le Conte, do.
Charles Lester Leonard, do.
Herman T. Lukens, do.
William Emott Maison, do.
Edward de Veaux Morrell, do.
Francis Benjamin Muhlenberg, do.
George Gelbach Emanuel Neuber, do.
William Woodbridge Noble, Germantown.
Joseph Allison Scott, Philadelphia.
Henry Sheaffer, Pottsville.
George Ard Shoemaker, Philadelphia.
Arthur Donaldson Smith, Andalusia.
Henry Austie Smith, Philadelphia.
do.
David Porter Stover, Germantown.
Samuel Welsh, 3rd, Philadelphia.
John Rhea Barton Willing, Germantown.
Lewis Wynne Wister, Overbrook.
Edward Yarnall,
TOWNE SCIENTIFIC SCHOOL.

3. Llywellyn Howard Jenks, do.
2. Lucien Vernon Leach, do.
3. Charles Elder Lindsay, do.

WHARTON SCHOOL OF FINANCE AND ECONOMY.

Miers Busch, Jr., Philadelphia.
William Wilson Carlile, do.
Roland Post Falkner, Germantown.
James Collins Jones, Philadelphia.
Andrew Wheeler, Jr., do.

DEPARTMENT OF MUSIC.

Edward C. Batchelor, Philadelphia.
Elizabeth D. Chance, do.
J. H. Chandler, M.D., do.
Albert W. Manifold, do.
Roland W. Mott, do.
Jane M. Wilson, do.

PHILADELPHIA.

Juniors, 47.

SUB-JUNIORS.

TOWNE SCIENTIFIC SCHOOL.

3. Enoch Jones Acker, Chester Co.
2. William Beam, do.
1. William Henry Bower, Riverton, N. J.
1. George Howland Chase, do.
2. Samuel Williamson Cheyney, do.
3. Allen Brooks Cuthbert, Beverly, N. J.
3. Howard Godley, do.
3. Stephen Harris, Germantown.
2. John Lincoln Harvey, Ridley Park.
3. Hermann Siegfried Hering, do.
1. Herman Herzog, Jr., do.
3. Thomas Hill Brinton Jacobs, Doylestown.
4. Wilmer Francis Lubbe, Conshohocken.
4. Lino Francesco Rondinella, Philadelphia.
3. Frederick G. Thorn, Jr., do.
4. Herbert Coleman Whitaker, Camden, N. J.

SOPHOMORES.

DEPARTMENT OF ARTS.

David Sands Brown Chew, Germantown.
James Burnet Crane, Rome, Italy.
George Christian Eisenhardt, Philadelphia.
William West Frazier, 3rd, do.
William Thompson Graham, do.
James Biddle Halsey, do.
Crawford Dawes Hening, do.
William Robert White Hentz, do.
Robert Murray Hogg, Bristol.
George Quintard Horwitz, Philadelphia.
John Chester Hyde, Jr., do.
Edward Miller Jefferys, do.
Samuel Stryker Kneass, do.
Irvin Poley Knife, do.
Christopher Magee, Jr., do.
Albert William Manifold, do.
John Hooker Packard, Jr., do.
George Petry, do.
William Campbell Posey, do.
Robert William Rogers, do.
Jacob Martin Rommel, Jr., do.
Edwin Jaquett Sellers, do.
Walter Moore Shaw, Norristown.
Frederick Thibault, Pittsburg.
Howard James Truman, Frankford.
Thomas Holmes Walker, Philadelphia.
George Wismer Wilgus, do.
Charles Baeder Williams, do.
Charles Elmer Woodruff, do.
Samuel Megargee Wright, Philadelphia.

TOWNE SCIENTIFIC SCHOOL.

Edgar Augustus Alcott, Mt. Holly, N. J.
Walter Girvin Allison, Philadelphia.
T. Passmore Berens, Germantown.
William Augustus Bigler, Philadelphia.
Amos Peaslee Brown, Jr., Germantown.
Isaac Roberts Davis,
Abram Trimble Eastwick,
William Appleton Ferree,
Thomas Sydenham Reed Flickwir,
William Salter Freeman,
Theodore Gould, Jr.,
Thomas Graham Grier,
Morris Hacker,
Joseph Martin Harlan,
Enos Major Harris, Jr.,
Charles Herman Haupt,
Gerald Holsman,
Joseph Edward Horn,
Francis Emlen Hoskins,
Joseph David Israel,
Wilbur Paddock Klapp,
James Harmer Knight,
Gustavus Adolphus Edward Kohler,
Leon Kraft,
Walter Raleigh Livingston,
Jacob Lychenheim,
Marshall Sprogell Lynch,
Richard McCull,
Percy McGeorge,
Charles Price Mercer,
Henry Jackson Mullen,
John Grubb Parke, Jr.,
Edward Arnott Pearson,
Louis Edm’d Jos. Stanislaus Péquignot,
Julius Bujac Price,
William Green Ridgway,
Henry Alexander Robb,
Abraham Bunn Ross,
Robert Lewis Rutter,
Jacob Sailer, Jr.,
Harry Randolph Stoops,
Sydney Thayer,
Earl Thomson,
Richard Albert Tilghman, Jr.,
Henry Davis Todd, Jr.,
David Edward Tracy,
Victor Francisco Valdes,
Alfred Weeks, Jr.,
William Daniel Weikel,
John Weiszgerber,
Samuel Jennings White,
Edmund Wright, Jr.,
John Williamson Ziegler,

Chelten Hills.
Wissahicken.
Philadelphia.
do.
Beverly, N. J.
Philadelphia.
do.

Lower Merion.

Philadelphia.
do.

Germantown.

Philadelphia.
do.

Merion Station.
Camden, N. J.

Philadelphia.

Annapolis, Md.

Conshohocken.

Fox Chase.

Philadelphia.

Merch'tville, N. J.

Philadelphia.
do.
do.
do.

Sophomores, 83.
## FRESHMEN.

### DEPARTMENT OF ARTS.

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Allen, Jr.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>David Werner Amram</td>
<td>do.</td>
</tr>
<tr>
<td>William Sinclair Ashbrook</td>
<td>do.</td>
</tr>
<tr>
<td>John Ashhurst, 3d</td>
<td>do.</td>
</tr>
<tr>
<td>William Francis Audenried</td>
<td>do.</td>
</tr>
<tr>
<td>Chauncey Ralston Baugh</td>
<td>Chestnut Hill.</td>
</tr>
<tr>
<td>Joseph Spencer Brock</td>
<td>Philadelphia.</td>
</tr>
<tr>
<td>Edgar French Brown</td>
<td>Torresdale.</td>
</tr>
<tr>
<td>Harry Gibbs Clay, Jr.</td>
<td>Philadelphia.</td>
</tr>
<tr>
<td>Charles Tyler Cowperthwait</td>
<td>do.</td>
</tr>
<tr>
<td>Edwards Sanford Dunn</td>
<td>do.</td>
</tr>
<tr>
<td>Thomas Harrison Farquhar</td>
<td>do.</td>
</tr>
<tr>
<td>George Fetterolf</td>
<td>do.</td>
</tr>
<tr>
<td>John Sims Forbes</td>
<td>do.</td>
</tr>
<tr>
<td>George Harrison Frazier</td>
<td>do.</td>
</tr>
<tr>
<td>Fred. Wm. Wilson Graham</td>
<td>do.</td>
</tr>
<tr>
<td>Douglass Morgan Hall</td>
<td>do.</td>
</tr>
<tr>
<td>John McArthur Harris</td>
<td>do.</td>
</tr>
<tr>
<td>Samuel Fred. Houston</td>
<td>do.</td>
</tr>
<tr>
<td>Walter Rodman Lincoln</td>
<td>do.</td>
</tr>
<tr>
<td>Walter Biddle Lowry</td>
<td>do.</td>
</tr>
<tr>
<td>John Lynch</td>
<td>do.</td>
</tr>
<tr>
<td>Robert Stephen Maison</td>
<td>do.</td>
</tr>
<tr>
<td>Edward Alden Miller</td>
<td>do.</td>
</tr>
<tr>
<td>James Alan Montgomery</td>
<td>West Chester.</td>
</tr>
<tr>
<td>Hyland Clarke Murphey</td>
<td>Philadelphia.</td>
</tr>
<tr>
<td>George Wharton Pepper</td>
<td>do.</td>
</tr>
<tr>
<td>Washington Mallet-Prevost</td>
<td>do.</td>
</tr>
<tr>
<td>Francis John Pryor, Jr.</td>
<td>do.</td>
</tr>
<tr>
<td>Theodore Wood Reath</td>
<td>do.</td>
</tr>
<tr>
<td>Arthur John Rowland</td>
<td>do.</td>
</tr>
<tr>
<td>Alexander Wilson Russell</td>
<td>do.</td>
</tr>
<tr>
<td>Randolph Potter Russell</td>
<td>do.</td>
</tr>
<tr>
<td>Robert Bowen Salter</td>
<td>do.</td>
</tr>
<tr>
<td>Lewis William Seal</td>
<td>do.</td>
</tr>
<tr>
<td>André William Séguin</td>
<td>New Orleans, La.</td>
</tr>
<tr>
<td>Henry Daniel Emanuel Siebott</td>
<td>Philadelphia.</td>
</tr>
<tr>
<td>Henry Naglee Smaltz</td>
<td>do.</td>
</tr>
<tr>
<td>James Somers Smith, Jr.</td>
<td>do.</td>
</tr>
<tr>
<td>John Duncan Ernest Spaeth</td>
<td>do.</td>
</tr>
<tr>
<td>Witmer Stone</td>
<td>Germantown.</td>
</tr>
<tr>
<td>George Flowers Stradling</td>
<td>Hatboro'.</td>
</tr>
<tr>
<td>Charles Cooper Townsend</td>
<td>Overbrook.</td>
</tr>
<tr>
<td>William Stetler Wright</td>
<td>Bristol.</td>
</tr>
<tr>
<td>Norton Buel Young</td>
<td>Chestnut Hill.</td>
</tr>
</tbody>
</table>
Henry Clay Adams, Philadelphia.
John Allen, do.
Franklin Lee Altemus, Jr., do.
Louis Eugene Amet, do.
Forrest Murrell Anderson, Curwensville.
Lewis Elsworth Bailey, Philadelphia.
Henry Price Ball, do.
Samuel Dickson Barr, do.
Edward Charles Batchelor, do.
Heston Bates, do.
William Caspar Benkert, do.
Charles Seligman Bernheimer, do.
Alexander Mercer Biddle, do.
George Brinton, do.
Hugh Jones Brooke, do.
Clarence King Brown, do.
Harry Lonstreth Brown, do.
Francis Asbury Bruner, do.
Charles T. Parry Brunner, do.
Herbert Bancroft Carpenter, do.
Frederick Colton Clarke, do.
Albert Rowland Cline, do.
Crawford Coates, do.
Theodore Francis Colladay, Swarthmore.
Warder Cresson, Philadelphia.
Frank Hughes Culin, do.
Samuel Field Davis, Weldon.
Thomas Darling Brown, Chelten Hills.
Edgar Pardee Earle, Camden, N. J.
Joseph Sketchley Elverson, Philadelphia.
Loudon Engle, do.
Joseph Allison Eyster, Jr., Germantown.
Lee Käuffer Frankel, Philadelphia.
William Englebert Fry, do.
Clarendon Harris Garrett, do.
Francis Edmund Green, do.
Silas Godfrey Griffith, do.
William Hahman, do.
Walter Eugene Harrington, Jenkintown.
John Dawson Hawkins, Philadelphia.
William George Houston, do.
John Julius Hovey, Philadelphia, N. J.
William L. Jones, Jr., do.
Frank James Keeley, do.
Edward Fulbister Kenney, do.
George Sloman Ketchum, do.
Louis John Kolb, do.
Theophilus Kuelling, do.
Thomas Love Latta, do.

3. Frank Davis Jones, Philadelphia.
5. George Henry Krug, Campinas, Brazil.
2. Charles Turbit Massey, Philadelphia.
3. Albert Emerick Miller, do.
1. Alfred Hurst Read, Norristown.

1. David Owen Brooke, Norristown.
2. Edward Sinclair Campbell, Jr., Philadelphia.
3. Eugene Haenchen de Kieffer, do.
3. David Rinehart Mehaffey, Marietta.
1. Frederick Gad Myhlertz, Philadelphia.

1. Craig Ritchie Arnold, Philadelphia.
2. Edward Ilsley, do.
1. John Myers, do.
6. Thomas Haven Ross, do.
1. Jacob John Sheffler, Coudersport.
3. Frederick Charles Joseph Smith, Philadelphia.
3. Paul Thompson, Beverly, N. J.
3. William Downes Wilson, do.

Special Students, 38.

PARTIAL STUDENTS.
DEPARTMENT OF ARTS.

Frank Lambader, Jr., Philadelphia.
Charles Howard Hagert, do.
Grant Lee Knight, do.
William George Thomson, do.
Otis Mills Coxe, do.
Charles Alexander Oliver, Chestnut Hill.
Edmund Austin Stewardson, Philadelphia.
Henry Wurst, Philadelphia.
WHARTON SCHOOL OF FINANCE AND ECONOMY.

Hon. Robert Adams, A.M. (Univ. of Pa.), Philadelphia.
George Bartleson Benners, do.
Clarence Wills Taylor, Camden, N. J.
Norman Ellison, Philadelphia.
John Simpson Fernie, do.
Frederick Morton Fox, do.
Charles Stanley Harvey, do.
George Wharton McMullin, Muncy.
Rollin Crouse Smith, Burlington, N. J.
William de Rochbrune Souder, Philadelphia.
Barclay Harding Warburton, Partial Students, 19.

<table>
<thead>
<tr>
<th></th>
<th>Arts.</th>
<th>Science</th>
<th>Finance</th>
<th>Music</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>29</td>
<td>20</td>
<td>4</td>
<td>8</td>
<td>61</td>
</tr>
<tr>
<td>Juniors</td>
<td>30</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>47</td>
</tr>
<tr>
<td>Sub-Juniors</td>
<td>—</td>
<td>31</td>
<td>—</td>
<td>—</td>
<td>31</td>
</tr>
<tr>
<td>Sophomores</td>
<td>30</td>
<td>53</td>
<td>—</td>
<td>—</td>
<td>83</td>
</tr>
<tr>
<td>Freshmen</td>
<td>46</td>
<td>91</td>
<td>—</td>
<td>—</td>
<td>137</td>
</tr>
<tr>
<td>Special Students</td>
<td>—</td>
<td>38</td>
<td>—</td>
<td>—</td>
<td>38</td>
</tr>
<tr>
<td>Partial Students</td>
<td>8</td>
<td>—</td>
<td>11</td>
<td>—</td>
<td>19</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>143</strong></td>
<td><strong>239</strong></td>
<td><strong>20</strong></td>
<td><strong>14</strong></td>
<td><strong>416</strong></td>
</tr>
</tbody>
</table>
DEPARTMENT OF MEDICINE.

FACULTY.

WILLIAM PEPPER, M.D., LL.D., Provost of the University, and ex-officio President of the Faculty.

JOSEPH LEIDY, M.D., LL.D., Professor of Anatomy.

HENRY H. SMITH, M.D., Emeritus Professor of Surgery.

RICHARD A. F. PENROSE, M.D., LL.D., Professor of Obstetrics and of the Diseases of Women and Children.

ALFRED STILLÉ, M.D., LL.D., Professor of the Theory and Practice of Medicine, and of Clinical Medicine.

D. HAYES AGNEW, M.D., LL.D., John Rhea Barton Professor of Surgery, and Professor of Clinical Surgery.

WILLIAM PEPPER, M.D., LL.D., Professor of Clinical Medicine.

WILLIAM GOODMAN, M.D., Professor of Clinical Gynecology.

JAMES TYSON, M.D., Professor of General Pathology and Morbid Anatomy.

HORATIO C. WOOD, M.D., LL.D., Professor of Materia Medica, Pharmacy, and General Therapeutics.

THEODORE G. WORMLEY, M.D., LL.D., Professor of Chemistry and Toxicology.

JOHN ASHHURST, Jr., M.D., Professor of Clinical Surgery.

HARRISON ALLEN, M.D., Professor of Physiology.

CLINICAL PROFESSORS.

WILLIAM F. NORRIS, M.D., Clinical Professor of Diseases of the Eye.

GEORGE STRAWBRIDGE, M.D., Clinical Professor of Diseases of the Ear.

HORATIO C. WOOD, M.D., LL.D., Clinical Professor of Nervous Diseases.

LOUIS A. DUHRING, M.D., Clinical Professor of Skin Diseases.

AUXILIARY PROFESSORS.

JOHN J. REESE, M.D., Professor of Medical Jurisprudence, including Toxicology.

JOSEPH G. RICHARDSON, M.D., Professor of Hygiene.

DEMONSTRATORS AND LECTURERS.

CHARLES T. HUNTER, M.D., Demonstrator of Anatomy.

ROLAND G. CURTIN, M.D., Lecturer on Physical Diagnosis.

CHARLES K. MILLS, M.D., Lecturer on Mental Diseases.

ADOLPH W. MILLER, M.D., Lecturer on Materia Medica and Pharmacy, and Demonstrator of Practical Pharmacy.

DE FOREST WILLARD, M.D., Lecturer on Orthopaedic Surgery.

ELLIOTT RICHARDSON, M.D., Lecturer on Clinical and Operative Obstetrics, and Demonstrator of Operative Obstetrics.

ROBERT MEADE SMITH, M.D., Demonstrator of Experimental Physiology.

JOHN MARSHALL, M.D., NAT.SC. D., Demonstrator of Practical Chemistry.

BENJAMIN F. BAER, M.D., Demonstrator of Clinical Gynecology.

EDWARD T. BRUEG, M.D., Demonstrator of Clinical Medicine.

J. WILLIAM WHITE, M.D., Demonstrator of Surgery, and Lecturer on Venereal Diseases.
HARRY R. WHARTON, M.D., Demonstrator of Clinical Surgery.
JOHN B. DEAVER, M.D., Demonstrator of Osteology and Syndesmology.*
HENRY F. FORMAD, M.D., Demonstrator of Morbid Anatomy and Pathological Histology, Lecturer on Experimental Pathology, and Librarian of the Stills Medical Library.
EDWARD T. REICHERT, M.D., Demonstrator of Experimental Therapeutics.
GEORGE A. PIERSOL, M.D., Demonstrator of Normal Histology.
WILLIAM M. GRAY, M.D., Assistant Demonstrator of Normal Histology.
JOHN B. DEAVER, M.D., RICHARD H. HARTE, M.D., THOMAS R. NEILSON, M.D., EDMUND W. HOLMES, M.D., WM. BARTON HOPKINS, M.D., HARRY R. WHARTON, M.D., RICHARD H. HARTE, M.D., ALBERT L. TOBOLDT, M.D., Assistant Demonstrator of Practical Pharmacy.
WILLIAM A. EDWARDS, M.D., JUDSON DALAND, M.D., ARCHER N. RANDOLPH, M.D., GEORGE E. SHOEMAKER, M.D., ASSISTANT DEMONSTRATORS OF CLINICAL MEDICINE.
W. M. L. ZIEGLER, M.D., Assistant Demonstrators of Anatomy.
W. M. L. ZIEGLER, M.D., Instructor in Otolaryngology.
J. P. CROZER GRIFFITH, M.D., Assistant to the Professor of Obstetrics.
J. H. STELWAGON, M.D., Instructor in Dermatology.
FRANCIS X. DERCUM, M.D., Instructor in Nervous Diseases.
HENRY W. STELWAGON, M.D., Instructor in Orthopaedic Surgery.

The following-named graduates of the school conduct the admission examinations in the several cities in which they reside:

Dr. C. H. mastin, 110 St. Francis Street, Mobile, Ala.
Dr. P. V. SCHENCK, 2732 Washington Avenue, St. Louis, Mo.
Dr. JOS. M. TOWLER, 6 N. Main Street, Columbia, Tenn.
Dr. EUGENE A. CRISSOM, North Carolina Insane Asylum, Raleigh, N. C.
Dr. C. D. FISHER, 70 McMicken Avenue, Cincinnati, Ohio.
Dr. E. C. BULLARD, 185 Harrison Avenue, Boston, Mass.
Dr. W. S. ELKIN, Atlanta, Ga.
Dr. J. W. WHITBECK, 125 East Avenue, Rochester, N. Y.

* During the present and the past annual session Dr. Deaver has performed the duties of Demonstrator of Anatomy.
HOSPITAL STAFF.

ALFRED STILLÉ, M.D., LL.D., Professor of Clinical Medicine.
WILLIAM PEPPER, M.D., LL.D., Professor of Clinical Medicine.
D. HAYES AGNEW, M.D., LL.D., Professor of Clinical Surgery.
WILLIAM GOODELL, M.D., Professor of Clinical Gynecology.
JAMES TYSON, M.D., Professor of General Pathology and Morbid Anatomy.
JOHN ASHHURST, Jr., M.D., Professor of Clinical Surgery.
WILLIAM F. NORRIS, M.D., Clinical Professor of Diseases of the Eye.
GEORGE STRAWBRIDGE, M.D., Clinical Professor of Diseases of the Ear.
HORATIO C. WOOD, M.D., LL.D., Clinical Professor of Nervous Diseases.
LOUIS A. DUHRING, M.D., Clinical Professor of Skin Diseases.
ROLAND G. CURTIN, M.D.,
EDWARD T. BRUEN, M.D., Assistant Physicians.
LOUIS STARR, M.D.,
CHARLES T. HUNTER, M.D., Assistant Surgeons.
J. WM. WHITE, M.D.,
H. R. WHARTON, M.D.,
RICHARD H. HARTLE, M.D.,
FREDERICK C. SHEPPARD, M.D., Assistant Gynecologist.
SAMUEL D. RISLEY, M.D., Assistant Ophthalmic Surgeon.
WALTER M. L. ZIEGLER, M.D., Assistant Aural Surgeon.
HENRY W. STELWAGON, M.D., Assistant Dermatologist.
BENJ. F. HAMELL, M.D., Superintendent of the Hospital.
CHARLES W. DULLES, M.D., Surgical Registrar.
WILLIAM E. HUGHES, M.D., Medical Registrar.
HENRY F. FORMAD, M.D., Pathologist.
JUDSON DALAND, M.D., Curator.
GWILLYM G. DAVIS, M.D., Surgical Anesthetizer.
B. C. HIRST, M.D.,
EDWARD MARTIN, M.D., Resident Physicians.
JOSEPH STOKES, M.D.,
JOSEPH C. ROGERS, Apothecary.

DISPENSARY SERVICE.

CHARLES T. HUNTER, M.D., Chief of the Surgical Dispensary.
SAMUEL D. RISLEY, M.D., Chief of the Dispensary for Diseases of the Eye.
WALTER M. L. ZIEGLER, M.D., Chief of the Dispensary for Diseases of the Ear.
BENJAMIN F. BAER, M.D., Chief of the Dispensary for Diseases of Women.
DE FOREST WILLARD, M.D., Surgeons in the Orthopedic Dispensary.
A. SYDNEY ROBERTS, M.D.,
J. WILLIAM WHITE, M.D., Chief of the Dispensary for Venereal Diseases.
JOHN H. MUSER, M.D., Chief of the Medical Dispensary.
LOUIS STARK, M.D., Chief of the Dispensary for Diseases of Children.
CARL SEILER, M.D., Chief of the Dispensary for Diseases of the Throat.
FRANCIS X. DERCUM, M.D., Chief of the Dispensary for Nervous Diseases.
H. W. STELWAGON, M.D., Chief of the Dispensary for Diseases of the Skin.
LEWIS W. KIRK, M.D.,
WILLIAM E. HUGHES, M.D., Assistant Physicians in the Medical Dispensary.

Wm. L. Taylor, M.D., Assistant Physicians in the Dispensary for Diseases of Women.

James Wallace, M.D., Assistant Physicians in the Dispensary for Diseases of G. E. De Schweinitz, M.D., the Eye.

James Hendrie Lloyd, M.D., Assistant Physician in the Dispensary for Nervous Diseases.

Robert H. Hamill, M.D., Assistant Physician in the Dispensary for Diseases of the Ear.

J. Madison Taylor, M.D., Assistant Surgeons in the Dispensary for Venereal Diseases.

Thomas R. Neilson, M.D., Assistant Physician in the Dispensary for Diseases of the Throat.

All communications should be addressed to

James Tyson, M.D.,
Secretary of the Faculty of Medicine,
P. O. Box 2838, Philadelphia, Penna.

Organization of the School.

The Department of Medicine was founded, in 1765, by Drs. William Shippen, John Morgan, Adam Kuhn, Benjamin Rush, and Thomas Bond. Its reputation has been maintained by worthy successors, among whom may be mentioned Barton, Wistar, Chapman, Physick, Dewees, Horner, Hare, Gibson, Jackson, George B. Wood, Hodge, James B. Rogers, Carson, the elder Pepper, Francis Gurney Smith, and John Neill.

Admission.

Candidates for admission are required: First, to write an essay (not exceeding a page of foolscap), which may serve as a test in orthography and grammar; second, to pass an examination in Elementary Physics (Part I. of Fownes's Chemistry). But candidates who have either received a collegiate degree, or passed the matriculate examination of a recognized college, or who have a certificate covering the required subjects from a recognized normal or high school, or a duly organized county medical society that has instituted a preliminary examination,—such as that adopted by the
Medical Society of the State of Pennsylvania,—may enter without examination.

Students who have attended one course in a regular* medical school are admitted to the second year of the University course, upon passing a satisfactory examination in General Chemistry and Materia Medica and Pharmacy. Students who have attended two courses in a regular medical school are admitted to the third year, upon passing satisfactorily an examination in General and Medical Chemistry, Materia Medica and Pharmacy, Anatomy, and Physiology.

Graduates of regular medical schools in good standing are admitted to the third year without an examination.

Graduates of Colleges of Pharmacy and Dental Colleges in good standing are admitted to the second year upon passing the entrance examination only.

Students may report to the Secretary for examination at any time after the third Monday in September. Those who cannot conveniently appear before the opening of the winter session, can arrange for examination after the beginning of the term. Examinations may also be held at any time during the spring session.†

Attention is particularly called to the special advantages of the Course Preparatory to Medicine in the Towne Scientific School of the University. Students taking this course for not less than two years will be exempted from a preliminary examination. They need not be full students in the College Department, but may be admitted as special students for this course alone.

COURSE OF STUDY.

The first year is largely occupied with work in the various laboratories, of Chemistry, Pharmacy, Osteology, Histology, and Biology, and in Dissection. The first year student may also attend clinical lectures in general medicine and surgery. In the second

* Homœopathic and Eclectic schools are not recognized as being in this category.
† Examinations for admission will also be held annually during the last week in June in the cities of Boston, Mass., Rochester, N. Y., Raleigh, N. C., Columbia, Tenn., Atlanta, Ga., Mobile, Ala., Cincinnati, O., Chicago, Ill., Detroit, Mich., St. Louis, Mo., St. Paul, Minn., San Francisco, Cal. The student can, of course, be examined in Philadelphia, if he prefer.
year, in addition to the didactic and clinical teaching, laboratory instruction is furnished in Physiology and Pathological Histology. Dissection is continued. Throughout the second and third years, the student is required to attend the general medical and surgical clinics at the University and Philadelphia Hospitals, and the clinics in special departments at the former. Special bedside instruction in Clinical Medicine and Surgery, in Physical Diagnosis, and in Gynaecology is given in the third year, as well as opportunities for the practical study of diseases of the eye, ear, throat, and skin, and for acquiring proficiency in the use of the various instruments employed in their treatment. For this purpose, the third-year class is divided into sections of convenient size, each of which receives direct personal instruction. In the fourth year, on which attendance is voluntary, the instruction is almost purely practical in character.

The course is so arranged as to permit the constant introduction of new essential subjects, as was secured by the older method of teaching. The laboratory instruction is so co-ordinated with the didactic teaching as to illustrate the subjects taught in the lectures.

Advanced students may make original researches in the laboratories of pharmacy, chemistry, physiology, pathology, and experimental therapeutics.

The effect of the adoption of this method on the composition of the classes and on their proficiency, has been most gratifying. A much larger proportion of the students have had a good education, either in colleges or in reputable academies, and their attention to study has been marked by increased seriousness and zeal. The annual examinations have steadily improved; the examinations for graduation have shown a higher degree of merit; and a much larger proportion of inaugural theses have given evidence of scientific knowledge as well as literary culture. The Medical Faculty are assured, therefore, that their advance towards a more perfect system of instruction has been sustained both by enlightened professional opinion and by the practical results. They are also convinced that further contemplated improvements, if judiciously made, will receive, not only the approval of all right-minded men, but the active co-operation and support of the medical profession.
ADDITIONAL INSTRUCTION—POST-GRADUATE COURSE.

Beside the required course and the voluntary fourth year, the general and special clinics and certain didactic lectures are continued after Commencement until the middle of June. There is, also, a special course for graduates throughout the academic year. All subjects connected with the fundamental departments of medicine, or with its several subdivisions determined by usage, are thoroughly taught in one or other of these courses; and it is strongly urged upon all students, especially those of the second and third years, to continue their studies during the spring and summer, and, if possible, to pursue the studies of the fourth year. For attendance on these a certificate will be given in addition to the diploma.

The new wing in the University Hospital, for the accommodation of cases of chronic diseases, especially of the heart and lungs, is completed, so that unusually good opportunities will be afforded for the study of these important affections. This wing has been erected by the liberality of Mr. Henry C. Gibson; and the beds, 100 in number, will be endowed by friends of the University. The Peter Hahn Ward, endowed by the late Dr. George B. Wood, has been opened for the admission of patients.

Students of one department of the University may attend, without additional charge, the lectures and recitations in any other department during hours otherwise unoccupied, provided that the consent of the Dean of such department has first been obtained.

OUTLINE OF THE COURSE.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
<th>Total hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>3 lectures per week, 10 hours practical anatomy</td>
</tr>
<tr>
<td>Histology</td>
<td>2 1/2 hours laboratory instruction per week</td>
</tr>
<tr>
<td>Materia Medica and Pharmacy</td>
<td>1 lecture per week, 2 hours laboratory</td>
</tr>
<tr>
<td>General Chemistry, including Chemical Physics</td>
<td>2 lectures per week, 4 hours laboratory</td>
</tr>
<tr>
<td>Physiology and Biology</td>
<td>3 lectures per week, 1 hour laboratory</td>
</tr>
<tr>
<td>General Pathology</td>
<td>1 lecture per week</td>
</tr>
<tr>
<td>Hygiene</td>
<td>1 lecture per week</td>
</tr>
<tr>
<td>General Clinics, Medical and Surgical</td>
<td>6</td>
</tr>
</tbody>
</table>

Final examinations at the end of the Course: General Chemistry, Materia Medica and Pharmacy.

<table>
<thead>
<tr>
<th>SECOND YEAR</th>
<th>Total hours per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy</td>
<td>3 lectures per week, 10 hours evening dissection</td>
</tr>
<tr>
<td>Topographical Anatomy</td>
<td>2 lectures per week</td>
</tr>
<tr>
<td>Medical Chemistry</td>
<td>1 lecture per week, 4 hours laboratory</td>
</tr>
<tr>
<td>Physiology</td>
<td>3 lectures per week, 1 hour laboratory</td>
</tr>
<tr>
<td>General Pathology and Morbid Anatomy</td>
<td>2 lectures per week, 1 1/2 hours laboratory</td>
</tr>
<tr>
<td>Course</td>
<td>Hours per Week</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Therapeutics</td>
<td>2</td>
</tr>
<tr>
<td>Theory and Practice of Medicine</td>
<td>3</td>
</tr>
<tr>
<td>Surgery</td>
<td>3</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>2</td>
</tr>
<tr>
<td>General Clinics, Medical and Surgical</td>
<td>8</td>
</tr>
<tr>
<td>Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
<tr>
<td><strong>Final examinations at the end of the Course: Anatomy, Medical Chemistry, and Physiology.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**THIRD YEAR.**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Pathology and Morbid Anatomy</td>
<td>2</td>
</tr>
<tr>
<td>Demonstrations in Morbid Anatomy</td>
<td>1</td>
</tr>
<tr>
<td>Therapeutics</td>
<td>2</td>
</tr>
<tr>
<td>Theory and Practice of Medicine</td>
<td>3</td>
</tr>
<tr>
<td>Surgery</td>
<td>3</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>2</td>
</tr>
<tr>
<td>Operative Surgery, Minor Surgery, and Bandaging</td>
<td>1</td>
</tr>
<tr>
<td>Diseases of Women and Children</td>
<td>1</td>
</tr>
<tr>
<td>Gynecology</td>
<td>2</td>
</tr>
<tr>
<td>Bedside Instruction in Practical Medicine (including Physical Diagnosis)</td>
<td>1</td>
</tr>
<tr>
<td>Clinical Conference</td>
<td>1</td>
</tr>
<tr>
<td>General Clinics, Medical and Surgical</td>
<td>8</td>
</tr>
<tr>
<td>Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Gynecology at both University and Philadelphia Hospitals)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Final examinations at the end of the Course: General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children.</strong></td>
<td></td>
</tr>
</tbody>
</table>

**FOURTH YEAR (VOLUNTARY).**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours per Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Medicine and Physical Diagnosis, including Laryngology</td>
<td>3½</td>
</tr>
<tr>
<td>Clinical Surgery</td>
<td>3</td>
</tr>
<tr>
<td>Operative Surgery and Veneral Diseases</td>
<td>1</td>
</tr>
<tr>
<td>Nervous and Mental Diseases and Electro-Therapeutics</td>
<td>3</td>
</tr>
<tr>
<td>Dermatology</td>
<td>1</td>
</tr>
<tr>
<td>Diseases of Children</td>
<td>1</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>3</td>
</tr>
<tr>
<td>Dermatology</td>
<td>3</td>
</tr>
<tr>
<td>Otology</td>
<td>2</td>
</tr>
<tr>
<td>Clinical and Operative Obstetrics</td>
<td>½</td>
</tr>
<tr>
<td>Orthopedic Surgery</td>
<td>1</td>
</tr>
<tr>
<td><strong>Final examinations for degree at the end of the course: Clinical Medicine, including Laryngology, Clinical Surgery, Operative Surgery, Gynecology, Clinical and Operative Obstetrics, Dermatology, Ophthalmology, Otology, and Medical Jurisprudence and Toxicology.</strong></td>
<td></td>
</tr>
</tbody>
</table>

* For these courses the class is divided into sections, so that each student may receive direct personal instruction.
Students of the University who pursue a four years' course, and who pass a satisfactory examination, will be awarded a certificate in addition to the diploma. The degree of Doctor of Medicine will also be conferred on graduates of other medical schools in good standing who take the third year of the three years' curriculum, or who attend the fourth year, together with the didactic lectures on Morbid Anatomy, Therapeutics, Practice of Medicine, Surgery, and Obstetrics, and who pass a satisfactory examination.

(For post-graduate courses, see p. 58.)

TEXT-BOOKS.

Chemistry: Fownes's Chemistry; Mutet's Analytical Chemistry.
Materia Medica: H. C. Wood.
Anatomy: Leidy; Gray; Schaeffer's Practical Histology for laboratory work.
Physiology: Kirke.
General Pathology: Rindfleisch's Elements of Pathology, translated by Mercur, revised by Prof. Tyson; Tyson's Cell Doctrine, pp. 127-152.

SECOND AND THIRD YEARS.

Medical Chemistry: Greene; Tyson's Practical Examination of Urine; Marshall & Smith's Chemical Analysis of Urine.
Anatomy: Leidy; Gray.
Physiology: Foster.
General Pathology and Morbid Anatomy: Coats's Manual of Pathology.

Therapeutics: H. C. Wood.
Practice of Medicine: Flint or Roberts; Fenwick's Medical Diagnosis.

Surgery: Agnew; Ashhurst.

Obstetrics: Playfair's Midwifery.

Gynecology: Goodell's Lessons in Gynecology.

COLLATERAL READING.

Wurts's Elements of Modern Chemistry; Atfield's Chemistry.
Wood & Bache's Dispensatory.
Quain; Wilson; Allen; Stricker's Histology.
Carpenter; Foster.

Wormley's Micro-Chemistry of Poisons.

Quain; Allen; Wilson; Stricker.
Carpenter.

Cornil and Ranvier, translated by Shakespeare and Simes; Orth's Diagnosis in Pathological Anatomy; Forndal's Manual of Microscopic Diagnosis, illustrated by Blackburn.

Wood & Bache's Dispensatory.
Reynoldt's System; Bruen, Physical Diagnosis; Stille's Therapeutics; Stille & Maisch's Dispensatory; Duhring on Diseases of the Skin.

Smith's Principles and Practice; International Encyclopedia of Surgery, Ashhurst; Erichsen; Billroth's Surgical Pathology.

Hodge's Obstetrics; West on Diseases of Women; West on Diseases of Children; Meigs and Pepper on Children.

Hodge on Diseases Peculiar to Women; Thomas on Diseases of Women; Emmet's Practice of Gynecology.
<table>
<thead>
<tr>
<th>Hour</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 A.M.</td>
<td>General Chemistry</td>
<td>General Chemistry</td>
<td>Chemical Laboratory, two hours</td>
<td>Practical Biology, Laboratory, One section 2 h'rs, Others Pract. Anatomy.</td>
<td>Philadelphia Hospital, Medical and Surgical Clinics.</td>
<td>Materia Medica.</td>
</tr>
<tr>
<td>10 A.M.</td>
<td>Practical Biology, Laboratory, One section 2 h'rs, Others Pract. Anatomy.</td>
<td>Chemical Laboratory, two hours</td>
<td>Hygiene</td>
<td>General Pathology.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 A.M.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others attend Anatomy.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others Pract. Anatomy.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others attend Clinic on Diseases of the Ear, U. H.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others attend Clinic on Diseases of the Ear, U. H.</td>
<td>Practical Biology, Laboratory, One section 2 h'rs, Others Pract. Anatomy.</td>
<td>Practical Biology, Laboratory, One section 2 h'rs, Others attend Clinic on Diseases of the Ear, U. H.</td>
</tr>
<tr>
<td>12 M.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others attend Clinic on Diseases of the Ear, U. H.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others attend Clinic on Diseases of the Ear, U. H.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others attend Clinic on Diseases of the Ear, U. H.</td>
<td>Normal Histology, Laboratory, One section 2 h'rs, Others attend Clinic on Diseases of the Ear, U. H.</td>
<td>Philadelphia Hospital, Medical and Surgical Clinics.</td>
<td>Materia Medica.</td>
</tr>
</tbody>
</table>

SECOND YEAR.

<table>
<thead>
<tr>
<th>Hour</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 A.M.</td>
<td>Practical Physiology, One section 1½ hours.</td>
<td>Practical Physiology, One section 1½ hours.</td>
<td>Medical Chemistry</td>
<td>Medical Chemistry.</td>
<td>Philadelphia Hosp., Med. and Surgical Clinics.</td>
<td></td>
</tr>
<tr>
<td>10 A.M.</td>
<td>Morbid Anatomy.</td>
<td>Topographical Anatomy.</td>
<td>Pathological Anatomy, One section 2 h'rs.</td>
<td>Pathological Anatomy, One section 2 h'rs.</td>
<td>Morbid Anatomy.</td>
<td>Pathol. Histology, Laboratory, One section 2 h'rs.</td>
</tr>
</tbody>
</table>

THIRD YEAR.

<table>
<thead>
<tr>
<th>Hour</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
</table>
FOURTH YEAR.

<table>
<thead>
<tr>
<th>Hour</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 A.M.</td>
<td>Clinical Medicine.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 A.M.</td>
<td></td>
<td>Philadelphia Hospital, Medical and Surgical Clinics.</td>
<td></td>
<td>Clincal Conference.</td>
<td>Autopsies.</td>
<td>Philadelphia Hospital, Medical and Surgical Clinics.</td>
</tr>
<tr>
<td>5 P.M.</td>
<td></td>
<td></td>
<td>Mental Diseases.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U. H. University Hospital.

For the study of Histology, Biology, and of Pathological Histology the class is divided into sections, one of which is occupied at a time; those of the first-year students not thus engaged work in the osteological laboratory or dissect, while those of the second year attend Clinics. See special roster.

For Ward Class instruction the third-year class is divided into sections. See special roster.

ROSTER OF BEDSIDE INSTRUCTION AND SPECIAL CLINICS FOR STUDENTS OF THE THIRD YEAR, SESSION 1883-4.

For attendance upon these Courses, the Third Year Class is divided into four sections, A, B, C, and D, which attend as follows:—

From Tuesday, Oct. 2d, until Friday, Nov. 16th, inclusive.

<table>
<thead>
<tr>
<th>From Tuesday, Oct. 2d, until Friday, Nov. 16th, inclusive.</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Pepper.</td>
<td>A B — C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Goodell</td>
<td>B</td>
<td></td>
<td>D A</td>
<td></td>
</tr>
<tr>
<td>&quot; Ashhurst</td>
<td>C D B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Clinics</td>
<td>D A C &amp; A &amp; C B &amp; D</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>From Monday, Nov. 19th, to Friday, Jan. 4th, inclusive.</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Pepper.</td>
<td>B C D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Goodell</td>
<td>C — A</td>
<td></td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>&quot; Ashhurst</td>
<td>D A</td>
<td></td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Special Clinics</td>
<td>A B &amp; D B &amp; C A &amp; C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>From Monday, Jan. 7th, to Friday, Feb. 22d, inclusive.</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Pepper.</td>
<td>C A —</td>
<td></td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>&quot; Goodell</td>
<td>D B C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Ashhurst</td>
<td>A B C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Clinics</td>
<td>B C &amp; D A &amp; D A &amp; B</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From Monday, Feb. 25th, to Friday, April 11th, inclusive.

Prof. Pepper

" Goodell

" Ashhurst

Special Clinics

The instruction is given at the University Hospital at 1 o'clock. Prof. Pepper will meet the sections of the Third Class in the Main Ward, second floor; Prof. Goodell in the Lower Lecture Room; and Prof. Ashhurst in the Front Ward, first floor. The Special Clinics are held in the upper Lecture-Room.

This arrangement enables each section to attend, during an equal portion of the term, the clinical lectures on special subjects, as follows:

1 P.M.

Monday.
Prof. Strawbridge

Tuesday.
Prof. Duhring

Thursday.
Prof. Norris

Friday.
Prof. Wood

Otology.
Dermatology.
Ophthalmology.
Nervous Diseases.

The entire Third Year Class will attend the General Medical, Surgical, and Gynecological Clinics, held on Wednesdays and Saturdays, from 12 to 2 o'clock, in the Upper Lecture-Room; also the Demonstrations in Morbid Anatomy by Prof. Tyson at 11 o'clock on Tuesdays, and the Clinical Conferences of Prof. Pepper at 11 o'clock on Thursdays.

SPECIAL ROSTER OF LABORATORY INSTRUCTION IN HISTOLOGY, BIOLOGY, OSTEOLOGY, AND SYNDESMOLOGY, FOR STUDENTS OF THE FIRST YEAR, SESSION 1883-4.

For instruction in these Laboratories the First Year Class will be divided into five sections, A, B, C, D, and E, which will attend as follows:

1st Period. From Monday, Oct. 1st, until Wednesday, Nov. 7th, inclusive.

Histology. Sec. A 12 to 2 A 12 to 2 A 12 to 2 A 12 to 2 A 12 to 2 A 12 to 2

Biology.
B 10 to 12 - - B 9 to 11 - - B 12 to 2

Osteology.
D & E 12 M. B & C

2d Period. From November 7th to December 15th, inclusive.

Histology.
B 12 to 2 B 12 to 2 B 12 to 2 B 12 to 2 B 12 to 2

Biology.
C 10 to 12 - - C 9 to 11 - - C 12 to 2

3d Period. From December 15th to January 22d, inclusive.

Histology.
C 12 to 2 C 12 to 2 C 12 to 2 C 12 to 2 C 12 to 2

Biology.
D 10 to 12 - - D 9 to 11 - - D 12 to 2

4th Period. From January 22d to February 2oth, inclusive.

Histology.
D 12 to 2 D 12 to 2 D 12 to 2 D 12 to 2 D 12 to 2

Biology.
E 10 to 12 - - E 9 to 11 - - E 12 to 2

Syndesmology.
A & E 12 M. A & E 12 M. A & E 12 M. A & E 12 M. A & E 12 M.

5th Period. From February 2oth to April 7th, inclusive.

Histology.
E 12 to 2 E 12 to 2 E 12 to 2 E 12 to 2 E 12 to 2

Biology.
A 10 to 12 - - A 9 to 11 - - A 12 to 2

After the first period all students not occupied in the Laboratory of Normal Histology will dissect from 12 to 2 daily, except Wednesdays and Saturdays, and from 10 to 12 Mondays, and 9 to 11 Thursdays, except those occupied with Biology and Syndesmology.
GRADUATION.

At the close of the third year, students who have passed all their examinations satisfactorily receive the degree of Doctor of Medicine on the following conditions:—

I. The candidate must have attained the age of twenty-one years, and be of good moral character. He must have attended at least his last course of instruction in this school, and have prepared a satisfactory thesis.*

II. When he receives notice of having successfully passed his final examination, he must enter his name on the register of candidates for the degree.

III. He must be present at Commencement, unless excused by the Faculty.

ARRANGEMENT OF SESSIONS.

The Spring Session, 1884, begins on Monday, May 5th, and ends about the middle of June.

The Preliminary Session begins on Monday, September 15th, and ends on Saturday, September 27th.

The Winter Session, 1884–85, upon which alone attendance is obligatory, begins on Wednesday, October 1, 1884, and ends on Wednesday, April 15, 1885.

EXPENSES.

WINTER TERM.

FIRST YEAR.

Matriculation Fee $5 00
For general ticket, admitting to all the lectures and laboratory work assigned to this year, including dissection $150 00
Dissecting material $1 a part.

SECOND YEAR.

For general ticket, admitting to all the lectures and laboratory work assigned to this year, including dissection $150 00
Dissecting material $1 a part.

* The thesis must be in the candidate's own handwriting, and should be written on thesis paper, the alternate pages being left blank. It should be prepared before the commencement of the last course of lectures. It must be bound, and becomes after presentation the property of the Stills Medical Library. In no case can it be returned or loaned; so that students who desire to make further use of their theses should prepare extra copies for such use.

A thesis may be published by the candidate if he desires it, the permission of the Professor by whom he was examined thereon having been first obtained; but no alteration shall be made in such thesis without the consent of the Professor.
THIRD YEAR.

For general ticket, admitting to all the lectures and practical work assigned to this year, including operating and bandaging (no graduation fee) $150.00
Fee for the full third year course to graduates of other schools, including privilege of applying for graduation (no graduation fee) 150.00
Material for operating $1 a part.

FOURTH YEAR (VOLUNTARY).

For general ticket, including all the practical courses of this year (no graduation fee) $150.00
To graduates of other schools, with the privilege of attending the didactic courses of the third year, and applying for graduation (no graduation fee) 200.00

SPRING SESSION.

Matriculation fee (paid once only) $5.00
Tuition fee 30.00
This sum will be credited on account of the fee for the ensuing Winter Term.

FEES FOR SPECIAL COURSES.

(Students taking special or partial courses, if not graduates of the school, are required to pay the matriculation fee, in addition to the fees named below.)

For the full third Course, including bandaging and operating, to graduates of this school $75.00
For a single Course of Lectures, except Materia Medica 20.00
For Course on Materia Medica, and on Bandaging and Operating, each 25.00
For Practical Course in the Chemical Laboratory 25.00
For the Course in Practical Gynecology of the third year 15.00
For any one of the remaining practical Courses of the third year

Graduates of the school are admitted to the LECTURES free of charge; but they pay the fees for the practical courses.

At the beginning of the first year, each student is required to make a deposit of five dollars with the Professor of Chemistry, to cover "breakage" in the chemical laboratories. Any balance remaining is returned.

All fees are payable in advance to the Secretary of the Faculty, who will issue a general ticket of admission to all the lectures and practical instruction. Under no circumstances are any changes made in the established fees. The only free scholarships granted are those under the regulations named below.

Board can be obtained in Philadelphia for $4 per week and upwards.

SCHOLARSHIPS.

A competitive examination of candidates to fill six free scholarships is held annually. (In 1884, on Wednesday, September 24, at 12 o'clock, noon.) The candidates will be required—

First. To furnish satisfactory evidence that they are without means to defray the expenses of a medical education.

Second. To write a brief autobiography, not exceeding a page of foolscap, which will serve as a test of their qualifications in orthography and grammar.

Third. To pass a written examination in Latin prose translation, (first three books of Caesar,) and a written examination in Physics.
Candidates who propose to present themselves for examination will send their names, accompanied by the necessary certificate required by the first condition, to the Secretary of the Faculty of Medicine, before Sept. 15th, and appear without further notice.

SPRING COURSE OF INSTRUCTION—1884.

The various laboratories in connection with the University are open during the spring and early summer, and the post-graduate courses described below are continued.

The clinics and lectures are continued at the Hospital, and instruction will be given upon the following subjects:—CHEMISTRY; MATERIA MEDICA; PHARMACY; HISTOLOGY; PHYSIOLOGY; REGIONAL ANATOMY; MORBID ANATOMY; PHYSICAL DIAGNOSIS; VENEREAL DISEASES; PRACTICAL and CLINICAL OBSTETRICS; MENTAL DISEASES, and ELECTRICAL THERAPEUTICS; EXPERIMENTAL PATHOLOGY; CLINICAL MEDICINE; CLINICAL SURGERY; CLINICAL GYNECOLOGY; DISEASES OF CHILDREN; DISEASES OF THE NERVOUS SYSTEM; DISEASES OF THE EYE; DISEASES OF THE EAR; and DISEASES OF THE SKIN.

PRELIMINARY LECTURES—1884.

This Session, beginning Monday, Sept. 15th, is strongly recommended to all students who can attend it. It includes lectures, didactic and clinical, by members of the Faculty and others. No fee is charged for this session.

POST-GRADUATE INSTRUCTION—1883-4.

The post-graduate instruction for the Session of 1883-4 includes the following subjects:—

CLINICAL MEDICINE AND PHYSICAL DIAGNOSIS, by Prof. Pepper and Dr. Bruen.
RENAL DISEASES AND DIABETES, WITH PRACTICAL EXAMINATION OF URINE, by Prof. Tyson.
NERVOUS DISEASES AND ELECTRO-THERAPEUTICS, by Prof. Wood; and by Dr. Sinkler, at the Orthopaedic Hospital.
CLINICAL SURGERY, by Prof. Ashhurst.
OPHTHALMOLOGY, by Dr. S. D. Risley.
DERMATOLOGY, by Prof. Duhring.
OTOLOGY, by Prof. Strawbridge.
GYNECOLOGY, by Dr. B. F. Baer.
OPERATIVE AND GENITO-URINARY SURGERY, WITH VENEREAL DISEASES, by Dr. White.
CLINICAL AND OPERATIVE OBSTETRICS, by Dr. E. Richardson.
LARYNGOLOGY, by Dr. Seiler.
DISEASES OF CHILDREN, by Dr. Starr.
MICROSCOPY AND PATHOLOGY, by Dr. Formad.
The teaching consists in bedside and dispensary lessons, in the practical examination of patients, and the use of instruments of precision in the diagnosis and treatment of disease. The classes are composed of graduates only. From two to six hours weekly are devoted to each of the branches named. The instruction is given at the University and other Hospitals with which the different members of the staff are connected.

In addition, the classes are permitted to attend, without further expense, the general and special clinics of the University, and such didactic lectures as do not interfere with the post-graduate instruction.

Five courses, of six weeks each, are given during the year, the first beginning October 1st, the second November 12th, the third January 10th, the fourth February 21st, and the fifth April 15th. Fee for each branch $15. A reduction of 15 per cent. will be made when six or more courses are taken. Fees invariably in advance.

In addition to the above combined courses, the following are also given:

- **Practical Physiology**, by Dr. Robert Meade Smith. Systematic Instruction in Experimental Physiology and Experimental Therapeutics, and the superintendence of Original Investigations. Fee, including material, $25.
- **Histology and Pathology**, by Dr. H. F. Formad. Two courses: I. Normal and Pathological Histology, including Microscopic Technology; the opportunity of witnessing and making Post-mortem Examinations. Winter and spring months. II. Experimental Histology and Experimental Pathology. Fee for each course, including material, $15.

**Facilities for Instruction, etc.**

The instruction in the Medical Department is conducted in the Medical Hall, the Laboratory Building, and the Hospital of the University.

**Hall of the Medical Department.**

The Medical Hall contains the Wistar and Horner Museum, the Histological, Osteological, Physiological, Pathological, and Pharmaceutical Laboratories, and the Stillé Medical Library.

The Wistar and Horner Museum, founded nearly one hundred
years ago, has been annually augmented, and is unequalled in the United States for the number and variety of its specimens of the normal and the morbid anatomy of every part of the human body. It also contains a large number of preparations in comparative anatomy, and an extensive collection of models, used in illustrating the lectures. The matriculation ticket entitles the holder to admission to the Museum, which is open on Wednesday and Saturday of each week, from 9 A. M. to 12 M., throughout the session.

The Cabinet of Morbid Anatomy, collected by the late Dr. George B. Wood, and generously given by him to the University, contains an extensive series of wet preparations, drawings, and models in wax and other materials. These form a collection, unrivalled in extent and value, for illustrating diseases of the internal organs and the skin.

The late distinguished Professor of Obstetrics, Dr. Hugh L. Hodge, enriched the facilities of Instruction in that special branch by the gift of his valuable Cabinet.

Through a like liberality of Dr. Henry H. Smith, Emeritus Professor of Surgery, and of the late Dr. John Neill, Emeritus Professor of Clinical Surgery, the University has an extensive and valuable gift of morbid specimens, models, and drawings.

The spacious apartments devoted to these collections are well adapted to their display, and render them accessible for examination.

The Histological Laboratory is under the supervision of the Professor of Anatomy, and the direct guidance of the Demonstrators of Histology. The laboratory is furnished with excellent microscopes, and all necessary apparatus to enable the first course student to become practically familiar with the most approved methods of microscopical technology, as well as with the Normal Histology of all the tissues and organs. During the spring months the laboratory is open for such as may desire a course embracing the refinements and minutiae, which of necessity are omitted in the regular winter's work. Especial facilities are afforded to those who desire to pursue original research; for such the laboratory is open the entire year, except during July and August.

The Osteo-Synodesmological Laboratory is under the supervision of the Professor of Anatomy and the Demonstrator of Osteol-
ogy and Syndesmology. The first year student is required, in this Laboratory, to make himself familiar with the skeleton and the articulations, before beginning dissection of the cadaver.

Physiological Laboratory.—The Physiological Laboratory is under the personal supervision of the Professor of Physiology and the Demonstrator. It is furnished with every form of apparatus likely to be used by the practical physiologist. An elementary practical course in Physiology, designed especially for first year students who are without preliminary training in Biology, is continued throughout the session; and students of the second year are further instructed in Practical Physiology; while every facility is afforded advanced students and graduates pursuing special studies in that subject. The Laboratory is open during the entire year, except July and August.

Pathological Laboratory.—This Laboratory, under the direction of the Professor of General Pathology and Morbid Anatomy, and the Demonstrators of Pathological Histology, was opened in 1874, and has already attracted, from remote sections of the country, a large number of physicians and students who desire special preparation in microscopic technology, normal and pathological histology, and experimental pathology. It is suitably furnished with microscopes, and all appliances requisite for practical study of these subjects, and for making original researches.

The Laboratory is supplied also with a complete outfit of materials and apparatus for investigation of Bacteria in their relation to infectious diseases, and the study of lower fungi in general.

The practical work in the pathological laboratory during the regular winter session is obligatory to students of both second and third year.

1st. Each student of the second year is provided with a separate table and microscope, with material and reagents, and receives personal instruction in pathological histology, in micology, and in the microscopy of urine.

2d. Each student of the third year receives advanced practical instruction in morbid anatomy, and in the execution of autopsies. The weekly demonstrations of the gross appearance of specimens, embracing all known morbid products, mostly in fresh condition, side by side with the microscopic section from the same, are an extremely useful feature of this course.
Special instruction and guidance in original research are given by the demonstrators to advanced students.

The laboratory is open during the entire year, except July and August.

Pharmaceutical Laboratory.—The Pharmaceutical Laboratory is in charge of the Professor of Materia Medica and Pharmacy, and the Demonstrators of Pharmacy. It is furnished with suitable tables and all necessary apparatus. In it the student learns not only the various pharmaceutical processes, but also that familiarity with drugs which can be acquired only by handling them.

Laboratory of Experimental Therapeutics.—This Laboratory, under the direction of the Professor of Materia Medica and Therapeutics, is furnished with all apparatus and instruments necessary for the study of the physiological action of medicines.

The Stillé Medical Library.—This Library, founded by Prof. Alfred Stillé for the purpose of promoting a spirit of scientific research and literary culture, now contains over four thousand volumes. During the Winter and Spring Courses it is accessible to advanced students and graduates of the Medical Department under appropriate regulations.

The Laboratory Building.

The first floor is arranged for the Operating Room or Infirmary of the Dental Department, and has the necessary waiting-rooms, etc., carefully adapted to the requirements of this department. The entrance is from the centre on Spruce Street.

The second and third floors are fitted up as chemical laboratories; the second being the laboratory of General Chemistry, and the third that of Medical Chemistry. Each story is capable of accommodating two hundred and sixteen students; so that, even if the total University class should reach six hundred, each student of chemistry could be furnished with his own table and apparatus. In addition to the main room, on each story, there are four balance rooms, divided from these large apartments by glass partitions.

The fourth floor is entirely occupied by the Dissecting Room.

The entrance for the second, third, and fourth stories is from the rear and nearly opposite the south entrance door of the Medical Department. An elevator is arranged at this place for all the stories.
CHEMICAL LABORATORIES.—I. The Working Laboratory for Practical Chemistry, under the supervision of the Professor of Chemistry and the Demonstrator, with competent assistants. Students of the First Year devote four hours each week to the study of General Chemistry. The course includes chemical manipulations and the detailed study of the chemical reactions of the principal metals, acids, and their combinations; with the general principles of Qualitative Analysis, especially as they relate to the detection and separation of metals and compounds of interest to the physician. Each student is provided with a separate table and apparatus, and is required to exhibit by formulae, on paper, all reactions involved in his tests.

2. Students of the Second Year devote four hours per week to practical work in the laboratory. The course embraces an introduction to the general principles of Quantitative Analysis and the principles of Volumetric Analysis, with the practical examination of urine and animal fluids, and the recognition and recovery of poisons from the animal body and complex mixtures.

DISSECTING ROOM.—In constructing the new Dissecting Room of the University, care was taken to provide everything that experience suggested as being necessary or desirable. The room is at the top of the Laboratory Building, and is bounded by its extreme dimensions. It is therefore one hundred and fifty-nine feet in length, by ninety-two feet in width. It is lighted by windows in the four sides, and by skylights in the ceiling. By this means, too, the most perfect ventilation is secured. There are gas burners over every table for work by night. The tables have stone tops, which cannot absorb the discharges and can be kept perfectly clean. There are numerous washstands and private closets for the use of each student. Cleanliness is rigidly enforced. The preservation of the cadaver has been so successfully accomplished as almost to do away with the dangers of dissecting wounds. Dissection is legalized in Pennsylvania.

The Room is open throughout the year (except in July and August), under the superintendence of the Professor of Anatomy and the Demonstrators.

PRACTICAL SURGERY.—The application of bandages and dressings, surgical operations on the cadaver are a part of the practical instruction to students of the Third Year, under the supervision of
the Professor and Demonstrators of Surgery. Instruments, splints, and bandages are supplied free of cost.

THE UNIVERSITY HOSPITAL.

The University Hospital is an elegant and commodious edifice, constructed according to the best established principles of hospital architecture, and provided with all the appliances pertaining to such institutions of the first class. It is adjacent to the new Medical Hall, and forms an integral portion of the Medical Department. In its various departments, during 1882, there were treated 7880 cases, representing almost all of the known medical, surgical, and gynaecological affections. Owing to its being situated within a very short distance of the numerous railroads, the Hospital is especially rich in cases of severe injury, and its acute surgery is almost unrivalled. Attendance on the Clinical Lectures delivered in its amphitheatres and its wards is a part of the daily duty of the students, and ample opportunities are afforded to the more advanced among them to gain a personal and practical acquaintance with Clinical Medicine, Surgery, Gynaecology, and the Specialties. These subjects are taught by the several Clinical Professors.

The resident physicians of the University Hospital are every year selected by competitive examination from among the graduating class of the University. The next examination will be held Friday, May 2, 1884, at 12 M.

OTHER HOSPITALS AND HOSPITAL CLINICS.

In addition to the official clinical lectures and bedside instruction delivered at the University Hospital, and the other diversified means of acquiring practical knowledge and skill which that Institution affords, medical students have the opportunity of attending clinical lectures in other Hospitals and private classes formed for the special study of disease.

The PHILADELPHIA HOSPITAL, contiguous to the grounds of the University, contains one thousand beds. In it are delivered twice a week Clinical Lectures on Medicine, Surgery, and the Diseases of Women and Children. Lectures on Clinical Medicine and Surgery are also delivered twice a week during the greater part of the year by the Medical Staff of the PENNSYLVANIA HOSPITAL. Instruction in Clinical Surgery and Children's Diseases is given, too, at the Chil-
DREN'S HOSPITAL. To these institutions students are admitted without charge, except at the Pennsylvania Hospital, where a small fee is now required.

During the spring and summer *private* classes are also formed for Clinical Instruction, for which a moderate fee is exacted.

Appointments of Resident Physicians, amounting to twenty-five or more, are made annually in the different Hospitals of the city. With one or two exceptions these positions are now filled by *competitive examination of candidates*.

From the preceding summary it is evident that a prolonged residence in the city must be of the utmost value to the student, by enabling him to pursue a systematic course of study and to become practically familiar with the scientific methods of investigating disease, and with the principles and results of its treatment.

**STILLE MEDICAL SOCIETY AND H. C. WOOD MEDICAL SOCIETY.**

These Societies are composed of Second and Third year students. Their meetings are held once a week during the winter session for the reading and discussion of papers referring to the theory and practice of medicine.

**PRIZES.**

Three Prizes, one of One Hundred Dollars, one of Fifty Dollars, and a third of a Gold Medal of the value of Fifty Dollars, or its money equivalent, will be awarded to the members of the Graduating Class of 1883–84 for the best Essays upon Medical subjects, provided such Essays are of sufficient merit.

One of these prizes has been instituted by the Society of the Alumni of the Medical Department of the University; the others by friends of the University.

A Prize of Thirty Dollars will be awarded by the Demonstrator of Anatomy to the member of the Graduating Class who shall present the best record of the anomalies found in the anatomical rooms.

A Prize of Twenty Dollars will also be awarded by the Demonstrator for the best *vascular preparation*, to be placed in the Wistar and Horner Museum, with the name of the preparer attached.
MORBID ANATOMY PRIZE.—A prize of a Zentmayer's Histological Microscope will be awarded by the Professor of General Pathology and Morbid Anatomy for the best thesis on any subject connected with Pathology or Morbid Anatomy, illustrated by a set of not less than twelve microscopical preparations. The Essay must be presented as competing for the prize.

The names of those to whom the prizes are awarded are announced at the Annual Commencement of the Medical Department.

MATRICULATES 1883-4.

FOURTH YEAR.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costa, Leopoldo M. da</td>
<td>J. Hay and Univ.</td>
<td>Sao Paulo, Brazil.</td>
</tr>
<tr>
<td>Free, George B. M.</td>
<td>Ind.</td>
<td>York.</td>
</tr>
<tr>
<td>Hickman, Harbeson, Jr.</td>
<td>Hiram Burton.</td>
<td>Lewes, Del.</td>
</tr>
<tr>
<td>Littig, Lawrence W.</td>
<td>State Univ. of</td>
<td>Davenport, Iowa.</td>
</tr>
<tr>
<td></td>
<td>Iowa and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>W. D. Middleton.</td>
<td></td>
</tr>
</tbody>
</table>

Students of the Fourth Year, 4.

THIRD YEAR.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachman, Archibald C.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baldy, John M.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barr, Martin W.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batchelor, William A.</td>
<td>Marietta</td>
<td></td>
</tr>
<tr>
<td>Batt, Wilmer R.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bergey, David H.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bodamer, George A.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bradford, John Marion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bradford Thomas B.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breiman, Park P.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brinkman, Morris W.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bucher, John C.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cantwell, Frank V.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carothers, Edward J.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carson, Thomas H.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cassel, George L.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collmar, Charles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daggett, William Gibbons, A.B.</td>
<td>University.</td>
<td></td>
</tr>
<tr>
<td>(Yale)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delpuech, William A.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diven, Samuel L.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dock, George</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Douglas, Henry S.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duplan, Ernesto</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evans, Charles W.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evans, Eimer E.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evans, Evan W.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evans, Franklin J.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farkhur, Charles T. N.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fithian, Frank, A.B.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Centre, Ky.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R. A. F. Penrose.   
A. C. Transue.     
John B. Deaver.    
Sam'l Wolfe.      
H. F. Formad.     
John Ashburnst, Jr. 
E. T. Bruen.    
J. H. Musser.   
Jno. B. Deaver.  
I. R. Bucher.       
T. H. Mackenzie.  
J. Y. Scott.     
H. M. Alexander and 
J. H. Grove.  
University.       
David L. Daggett. 
S. M. Woodburn.  
S. B. Kieffer.    
C. A. Rhater.     
University.       
S. S. Koser.     
P. J. Roebuck.    
E. L. Evans.     
J. L. Forwood.   
Q. C. Farquhar.  
Jos. Fithian.
<table>
<thead>
<tr>
<th>Name</th>
<th>City/State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florance, Egbert</td>
<td>Mooroolbanna, Australia</td>
</tr>
<tr>
<td>Rousse, M. Howard</td>
<td>Radnor</td>
</tr>
<tr>
<td>Gault, C. Reese</td>
<td>Reading</td>
</tr>
<tr>
<td>Glover, Samuel P.</td>
<td>Hartleton</td>
</tr>
<tr>
<td>Greenewalt, John C.</td>
<td>Chambersburg</td>
</tr>
<tr>
<td>Hamaker, Winters D., A.M. (Wash. and Jefferson)</td>
<td>Schellsburg</td>
</tr>
<tr>
<td>Hare, Hobart Amory</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Hirsh, Charles E.</td>
<td>Staunton, Va.</td>
</tr>
<tr>
<td>Hoobaugh, John U., A.B. (Franklin and Marshall)</td>
<td>Green Park</td>
</tr>
<tr>
<td>Howell, William G., Jr.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Hunter, N. Perry, A.B. (Cornell)</td>
<td>Jasper, N. Y.</td>
</tr>
<tr>
<td>Ickes, William J.</td>
<td>Sandy Hill</td>
</tr>
<tr>
<td>Jenkins, Stephen R.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Judge, John P., A.M. (Mt. St. Mary's)</td>
<td>Media</td>
</tr>
<tr>
<td>Junco, Leoncio del, A.M.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Lemos, Odorico G. de</td>
<td>Matanzas, Cuba</td>
</tr>
<tr>
<td>Little, George</td>
<td>Para, Brazil, S. A.</td>
</tr>
<tr>
<td>Luce, John E.</td>
<td>Potsville</td>
</tr>
<tr>
<td>Lynd, Robert S.</td>
<td>Red Wing, Minn.</td>
</tr>
<tr>
<td>Macneal, John</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Marvel, Philip</td>
<td>Lake Linden, Mich.</td>
</tr>
<tr>
<td>Mastin, Claude H., Jr.</td>
<td>Dover, Del.</td>
</tr>
<tr>
<td>Moore, William A.</td>
<td>Mobile, Ala.</td>
</tr>
<tr>
<td>Mosteller, William H.</td>
<td>Rochester, N. Y.</td>
</tr>
<tr>
<td>Moyer, Alfred C.</td>
<td>Kimberton</td>
</tr>
<tr>
<td>McAlister, Alexander, Ph.G.</td>
<td>Allen town</td>
</tr>
<tr>
<td>McBride, Thomas Barr</td>
<td>Camden, N. J.</td>
</tr>
<tr>
<td>Newton, George W.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Norton, Albert E.</td>
<td>Boston, Mass.</td>
</tr>
<tr>
<td>Novaces, Francisco de P.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>O'Brien, Thomas C.</td>
<td>Rio Claro, Brazil, S.A.</td>
</tr>
<tr>
<td>Orr, William P.</td>
<td>Conshoheucken</td>
</tr>
<tr>
<td>Peters, Howard Vance, A.B.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Pierce, William R.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Potter, James T.</td>
<td>Amsterdam, N. Y.</td>
</tr>
<tr>
<td>Powell, Lapher A.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Powell, William M.</td>
<td>Cochranton</td>
</tr>
<tr>
<td>Power, David P., A.B. (Wash. and Jefferson)</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Prendergast, James F.</td>
<td>McKeesport</td>
</tr>
<tr>
<td>Prettyman, John S., Jr.</td>
<td>Binghamton, N. Y.</td>
</tr>
<tr>
<td>Rauchley, William C.</td>
<td>Milford, Del.</td>
</tr>
<tr>
<td>Rechfuss, Emil G., Ph. G.</td>
<td>Dover, Del.</td>
</tr>
<tr>
<td>Rentz, Gustav A., Ph.G.</td>
<td>Philadelphia</td>
</tr>
<tr>
<td>Richardson, Charles W.</td>
<td>St. Paul, Minn.</td>
</tr>
<tr>
<td>Richardson, Rodney H., Ph.B. (Delaware)</td>
<td>Washington, D. C.</td>
</tr>
<tr>
<td>Robb, Hunter</td>
<td>Lewes, Del.</td>
</tr>
<tr>
<td>Roberts, Ellis G.</td>
<td>Burlington, N. J.</td>
</tr>
<tr>
<td>Robinson, Oliver D.</td>
<td>Kenyogroes, Wales</td>
</tr>
<tr>
<td>Robison, Milton A.</td>
<td>Georgetown, Del.</td>
</tr>
<tr>
<td>Roderer, John F.</td>
<td>Williamsport</td>
</tr>
<tr>
<td>Seople, Wm. O., Ph.B. (Lafayette)</td>
<td>Philadelphia</td>
</tr>
<tr>
<td></td>
<td>Easton</td>
</tr>
</tbody>
</table>
Shapley, William E.
Shaver, William D.
Sherraden, William H., D.D.S.
Simpson, Maxwell G., M.A. (Laf'te)
Skinner, Harry
Steer, Edgar H.
Stout, Charles P., Ph.G.
Sykes, Henry
Temple, Frank M., M.D.
Temple, William H., Jr.
Tovar, Luis P., D.D.S.
Trumbull, John Heyward, Ph.B. (Yale)
Van Horn, Alfred F.
Van Loon, William E., Ph.B. (Wesleyan Univ.)
Wallis, J. Edward, Ph.G.
Waterbury, Edward M., A.B. (Univ. of Rochester)
Wetherill, Richard B., M.D.
Whitney, Harry Leroy
Wilson, Cunningham
Winner, William G.
Woodnutt, Clement A.
Zuill, William L., D.V.S.

Plymouth.

Shippensburg.

C. A. Howland and W. M. Witherspoon.
University.

Plymouth.
Council Bluffs, Iowa.
Parkesburg.
Philadelphia.
Waterford, Va.
Florence, N. J.
Liverpool, N. B.
Mercer.
White Plains, Va.
Bogota, U. S. of Col.
Talcahuano, Chili.

Catasauqua.
Wilkes-Barre.
Philadelphia.
Saratoga Springs, N.Y.

Philadelphia.

Students of the Third Year, 107.

SECOND YEAR.

Albright, Titus
Alexander, Reid
Allyn, Herman B., A.B. (Univ. Pa.)
Ball, Lewis Heisler, Ph.B. (Delaware)
Beckley, Joseph R.
Bermudez, Salvador
Birney, David Bell, A.B. (Univ. Pa.)
Bley, Alphonso, A. W. Ph.G.
Boom, Harry Herbert
Boyd, Robert H., A.B. (Lafayette)
Brader, William B.
Bratton, Howard, A.M. (Princeton)
Butler, William J.
Cameron, Markley C.
Carson, Alfred D., Ph.D. (Lyceum of Valparaiso)
Clark, George A.
Coburn, Clinton C.
Cochrane, William R., Ph.B. (Western University)
Cooke, Dudley T., A.B. (Central High School)
Cotzhausen Louis von, Ph.G.
Day, F. Harvey
Deaver, Harry Clay
Depue, Barclay II.
Dingee, Charles
Eckels, G. Morris, Ph.G.
Edsall, Frank H.
Elmer, Matthew K., A.B. (Princeton)
Emery, Francis E. E.
Evans, William

Hilltown.

Harvey Kratz.
M. Rowe.
University.
S. Chandler.
University.
Samuel Weiss.
University.
Barton C. Hirst.
University.
University.
University.
University.
H. H. Mitchell.
W. G. Weaver.
H. H. Clark.
University.

Hermann.

University.
Win. G. Nowell.
J. M. & J. B. Deaver.
James D. De Witt.
Richard Dingee.
University.
University.
University.
University.
University.

Philadelphia.

Green Village.

Eastern University.

Philadelphia.

School.

Philadelphia.

Wilmington, Del.

Buck.

Harmony, N. J.

Newportville.

Mechanicsburg.

Hamburg, N. J.

Bridgeton, N. J.

San Juan, Arg. Rep.

Darling.

University.

University.

University.

University.

University.

University.

University.
Farquhar, Charles  
Fitpatrick, Charles, Jr.  
Freas, Henry M., A.B. (Pennsylv'a)  
Gadd, Samuel Wesley, Ph.G.  
Gallagher, W. Moorehouse  
Geissel, Albert E.  
Goodell, William C.  
Griffith, Elijah  
Grimm, Nathan P.  
Guiteras, Gregorio M., A.M. (La Salle)  
Henderson, William B.  
Herman, George C.  
Herr, William M.  
Hines, Peter  
Hite, J. Edwin  
Hubbard, Thomas  
Huston, William O., A.B. (Westminster)  
Jelovitz, Meier L.  
Johnson, William H.  
Jones, Fremont C.  
Jones, Oliver B.  
Kelley, John A.  
Kenney, Edward L., A.B. (Laf'te)  
King, Thomas D., A.B. (Princeton)  
Kittredge, Frank E.  
Kreps, John J.  
Lame, Samuel Louis  
Learned, William T., A.B. (Brown)  
Lincoln, Mark H.  
Lott, William C., A.B. (Brown)  
Macy, John W.  
Mengel, Matt S.  
Merkle, Horace E.  
Miller, Asher D.  
Miller, Elijah  
Miller, George B. McClellan  
Morrow, Charles H.  
Morton, Thomas S. K.  
Musser, F. Reber  
McCloskey, William D.  
Nichols, William V.  
Novaes, Emygdio Dias  
Packard, Frederick A., B.A. (Univ. Pa.)  
Pike, Charles P.  
Potts, Charles S., A.B. (Central High School)  
Purcell, McDaniel  
Reap, George B.  
Rhoads, Edward G.  
Rickert, Charles M.  
Riera, John H.  
Ring, G. Oran, A.B. (Central High School)  
Riva, Ferdinand E., A.B. (Institute of Havana)  
Roberts, Thomas S.  
Robeson, William F., B.S. (Dickinson Seminary)  

Oney, Md.  
Philadelphia.  
Lafayette Hill.  
Philadelphia.  
Hollidaysburg.  
Philadelphia.  
Philadelphia.  
Pittston.  
West Chester.  
Matanzas, Cuba.  

Lewistown.  
Maxatawney.  
Lancaster.  
Wilkes-Barré.  
Kansas, Ill.  
Ashtabula, Ohio.  
West Fairfiled.  

Philadelphia.  
Hartford, Conn.  
Ebensburg.  
Philadelphia.  
Pittston.  
Griggsville, Ill.  
Springfield, Ohio.  
Nashua, N. H.  
Clear Spring, Md.  
New Castle, Del.  
Fall River, Mass.  
Laurelton.  
Bridgeton, N. J.  
Camden, N. J.  
Reading.  
Minersville.  
Manor Station.  
Cold Spring, N. J.  
Philadelphia.  
Gloucester, Mass.  
Philadelphia.  
Munsey.  
Columbia, N. C.  
Chester, N. J.  
Rio de Janeiro, Brazil.  

Philadelphia.  
University.  
University.  
University.  
University.  
University.  
University.  
University.  
University.  
University.  
University.  
University.
Rowe, Charles K.
Rowe, Ross B., A.B. (Princeton)
Schnabel, Edwin D., M.E.
Scott, Henry
Seull, William B.
Shaw, Joseph B.
Shober, John Bedford, A.B. (Princeton)
Shoemaker, Harvey
Small, Edward H., A.B. (Princeton)
Stephens, Frank M.
Stetler, Howard S., A.B. (Univ. Pa.)
Stewart, John C.
Stone, Ralph Lane
Strouse, Frederick M.
Sutton, Frank S., Ph.B. (Univ. Cal.)
Swayne, Herbert N.
Taubel, Louis Edward, A.B. (Ursinus)
Taylor, George B.
Taylor, George Y., A.B. (Princeton)
Taylor, John F.
Tull, M. Graham, A.M. (Lafayette)
Van Pelt, William T.
Wallace, Charles H.
Weaver, Daniel B., A.B. (Yale)
Wells, George M., A.M.
Whittin, James L.
Williams, Thomas D., Ph.G.
Wilson, Edwin Frazer, A.B. (Kenyon)
Woodruff, Robert A.
Ziegler, S. Lewis, A.M. (Lewisburg)

Dudley, Ill.
Strasburg.
Hecktown.
Fall River, Mass.
Philadelphia.
Trenton, N. J.
Philadelphia.
Philadelphia.
Mercer.
Bentleyville.
Philadelphia.
Fort William, Scot.
Norristown.
St. Paul, Minn.
Trenton, N. J.
San Francisco, Cal.
Crossingville.
Philadelphia.
Towanda.
Burlington, N. J.
Brownsville.
Philadelphia.
Philadelphia.
Philadelphia.
Philadelphia.
Mt. Vernon, Ohio.
Lewis town.
Lewisburg.

Achey, Frederick A.
Aitken, Harry W.
Albertson, William C.
Baker, George Fales
Banks, William H.
Bates, Edgar
Baylis, John N.
Beck, Charles S.
Benton, John W.
Bricker, William H.
Broughton, William H., Ph.B. (Delaware)
Brumbaugh, Samuel O.
Burns, Samuel W.
Burr, Charles W., B.S. (Univ. Pa.)
Byrnes, Daniel C.
Carey, William A.
Carle, Charles W.
Carver, Henry, A.B. (Yale)
Cashman, Elmer W.
Chambers, George H.
Church, Joseph G.
Clayton, Joshua
Cook, Snow P., B.A.
Crawford, James II., Jr.

Lancaster.
West Chester.
Vienna, N. J.
Philadelphia.
Mifflintown.
Allentown.
Bridgeport, N. J.
Wilkes-Barre.
Ogdensburg, N. Y.
Philadelphia.
Kingston, Md.
Huntington.
Philadelphia.
Philadelphia.
Lima, N. Y.
Wenonah, N. J.
Ashley.
Dover stown.
Bendersville.
Philadelphia.
Girard ville.
Middletown, Del.
Milton, Nova Scotia.
Brownsville.

M. Rowe.
University of Pa.
Richard H. Beck.
J. B. Chagnon.
Jno. R. Haynes.
H. W. Coleman.
Jno. H. Packard.

John B. Deaver.
M. M. Magoffin.
J. Y. Scott.
University.
Univer. of Aberdeen.
John C. Spear.
H. Hoegh.
Charles B. Leavitt.
University.
University.
Joseph Hearne.
C. K. Ladd.
University.
University.
University.
John J. Black.
John H. Musser.
Traill Green.
University.
W. V. Runkle.
Gordon and Fulton.
University.
P. S. Carpenter.

P. S. Carpenter.

H. E. Muhlenburg.
Isaac Massey.
L. B. Hoagland.
William Pepper.
L. Banks.
J. D. Christian.
University.
E. R. Mayer.
J. H. and C. C. Benton.
J. William White.
John Dale.

University.
University.
University.
E. M. Moore, Jr.
J. William White.
A. D. Tewksbury.
University.
E. W. Mumma.
University.
University.
University.
W. S. Duncan.
<table>
<thead>
<tr>
<th>Name</th>
<th>City</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crilly, John C.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Culp, John F.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Dalbey, Alvin D., A.B.</td>
<td>Central High School</td>
<td>University</td>
</tr>
<tr>
<td>Dale, Frank</td>
<td>Louis</td>
<td>University</td>
</tr>
<tr>
<td>Davies, J. Henry</td>
<td>Bellefonte</td>
<td>University</td>
</tr>
<tr>
<td>Diller, Theodore</td>
<td>Cleveland, Ohio</td>
<td>University</td>
</tr>
<tr>
<td>Dixon, Samuel G.</td>
<td>Lancaster</td>
<td>University</td>
</tr>
<tr>
<td>Donoho, Michael J., A.B.</td>
<td>Centre Hall</td>
<td>University</td>
</tr>
<tr>
<td>Dortland, William A. N., A.B.</td>
<td>New Bremen, Ohio</td>
<td>University</td>
</tr>
<tr>
<td>Dorsey, Allen W., A.B.</td>
<td>Owego, N.Y.</td>
<td>University</td>
</tr>
<tr>
<td>Downing, Henry M.</td>
<td>West Chester</td>
<td>University</td>
</tr>
<tr>
<td>Emerick, Charles E.</td>
<td>Centre Hall</td>
<td>University</td>
</tr>
<tr>
<td>Fisher, John V.</td>
<td>W. H.</td>
<td>University</td>
</tr>
<tr>
<td>Fiedler Johann, Henry E.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Green, Edgar M., A.B.</td>
<td>Messiah</td>
<td>University</td>
</tr>
<tr>
<td>Green, Walter D., A.B.</td>
<td>Princeton</td>
<td>University</td>
</tr>
<tr>
<td>Groome, Albert R.</td>
<td>Trenton, N. J.</td>
<td>University</td>
</tr>
<tr>
<td>Gross, William D., Jr., A.B.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Hammam, Thomas T., A.B.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Hammond, Levi J.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Harmon, John B.</td>
<td>Delaware</td>
<td>University</td>
</tr>
<tr>
<td>Heald, Pusey</td>
<td>Altoona</td>
<td>University</td>
</tr>
<tr>
<td>Hepler, Henry A.</td>
<td>Reading</td>
<td>University</td>
</tr>
<tr>
<td>Herah, Daniel G.</td>
<td>East Greenville</td>
<td>University</td>
</tr>
<tr>
<td>Hill, J. Heighe</td>
<td>Locust Grove, Md.</td>
<td>University</td>
</tr>
<tr>
<td>Hillegass, John P.</td>
<td>State College</td>
<td>University</td>
</tr>
<tr>
<td>Hoagland, Benn W.</td>
<td>Pennsburg</td>
<td>University</td>
</tr>
<tr>
<td>Holmen, Charles J.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Hoffman, Louis J.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Hoffman, Jacob Z., A.B.</td>
<td>Madison</td>
<td>University</td>
</tr>
<tr>
<td>Holly, William J., A.B.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Hopkins, Gerald C.</td>
<td>Houseville</td>
<td>University</td>
</tr>
<tr>
<td>House, Luther M.</td>
<td>Cambridge, Mass.</td>
<td>University</td>
</tr>
<tr>
<td>Humiston, Franklin G., A.B.</td>
<td>Williamsport</td>
<td>University</td>
</tr>
<tr>
<td>Hunt, Charles D.</td>
<td>Chesterstown, Md.</td>
<td>University</td>
</tr>
<tr>
<td>Harlock, John</td>
<td>Waynesboro</td>
<td>University</td>
</tr>
<tr>
<td>Jacobs, Harvey L.</td>
<td>Petrolia</td>
<td>University</td>
</tr>
<tr>
<td>Jameson, William B.</td>
<td>Stockton, N.J.</td>
<td>University</td>
</tr>
<tr>
<td>Jones, Kent C.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Jones, Samuel H.</td>
<td>Richmond, Ind.</td>
<td>University</td>
</tr>
<tr>
<td>Jones, William P., B.S.</td>
<td>Richmond</td>
<td>University</td>
</tr>
<tr>
<td>Kerlin, Elijah I.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Kilburn, Louis J. C.</td>
<td>Milton, Nova Scotia</td>
<td>University</td>
</tr>
<tr>
<td>Knowles, James H., A.B.</td>
<td>Meckeesport</td>
<td>University</td>
</tr>
<tr>
<td>Knox, Will J.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Kynett, Harry H., A.B.</td>
<td>Navajas.</td>
<td>University</td>
</tr>
<tr>
<td>Laine, Damaso T.</td>
<td>Orbigonia</td>
<td>University</td>
</tr>
<tr>
<td>Lane, Samuel M.</td>
<td>Martinsburg, W. Va.</td>
<td>University</td>
</tr>
<tr>
<td>Lee, D. Olin</td>
<td>Rochester, N. Y.</td>
<td>University</td>
</tr>
<tr>
<td>Lee, Thomas G.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Leopold, Isaac B.S.</td>
<td>Eliz.</td>
<td>University</td>
</tr>
<tr>
<td>Lichty, Albert M.</td>
<td>Meridian.</td>
<td>University</td>
</tr>
<tr>
<td>Long, Wilson P.</td>
<td>Philadelphia</td>
<td>University</td>
</tr>
<tr>
<td>Lung, George A., A.B.</td>
<td>Leon, Nicaragua</td>
<td>University</td>
</tr>
<tr>
<td>Macias, Jose J., Ph.B.</td>
<td>Leon, Nicaragua</td>
<td>University</td>
</tr>
<tr>
<td>Martin, Luis B.S.</td>
<td>Leon, Nicaragua</td>
<td>University</td>
</tr>
<tr>
<td>T. Martin</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>T. C. Franke</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>T. D. Dunn</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>W. A. Jacobs</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>F. McGill</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Trail Green</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>W. W. L. Phillips</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>K. E. Eimer</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Lincoln University</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Howard S. Reiser</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>J. H. Hersch</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>J. Horton Kelly</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>J. G. Hillegass</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>L. B. Hoagland</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>A. C. Chingaman</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>H. C. Fogley</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>J. L. Zeigler &amp; Son</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Benjamin Frantz</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>W. C. Foster</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>John Woolerton</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>R. B. Jones</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>T. Jones</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>D. Hayes Agnew</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Halifax Medical Col.</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>W. F. Knox</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Lewis D. Harlow</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Richard M. Moore</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>Judson Daland</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>T. F. Livelygood</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>M. S. Long</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>
Martin, Charles B. Bart.
Matlack, Elwood, A.B. Philadelphia.
Miller, Louis J. Huntingdon.
Morris, William L. Philadelphia.
Morton, Samuel W. Linwood.
Moyer, Sherman G. T. Pottsville.
Mullen, William P., A.B. (Central Philadelphia. High School)
Marchison, John North River, P. E. I.
Musser, William W. Lewisburg.
McClure, Charles B. Loyaton.
McFetridge, William C. Philadelphia.
Negendank, Egmont T. Wilmington, Del.
Neuber, Samuel T., A.B. (Univ. Pa.) Philadelphia.
Orbison, J. Harris, A.B. Bellefonte.
Otto, Joseph, Jr. Key West, Fla.
Pascoe, George Y., Jr., A.B. (Central High School)
Pfouts, Gilbert B. Philadelphia.
Porter, Norman H. Carlisle.
Pownall, Elmer E. Bridge Valley.
Redmond, Henry Corpus Christi, Tex.
Schum, Frank L. Altoona.
Seymour, Alfred M., A.B. Huntingdon, Conn.
Sharp, Alexander A., A.B. (Dickinson)
Shissler, Alfred G. Shamokin.
Shoemaker, Jesse G. Philadelphia.
Shoemaker, Samuel B., B.S. (Harv'd) Germantown.
Snodgrass, O. Edmund York.
High School)
Stiles, William E. Pittsburgh.
Tatum, Edward J., A.B., (Yale) New York, N. Y.
Thompson, James B. Allegheny City.
Thompson, William O. Summit Hill.
Thornley, Frederick C. Philadelphia.
Tomlin, Almer N. Goshen, N. J.
Townshend, William S. Parrsboro', Nova Sco.
Ward, Eliah T., A.B. (Central High Cincinnati, Ohio.
School)
Weaver, W. Warren, A.B. (Penn.) Hanover.
Welker, Abram T. Hillesgass.
Weller, Elmer K. Trexlertown.
Westcott, Thompson S., A.B. (Univ. Philadelphia. of Pa.) Trenton, N. J.
Whitehead, John White, R. Parks Ashland, Ohio.
Wilson, Arthur L. Philadelphia.
Wilson, Henry G.
Woolverton, Edwin V. C.
Wythe, William H.
Yard, John S.
Yard, Pearson
Zentmayer, William

Carlisle.
Trenton, N. J.
Ocean Grove, N. J.
Trenton, N. J.
Philadelphia.

Students of the First Year, 140.

Cadwell, Charles C.
Shiffer, Jacob J.

Cheek, Benjamin A., M.D.
Clarke, James M., M.D.
Dunlap, Fayette, A.M., M.D.
Fitzgerald, John M., M.D.
Griswold, Eliahsa, M.D.
Hardman, Lamartine G., M.D.
Hinkle, Franklin, M.D.
Hopkinson, Oliver, M.D.
Lawrason, George B., M.D.
McGuire, Constantine F., M.D.
Pixley, Chelius S., M.D.
Pryor, John H., M.D.
Pyle, Joseph P., Ph.B., M.D.
Rowley, Augustus P., M.D.
Thornton, Wm. H., A.M., M.D.
Tucker, George W., M.D.
Wende, Ernest, M.D.
Williams, Frederick S., M.D.
Winne, Charles K., M.D.

Greensboro', N. C.
Harris, Alia.
Danville, Ky.
Sharon.
Harmony Grove, Geo.
Columbia.
Philadelphia.
New Orleans, La.
Brooklyn, N. Y.
Elkhart, Ind.
Buffalo, N. Y.
New Castle, Del.
Susquehanna.
Buffalo, N. Y.
Orwell, Ohio.
Aiden, N. Y.
Puysallup, Wash. Ter.
United States Army.

Students of the fourth year
Students of the third year
Students of the second year
Students of the first year
Special Students
Post-graduate Students

TOTAL.

Students of the fourth year
Students of the third year
Students of the second year
Students of the first year
Special Students
Post-graduate Students

The total number of new matriculates the present session, including those admitted to advanced standing, is 160.

SUMMARY.

Alabama . . . 3
Argentine Republic . 1
Australia . . . 1
Brazil . . . 4
California . . . 1
Chili . . . 2
Connecticut . . . 4
Cuba . . . 4
Delaware . . . 20
District of Columbia . . . 1
Florida . . . 1
Georgia . . . 1
Illinois . . . 5
Indiana . . . 2
Iowa . . . 2
Kentucky . . . 3
Louisiana . . . 1
Maryland . . . 6
Massachusetts . . . 6
Mexico . . . 1
Michigan . . . 1
Minnesota . . . 4
Missouri . . . 1
New Brunswick . . . 1
New Hampshire . . . 1
New Jersey . . . 25
New York . . . 14
Nicaragua . . . 3
North Carolina . . . 2
Nova Scotia . . . 3
Ohio . . . 10
Pennsylvania . . . 237
Prince Edward Island . . . 2
Scotland . . . 1
Texas . . . 2
United States Army . . . 1
U. S. of Colombia . . . 1
Virginia . . . 1
Wales . . . 1
Washington Territory . . . 1
West Virginia . . . 1

Total . . . 386
AUXILIARY DEPARTMENT OF MEDICINE.

FACULTY.

WILLIAM PEPPER, M.D., LL.D., Provost of the University, and ex-officio President of the Faculty.

JOHN J. REESE, M.D., Professor of Medical Jurisprudence and Toxicology.

SAMUEL B. HOWELL, M.D., Professor of Mineralogy and Geology.

JOSEPH T. ROTHROCK, B.S., M.D., Professor of Botany.

JOSEPH G. RICHARDSON, M.D., Professor of Hygiene.

ANDREW J. PARKER, M.D., Ph.D., Professor of Comparative Anatomy and Zoology.

SAMUEL B. HOWELL, M.D., Dean.

AIMS OF THE DEPARTMENT.

The Auxiliary Faculty of Medicine was established in the year 1865, for the purpose of supplementing the ordinary winter course of medical instruction by lectures given during the spring months on certain collateral branches of science. The session for 1884 will begin on Monday, March 3d, and continue until the early part of June. Three lectures a week are given by each professor.

Although not incorporated with the Department of Medicine, this Faculty gives instruction upon various subjects essential to the thorough education of the physician. To profit by this instruction, the student should have previously attended at least two sessions of the usual winter lectures. In fact, this course is essentially postgraduate; and the Faculty, therefore, earnestly recommends that at least one session should be attended, if possible, after graduation in medicine.

The lectures are open, also, to those who are not engaged in the study of medicine, and they afford an excellent opportunity to teachers and others who may be desirous of acquiring a knowledge of the subjects taught. Tickets may be obtained from the Dean, either for the whole course of lectures, or for those on a single branch.

FEES.

The Lectures are free to students and graduates of the Department of Medicine of the University. Other matriculates pay ten dollars for each professor's ticket, or thirty-five dollars for the whole course. The graduation fee is ten dollars.
DEGREES.

Graduates in medicine of the University, or of other recognized schools, who attend two full courses of lectures in the Auxiliary Department of Medicine, who pass a satisfactory examination, and who present an original thesis on one of the subjects taught, receive the degree of Bachelor of Science (B.S.), on complying with the following conditions:

(1) When applying to the Dean for examination, the candidate must exhibit his medical diploma and the tickets of this Faculty.

(2) The thesis must be presented to the Dean and the graduation fee be paid by the 15th day of May.

(3) Candidates must be present at Commencement, unless excused by the Faculty.

Graduates in Medicine who matriculated in the Auxiliary Department of Medicine before June, 1880, will receive the degree of Doctor of Philosophy on complying with the then existing conditions.

Graduation theses may be published by permission of the Faculty.

PRIZES.

(1) The George B. Wood Prize, founded by the Alumni Association of the Auxiliary Department of Medicine, is bestowed annually upon the candidate who passes the best examination, and presents the best original thesis on an experimental subject, satisfactory to the Faculty.

(2) Messrs. R. & J. Beck, opticians, through their manager, W. H. Walmsley, offer at the coming session one of their new "Ideal" microscopes, complete, of the value of seventy-five dollars, to the author of the best and most practical paper illustrative of any Department of Natural History, preference being given to Human Anatomy and Botany, worked out by the aid of the microscope, and accompanied by prepared objects or drawings of the subject-matter.

COURSE OF STUDY.

Medical Jurisprudence and Toxicology.—Subjects of legal medicine on which the physician may be called upon to give evidence in a court of justice:

- Signs of Death; Personal Identity (identification of the living and the dead);
- Feigned Diseases; Violent Deaths (homicidal and suicidal) from (a) wounds; (b) hanging;
- (c) strangling; (d) suffocation; (e) drowning; (f) heat; (g) cold; (h) starvation;
- (i) lightning; (k) poisoning.
Infanticide and Criminal Abortion; Signs of Pregnancy and of Delivery; Legitimacy; Rape; Survivorship.

The Jurisprudence of Insanity (civil and criminal responsibility; feigned insanity; rights of the insane; plea of insanity as a bar to judicial punishment).

The Legal Rights and Liabilities of Physicians; Medical Experts—their rights and compensation.

Life Insurance in its medico-legal relations.

Poisoning, with special reference to testing; modes of procedure in order to determine the presence of poisons in cases of homicide and suicide.

MINERALOGY AND GEOLOGY.—Lectures on Descriptive Mineralogy. Practical determination of minerals by their physical properties. Qualitative analysis by the blowpipe, in connection with reactions in the humid way, for the rapid determination of minerals, ores, soils, and mineral waters. Use of the spectroscope in qualitative determinations.

Under Geology will be embraced: The Chemistry of Geology; Lithological Geology—condition, structure, and arrangement of Rock Masses.


Practical Mineralogy and Geological Chemistry.

BOTANY.—Vegetable Physiology. Practical Botany.

Practical classes in Analytical Botany are held, in addition to the regular lectures.

HYGIENE.—A full consideration of all the conditions necessary to individual and public health, including the study of the causation of epidemic and other diseases, with a view to their prevention.

Sanitary Science, and especially Preventive Medicine, has advanced with such enormous strides during the past few years, that it has been found necessary to devote alternate years to instruction in regard to Public and Personal Hygiene respectively.

COMPARATIVE ANATOMY AND ZOOLOGY.—1. An outline of the classes of animals. 2. A succinct account of their anatomy and embryology. 3. Explanation of "varieties" of human anatomy, and the proper method of studying malformations. 4. A description of human parasites. 5. An account of the more important sources of those articles of the materia medica which are derived from the animal kingdom. 6. Practical laboratory work in which the students dissect types of each of the principal classes of animals. Original research in comparative anatomy and embryology.

SUMMER CLASS.

The Professor of Comparative Anatomy, with efficient assistants, will conduct, during the summer months, at a place on the Atlantic coast, a practical laboratory for special work in the subjects of his chair.

MUSEUM.

The Museum of the Auxiliary Department of Medicine contains three thousand mineral specimens systematically arranged; a collection of rocks, fossils, and casts, arranged according to their geological succession; a valuable philosophical apparatus; a growing collection of specimens of Comparative Anatomy and Zoology; chemical preparations and apparatus illustrative of Toxicology; diagrams, etc. These collections are arranged in the rooms of the Faculty.
The principal text-books used are:

Taylor's Medical Jurisprudence (American edition by Reese), and Reese's Manual of Toxicology.
Dana's System of Mineralogy.
Elderhorst's Manual of Qualitative Blowpipe Analysis.
Dana's Manual of Geology.
Ganot's Éléments de Physique, translated by E. Atkinson, Ph.D., F.C.S.

Works of reference:

Wharton and Still's Medical Jurisprudence.
Wormley's Micro-Chemistry of Poisons.
Sach's Text-book of Botany.
Le Maout and Decaisne's General System of Botany, Descriptive and Analytical.
Cooke and Berkeley on Fungi.
Parkes or Wilson's Manual of Hygiene.
Duck's Hygiene and Public Health.
Pavy or Chambers on Diet.
Mivart's Elements of Anatomy.
Gegenbaur's Elements of Comparative Anatomy.
Balfour's Comparative Embryology.

MATRICULATES, 1883.

Bagg, John S., M.D.,
Baldy, J. M.,
Bergey, David H.,
Birney, David B.,
Breneman, P. P.,
Cantwell, Frank V.,
Carr, William H.,
Carson, A. D.,
Chandler, J. H., M.D.,
Cochrane, W. R.,
Dock, George,
Duplan, Ernesto,
Elder, Frank H., M.D.,
Evans, E. W.,
Evans, Frank J.,
Fussel, M. H.,
Glover, S. P.,
Guiñóras, Gregorio M.,
Griswold, E., M.D.,
Haehnlen, W. F., M.D.,
Hamaker, W. D.,
Howell, W. G., Jr.,
Jelovitz, M. L.,
Jennings, J. E.,
Jenkins, S. R.,
McAllister, Alexander,

W. Springfield, Mass.
Danville.
Skippack.
Philadelphia.
Strasburg.
Trenton, N. J.
St. Clair.
Valparaiso, Chili.
Barbadoes, W. I.
Pittsburg.
Harristown.
Minatitlan, Mex.
Philadelphia.
Easton.
Chester.
Radnor.
Hazleton.
Matanzas, Cuba.
Sharon.
Philadelphia.
Schellsburgh.
Philadelphia.
do.
Harristown.
Canada.
Camden, N. J.
Mengel, M. S.,
Morton, Thomas S. K.,
Montgomery, P. Brough,
Norton, Albert E.,
Peters, H. Vance,
Power, D. P.,
Reed, C. H., M.D.,
Rehfuss, E. G.,
Renz, Gustav A.,
Ring, G. O.,
Robb, Hunter,
Robinson, O. D.,
Seltzer, C. J.,
Shell, J. K., M.D.,
Stout, C. P.,
Strouse, F. M.,
Trumbull, J. Heyward,

Reading.
Philadelphia.
Chambersburg.
Philadelphia.
do.
McKeesport.
Philadelphia.
do.
St. Paul, Minn.
Philadelphia.
Burlington, N. J.
Georgetown, Del.
Philadelphia.
do.
Florence, N. J.
St. Paul, Minn.
Talcahuano, Chili.
Total, 43.
DEPARTMENT OF DENTISTRY.

FACULTY.

WILLIAM PEPPER, M.D., LL.D., Provost of the University, and ex-officio President of the Faculty.

CHARLES J. ESSIG, M.D., D.D.S., Professor of Mechanical Dentistry and Metallurgy.

EDWIN T. DARBY, M.D., D.D.S., Professor of Operative Dentistry and Dental Histology.

JAMES TRUMAN, D.D.S., Professor of Dental Pathology, Therapeutics and Materia Medica.

JOSEPH LEIDY, M.D., LL.D., Professor of Anatomy.

HARRISON ALLEN, M.D., Professor of Physiology.

THEODORE G. WORMLEY, M.D., LL.D., Professor of Chemistry.

ROBERT HUEY, D.D.S., Lecturer on Operative Dentistry.

CLINICAL INSTRUCTORS.

Dr. C. S. Beck,
Dr. Louis Jack,
Dr. Geo. W. Klump,
Dr. George H. McDonald,
Dr. W. R. Millard,
Dr. R. R. Underwood,
Dr. E. H. Neall,
Dr. H. C. Register,
Dr. R. H. Shoemaker,
Dr. J. A. Wardell,
Dr. J. A. Woodward,
Dr. H. C. Longnecker.

DEMONSTRATORS.

WM. LEWIS CAVE, D.D.S., Demonstrator of Mechanical Dentistry.
J. JUDSON EDWARDS, D.D.S., Assistant Demonstrator of Mechanical Dentistry.
CHARLES T. HUNTER, M.D., Demonstrator of Anatomy.
JOHN MARSHALL, M.D., Nat.Sc.D., Demonstrator of Practical Chemistry.

COURSE OF STUDY.

The Course extends over two years, and in each year there are three sessions, the Spring, the Preliminary, and the Winter Session. By this arrangement, students are spared the necessity of securing a preceptor during their stay in the city; the Faculty deeming attendance during the spring and summer months equivalent to private instruction. Such attendance, however, is not to be considered in any way a substitute for the Winter Session.

During the Spring and the Preliminary Session there are one or more lectures a day upon important practical subjects, or on matters collateral with the subjects of the Winter Session. During the Winter Session the following is the arrangement of studies:
### FIRST YEAR.

<table>
<thead>
<tr>
<th>Hour</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 A.M.</td>
<td>General Chemistry.</td>
<td>General Chemistry.</td>
<td>Mechanical Clinic.</td>
<td>Mechanical Clinic.</td>
<td>Mechanical Clinic.</td>
<td></td>
</tr>
<tr>
<td>10 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 A.M.</td>
<td>Mechanical Clinic.</td>
<td>Chemical Laboratory.</td>
<td>Chemical Laboratory.</td>
<td>Mechanical Clinic.</td>
<td>Mechanical Clinic.</td>
<td></td>
</tr>
<tr>
<td>12 M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 P.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Operative Clinic.</td>
</tr>
<tr>
<td>2 1/2 P.M.</td>
<td>Operative Clinic.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 1/2 P.M.</td>
<td>Anatomy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 1/2 P.M.</td>
<td>Physiology.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 1/2 P.M.</td>
<td>Mechanical Dentistry.</td>
<td></td>
<td></td>
<td></td>
<td>Metallurgy.</td>
<td>Operative Dentistry.</td>
</tr>
</tbody>
</table>

The curriculum of the first year is identical for Medical and Dental students as far as Anatomy, Chemistry, and Physiology are concerned.

### SECOND YEAR.

<table>
<thead>
<tr>
<th>Hour</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 A.M.</td>
<td>Laboratory of Mechanical Dentistry, or Operative Clinic.</td>
<td>Laboratory of Mechanical Dentistry, or Operative Clinic.</td>
<td>Laboratory of Mechanical Dentistry, or Operative Clinic.</td>
<td>Laboratory of Mechanical Dentistry, or Operative Clinic.</td>
<td>Laboratory of Mechanical Dentistry, or Operative Clinic.</td>
<td>Laboratory of Mechanical Dentistry, or Operative Clinic.</td>
</tr>
<tr>
<td>10 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 A.M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 M.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 P.M.</td>
<td>Operative Clinic.</td>
<td>Operative Clinic.</td>
<td>Operative Clinic.</td>
<td>Operative Clinic.</td>
<td>Operative Clinic.</td>
<td>Operative Clinic.</td>
</tr>
<tr>
<td>2 1/2 P.M.</td>
<td>Operative Clinic.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 1/2 P.M.</td>
<td>Anatomy.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 1/2 P.M.</td>
<td>Physiology.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 1/2 P.M.</td>
<td>Mechanical Dentistry.</td>
<td></td>
<td>Metallurgy.</td>
<td>Operative Dentistry.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 3 P.M.  | University Hospital Clinics.       |                                       |                                      |                                      |                                      |                                      |
| 4 1/2 P.M. | Physiology.                     |                                       |                                      |                                      |                                      |                                      |
| 5 1/2 P.M. | Mechanical Dentistry.        |                                       | Metallurgy.                  | Operative Dentistry.               |                                      |                                      |

Dental Pathology, Therapeutics, and Materia Medica.
In order to facilitate work in the practical departments, and fully employ the student's time, the first year student devotes the morning hours equally to dental and chemical laboratory work.

The second year student has the entire forenoon of each day for practical dental work. Every opportunity is afforded for practice in operative and mechanical dentistry.

The graded course, with its examinations at the close of the first year, not only economizes time, but facilitates the acquisition of a knowledge of the remaining branches.

OUTLINE OF THE COURSE.

The lectures on OPERATIVE DENTISTRY AND DENTAL HISTOLOGY embrace the comparative anatomy of the teeth, the functions and microscopical peculiarities of the dental organs, the development of teeth, their component tissues, a full description of the materials and instruments used in operative dentistry, a thorough elucidation of all dental operations, such as filling, extracting, regulating, the pathological relations of the teeth to the other parts of the system, and a minute description of all special diseases related to dental surgery, or of interest to the dentist. The theories taught are demonstrated in clinics.

The instruction in MECHANICAL DENTISTRY AND METALLURGY embraces the proper fitting up of a dental laboratory; the use of tools; the melting, refining, alloying, and working of metals and alloys used by the dentist; the chemical and physical properties of materials pertaining to ceramic dentistry, their preparation, and the most approved formulae for compounding bodies and enamels for the manufacture of block teeth and continuous gum work; the history and properties of all substances used in making artificial dentures; as well as the mechanical treatment of cleft palate, including the several methods of constructing obturators for such cases, whether congenital or acquired. The lectures in this department also include every approved mechanical means of correcting irregularities of the teeth. They are amply illustrated by specimens, models, diagrams, and practical application in the laboratory, under the supervision of accomplished mechanical dentists. Special attention will be directed to the higher branches of plate work, the continuous gum process, and carving teeth.

Every student is required to furnish his own bench tools for
metal and rubber work, and will be provided with a place in which they can be locked when not in use.

The lectures in Chemistry embrace the study of chemical physics and principles of chemical philosophy, together with a detailed consideration of the principal elementary substances and their compounds, and of the fundamental principles of organic chemistry, including the classification of organic compounds, and the special study of typical members of the different classes. Special attention is also given to the laws of chemical affinity, and the conditions under which they are modified, especially as they relate to the preparation of mixtures and prescriptions.

The course in practical chemistry in the working laboratory includes exercises in chemical manipulation, the study of the chemical properties and reactions of the principal metals, acids, and their combinations, and the general principles of qualitative analysis, especially as they relate to the detection and separation of the metals and compounds of interest to practitioners in all branches of medicine. Each student is provided with a separate table and apparatus, and is required to perform all the usual chemical manipulations under the direction of demonstrators, as well as to exhibit by formulae, on paper, all reactions involved in his tests.

Human Anatomy is taught in its relations to all the departments of medicine, including dentistry. The lectures are illustrated by fresh dissections of the human body, and a rich museum of anatomical specimens, large and well-executed models, and drawings.

The course on Physiology includes lectures and demonstrations on the entire human physiology and on physiological chemistry. The study of the physiology of each organ is preceded by a full consideration of its histology. The course is amply illustrated by appropriate diagrams, chemico-physiological experiments, and vivisections.

The lectures on Dental Pathology include such portions of general pathology as have a bearing upon the special subjects taught. Dentition, and its possible pathological results, will receive careful attention, followed by a detailed consideration of all the diseases to which the teeth and surrounding parts are liable, the character—normal and abnormal—of the oral secretions, and the direct and remote relations which the pathological conditions of the mouth sustain to other portions of the system.
The treatment required under each head will be explained, and the recognized processes by which to secure a return to normal conditions, be minutely detailed.

**MATERIA MEDICA** will be taught with special reference to the character and value of those remedies that have a direct or indirect bearing upon dental therapeutics.

**CLINICAL INSTRUCTION.**

Four hours daily (except Saturday) are spent in actual practice under the supervision of the Demonstrators. Every student is required to provide his own instruments, except those for extracting. He is expected to keep them in perfect order, and will be provided with a place in which they can be locked when not in use. In the new operating room, wires are arranged to a number of the chairs for the use of electric pluggers.

**TEXT-BOOKS AND WORKS OF REFERENCE.**

- *On Operative Dentistry and Dental Histology*: Harris' Principles and Practice; Tomes' Dental Surgery; Tait's Operative Dentistry; Tomes' Dental Anatomy.
- *On Mechanical Dentistry and Metallurgy*: Richardson's Mechanical Dentistry; Wildman's Instructions in Vulcanite Work; Kingsley's Oral Deformities; Essig's Dental Metallurgy.
- *Dental Follicle*: Legros and Magitot, translated by M. S. Dean.
- *On Chemistry*: Fownes' or Wurtz's Chemistry; Wormley's Micro-Chemistry of Poisons; Muter's Analytical Chemistry.
- *On Physiology*: Foster's Physiology, with Frey's Compendium of Histology; Tyson's Cell Doctrine; Carpenter's Physiology, by Smith.
- *On Materia Medica*: H. C. Wood's Therapeutics; Geo. B. Wood's Therapeutics; Wood and Bache's Dispensatory.
- *On Surgery*: Agnew's Surgery; Ashhurst's Surgery; Billroth's Surgical Pathology.

**INFIRMARY AND LABORATORY.**

The Infirmary and Laboratory are open to the student for the prosecution of the practical part of his studies under the guidance and supervision of competent demonstrators. During the Preliminary and the Winter Session, a Clinical Lecture is given and operations performed by one of the Professors every Saturday.

**THE STILLÉ MEDICAL LIBRARY.**

This Library, which was founded by Professor Alfred Stillé for the purpose of promoting a spirit of scientific research and literary culture, contains upwards of four thousand volumes. During
the Winter and Spring Sessions it is accessible to students and graduates of the Dental Department under appropriate regulations.

MUSEUM AND CABINETS.

The WISTAR AND HORNER MUSEUM, founded nearly ONE HUNDRED YEARS ago, and annually augmented, is unequalled in the United States for the number and variety of its specimens of the normal and the morbid anatomy of every part of the human body. It also contains a large number of preparations in comparative anatomy, a rich collection of specimens relating to Dentistry, such as the different stages of dentition, abnormal conditions of the teeth, mandibles of the lower animals, etc., and an extensive collection of artistic models, which are used in illustrating the several courses of lectures. It is open on Wednesday and Saturday of each week, from 9 A.M. to 12 M., throughout the session. The ticket of matriculation in this Department entitles the holder to admission to the Museum.

ARRANGEMENT OF SESSIONS.

The Spring Session, 1884, begins on Monday, May 5th, and ends about the middle of June.

The Preliminary Session begins on Monday, September 15th, and ends on Saturday, September 27th.

The Winter Session, 1884–85, begins on Wednesday, October 1st, 1884, and ends on Friday, May 1st, 1885.

SPRING SESSION.

The following lectures are given:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Dentistry and Metallurgy</td>
<td>Prof. Essig</td>
</tr>
<tr>
<td>Operative Dentistry, Dental Histology</td>
<td>Prof. Darby</td>
</tr>
<tr>
<td>Dental Pathology, Therapeutics, and Materia Medica</td>
<td>Prof. Truman</td>
</tr>
<tr>
<td>Physiology</td>
<td>Prof. Allen</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Prof. Wormley</td>
</tr>
<tr>
<td>Regional Anatomy</td>
<td>Dr. Chas. T. Hunter</td>
</tr>
</tbody>
</table>

Students of the Dental Department have access to all the other medical lectures in the Spring Course free of additional charge.

FALL SESSION.

The Fall Course is free of charge to those who enter for the Winter Session.
EXAMINATIONS.

At the close of the first year, examinations are held in chemistry and materia medica. If the student is not qualified, a second examination is afforded him at the beginning of the next winter session.

The final examination is in anatomy, physiology, operative dentistry, mechanical dentistry and metallurgy, and dental pathology and therapeutics.

Students who have attended one full term in another dental or medical school recognized by the Faculty, will be admitted to the graduating class.

DEGREES.

At the close of the second year, upon passing satisfactorily all his examinations and complying with the following regulations, the student will receive the degree of Doctor of Dental Surgery (D.D.S.):—

I. The candidate must be at least twenty-one years of age, and must have attended two full winter sessions,—the second, at least, in this institution.

II. He must have dissected at least two parts; must prepare a thesis upon some subject connected with the theory or the practice of dentistry; must treat thoroughly and bring before the Professor of Operative Dentistry a patient requiring all the usual dental operations; must take up at least one artificial case, and bring it completed, with the patient, before the Professor of Mechanical Dentistry at least 30 days before the close of the term; and must prepare a specimen case, to be deposited in the College collection, and present it to the Professor of Mechanical Dentistry before the 1st of April. The operations must be performed, and the work on the artificial case done, at the College building.

Students of Dentistry who wish the degree of Doctor of Medicine also, can take a three years’ course; but they must notify the Secretary of the Department of Medicine of their intention before the beginning of the second session. They must then add to the studies of the second year, Medical Chemistry, General Pathology and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, and Obstetrics, with clinics, medical and surgical. At the end of this year they are examined in Medical Chemistry, Anatomy,
and Physiology, in addition to the dental branches. If qualified, they then receive the degree of D.D.S., and pass on to the third year in medicine.

To such graduates the spring course is open for practice at the chair, or in the dental laboratory, free of additional charge.

In the third year they take the studies of the third year of the medical course, and at the end of the year pass an examination in Therapeutics, General Pathology and Morbid Anatomy, Theory and Practice of Medicine, Surgery, and Obstetrics.

**EXPENSES.**

**FIRST YEAR.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matriculation Fee</td>
<td>$5.00</td>
</tr>
<tr>
<td>General ticket, Winter Session</td>
<td>100.00</td>
</tr>
<tr>
<td>Total (DENTISTRY ONLY)</td>
<td>$105.00</td>
</tr>
</tbody>
</table>

**SECOND YEAR. DENTISTRY ONLY.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>General ticket, Winter Session</td>
<td>$100.00</td>
</tr>
<tr>
<td>Dissecting ticket (required)</td>
<td>10.00</td>
</tr>
<tr>
<td>Graduation</td>
<td>30.00</td>
</tr>
<tr>
<td>Total fees for the two courses in dentistry, including graduation</td>
<td>$140.00</td>
</tr>
</tbody>
</table>

**SECOND YEAR. DENTISTRY AND MEDICINE.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matriculation in Medical Department</td>
<td>$5.00</td>
</tr>
<tr>
<td>Tuition for joint medical and dental studies</td>
<td>190.00</td>
</tr>
<tr>
<td>General ticket</td>
<td>$150.00</td>
</tr>
<tr>
<td>No graduation fee</td>
<td></td>
</tr>
</tbody>
</table>

**THIRD YEAR. (MEDICINE.)**

Third-year medical students who have graduated in the department of Dentistry are entitled to the use of the Operative Clinics and the Dental Laboratory free of charge.

Board can be obtained at from five to eight dollars per week, according to location and accommodations. In locations near the College, students generally pay about five dollars per week. This amount includes fire and light.

Persons desiring further information in regard to this Department should address the Secretary, giving Name, Post Town, County, and State.

Members of the profession who receive a copy of this Catalogue are requested to notify the Secretary should they change their residence, and to send postal card with names of dentists practising in the town or county in which they reside.

Members of the profession who have specimens of peculiarities of development or unusual pathological conditions, models of irregularities as to position of the natural teeth, etc. etc., and who will be
good enough to send the same by mail or otherwise to Prof. E. T. Darby, No. 1513 Walnut Street, Philadelphia, Pa., will receive suitable acknowledgment and thanks. The specimens will be nicely mounted, with the donor’s name attached, and deposited in the College Museum.

JAMES TRUMAN, Secretary.

MATRICULATES 1883–4.

SECOND YEAR.

Aldcroft, J. Gamwell
Bermudez, Salvador
Bowers, Horace A.
Brown, Wistmar P.
Campbell, William F., M.D.
Cate, Wilbur T.
Davila, Nemecio, Ph.D.
Deaves, Homer J. C.
Emmett, John W.
Emmes, Samuel, Jr.
Erskine, Stirling, M.D.
Entrikin, Joseph B.
Gastal, Edmund
Goettinger, Louis
Graves, Luther H.
Hert, Benedict S.
Hiestand, Ira
Hoar, Adam R.
Jimenes, Generoso A.
Loder, James E.
McCance, James L.
McMillan, Samuel J.
Maercklein, Robert
Miner, Howard A.
Munn, Edgar W.
Nittinger, Alfred
Noble, Henry B., Jr.
Provost, Howard G.
Redpath, Philip E.
Robinson, F. Field Rokey
Shockley, Abraham L.
Skidmore, Luther W.
Stebbins, Leonard S.
Stine, Harry M.
Stowell, Sidney S.
Swartz, John T.
Teller, William H.
Tompkins, Clarence
Tripler, William C.
Walls, Frank H.
Watson, D. Stuart

First Year.

Hudson, N. Y.
Leon, Nicaragua.
Nashua, N. H.
Philadelphia.
Media.
Springfield, Mass.
Santiago, Chili.
Neola, Iowa.
Freeport, Ill.
Boston, Mass.
Philadelphia.
Kennet Square.
Pelotas, Brazil.
Berlin, Germany.
Philadelphia.
Rochester, N. Y.
Millersville.
Philadelphia.
Havana, Cuba.
Philadelphia.
Oil City.
Cumberland, Md.
Milwaukee, Wis.
Guilford, N. Y.
Freeport, Ill.
Philadelphia.
Washington, D. C.
Stamford, Conn.
Niagara Falls, N. Y.
London, Eng.
Lakeville, Mass.
Morris, Ill.
Springfield, Mass.
Harrisburg.
Peru, Mass.
Washington, D. C.
Philadelphia.
Philadelphia.
Vineyard, N. J.
Fairfield.

Students of the Second Year, 41.

FIRST YEAR.

Richmond, Ind.
Mexico, Mexico.
Hanover, Germany.
Havana, Cuba.
Proctorville, Ohio.

C. K. Van Vleck.
University.
George Bowers.
University.
University.
Anderson & Hurlbut.
University.
University.
University.
University.
University.
A. G. Gastal & Son.
University.
Charles E. Graves.
A. A. Morgan.
P. W. Hiestand.
University.
J. P. Piir.
E. M. Beesley.
J. H. Heirly.
Joseph M. Weller.
B. G. Maercklein.
A. E. Bradley.
W. H. Taggart.
S. D. Strohm.
H. H. Noble.
Strang & Sage.
A. C. Cryder.
Torre & Rogers.
E. S. Hathaway.
Stoner & Murray.
J. S. Hurlbut.
G. W. Stine.
C. L. Anderson.
William H. Hertz.
University.
A. P. Tompkins.
University.
Fred. W. Welch.
R. Watson.

W. N. Wilson.
University.
University.
University.
Students of the second year

Students of the first year

Total  41

SUMMARY.

<table>
<thead>
<tr>
<th>State</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>3</td>
</tr>
<tr>
<td>California</td>
<td>2</td>
</tr>
<tr>
<td>Canada</td>
<td>1</td>
</tr>
<tr>
<td>Chili, S. A.</td>
<td>1</td>
</tr>
<tr>
<td>Connecticut</td>
<td>2</td>
</tr>
<tr>
<td>Cuba</td>
<td>4</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>2</td>
</tr>
<tr>
<td>England</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>3</td>
</tr>
<tr>
<td>Illinois</td>
<td>5</td>
</tr>
<tr>
<td>Sao Paulo, Brazil</td>
<td></td>
</tr>
<tr>
<td>Freeport, Ill.</td>
<td></td>
</tr>
<tr>
<td>Stamford, Conn.</td>
<td></td>
</tr>
<tr>
<td>Mayesville, S. C.</td>
<td></td>
</tr>
<tr>
<td>Chicope, Mass.</td>
<td></td>
</tr>
<tr>
<td>Orange, N. J.</td>
<td></td>
</tr>
<tr>
<td>Philadelphia.</td>
<td></td>
</tr>
<tr>
<td>Syracuse, N. Y.</td>
<td></td>
</tr>
<tr>
<td>Catskill, N. Y.</td>
<td></td>
</tr>
<tr>
<td>Sao Paulo, Brazil</td>
<td></td>
</tr>
<tr>
<td>Greensburg, N. Y.</td>
<td></td>
</tr>
<tr>
<td>Milton.</td>
<td></td>
</tr>
<tr>
<td>Minneapolis, Minn.</td>
<td></td>
</tr>
<tr>
<td>Holis, N. H.</td>
<td></td>
</tr>
<tr>
<td>Bethlehem.</td>
<td></td>
</tr>
<tr>
<td>Knoxville.</td>
<td></td>
</tr>
<tr>
<td>Matanzas, Cuba.</td>
<td></td>
</tr>
<tr>
<td>Connellsville.</td>
<td></td>
</tr>
<tr>
<td>Kennet Square.</td>
<td></td>
</tr>
<tr>
<td>Philadelphia.</td>
<td></td>
</tr>
<tr>
<td>Sacramento, Cal.</td>
<td></td>
</tr>
<tr>
<td>Shamokin.</td>
<td></td>
</tr>
<tr>
<td>Annapolis, Md.</td>
<td></td>
</tr>
<tr>
<td>Watertown, N. Y.</td>
<td></td>
</tr>
<tr>
<td>Palmyra, Wis.</td>
<td></td>
</tr>
<tr>
<td>Philadelphia.</td>
<td></td>
</tr>
<tr>
<td>Waupaca, Wis.</td>
<td></td>
</tr>
<tr>
<td>Winchester, Ky.</td>
<td></td>
</tr>
<tr>
<td>Barbadoes, W. I.</td>
<td></td>
</tr>
<tr>
<td>Matanzas, Cuba.</td>
<td></td>
</tr>
<tr>
<td>Sussex, Canada.</td>
<td></td>
</tr>
<tr>
<td>Illon, N. Y.</td>
<td></td>
</tr>
<tr>
<td>Broslan, Germany.</td>
<td></td>
</tr>
<tr>
<td>Philadelphia.</td>
<td></td>
</tr>
<tr>
<td>Davenport, Iowa.</td>
<td></td>
</tr>
<tr>
<td>Sacramento, Calif.</td>
<td></td>
</tr>
<tr>
<td>Winchester, Ky.</td>
<td></td>
</tr>
<tr>
<td>Philadelphia.</td>
<td></td>
</tr>
<tr>
<td>N. Hatfield, Mass.</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>9</td>
</tr>
<tr>
<td>Nicaragua, C. A.</td>
<td>1</td>
</tr>
<tr>
<td>Ohio</td>
<td>1</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>28</td>
</tr>
<tr>
<td>South Carolina</td>
<td>1</td>
</tr>
<tr>
<td>West Indies</td>
<td>1</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>3</td>
</tr>
<tr>
<td>Total 88</td>
<td></td>
</tr>
</tbody>
</table>
DEPARTMENT OF VETERINARY MEDICINE.

FACULTY.

WILLIAM PEPPER, M.D., LL.D., PROVOST OF THE UNIVERSITY, and ex-officio President of the Faculty.
RUSH SHIPPEN HUIDEKOPER, M.D., V.S., DEAN OF THE FACULTY, Professor of Internal Pathology, and pro tempore Professor of Veterinary Anatomy.
JAMES TYSON, M.D., Professor of General Pathology and Morbid Anatomy.
HORATIO C. WOOD, M.D., LL.D., Professor of Materia Medica, Pharmacy, and General Therapeutics.
THEODORE G. WORMLEY, M.D., LL.D., Professor of Chemistry and Toxicology.
HARRISON ALLEN, M.D., Professor of Physiology.
JOSEPH T. ROTHROCK, M.D., B.S., Professor of Botany.
ANDREW J. PARKER, M.D., Ph.D., Professor of Comparative Anatomy and Zoology.
ROBERT MEADE SMITH, M.D., Professor of Comparative Physiology.

DEMONSTRATORS.

ADOLPH W. MILLER, M.D., Demonstrator of Pharmacy.
HENRY F. FORMAD, M.D., Demonstrator of Pathology and Morbid Anatomy.

AIM OF THE DEPARTMENT.

This Department aims to give instruction, both theoretical and practical, in all branches pertaining to the care of domestic animals and the cure of the diseases to which they are subject.

The importance of such a department in connection with the University was originally urged by Dr. Benjamin Rush, but its establishment was unavoidably delayed, until, by the recent acquisition of adequate grounds, a suitable site was secured for the necessary buildings and enclosure.

BUILDINGS AND GROUNDS.

A handsome amphitheatre and large rooms for dissection and laboratory work have been erected, and the stables requisite for hospital use will be finished and occupied before the opening of the Department in September, 1884.

* The appointments necessary to complete the Faculty will be made during the present year.
The advantages in both location and extent of grounds leave nothing to be desired, and the practical advantages enjoyed by the student will fully equal those offered anywhere in Europe.

ADMISSION.

The requirements for admission to this Department are the same as those for the Department of Medicine (p. 47).

COURSE OF STUDY.

The year begins on October 1st and ends on June 15th. The course of study extends over three years, and includes the following subjects:—

FIRST YEAR.

Chemistry, Materia Medica and Pharmacy, Physiology, Histology, Botany, Zoology, Veterinary Anatomy, and Forging.

SECOND YEAR.

Medical Chemistry, Physiology, Therapeutics, General Pathology and Morbid Anatomy, Veterinary Anatomy, Surgical Pathology, Internal Pathology and the Contagious Diseases, Botany, and Zoology.

THIRD YEAR.

Therapeutics, General Pathology and Morbid Anatomy, Surgical Pathology and Operative Surgery, Internal Pathology and the Contagious Diseases, Sanitary Police, Obstetrics, and Zootechnics.

In the second year the student will attend clinics, and will serve as aid in the hospital; in the third year, he will be placed in charge of sick animals, and be required to prepare clinical reports and make autopsies. He will, also, make regular visits to breeding and dairy farms and to slaughter-houses, in order to familiarize himself with the races of animals, the economical means employed in their care, and the varieties of butcher-meat.

The immense number of horses in Philadelphia, the large car and sale stables in the immediate neighborhood of the University, and the fine agricultural country lying just outside the city, which can be utilized for the study of cattle and other food animals, will afford the students of this school especial opportunities.
EXAMINATIONS

will be held at the close of each year and at the end of the course. All these examinations must be passed satisfactorily before the student can be registered as a candidate for the degree.

GRADUATION.

Upon completing satisfactorily the full course of study, the student receives the degree of Veterinary Surgeon (V. S.), upon the same conditions as those on which the degree of Doctor of Medicine is conferred (p. 56.)

EXPENSES.

The Matriculation Fee is five dollars; the Tuition Fee, one hundred dollars a year.

Further information respecting this school may be obtained from Professor R. S. Huidakoper, M.D., V.S., Dean of the Faculty, 111 South 20th Street, Philadelphia, Pa.
DEPARTMENT OF LAW.

FACULTY.

WILLIAM PEPPER, M.D., LL.D., Provost of the University, and ex-officio President of the Faculty.

P. PEMBERTON MORRIS, A.M.,* Professor of Practice, Pleading, and Evidence at Law and in Equity.

Hon. J. I. CLARK HARE, LL.D., Professor of the Institutes of Law, including, *inter alia*, International, Constitutional, and Commercial Law.

E. COPPÉE MITCHELL, LL.D., Professor of the Law of Real Estate and Conveyancing, and of Equity Jurisprudence.

JAMES PARSONS, A.M., Professor of the Law of Personal Relations and Personal Property.

JOHN J. REESE, A.M., M.D., Professor of Medical Jurisprudence.

GEORGE TUCKER BISPHAM, A.M., Professor-elect of Practice, Pleading, and Evidence at Law and in Equity.

E. C. MITCHELL, Dean of the Law Faculty,
518 Walnut Street, Philadelphia.

AIM OF THE DEPARTMENT.

The aim of this Department is to aid students who are preparing for admission to the Bar, as well as others who are desirous of acquiring knowledge in any branch of legal learning. The Conveyancer or the Merchant may attend, with profit, the particular lectures appropriate to his pursuits.

COURSE OF STUDY.

Students may matriculate in this Department at any stage of their professional preparation. No entrance-examination is required by the Faculty.

The Course occupies two years. Each year is divided into two terms, the first beginning on the first of October, the second on the first of February. Each term continues four months. The course is so arranged that a student entering at the beginning of any October term will complete his studies in two years.

* Resigned, to take effect June 15, 1884.
SESSION OF 1883-4.

**October Term.**
- Evidence.
- Contracts, Bills of Exchange and Promissory Notes; Bills of Lading.
- Equity Jurisprudence.

**February Term.**
- Practice and Pleading in Equity.
- Conflict of Laws, Criminal Law.
- Equity Jurisprudence.
- Bailment, Common Carriers, Pledges, Chattel Mortgages, Life Insurance.
- Medical Jurisprudence.

SESSION OF 1884-5.

**October Term.**
- Practice and Pleading at Law.
- Constitutional Law, Insurance.
- Real Estate.
- Domestic Relations; Executors and Administrators.

**February Term.**
- Practice and Pleading at Law.
- Suretyship and Guaranty.
- Conveyancing.
- Title to Personal Property, Civil Law; Contract of Sale.
- Medical Jurisprudence.

Instruction is given by lectures, and by books and portions of books upon the subjects of the lectures, which are recommended by the Professors. The students are frequently and carefully examined. Moot courts are held, at which questions, prepared by the Professors, are argued. These courts meet once a week during each term; and an evening is assigned to each case, so that a continuous discussion can be had of the points raised for argument. The Law Academy of Philadelphia, too, an institution of long standing, to which not only students, but many practising lawyers, belong, gives opportunity for debate and argument that has been found of the greatest practical advantage.

The Supreme Court of Pennsylvania, the County Courts, and the Federal Courts are in session in Philadelphia during a great part of the year; so that students can have ample facilities for observing judicial proceedings.

**FEES.**

The Tuition Fee for the full course (except Medical Jurisprudence) is forty dollars a term. Each Professor will issue tickets for his own lectures to students who do not desire to attend the full course, and will fix the fee at his own discretion. Students who take the full course pay, also, a matriculation fee of five dollars. No other charges are made.

Students who have received the degree of Bachelor of Laws may attend all future lectures free of charge.

The students of this Department are also permitted to attend
the Lectures given in the other Departments free of charge. Some of these, especially the Lectures on English History and Literature, Rhetoric, Intellectual and Moral Philosophy, and Social Science, are of value to the lawyer, and an opportunity is thus offered, to those whose previous training has been to some extent limited, to make up the deficiency.

The law students have also the free use of the University Library, under the usual regulations.

The Library of the Law Association of Philadelphia (one of the largest in the country) is also open to students of law in the University for a fee of three dollars per annum, under proper regulations.

EXAMINATIONS AND DEGREES.

The following statute, fixing the qualifications of candidates for graduation, has been adopted by the Board of Trustees.

"In order to obtain the degree of the Bachelor of Laws, there shall be required of every candidate—

1. That he shall have attended upon the full course of instruction (both Lectures and Examinations) given in the Law Department, except the Lectures on Medical Jurisprudence.

2. He shall have prepared and submitted to the Faculty, at some time to be fixed by them, an essay, composed by himself, on some legal subject, sufficient in merit to satisfy the Faculty of his fitness to receive the degree.

3. He shall have passed an examination at the end of each session upon the subjects of study during that session. The examination shall be conducted by the Faculty, either orally or in writing, as they may determine, in the presence of such of the members of the committee on the said Law Department belonging to this Board as may choose to attend. And the members of the Board of Examiners appointed by the Courts of Philadelphia may be present at the examination if they desire to do so."

The essay required from each candidate must be handed to the Dean of the Faculty by the 15th of February.

Errors in spelling or grammar, or other evidence of the want of a good English education, will preclude a candidate from receiving a degree.

The examinations required by the statute are both written and oral, and are held during the last week in May. The questions used at the written examination in May, 1883, will be found on a subsequent page.

Students are not admitted to advanced standing. Actual attendance on the full course of two years is required for graduation.

Students who have attended the lectures of any of the Professors without taking a full course, may receive certificates of proficiency.
PRIZES.

The Alumni of this Department have established two prizes, one of fifty dollars, called the "Sharswood Prize," and one of twenty-five dollars, called the "Meredith Prize," to be competed for by the Graduating Class for the best and the second best graduation essay. They are awarded by the Faculty.

A Faculty prize of fifty dollars is given to the student in either class who passes the best written examination with all the Professors, the answers to the questions proposed to be completed within a limited time.

ADMISSION TO THE BAR.

Graduates of this Department, having complied with the rules of court, are admitted to practise in the Courts of Common Pleas and Orphans' Court of Philadelphia, in accordance with the following rule adopted by those courts in June, 1875:

"Any citizen of the United States, of full age, who shall have been graduated Bachelor of Laws by the University of Pennsylvania, after the course of study required in the University, may be admitted to practise as an attorney of this court, if he shall have complied with the rule now in force as to the preliminary examination and been registered for one year in the Prothonotary's office as a student of law in said University by the Dean of the Law Faculty thereof."

The preliminary examination referred to in this rule is conducted by the Board of Examiners appointed by the courts of Philadelphia County, and embraces all the branches of a good English education. No person can be registered as a student of law without passing this examination.

Application for admission, and for information, should be made to the Dean of the Faculty, at his office, 518 Walnut Street, Philadelphia.

EXAMINATION QUESTIONS, MAY, 1883.

PROFESSOR MORRIS.

1. What do you understand by a personal action?
2. Explain the doctrine of venue.
3. State the difference between a plea in bar and in abatement.
4. At what stage of the proceedings is de injuria available?
5. Explain the difference between a common and special traverse.
6. What is a judgment?
7. Name the executions available in personal actions in Pennsylvania.
8. What is a bail piece? and what are the holder's powers under it?
9. How many judgments are there in partition? Name them.
10. Is title ever determined by one verdict and judgment in ejectment? Give the reasons for your answer.

PROFESSOR HARE.

1. Who were the parties to the Constitution of the United States, and by whom was it established in fact, and according to the tenor of the instrument?
2. Is the government of the United States absolute, or one of absolute powers? State the distinction.
3. Does the power to regulate commerce extend to commercial contracts made and to be performed within a State? Can a State establish a quarantine for foreign goods or emigrants, and if so, by virtue of what power?
4. What is a contract within the prohibition of laws impairing the obligation of contracts, and what the obligation that may not be impaired?
5. Under what circumstances, and as to what contracts or persons may a State bankrupt or insolvent law be valid?
6. Can a State repeal the charter of a municipal corporation without providing for the payment of its debts, and what property of such a corporation may be taken in execution by its creditors before or after such repeal?
7. Is a contract not to exercise the power of taxation binding on a State, and what is the rule as it regards the police power?
8. What is a cause arising under the Constitution and laws of the United States, and by what means can such a cause be brought into a Federal Court?
9. Can the laws of the United States be administered by a State Court, or the laws of a State by a Federal tribunal?
10. Can a recovery be had in a State Court for a wrong done by a Federal officer in the exercise of his functions, or under color of an act of Congress?

PROFESSOR MITCHELL.

1. What is the test to determine whether a chattel annexed to the land is, or is not, part of the realty?
2. What changes were made by the married women's Act of 1848, and its supplements, in a husband's estate in his wife's land during her lifetime?
3. What are the rights of a life-tenant to take out minerals beneath the surface?
4. What is the difference in effect between a breach of condition, and a secondary or determining limitation, in bringing an estate to an end?
5. If land be conveyed to husband and wife and their heirs, what kind of estate do they take? and what are the rights of each of them?
6. Explain the method by which nearness of consanguinity is determined in Pennsylvania.
7. What is the difference between an adverse hostile possession of
land for 21 years, and an adverse hostile user of an easement for 21 years, in their effect upon the title to the land and the easement respectively?

8. When land is sold under a judgment at sheriff's sale, what title does the purchaser take?

9. What is implied from the words “grant, bargain, and sell,” in a duly recorded deed of conveyance of land?

10. Under what circumstances does a will of lands require subscribing witnesses?

PROFESSOR PARSONS.

(State in each reply the reason for your answer.)

1. When does interest begin to run upon an annuity, or upon a fund the income of which is given to the beneficiary for life?

2. When is extrinsic evidence admitted to show that a legacy satisfies, or is satisfied by, a debt, advancement, or donatio mortis causa?

3. When may a devisee, who takes land subject to encumbrance, claim to be exonerated by the personal assets?

4. In what order is the grant of administration made?

5. Has the Orphans' Court any jurisdiction over real estate for the purpose of enforcing its power to take advancements and settlements into account in making distributions?

6. Does the authority or discretion given by will to an executor to sell land for the payment of debts create a trust for the general body of the testator's creditors?

7. Is the creditor's right to collect his debt out of the decedent's land contingent upon a deficiency of personal assets, or is it an independent right against the real estate?

8. When is the employer liable for the negligence of a co-employee?

9. What persons in England and in Pennsylvania cannot intermarry because they are within the prohibited degrees of consanguinity, or affinity?

10. When may an infant defendant, who is not represented by a guardian ad litem, be bound by the judgment?

MATRICULATES 1883–4.

SENIOR CLASS.

Ashbridge, Abraham S., Jr.
Baker, John R., Jr.
Bell, John C.
Benson, James B.
Caldwell, J. Hope
Chapron, Francis S.
Chase, Charles A.
Coleman, William H.
Cramp, Howard
Cresse, Jere L.
Cushman, J. Frank
Duncan, Charles S.

Downingtown, Philadelphia,
do.
Condersport,
Dover, Del., Philadelphia,
do.
do.
Cape May, N. J.
Marietta,
Gettysburg,

T. W. Kimber.
Redding, Jones, & Car-
J. M. Thomas. [son.
MacVeagh & Bisham.
J. H. Shakspeare.
J. L. Kinsey.
H. R. Edmunds.
H. T. Coleman.
E. C. Mitchell.
J. G. Leach.
J. Merrill Linn.
R. M. Shick.
Fagan, Maurice E.  Philadelphia,
Hillbish, William P.  McKee's Half Falls,
Hornor, Wm. Macpherson  Philadelphia,
Jones, Walter G.  do.
Keefe, James J.  Milton,
Lancaster, J. Campbell  do.
McFarland, Thomas  do.
Murphy, Walter  do.
Peckham, Le Roy B.  do.
Porter, Hobart C.  do.
Remak, Gustavus, Jr.  do.
Scattergood, J. Edward  do.
Schively, Edwin F.  Germantown,
Schmidt, George S.  York,
Sheppard, Warren W.  Shiloh, N. J.
Simes, Alexander, Jr.  Philadelphia,
Smith, Abram H.  do.
Townsend, Jos. B., Jr.  do.
White, John J.  do.

JUNIOR CLASS.

Acker, Ephraim L.  Norristown.
Barrows, George A.  Philadelphia, do.
Beasley, Charles Oscar  do.
Benson, Cyrus L.  Lebanon,
Binns, Burton  Philadelphia, do.
Brinton, Ferree  do.
Clark, Joseph S.  Germantown,
Colvin, Harry E.  Schellsburg,
Comly, James I.  Philadelphia,
Crawford, Wm. B.  Conshohocken,
Develin, John F.  Philadelphia,
Darlington, Wm. S.  Concordville,
Fels, Maurice  Philadelphia,
Ferguson, Wm. C.  do.
Fitzpatrick, James  do.
Galbraith, John W.  do.
Gillespie, A. Jackson  do.
Gillingham, Frank M.  do.
Good, D. Clare  do.
Guillou, Alfred  do.
Hamberg, M. P.  do.
Harvey, W. Spence  do.
Holden, Chancellor D.  do.
King, Frederick J.  do.
Krein, Charles B.  do.
Levis, Townsend E.  Media,

W. & C. B. McMichael.
Charles F. Corson.
Hon. W. A. Porter.
MacVeagh & Bispham.
J. T. Baker.
MacVeagh & Bispham.
J. T. Spencer.
E. L. Perkins.
Wm. H. Lex.
W. G. Griffith.
G. Junkin.
R. N. Willson.
J. E. Carpenter.
G. Remak.
J. M. Pile.
E. Shippen.
Hon. B. H. Brewster.
University.
P. F. Rothermel, Jr.
Joseph Savidge.
J. B. Townsend.
N. H. Sharpless.
Seniors, 34.

Crawford & Dallas.
A. S. Letchworth.
Jno. Benson.
M. Veale.
E. C. Mitchell.
J. C. Bullitt.
Jno. Cessna.
Joseph Ball.
Redding, Jones, & Car- 
H. C. Terry.  [son.
Redding, Jones, & Car-
J. Parsons.  [son.
J. C. Ferguson.
A. A. Hirst.
W. S. Lane.
T. E. Patterson.
F. S. Simpson.
MacVeagh & Bispham.
V. Guillou.
A. A. Grace.
P. F. Rothermel, Jr.
P. S. Cantrell.
A. S. Letchworth.
E. F. Hoffman.
Admitted.


Juniors, 60.

SPECIAL STUDENTS.


SUMMARY.

<table>
<thead>
<tr>
<th>Seniors</th>
<th>Juniors</th>
<th>Special Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>60</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>101</td>
</tr>
</tbody>
</table>
DEPARTMENT OF PHILOSOPHY.

FACULTY.

WILLIAM PEPPER, M.D., LL.D., Provost of the University, and ex-officio President of the Faculty.
E. OTIS KENDALL, LL.D., Dean of the Faculty, and Professor of Mathematics.

JOSEPH LEIDY, M.D., LL.D., Professor of Zoology.
J. PETER LESLEY, LL.D., Professor of Geology.
REV. ROBERT E. THOMPSON, A.M., Professor of History.
FREDERICK A. GENTH, Ph.D., Professor of Inorganic Chemistry.
SAMUEL B. HOWELL, M.D., Assistant Professor of Geology.
GEORGE F. BARKER, M.D., Ph.B., Professor of Physics.
JAMES PARSONS, A.M., Professor of Law.
GEORGE A. KENIG, Ph.D., Professor of Mineralogy.
JOSEPH T. ROTHROCK, B.S., M.D., Professor of Botany.
THEODORE G. WORMLEY, M.D., LL.D., Professor of Organic Chemistry.
ANDREW J. PARKER, M.D., Ph.D., Assistant Professor of Zoology.
MORTON W. EASTON, Ph.D., Professor of Comparative Philology.
EDMUND J. JAMES, Ph.D., Professor of Political and Social Science.
REV. GEORGE S. FULLERTON, A.M., B.D., Instructor in Intellectual and Moral Philosophy.

AIM OF THE DEPARTMENT.

The aim of this Department is to supervise advanced studies, and, as far as possible, to afford advanced instruction, in the various branches of literature and science. Several courses, each covering a period of two years, are open to graduates of any department of this University, or of institutions of similar standing, and to other persons who can pass a satisfactory examination. The student may or may not be a candidate for the degree of Doctor of Philosophy. In the latter case, residence at the University will not be required; in the former, it will be expected, though, in special cases and for good reasons, the Faculty may excuse candidates from compliance with this requirement. A course may be begun at any time.

COURSES OF STUDY.

The following courses are now open:

MATHEMATICS.—No instruction. Examination for the degree.*
ZOOLOGY AND COMPARATIVE ANATOMY.—Laboratory work, with occasional lectures on Principles and Classification. Oral examination on the Classification of the Animal Kingdom (including the Chief Characters of the Classes and Orders of Animals), and on

* See note on opposite page.
the principles of Comparative Anatomy and General Morphology, together with the specific anatomy of some form selected by the professor.


GEOLOGY.—I. Laboratory work—the plotting of geological field notes in map form by contour lines, the location of outcrops, the construction of vertical and columnar sections, the manufacture of relief models, and the coloring of both maps and models on the two systems of the Pennsylvania and the United States surveys. II. Lectures on Dynamic, Structural, and Chemical or Physical Geology, on Lithology, on Systematic or Historical Geology, and on Palaeontology. III. Reports on districts visited by the student, with sketches, sections, full descriptions of strata, and a determination of the fossils.

HISTORY.—No instruction. Examination for the degree.*

INORGANIC CHEMISTRY.—Laboratory practice. Examination in the History of Chemistry, Chemical Philosophy, and the Chemistry of all well-established elements and their compounds.

PHYSICS.—No instruction. Examination for the degree.*

LAW.—Civil Law, Admiralty, and Comparative Jurisprudence.

Text-Books: Hadley’s Civil Law, Mear’s Analysis of Ortolan, Mackeldey’s Dogmatics; Austin, Marksby, and Holland on Jurisprudence; Parsons’ Admiralty; Glasson, Holmes, and Digby on the History and Development of the Common Law; Story’s Conflict of Law; Foote and Von Bar on International Law.

MINERALOGY.—Laboratory practice. Oral examinations, first, (for students who take mineralogy as a principal study) on geometrical crystallography, comprising the development of the zonal equation, the transformation of axes, the linear and spherical methods of projection, the reduction of angles to indices, the methods employed in fixing the optical constants, and, by way of illustration, the identification of the less common minerals, presented in well-developed crystals; second, (for students who take mineralogy as a secondary branch,) on the determination of any mineral substance by the blowpipe, the more common species of

* Lists of authorities to be consulted in these cases can be had on application to the Secretary.
minerals at sight, and elementary crystallography, \textit{i.e.} the systems, their holohedral and hemihedral forms, and the current systems of classification.

\textbf{Botany.}—Lectures and laboratory practice. Examination in Phænogamic, Cryptogamic, Structural, or Geographical Botany. Economic Botany, with the general relations of plants to human wants and uses.

\textbf{Organic Chemistry.}—Laboratory practice. Examination on Organic, Physiological, and Toxicological Chemistry.

\textbf{Philology.}—Sanskrit, Linguistics, and the Comparative Philology of the Indo-European languages.

\textbf{Political and Social Science.}—Political Science (in the narrow sense of the term), Political Economy, Finance, Administration, Legislation, etc.

\textbf{Intellectual and Moral Philosophy.}—History of Speculative Philosophy, of Psychology, and of Ethics. (Other subjects will be announced.)

\textbf{Fees.}

For instruction or supervision, whether the student be in residence or not, one hundred and fifty dollars a year will be charged, with special fees for material used. A graduation fee of thirty-five dollars will be also charged in case a degree is taken. The cases of applicants for a degree on examination alone, without instruction or supervision, will be considered separately.

\textbf{Degree.}

The Degree of Doctor of Philosophy will be conferred upon the following conditions:

1. The candidate must be a Bachelor of either Arts or Science of a reputable institution, or else must satisfy the Faculty by examination or otherwise that he possesses an equivalent preparation.

2. He must pursue during two years, under the supervision of the Faculty, a course of study in at least three branches of literature or science, one of which shall be designated as the principal branch and the other two as subordinate branches.

3. He must pursue original investigations in the principal branch of study, must present a satisfactory thesis founded on it, and must pass an examination in all three branches.

For further information respecting this Department address Professor E. J. James, Ph.D., Secretary of the Faculty.
DEGREES, HONORS, AND PRIZES, 1882-83.

HONORARY DEGREES.

APRIL 13, 1883.
Doctor of Laws, GEORGE LEIB HARRISON.

JUNE 15, 1883:
Master of Arts, Professor LEWIS M. HAUPT, C.E.
Doctor of Science, Professor ISAAC SHARPLESS, S.B.
Doctor of Divinity, Rev. Prof. WILLIAM WACKERNAGEL, A.M.

DEGREES IN COURSE—CERTIFICATES.

JUNE 15, 1883.
Bachelor of Arts—
William Adger, George Lodge,
Cyrus Adler, Cornelius Davis Mecutchens,
Charles Young Audenried, Elliston Joseph Morris,
Charles Oscar Beasley, John Robert Moses,
Logan McKnight Bullitt, Samuel Theophilus Neuber,
Edward Potts Cheyney, Howard Wurts Page,
William Howard Falkner, Emil Roth,
Edward Grier Fergusson, Paul Judd Sartain,
Edward Grier Fullerton Geo. Edward Schlegelmilch,
William Daniel Gross, Jr., Herman Schmitt,
James Powers Hawkes, Joseph Sherlock,
James Arthur Heaton, Francis Edward Smiley,
Arthur Washington Hess, Alpheus Waldo Stevenson.

Bachelor of Science—
In the Faculty of Science—
Dorsey Ash, Edward Henry Earnshaw,
Chas. Michael Baumann, Jr., Amasa Ely,
Charles Walts Burr, William Magee Field,
Sanford Keyser Campbell, William Marshall Hinkle,
Robert Culin Canby, Isaac Leopold,
Samuel Norris Craven, Edwin Beale Sadtler,
Richard Wistar Davids, Hiram Abiff Schofield,
Frank Miles Day, William Jones Serrill,
Lincoln Grant Eakins,
In the Faculty of Finance and Economy—
Charles Winrod Finck, William Redwood Wharton.
Master of Arts—
Alex. Aden Powell, Jr. ('79),
Christian Lee Gaul,
Huston Hammill Milligan,
John Perot,
Morris Rex Bockius,
William Purves Gest,
Edwin Ford Schively,
Charles Wadsworth, Jr.

Bachelor of Laws—
Thomas W. Bakewell,
Ellis Ames Ballard,
Leonard J. Bamberger,
Ben Stanley Banks,
Morris R. Bockius,
Charles W. Boger,
Francis E. Bucher,
S. Spencer Chapman,
John M. Cohen,
Howard A. Davis,
Adolph Eichholz,
Charles H. Eimerman,
Harry C. Ewing,
Hugh J. Fagen,
J. Francis Foulke,
William H. Fox,
John H. Geil,
William P. Gest,
George H. Gross,
George J. Harding,
Richard S. Hartpence,
J. Frank E. Hause,
Mrs. Carrie B. Kilgore,
Julius C. Levi,
Howard J. Lukens,
William H. R. Lukens,
Edward Lyster, Jr.,
James B. McCarron,
Thomas F. McMahon,
Francis P. McManus,
Lincoln MacVeagh,
Charles R. Maguire,
Samuel E. Maires,
J. Shriver Murphy,
Erskine Neide,
Robert J. Owen,
Horace Pettit,
Samuel V. Place,
Eli K. Price, Jr.,
W. Howard Ramsay,
Thomas Reath,
Emil Rosenberger,
Felix E. Schelling,
W. Penn Shipley,
Robert G. Smith,
Edgar C. Snyder,
Frank Sorver,
Edward Stair,
Alexander J. Truitt,
B. Masden Vaughan,
David Wallerstein.

Certificates of Proficiency—
In Arts—
Louis J. Cunningham Kimmell,
Henry Rankin Poore.

In Science—
George Fales Baker,
Anthony Fischer,
William George Gossling,
Harry Bernheim Hirsh,
George Andrew Luccareni,
Jacob Henry Stadelman,
Edward Walden, Jr.,
William Henry Weston,
Thomas Drake Whitaker.

In Music—
Annie V. Spooner,
Marie Jefferys,
Helen A. Clarke,
Katherine E. Smaltz.
Certificates of Study—
In Science—
Thomas Ridgway Barker,
Jesse Groom Shoemaker,
William Crowell McFetridge,
Frank Lynwood Garrison.

April 13, 1883.

Doctor of Medicine—
Backus, Ogden
Barber, A. Walker
Berenos, Conrad, M.A. (Yale)
Bidwell, Edwin H., Ph.G.
Bliss, Arthur Ames, A.B.
(Princeton)
Bliss, H. Dwight, B.S.
(Univ. of Rochester)
Bowman, Jacob Z.
Brooks, Frederick M.
Burger, Anthony J., B.S.
(Notre Dame, Ind.)
Carothers, J. Weller
Charlton, William E.
Cheston, Radeliffe
Chrystie, Walter
Clemens, Brentano
Coddington, Charles L.
Collins, Thomas S., Ph.G.
Cooper, J. Cardeen
Costa, Leopoldo M. da, A.B.
(Nat. Lyceum, Lisbon)
Cox, Charles N.
Crane, H. Bedell, Ph.G.
Crawford, Joel
Cubahs, Manuel J. de las, A. B.
(Coll. of Santiago)
Culpeper, William A.
Custer, David D.
Dibrell, Edwin R., M.D.
Ecroyd, Henry, Jr.
Eschbach, H. Clay, A.B.
(Franklin and Marshall)
Field, Benjamin Rush
Fronfield, J. Harvey
Garden, Henry M.
Gibson, Maris
Gloninger, Andrew B., A.B.
(Franklin and Marshall)
Grier, Edgar B.
Gunnar, Adolbert George, B.S.
( Univ. of Mich.)
Hamersly, Wm. H., B.S.
Hamilton, Isaac Beeson, A.B.
(Washington and Jefferson)
Harris, Harry C.
Hartmann, John J., M.D.
Rochester, N. Y.
Acute Opium Poisoning.
Rochester, N. Y.

Civilized America—
Barbadoes, W. I.
The Reciprocal Influence of Certain Affections and Pregnancy.

Cystitis.
Chinolin Tartrate.
Why I am not a Homœopathist.
Hippocrates and Ancient Medicine.

Chambersburg, Penna.
Scarlet Fever.
Fairfax Sta., Va.
Pseudo-Membranous Laryngitis.
Reading,
Cholera Morbus.

Milan,
Hemorrhage after Delivery.
Philadelphia,
Gonorrhœa.
Chopaw, Md.
Diagnosis of Pregnancy by External Examination.

High Bridge, N.J.
Acute Tonsillitis.
Easton,
Thoracic Aneurism.

Towanda,
Infantile Convulsions.
Woodbury, N. J.
Typhus Fever.

Canden, Del.
Morphoica.
São Paulo, Brazil, Cynuria.

Philadelphia,
Puerperal Septicæmia.
Newton, N. J.
Idiosyncrasy.

Reams, Va.

Santiago, Cuba,
Typhus Fever.

Barbadoes, W. I.
The Reciprocal Influence of Certain Affections and Pregnancy.

Fairview Vil.
Neurasthenia.

Van Buren, Ark.
Pneumonia.

Muncy,
Puerperal Insanity.

Limestoneville,
Anæmia; with a Clinical Report.

Easton,
Iritis.

West Chester,
Ascites.

Philadelphia,
A Clinical Study of the Urine.

Guthrieville,
Convallaria Maialis.

Lebanon,
Acute and Chronic Pleurisy.

Birmingham,
Lycocythæmia.

Catasaquoa,
The Clinical Significance of Albuminuria and Tube Casts.

Washington,
Gonorrhœa.

Lansdowne,
A Brief Journalistic Account of a Dissection.

Philadelphia,
Ergot in Labor.

Spontaneous Cure and Surgical Treatment of Aneurism.
Hawes, Earl P., D.D.S.
Haworth, Elwood B.
Hedges, Ellis W., A. B. (Princeton)
Heebner, Thomas F.
Hirat, Barton Cooke
Hoffman, Joseph E., A.B. (Lafayette)
Hopkinson, Oliver, Jr., A.B. (Univ. of Pa.)
Ingram, James H.

Johnson, Frederick C.
Johnson, Richard G.
Johnson, William N., A.B. (Univ. of Pa.)
Jordan, J. Murray, B.S. (Princeton)
Keys, T. Frank, Ph.G.

Kreeker, William H., A.M. (Central High School)
Lowrie, William L.
McIntire, Frank H.
Maclntosh, William
Martin, Edward, A.M. (Swarthmore)
Mater, Horace N., A.M. (Princeton)
Matson, Eugene G., Ph.B. (Central High School)
Mercer, William H.

Mehlmaney, James C.
Millspaugh, Jesse F., A.B. (Univ. of Michigan)
Mittieh, James, A.B. (Franklin and Marshall)
Mitchell, John K.
Montgomery, Guy Rochester
Neal, James B., A.B., Ph.B. (Yale)
Patterson, Thomas J.
Pershing, Howell Terry, M.S. (Lafayette)
Pettit, Louis Clark, Ph.G.

Pratorius, Gilbert G.
Preston, Geo. Junkin, A.B. (Washington and Lee Univ.)
Pyie, Joseph P., Ph.B. (Delaware)
Raht, William E.

Randall, Edward, Jr.
Rankin, James R.
Read, Harry C.
Reimann, Louis P., Ph.G.
Reynolds, Conrad S.  
Rishel, George P., A.B.  (Pa. State College)  
Ruhl, John H.  
Schloss, Aaron  
Seibert, James L.  
Seiss, Ralph W.  
Smedley, Harry L., D.D.S., Ph.G.  
Smith, Frank F., A.B.  (Dartmouth)  
Stewart, Walter S.  
Stokes, Joseph, A.B.  (Univ. of Pa.)  
Summerell, E. Mitchell, A.B. (Davidson, N. C.)  
Summers, S. Lewis  
Tommil, George M., Ph.G.  
Trotter, Spencer  
Voorhees, Nathaniel W., Jr., A.B. (Rutgers)  
Walsh, Edward F.  
West, George R., B.S.  (Emory and Henry)  
Whitney, George F.  
Wilkinson, George P.  
Young, George M.  
Young, James K.  
Rising Sun, Md.  A Contribution to the Histology of Bright's Disease.  
Bellefonte, Scarlet Fever.  
Middletown, Causes of Malaria.  
Columbus, Ind.  Influenza.  
Newport, Acute Pneumonia.  
Media, Hygiene.  
Battle Crk, Mich.  Epilepsy.  
Snow Shoe, Tubal Nephritis.  
Moorestown, N. J.  Hay Fever.  
Salisbury, N. C.  Typhoid Fever.  
Philadelphia, Enteric Fever.  
Santiago, Cuba, Tetanus.  
Philadelphia, Vertebrate Integument.  
Clinton, N. J.  Typhoid Fever.  
Pittston, Angina Pectoris.  
Leavenworth, K. Exophthalmic Goitre.  
Rome, Geo.  Physiognomy of Disease.  
Pottsville, Pertussis.  
Keokuk, Iowa, Cirrhosis of Liver.  
Indiana, Some of the Uses of Ergot.  
Trenton, N. J.  Obstructive Jaundice.  

Carr, William H.  
Wentz, David H.  
Jenkinson, The Termination of Disease.  

SUMMARY.  

<table>
<thead>
<tr>
<th>State</th>
<th>Count</th>
<th>State</th>
<th>Count</th>
<th>State</th>
<th>Count</th>
<th>State</th>
<th>Count</th>
<th>State</th>
<th>Count</th>
<th>State</th>
<th>Count</th>
<th>State</th>
<th>Count</th>
<th>State</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkansas</td>
<td>1</td>
<td>Michigan</td>
<td>2</td>
<td>New Jersey</td>
<td>9</td>
<td>New York</td>
<td>6</td>
<td>North Carolina</td>
<td>1</td>
<td>Ohio</td>
<td>1</td>
<td>Pennsylvania</td>
<td>61</td>
<td>Rhode Island</td>
<td>1</td>
</tr>
<tr>
<td>Barbados</td>
<td>1</td>
<td>Texas</td>
<td>1</td>
<td>Virginia</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuba</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delaware</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgia</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiana</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iowa</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kansas</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APRIL 13, 1883.  
Doctor of Dental Surgery—  
Anderson, Sigurd S.  
Austin, John F.  
Baker, Charles R.  
Barrett, W. Oliver  
Battles, Wilton L.  
Christiana, Norway.  
Cascade, Wis.  
Davenport, Iowa.  
Barre, Mass.  
Girard.
Beck, Uriah G.  
Carter, Colin S.  
Cook, Everett M.  
Croll, William L.  
Davenport, John F.  
DeWitt, Joseph R.  
Franklin, DeWitt C.  
Harper, J. Warren  
Herbein, Howard J.  
Hofmann, Georg  
James, David L.  
Jennings, Irving H.  
Keller, Edward I.  
Leser, Victor  
Lewis, Elmer L.  
Luce, John E.  
McCandless, Albert H.  
McDougall, John  
Nicol, John D.  
Noble, Joseph W.  
Parker, J. Abbott  
Scott, Robert M.  
Sherraden, William H.  
Stowe, Frank J.  
Taylor, William D.  
Tovar, Luiz F.  
Valdes, Antonio G.  
Wienecke, Eugene  
Yorks, John R.  
Williamsport.  
New York.  
Waterbury, Conn.  
Middletown.  
Freeport, Ill.  
Birdsboro'.  
Maysville, Ken.  
Carlisle.  
Sinking Spring.  
Darmstadt, Germany.  
Greenville, N. C.  
Harrisburg.  
Lancaster.  
St. Louis, Mis.  
York.  
Red Wing, Minn.  
Columbus City, Iowa.  
Pittston.  
Peoria, Ill.  
Carlisle.  
Minneapolis, Minn.  
Gettysburg.  
Council Bluff, Iowa.  
Toronto, Canada.  
West Springfield, Mass.  
Bogota, U. S. Colomb.  
Matanzas, Cuba.  
Leipzig, Germany.  
Danville.

SUMMARY.

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>1</td>
</tr>
<tr>
<td>Connecticut</td>
<td>1</td>
</tr>
<tr>
<td>Cuba</td>
<td>2</td>
</tr>
<tr>
<td>Germany</td>
<td>2</td>
</tr>
<tr>
<td>Illinois</td>
<td>2</td>
</tr>
<tr>
<td>Iowa</td>
<td>3</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>2</td>
</tr>
<tr>
<td>Minnesota</td>
<td>2</td>
</tr>
<tr>
<td>Missouri</td>
<td>1</td>
</tr>
<tr>
<td>New York</td>
<td>1</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1</td>
</tr>
<tr>
<td>Norway</td>
<td>1</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>13</td>
</tr>
<tr>
<td>U. S. of Colombia</td>
<td>1</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
</tr>
</tbody>
</table>

HONORS.

In the College Faculty, at the examination for Degrees—

In Arts—

Of the First Class, to Edward Potts Cheyney, Cornelius Davis Mecutchen, Charles Young Audenried, William Howard Falkner, and Edmund Morris Fergusson.

Of the Second Class, to Howard Wurts Page, Cyrus Adler, and George Edward Schlegelmilch.

Of the Third Class, to James Powers Hawkes, John Robert Moses, Francis Edward Smiley, Emil Roth, George Lodge, and Elliston Joseph Morris.
In Science—

Of the First Class, to Frank Miles Day and William Jones Serrill.
Of the Second Class, to Richard Wistar Davids, Sanford Keyser
Campbell, William Marshall Hinkle, and Lincoln Grant Eakins.
Of the Third Class, to Hiram Abiff Schofield, Robert Culin Canby,
Charles Michael Baumann, Jr., and Charles Walts Burr.

At the annual examination—

In Arts—

Of the First Class, to—
Juniors—Laurence Butler Ridgely.
Sophomores—Herman T. Lukens and Mark Wilks Collet.
Freshmen—Crawford Dawes Hening, Robert William Rogers,
Howard James Truman, and George Christian Eisenhardt.

In Science—

Of the First Class, to—
Juniors—Samuel Smyth Van Pelt.
Sophomores—Marshall Rogers Pugh, Herman Herzog, Jr., Stephen Harris, and Henry Szlapka.
Freshmen—Charles Herman Haupt.

In the Faculty of Medicine, for graduation theses*—

March 15, 1882.

Distinguished Merit, to—
George W. Johnston,
Carl H. Reed,
Herbert E. Smith,
Judson Daland,
Alexis D. Smith,

Honorable Mention, to—
Henry M. Boyd,
Charles S. Doulcy,
John L. Elliott,
William M. Gray,
D. Webster B. Kupp,
Charles H. Loder,
McCluny Radcliff,

April 13, 1883.

Distinguished Merit, to—
Oliver Hopkinson, Jr.,
Joseph P. Pyle,

Honorable Mention, to—
H. Dwight Bliss,
Thomas I. Collins,
Edgar B. Grier,
Thomas S. Heebner,
Barton C. Hirst,
John K. Mitchell,

George E. Shoemaker,
Charles Claxton,
W. Frank Haehlen,
N. Archer Randolph,

Joseph Schmidt,
Peter N. K. Schwenk,
Daniel W. Shelby,
John E. Sheppard,
J. Sinclair Tait,
William F. Taylor.

James Mitchell,
Louis Clark Pettit,

William MacIntosh,
Guy K. Montgomery,
James B. Neal,
Louis P. Reimann,
Ralph W. Seiss.

* For the Prize Theses, see p. 111.
In the Faculty of Dentistry, at the examination for Degrees—
Honorable Mention for averages exceeding 90, to—
John F. Austin, Wisconsin. Wm. H. Sherraden, Iowa.
Wilton L. Battles, Pennsylvania.

PRIZES.

I. By the College Faculty—

1. In Intellectual and Moral Philosophy, Junior Prize for the best Essay on "The Doctrine of Cause and Effect," equally to Waters Dewees Roberts and James Barr Ferree, with Honorable mention of Frank Cooper.

2. In the Greek Language and Literature, Junior Prize for the best examination on "The Oration of Æschines contra Ctesiphontem," read with the Professor, in addition to the regular course, equally to John August William Haas and Laurence Butler Ridgely.

3. For the best examination by a member of the Freshman Class on Greek Prose Composition with the accents, to Crawford Dawes Hening.

4. In Mathematics, Junior Prizes for the best examinations on the Lectures on Quaternions given to the Voluntary Junior Class: 1st, to Frank Cooper; 2d, to John Stokes Adams.

5. In History and English Literature, Junior Prize for the best Essay on "Gustavus Adolphus," to James Barr Ferree.

6. The Sophomore Prize, for the best Declamation, to John Stevens Durham.

7. The Matriculate Greek Prizes for the best examination upon the elements of Greek Prose Composition; of the 1st Rank to Crawford Dawes Hening, 2d Rank to Robert William Rogers.

8. The Prize offered by the Board of Trustees to the Scientific Classes for Improvement in Drawing and for general good conduct and application, to Charles Herman Haupt, of the Freshman Class.

9. The Henry Reed Prize, founded by the Alumni of the University in memory of Professor Henry Reed, for the best Essay by a member of the Senior Class (Department of Arts) on "The Causes and Tendencies of the Growing Obscurity in Recent Poetry," to Charles Oscar Beasley.

10. The Prize founded by the Society of the Alumni, for the best Latin Essay by a member of the Graduating Class, to Charles Young Audenreid, for his Essay "De Plebe Romana."
III

11. The Prize founded by the Society of the Alumni, for the best Original Declamation by a member of the Junior class, to Charles Hoffman.

12. The Prize founded by Mr. H. La Barre Jayne, for the best English Composition by a member of the Freshman Class, on "Proprietary Government in the American Colonies," to Howard James Truman.


14. "The Van Nostrand Prize," for the highest general average of scholarship in the Department of Civil Engineering (Junior Class), to Edward Shippen Watson Farnum.

II. By the Faculty of Law—

1. The Faculty Prize, for the best written examination with all the Professors, to Howard J. Lukens, of the Senior Class.

2. The Sharswood Prize, for the best graduation Essay in 1883, to Ellis Ames Ballard.

3. The Meredith Prize, for the second best Essay, to William P. Gest.

III. By the Faculty of Medicine—

March 15, 1882.

1. The Henry C. Lea Prizes, Fifty Dollars each, for the best graduation theses, to D. King Gotwals and Horace F. Jayne, ex aequo.

2. The Alumni Prizes, Fifty Dollars each, for the next best graduation theses, to George T. Robinson and Henry Wile, ex aequo.

3. The Morbid Anatomy Prize, a Zentmayer’s Histological Microscope, offered by the Professor of Morbid Anatomy for the best thesis on that subject, illustrated by microscopical preparations, to J. Wright Blackburn, with Honorable Mention of William H. Stewart.

4. The Anomaly Prize, offered by the Demonstrator of Morbid Anatomy for the best record of anomalies found in the dissecting-room, to Howard A. Kelly and Horace F. Jayne, equally.

5. The Osteological Prize, a copy of Quain’s Anatomy, offered by the Demonstrator of Osteology and Syndesmology, for the best essay on any subject connected with these branches by a member of the first year class, to Elmer C. Fahrney, with Honorable Mention of M. Howard Fussell.
1. The Alumni Prize of $100, to Conrad Berens and George Junkin, Jr., deceased.
3. A prize of $100, offered by Dr. Spencer Morris for marked proficiency in differential diagnoses and hygiene, to George R. West.
4. The prize of the Professor of Morbid Anatomy, a Zentmayer's Histological Microscope, to Edward Martin.
5. The prizes of the Acting Demonstrator of Morbid Anatomy, for the best anatomical preparations, to Edward Randall and William H. Mercur, with Honorable Mention of Isaac Buson Hamilton; for the greatest number of anomalies collected in the dissecting-room, to William H. Kreeker, with Honorable Mention of George R. West.

---

RECAPITULATION.

PROFESSORS, LECTURERS, AND INSTRUCTORS.

<table>
<thead>
<tr>
<th>College Department</th>
<th>31</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Medicine, including Hospital Service</td>
<td>105</td>
</tr>
<tr>
<td>&quot; &quot; &quot; (Auxiliary Faculty)</td>
<td>5</td>
</tr>
<tr>
<td>&quot; &quot; Dentistry</td>
<td>26</td>
</tr>
<tr>
<td>&quot; &quot; Veterinary Medicine</td>
<td>10</td>
</tr>
<tr>
<td>&quot; &quot; Law</td>
<td>6</td>
</tr>
<tr>
<td>&quot; &quot; Philosophy</td>
<td>15</td>
</tr>
<tr>
<td>Emeritus-Professors</td>
<td>2</td>
</tr>
</tbody>
</table>

| | |
| Repeated | 68 |
| | |
| Total | 200 |

STUDENTS.

<table>
<thead>
<tr>
<th>College Department</th>
<th>416</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Medicine</td>
<td>386</td>
</tr>
<tr>
<td>&quot; &quot; &quot; (Auxiliary Faculty)</td>
<td>43</td>
</tr>
<tr>
<td>&quot; &quot; Dentistry</td>
<td>88</td>
</tr>
<tr>
<td>&quot; &quot; Law</td>
<td>101</td>
</tr>
</tbody>
</table>

| | |
| Repeated | 1034 |
| | |
| Total | 1000 |

| | |
| Repeated | 34 |
| | |
| Total | 1000 |
## INDEX

### ADDRESSES:
- Instructors, Lecturers, etc., 8
- Professors, 6
- Standing Committees, 5

### ADMISSION:
- Bar, 95
- Department of Arts, 18
- Dentistry, 79
- Law, 92
- Medicine, 47
- Auxiliary, 74
- Music, 33
- Philosophy, 100
- Veterinary Medicine, 90
- Towne Scientific School, 20
- Wharton School of Finance, 32

### AIM:
- Department of Arts, 18
- Dentistry, 79
- Law, 92
- Medicine, 53
- Auxiliary, 74
- Music, 33
- Philosophy, 100
- Veterinary Medicine, 90
- Towne Scientific School, 20
- Wharton School of Finance, 29

### ANNUAL EXAMINATIONS:
- When held, 4
- Announcement of Results, 4
- College Department, 15
- Department of Dentistry, 85
- Law, 94
- Medicine, 50, 51
- Auxiliary, 75
- Philosophy, 102
- Veterinary Medicine, 91

### ARCHITECTURE, 21, 23

### ARTS, DEPARTMENT OF. (See Department of Arts.)

### AUXILIARY DEPARTMENT OF MEDICINE. (See Department of Medicine, Auxiliary.)

### BUILDINGS:
- Dental, 83
- Medical, 59, 62, 64
- Veterinary, 89

### CALENDAR:
- 1884-5, 2
- University, 4

### CERTIFICATES AWARDED, 1882-3, 104

### CHAIRMAN OF STANDING COMMITTEES, 5

### CHEMISTRY:
- Department of Dentistry, 82
- Medicine, 63
- Towne Scientific School, 22

### CIVIL ENGINEERING, 22

### CLERK:
- College Faculty, 10
- Faculty of Medicine, 10

### CLINICAL INSTRUCTION:
- Department of Dentistry, 83
- Medicine, 54, 64

### COLLEGE DEPARTMENT:
- (For Dates, see Calendar.)
- General Description, 12
- Annual Examinations, 15
- Fees, 13
- Faculty and Instructors, 12
- Instruction Open to Public, 13
- Libraries, 17
- Prizes, 15
- Scholarships, 14
- Secretary of Faculty, 12
- Societies, 17
- Summary of Students, 43
  (See Department of Arts, Towne Scientific School, Wharton School of Finance, and Department of Music.)

### COLLEGE:
- Faculty, Composition of, 13
- Year, 4
  (See College Department.)

### COMMENCEMENTS: WHEN HELD, 4

(113)
CONSTITUTION OF THE UNIVERSITY, 11

CONTENTS OF CATALOGUE, 3

COURSE OF STUDY:
Department of Arts, 18
  Dentistry, 79
  Law, 92
  Medicine, 48
  Auxiliary, 75
  Philosophy, 100
  Veterinary Medicine, 90
Post-Graduate in Medicine, 50
Preparatory to Medicine, 23
Towne Scientific School, 24
Wharton School of Finance, 31
Partial, Department of Arts, 20
  Law, 92
  Medicine, 57
  Auxiliary, 74
Wharton School of Finance, 32
Professional, Towne Scientific School, 21
Special, Department of Law, 92
  Medicine, 57
  Auxiliary, 74
Towne Scientific School, 21
Wharton School of Finance, 32

DATES. (See Calendar.)

DEAN:
College Faculty, name and address, 12
  Law Faculty, name and address, 92
Medical Faculty, Auxiliary, name and address, 74
Veterinary Faculty, name and address, 91
(See Secretary.)

DEGREES:
Honorary, 1882–3, 103
In Course, 1882–3, 103
Department of Arts, 20
  Dentistry, 85
  Law, 94
  Medicine, 56
  Auxiliary, 75
  Music, 33
  Philosophy, 102
Veterinary Medicine, 91
Towne Scientific School, 29
Wharton School of Finance, 32

DEMONSTRATORS, LECTURERS, ETC., 8

DENTISTRY, DEPARTMENT OF:
(For Dates, see Calendar.)
General Description, 79
Clinical Instruction, 83
Course of Study, 79
Degree, 85
Examinations, 85
Expenses, 86
Faculty and Instructors, 79
Fees, 86
Infirmary, 83

DENTISTRY, DEPARTMENT OF:
  Laboratory, 83
  Library, 83
  Matriculates, 87
  Museum, 84
  Pathology, 82
  Secretary of Faculty, 87
  Sessions, 84
  Summary of Students, 88

DEPARTMENT OF ARTS:
(For Dates see Calendar.)
General Description, 15
Course of Study, 18
Degrees, 20
Entrance Examinations, 18
Fees, 13
Partial Courses, 20
Requirements for Admission, 18
(See College Department, Dentistry, Law, Medicine, Medicine Auxiliary, Music, Philosophy, Towne Scientific School, Wharton School of Finance, Veterinary Medicine.)

DISPENSARY SERVICE, 46

DISSECTING ROOM, 63

DRAWING, 21, 22

DYNAMICAL ENGINEERING, 23

ENGINEERING:
Civil, 22
Dynamical, 23
Marine, 23
Mining, 22

ENTRANCE EXAMINATIONS:
(See Admission.)
When held, 4

EXAMINATION QUESTIONS:
Department of Law, 95

EXAMINATIONS:
Annual. (See Annual Examinations.)
Entrance. (See Entrance Examinations.)
for Advanced Standing, when held, 4
for Medical Scholarships, when held, 4

EXPENSES:
Department of Dentistry, 86
  Medicine, 56
Veterinary Medicine, 91
(See Fees.)

FACULTY AND INSTRUCTORS:
College Department, 12
Department of Dentistry, 79
  Law, 92
  Medicine, 44
  Auxiliary, 74
  Philosophy, 100
Veterinary Medicine, 89
FEES:
College Department, 13
Department of Law, 92
Medicine, Auxiliary, 74
Philosophy, 102
(See Expenses.)
FINANCE AND ECONOMY. (See Wharton School.)

GEOLOGY. (See Mining Engineering.)

GRADUATION. (See Degrees.)

HOLIDAYS, 4
HONORS, 1882-3, 109
HOSPITAL:
Clinics, 64
Staff, 46
University, 64

INFECTION, DEPARTMENT OF DENTISTRY, 83
INFORMATION, FURTHER:
Department of Arts, 20
Dentistry, 87
Law, 95
Medicine, 47
Auxiliary, 74
Music, 33
Philosophy, 102
Veterinary Medicine, 91
Towne Scientific School, 29
Wharton School of Finance, 32

INSTRUCTION OPEN TO PUBLIC, 13
INSTRUCTORS, NAMES AND ADDRESSES, 8

LABORATORY:
Department of Dentistry, 83
Building, Department of Medicine, 63
Chemical, " 63
Histological, " 60
Instruction, " 55
Pathological, " 61
Pharmaceutical, " 62
Physiological, " 61
Therapeutical, " 62
Towne Scientific School, 21

LAW, DEPARTMENT OF:
(For Dates, see Calendar.)
General Description, 92
Admission to Bar, 95
Aim, 92
Course of Study, 92
Degree, 94
Examinations, 94
Examination Questions, 95
Faculty, 92
Fees, 93
Matriculates, 97
Prizes, 95
Summary of Students, 99

LECTURERS, NAMES AND ADDRESSES OF, 8
LECTURES, ORDER OF:
Department of Dentistry, 80
Medicine, 53

LIBRARIES:
College Department, 17
Department of Dentistry, 83
Rogers Engineering, 23
Stille Medical, 62
Wharton School of Finance, 30

MARINE ENGINEERING, 23
MATRICULATES. (See Undergraduates.)
MEDICAL SCHOLARSHIPS, EXAMINATIONS FOR, 4
MEDICAL SOCIETIES, 65

MEDICINE:
Course Preparatory to, 23
Veterinary, 89

MEDICINE, DEPARTMENT OF:
(For Dates, see Calendar.)
General Description, 44
Additional Instruction, 50
Admission, 47
Clinical Instruction, 54, 64
Course of Study, 48
Dissecting Room, 63
Dispensary Service, 46
Expenses, 56
Faculty and Instructors, 44
Fees, 56
Graduation, 56
Hospital Staff, 46
Laboratories, 60, 63
Laboratory Instruction, 55
Matriculates, 66
Museums, 59
Order of Lectures, 53
Organization of School, 47
Post-Graduate Course, 50, 58
Preliminary Course, 1884, 58
Prizes, 65
Scholarships, 57
Secretary of Faculty, 47
Sessions, 56
Societies, 65
Spring Course, 1884, 58
University Hospital, 64

MEDICINE, AUXILIARY DEPARTMENT OF:
(For Dates, see Calendar.)
General Description, 74
Aim, 74
Course of Study, 75
Degrees, 75
Faculty, 74
Fees, 74
Matriculates, 77
Museum, 76
Prizes, 75
METHODS OF STUDY, TOWNE SCIENTIFIC SCHOOL, 21
MINING ENGINEERING, 22

MUSEUMS:
- Dental, 84
- Medical, 59, 76

MUSIC, DEPARTMENT OF:
- (For Dates, see Calendar.)
- General Description, 33
- Admission, 33
- Certificates of Proficiency, 33
- Degree, 33
- Fees, 33
- Term begins, 33
  (See College Department.)

NAVAL ARCHITECTURE, 23

OFFICERS OF INSTRUCTION AND GOVERNMENT, 6

ORDER OF LECTURES:
- Department of Dentistry, 80
- Medicine, 53

PARTIAL COURSES:
- Department of Arts, 20
- Law, 92
- Medicine, 57
- Auxiliary, 74
- Wharton School of Finance, 32

PHILOSOPHY, DEPARTMENT OF:
- (For Dates, see Calendar.)
- General Description, 100
- Aim, 100
- Courses of Study, 100
- Degree, 102
- Faculty, 100
- Fees, 102

POST-GRADUATE COURSE:
- Department of Medicine, 59, 58
  (See Philosophy, Department of.)

PRELIMINARY COURSE, 1884:
- Department of Dentistry, 84
- Medicine, 58

PRIZES:
- 1882-3, 110
- College Department, 15
- Department of Law, 95
- Medicine, 65
- Auxiliary, 75

PROFESSIONAL COURSES, TOWNE SCIENTIFIC SCHOOL, 21

PROFESSORS:
- Names and addresses of, 6
- Recapitulation of, 112

PROVOST, NAME AND ADDRESS, 6

PUBLIC INSTRUCTION:
- Applications for Admission to, 13
- Fees, 13

PUBLIC SCHOOL SCHOLARSHIPS, 14

RECAPITULATION OF PROFESSORS AND STUDENTS, 112

REQUIREMENTS FOR ADMISSION. (See Admission.)

ROGERS ENGINEERING LIBRARY, 23

SCHOOL: (See Wharton School and Towne Scientific School.)

SCHOLARSHIPS:
- College Department, 14
- Department of Medicine, 57
- Examinations for, 4

SPECIAL COURSES:
- Department of Medicine, 57
- Towne Scientific School, 21
- Wharton School of Finance, 32

SPRING COURSE, 1884:
- Department of Dentistry, 84
- Medicine, 58

STANDING COMMITTEES, CHAIRMEN OF, 5

STILLÉ MEDICAL LIBRARY, 62

STUDENTS. (See Undergraduates.)

TERMS, WHEN BEGIN AND END, 4

TEXT-BOOKS: (See the several Departments.)

TOWNE SCIENTIFIC SCHOOL:
- (For Dates, see Calendar.)
- General Description, 20
- Aim, 20
- Architecture, 23
- Chemistry, 22
- Civil Engineering, 22
- Course of Study, 24
- Degrees, 29
- Dynamical Engineering, 23
- Drawing, 23
- Entrance Examinations, 20
- Fees, 13
- Geology, 22
- Library, 23
TOWNE SCIENTIFIC SCHOOL:
Medical Preparatory Course, 23
Methods of Study, 21
Marine Engineering, 23
Mining Engineering, 22
Naval Architecture, 23
Physics, 23
Professional Courses. 21 —
(See College Department.)
TREASURER OF UNIVERSITY, 5
TRUSTEES, 5
TUITION. (See Fees.)

UNDERGRADUATES:
College Department, 33, 43
Department of Dentistry, 87, 88
Medicine, 66, 73
Auxiliary, 77
Law, 97, 99
Recapitulation of, 112

UNIVERSITY:
Calendar, 4
Constitution of, 11
Provost of, name and address, 6
Secretary of, name and address, 5
Standing Committees of, 5
Treasurer of, name and address, 5
Trustees of, 5
Vice-Provost of, name and address, 6

YEAR, COLLEGE, 4

VACATIONS, 4

VETERINARY MEDICINE, DEPARTMENT OF:
(For Dates see Calendar.)
General Description, 89
Admission, 90
Aim, 89
Buildings, 89
Course of Study, 90
Examinations, 91
Expenses, 91
Faculty and Instructors, 89
Fees, 91
Graduation, 91

VICE-PROVOST, NAME AND ADDRESS, 6

WHARTON SCHOOL OF FINANCE AND ECONOMY:
(For Dates, see Calendar.)
General Description, 29
Aim, 29
Course of Study, 31
Degree, 32
Entrance Examination, 32
Fees, 13
Libraries, 30
(See College Department.)

YEAR, COLLEGE, 4
DENTAL SUPPLIES.

THE S. S. WHITE

Dental Manufacturing Company.

The Largest Dental Manufactory and Depot in the World.

NINETY-TWO (92) FIRST PREMIUMS, including one from each of the great World’s Fairs of London, New York, Paris (1867), Vienna, Chili, Philadelphia, Paris (1878), Sydney, and Melbourne, attest that our Manufactures are UNEQUALLED IN QUALITY.

Porcelain Teeth.—The most natural and strongest made; the largest stock and the greatest variety anywhere to be found.

Dental Instruments, which for temper and finish have no rivals.

Dental Chairs.—Several varieties, each admitted to be the best of its class.

Dental Engines and Equipments, Automatic and Electric Mallets.

Filling Materials.—Specialties in Gold-Foil, Cylinders, etc., Tin-Foil, Dental Alloys, Cements, Gutta Percha, etc.

Nitrous Oxide Gas and Anesthetic Apparatus.

Corundum Wheels, Files, Slabs, etc.

Dental Furniture.—Cabinets, Brackets, Spittoons, Reflectors, Office Lathes, etc.

Laboratory Apparatus.—Lathes, Vulcanizers, Celluloid Apparatus, Furnaces, Tools, etc.

Specialties for the Mouth.—Tooth Powders, Mouth Washes, Tooth Pastes, Tooth Soaps, Dental Toilet Cases, Tooth Brushes, Floss Silk, etc.

Everything pertaining to the Dental Art, either for the Office or Laboratory.

The Dental Cosmos.—A Monthly Record of Dental Science. Price, $2.50 per annum.

Descriptive Chair, Engine and Mouth Specialty Circulars sent to any address.

Remittances may be made by Draft or Bill of Exchange on Philadelphia, New York, or London.

PRINCIPAL DEPOT:

Chestnut Street, corner of Twelfth, PHILADELPHIA.

BRANCHES:

NEW YORK. BOSTON. CHICAGO. BROOKLYN.
The World's Recognition of Merit

LONDON — 1881 — ANNOUNCEMENT.

At the late INTERNATIONAL MEDICAL AND SANITARY EXHIBITION, the World's most competent Judges recognized their unequalled excellence by granting the ONLY "AWARD OF MERIT" FOR TRUSSES TO I. B. SHELBY, Philadelphia, U.S.A. (Over Sixty-Eight Competitors)—confirming their favor with America's most distinguished Surgeons.


Seeley's Hard Rubber Trusses

Fine Steel Springs, neatly covered with highly-polished Hard Rubber. Made in every desirable pattern, with Pads anatomically constructed. Light, cool, cleanly durable, unequalled in quality, fit, and practical construction. Unaffected by time, use, or climate; used in bathing. Always Reliable. Prices reduced to meet the popular demands. Trusses for ordinary cases supplied by all leading Druggists and Dealers at the usual price of common Instruments.

To Avoid Spurious Imitations, see Genuine Stamped (String and Strip), "I. B. Seeley — Warranted!"

As success finds Imitators, ask for "SEELEY'S GENUINE" Establishment, 1347 Chestnut Street, Philadelphia, U.S.A.

Second floor devoted exclusively to Ladies' and Children's Department.

Branch Establishment, 74 Fleet St., London, Eng.

The Correct and Skillful Mechanical Treatment of Hernia or Rupture a Specialty.

Under Patronage of the World's most distinguished Surgeons.


Physicians residing at a distance and unable to personally accompany their patients can, if desired, have them placed by us in the private apartments of the Jefferson College Hospital, Philadelphia, or Guy's Hospital, London, conveniently accessible to our establishments, where the Mechanical Treatment will be under the immediate approval of their distinguished surgical staff, or any one of the preferred members. Our Special Instruments can be supplied, by mail or express, upon receiving a complete and accurate description of patient's case and condition; great care and immediate attention being given in our application departments to successfully meeting such professional demands.

Acknowledgment. — For the high favor and confidence so long extended to our Philadelphia Establishment by the eminent physicians and surgeons of this city, we desire to return our thanks, and also express our appreciation of the great confidence reposed in us by our professional friends throughout this country and Europe, as shown by their entrusting and directing to us their difficult and complicated cases for the successful treatment, original with and peculiar to our Establishments, acquired by an experience of over a quarter of a century specially devoted to this branch of Mechanics in Surgery, and first made known (outside of our application departments) to the professional world through the recently published writings of America's two most distinguished surgeons.

Selecting their further valued favors, We are very respectfully,

I. B. SEELEY & CO.

CHAS. W. KOLBE,
MANUFACTURER OF
Surgical & OrthopaediaL
INSTRUMENTS,
ARTIFICIAL LIMBS,
15 S. Ninth St.,
(Formerly South Ninth Street.)

PHILADELPHIA, PA.

Always on hand a complete stock of Instruments.

Apparatus and Limbs made to order.

Established 1849.

D. W. KOLBE & SON,
MANUFACTURERS OF
Surgical and Orthopaedical Instruments, and Artificial Limbs,
1207 Arch Street, Philadelphia.

Two Prize Medals Awarded by the U. S. Centennial Commission.

Instrument makers to the Pennsylvania Hospital, and Mechanists to the Philadelphia Orthopedic Hospital, and authorized makers of Artificial Limbs for U. S. Government and Baltimore and Ohio R. R. Co., etc., etc.

Particular attention is called to the improved Artificial Legs and Arms, apparatus for Resections, Shortened Legs, unainted fracture, apparatus for the variations of Club Foot, Bow Legs, Knock Knees, Weak Ankles, and diseases of Hip-Joint. Spinal Supports or Jackets, latest improved patterns, for diseases and injuries, lateral, anterior, and posterior curvature, and female weaknesses of Spine. Catalogues free on application; also new book on the "Treatment of Club Foot."
IRON-DYED SILK LIGATURE is the best and cheapest for general use. It is round not plaited, well finished, and durable. Can be waxed, oiled, or carbolized. Can be readily seen. Is not inflammatory. Nos. 1 and 2 will remain in the flesh a long time without causing irritation. It is the best for plastic surgery. Is the most delicate strong ligature. No 14 is as strong as ever needed. Does not soften and loosen itself, as catgut does. Price per Reel, 10 Cents. A sample card of the Iron-Dyed Silk (14 sizes) will be sent to any address on application. Used by Prof. Pancoast, Geo. Lister, and other leading Surgeons.

"I think the Iron-Dyed Silk the best I have ever used."

HUNTER McGUIRE, M.D., Richmond, Va.

WILLIAM SNOWDEN,
MANUFACTURER AND IMPORTER OF
SURGICAL INSTRUMENTS,
No. 7 South Eleventh St., Philadelphia.

Established 1821.—The oldest Surgical Instrument Manufacturing and Importing House in the United States.
The William Penn Charter School,
No. 8 South 12th Street, Philadelphia.

FOUNDED 1689.
CHARTERED BY WILLIAM PENN 1701-8.

The oldest existing chartered school in the country. Boys prepared for College and the Technical Schools.

DISTINCTIVE FEATURES.
Commodious and thoroughly ventilated school-rooms, with the best modern appliances.
A large playground and a fives court.
A teaching staff of trained specialists engaged exclusively in this school.
A thorough and systematic classification.
The games and sports officially recognized and participated in by the masters.
Marking for conduct and detaining after school not employed.

Applications are now received for such vacancies as may occur at the close of the current academical year.
For terms of tuition or other information, address
RICHARD M. JONES, M.A.,
Head Master.

RUGBY ACADEMY,
FOR YOUNG MEN AND BOYS,
No. 1415 Locust Street, Philadelphia.

EDWARD CLARENCE SMITH, M.A., PRINCIPAL.
ASSISTED BY SEVENTEEN ASSOCIATE TEACHERS.

This Academy prepares a limited and select number of pupils for business and professional life, for technical schools of high grade, or for honorable standing in college.
Preparation for the University of Pennsylvania is made a specialty, whether the course chosen be that of the Department of Arts, the Towne Scientific School, or the Wharton School of Finance and Economy.

Students are also fitted for Harvard, Yale, Princeton, and the New England colleges generally; also for the government schools at Annapolis and West Point.
Those looking to business life have thorough training in the English branches. Mathematics, Natural Science, and the Modern Languages, the instruction in Natural Science being supplemented by experiments and use of apparatus.

Special instructors are employed for the classes in French, German, Drawing, Penmanship, Elocution, and Bookkeeping.

The Primary Departments, in charge of ladies who are experts in primary work, are designed to be model schools of their grade. The great importance of the work of primary instruction is recognized. All the appliances of advanced methods are used. The aim is not only to impart knowledge, but to interest the mind, stimulate thought, and cultivate accurate and graceful expression.

All the rooms are spacious, light, and well ventilated.
Catalogues will be sent on application.
Reference is made to the Faculty of the University of Pennsylvania; also to the following patrons of the school:

- Hon. William Strong
- Rev. W. P. Breed, D.D.
- Rev. B. B. Comegys, Esq.
- Hon. C. W. Gibbons
- Rev. D. K. Goodwin, D.D.
- George L. Harrison, Esq.
- Henry M. Bache, Esq.
- Rt. Rev. M. H. DeW. Howe, D.D.
- Henry C. Lee, Esq.

- Strickland Keesee, Esq.
- John B. Packard, M.D.
- William M. Stewart, Esq.
- J. Sergeant Price, Esq.
- Bishop H. W. Warren, D.D.
- Rev. E. A. Hoffman, D.D.
- Rev. H. A. Wayland, D.D.
- Morton McMichael, Jr.
- William Goodell, M.D.
- J. T. Aldenried, Esq.
- Dr. S. Weir Mitchell
- S. Davis Page, Esq.
- Horace H. Furness, Esq.
- Hon. Clement F. Penrose
- Rev. J. B. Runku, D.D.
- Joshua L. Bailey, Esq.
- Rev. J. Wheaton Smith, D.D.
Young Men and Adults Practically Educated for Business at the
CRITTENDEN COMMERCIAL COLLEGE,
1131 Chestnut St., corner of Twelfth,
PHILADELPHIA.

ESTABLISHED 1844.
Incorporated 1855.

Bookkeeping in all its branches as practiced in the best Business Houses. Penmanship, rapid, legible, and beautiful style. Rapid Calculations. Business Methods and Practice. Correspondence. Forms, Commercial Law, etc. Students received at any time. Numerous Applications received from Business Houses for Students to fill situations. Hundreds of leading and most successful business men are among the graduates. Diplomas awarded on completion of Commercial Course.
"Groesbeck's Practical Bookkeeping." Price, $1.80.
For sale at the College. Will be mailed on receipt of price.
Circulars of the College and information free.

Address

JOHN GROESBECK, Principal.

Academy of the Protestant Episcopal Church,
FOUNDED, A. D. 1785.
LOCUST AND JUNIPER STREETS.

TRUSTEES,
The Rt. Rev. WM. BAOON STEVENS, D.D., LL.D., President.
GEORGE W. HUNTER, Secretary and Treasurer, 217 South Third Street.

The pupils are prepared for College, the Scientific School, and business life.
Terms—Upper School, $125. Middle School, $105. Lower School, $75.

PREPARATORY SCHOOL.
No. 1539 Chestnut Street, Philadelphia.

ALONZA BROWN, A.M.


PREPARATION FOR COLLEGE.

JOHN F. MAHER, M.S. (University of Pennsylvania),
15th and Chestnut Streets (Y. M. C. A. Building),
PHILADELPHIA, PA.

Students prepared for Colleges and Scientific Schools, privately and in Classes of a limited number. Instruction in the Higher Mathematics. Special Class for Small Boys.

Refers by permission to the following gentlemen of the Faculties of the University of Pennsylvania:

William Pepper, M.D., LL.D., Provost.
E. Otis Kendall, L.L.D.,
Rev. Frederick A. Muhlenberg, D.D.,
George F. Barker, M.D.,
Lewis M. Haupt, C.E.,

Rev. Robert E. Thompson, A.M.,
John G. E. McElroy, A.M.,
Frederick A. Genth, Ph.D.,
Oswald Seldensticker, Ph.D.,
Otis H. Kendall, A.M.
RITTENHOUSE ACADEMY,
DE B. K. LUDWIG, A.M., PRINCIPAL.

Rittenhouse Academy was established in 1854, and has for its object the thorough preparation of young men and boys for college or business. Its rooms are unsurpassed in the matter of light, heat, and ventilation. The number of its pupils is limited, so that more care may be devoted to each one.

Particular attention is paid to the Primary classes, into which young boys are admitted as soon as they can read. The Collegiate course is especially arranged to meet the requisitions for admission into the Department of Arts and Towne Scientific School of the University of Pennsylvania.

Scientific lectures, illustrated by extensive apparatus, are given weekly to the whole school. Catalogues containing references, expenses, and other particulars, will be sent upon application to the Principal.

THE FEWSMITH SCHOOL,
No. 1008 Chestnut Street, Philadelphia.

TWENTY-SEVENTH YEAR.

This school combines class-teaching with individual instruction and direct personal attention. It has three divisions,—a Primary, an Intermediate, and a High School. It receives boys of all ages, and at any time. It prepares for business or for college. The attendance is designedly limited. Call or write for circular.

Classical and Mathematical Instruction,
No. 1600 Spruce Street,
PHILADELPHIA.

Students thoroughly prepared for business or for admission to the Freshman or any higher class in the University or Scientific School. Private classes for ladies preparing for College. Special arrangements for instruction during the summer vacation.

R. H. CHASE, SAMUEL ALSOP.

The American Sunday-School Union,
1122 Chestnut Street, Philadelphia, and
10 Bible House, New York,
PUBLISHERS AND BOOKSELLERS
of Sunday-school books, periodicals, libraries, library and school-room requisites, works on Theology, Missions, Temperance, and General Literature. Catalogues and specimens of periodicals sent on application. Information as to prices, etc., of books, furnished.
Lauderbach Academy,
ASHLEY BUILDING, 108 S. Tenth St., Philadelphia.

CARD — The undersigned invites the attention of those interested in education to the record of his Academy both as to his success in preparing pupils for the highest standing in admission to the University of Pennsylvania and similar institutions, and for what is of perhaps greater importance — their maintenance of that rank during their entire collegiate course. It has also been found practicable to combine with college preparation a large amount of valuable business training which cannot fail to prove of service in after life.

To young men who are desirous of entering the schools of Law, Medicine, or Divinity, and who cannot afford the time necessary for a preliminary college course, we offer a brief special course that has never been found inefficient.

Catalogues containing terms, courses of study, and testimonials from leading citizens whose sons have been educated in the Academy can be obtained on application to

H. Y. LAUDERBACH, Principal.

The American
Fire Insurance Company,
PHILADELPHIA, PA.

Cash Capital Assets July 1, 1883
$400,000 00 $1,746,556 26

ALBERT C. L. CRAWFORD, Sec'y,
RICHARD MARIS, Assistant Secretary.

Thomas H. Montgomery, 
Hon. John Welsh, 
John T. Lewis,

DIRECTORS.

Thos. R. Maris, 
C. W. Poultney, 
Israel Morris,

John P. Wetherill, 
W. W. Paul, 
P. S. Hutchinson.

Penn Mutual
Life Insurance Company
OF PHILADELPHIA.

Assets, $9,000,000 .... Surplus, $1,890,000

HENRY C. BROWN, Sec'y, SAMUEL C. HUEY, President.

PURELY MUTUAL.

Thirty-five years successful business. Security — Liberality — Economy. The best insurance at moderate cost.

Agents Wanted.
Apply to H. S. STEPHENS, Vice-President.

Young Doctors
Just graduating and wishing to secure choice and profitable locations, and Physicians
wishing to Buy, Sell, or Exchange Locations or Properties, should write for full information and circulars to

Physicians' Exchange Bureau, 
1217 Filbert Street, 
PHILADELPHIA, PA.

Medical Books.
Your attention is called to our full and complete stock of Medical Books, Plates, Charts, etc. We aim to carry as complete an assortment as can be found in the United States. Visitors will receive prompt and courteous attention. Our shelves are free to all physicians and students. Orders by mail promptly filled. Inquiries will be answered by return mail. Send for catalogue. We shall be pleased to receive your favors.

Come and see us when in the city.

F. A. DAVIS, Attorney,
MEDICAL BOOKSELLER,
1217 Filbert Street, Philadelphia.
This well-known school, now in its 22d year, does not prepare directly for any college, but aims by a course of its own to fit for commercial or professional life such pupils as are intended to enter the world no later than their 18th or 19th year. This course, therefore, is necessarily not long, but must be broader and more practical than that of most schools of equal grade.

French and German are as strongly insisted upon as Latin and Greek; Drawing, as Penmanship; Surveying and Book-keeping, as Geometry, Algebra, and Arithmetic; and while English Composition, Letter-writing, Spelling, Geography, etc., receive a very full share of attention, Gymnastics, Drilling, and even Vocal Music are carefully provided for.

Of the general character of the school the Public has an opportunity of judging every year towards the end of June, the closing Exercises always taking place in the American Academy of Music. The Principal being a Catholic, the younger pupils, when Catholics, are carefully prepared for First Communion and Confirmation; and the more advanced constantly receive intelligent instruction in the principles of their religion. But the rights of the Non-Catholics—usually a fourth or a fifth of the school—are scrupulously respected. They are honestly taught their duties to God and man, but, as is well known, no sectarian influence, direct or indirect, is ever exercised in their regard. The number of pupils in charge of each teacher averaging 15, and the upper classes being usually full, smaller pupils are generally more acceptable; for them there is always plenty of room.

Circulars mailed to any address.

BLAKE, FLEER & CO.
248 North Eighth St., Philadelphia.
DENTAL INSTRUMENTS.

Flemming's Faradic Batteries, with rapid and slow interrupted Induction Currents.
Galvanic Cell-Batteries.
Batteries combining both the Faradic and Galvanic Currents.
Cautery Batteries.
Flemming's Universal Battery, combining Cautery, Galvanism, and Induction.
Stationary and Cabinet Office Batteries.

All Instruments made by us warranted equal to the best in the market.

Instruments for Electricity in Medicine and Surgery.

For simplicity and novelty of construction, and solid workmanship combined with elegance in appearance, these Instruments stand without rivalry; they are used and endorsed by high medical authority throughout our own and foreign countries, and are officially adopted by our U.S. Government as the most perfect. For catalogue and price list address OTTO FLEMMING, 1009 Arch Street, Philadelphia, Pa.
LICORICE!!
Equal to the best imported, and filling all the requirements of the U.S. Pharmacopoeia.

Franklin Institute Award 1874 for Purity of our Licorice; Centennial Award 1876 for Purity and General Excellence of Manufacture; Paris Exposition Award 1878 for General Excellence. We call the attention of all consumers of Licorice to our now well-established brand of this article. We successfully introduced our manufacture of Licorice to the trade more than ten years since, and to-day stand unrivalled in the market by any other make of Licorice, either foreign or domestic. Our method of manufacture is by means of the most improved processes and apparatus of modern times, and by them we can always assure uniformity of quality, and we invite critical comparison with any of the most celebrated brands, as regards appearance, fracture, flavor, freedom from gritty or other impurities. A trial order is solicited.

MELLOR & RITTENHOUSE,
Manufacturers of Licorice,
No. 218 North Twenty-second Street, Philadelphia.

The Gregg & Bowe Carriage Company.
Our Specialty is the Manufacturing of
FINE CARRIAGES
Adapted to
PHYSICIANS' USE.
Corner of Arch and Twelfth Streets, Philadelphia.

COLLINS' PRINTING HOUSE,
No. 705 Jayne Street,
PHILADELPHIA.

PRINTER OF
Medical, Scientific, Legal & Miscellaneous Works.

With practically UNLIMITED FONTS OF TYPE, the subscriber is able to print with accuracy and promptness,

Books,

Pamphlets,

Paper-Books,

Catalogues, etc.,
of the largest size and of the most elaborate character. To this feature of his establishment he earnestly invites the attention of Publishers and Authors throughout the United States.

Attorney and Superintendent,
J. W. HUFF.

T. K. COLLINS.
JAMES S. EARLE & SONS,
No. 816 Chestnut Street,
PHILADELPHIA,
Importers and Dealers in
WORKS OF ART,
Paintings, Engravings, Etchings, Autotypes, Water Colors, French Plate Mirrors, Exquisite Picture Frames, Artistic Bronzes.
ALL THE ROGERS' GROUPS OF STATUARY.

A NUTRITIOUS AND READILY DIGESTED FOOD FOR THE SICK.

MALTO-COCOA is a combination of dry Malt Extract and Powdered Caracas Cocoa.
MALTO-COCOA is palatable and readily digested.
MALTO-COCOA is recommended in consumption and all wasting diseases.
MALTO-COCOA supplies food for blood, brain, and nerve.
GRANULATED MALT EXTRACT is superior to the liquid Extracts of Malt, and may be presented in many combinations.

Samples of "MALTO-COCOA," GRANULATED MALT EXTRACT, with combination and Pharmaceutical specialties cheerfully furnished physicians, on application, free.

WILEY & HARRIS, Manufacturing Chemists,
123 North Seventh St., Philadelphia.


HANCE BROTHERS & WHITE,
MANUFACTURING
Chemists & Pharmacists,
Callowhill St., cor. Marshall,
PHILADELPHIA.


PURITY. ELEGANCE. RELIABILITY.

POWERS & WEIGHTMAN
Manufacturing Chemists,
PHILADELPHIA,
AND 56 MAIDEN LANE, NEW YORK,

Offer to the Wholesale Drug Trade, and to those who buy in similar quantities, a General Assortment of

CHEMICALS,
MEDICINAL, PHOTOGRAPHIC, AND FOR THE ARTS.
We desire to call attention to the following unsolicited editorial notice which appeared in the "New Remedies," November, 1883, page 822:—

"Compressed Tablets for Preparing Fehling's Solution.—Messrs. John Wyeth & Bro., of Philadelphia, have sent us a very compact and convenient case of test-agents for determining the presence and amount of glucose in diabetic urine, which is modelled after the test known as Fehling's. It is well known that in order to be at all reliable, Fehling's solution should be recently and carefully made; and it is so often the case that both these essentials are doubtful, that the physician who has occasion to test urine for glucose, fails to get the assistance that a good analysis could render him. The apparatus offered by Wyeth & Bro. consists of a small box containing a small pipette with a rubber bulb, and three small vials containing, respectively, sufficient caustic soda to make fifty mims of soda solution, twenty-five tablets of tartrate of soda, and the same number of tablets of sulphate of copper, the whole costing only forty cents, postage paid. Each package is accompanied with detailed instructions for use, and there is now no reason why examination of urine for glucose should not be as easy and customary as for albumen."

JOHN WYETH & BROTHER, Chemists, Philadelphia.

JOHNSTON'S FLUID BEEF.

The only Extract of Beef, combining within itself the entire azotized constituents of good, sound beef, and in therefore, the most nutritious meat preparation yet offered. The medical faculty, both in this country and Great Britain, have given it their approbation, and are largely prescribing it.

Our leading hospitals, as well as the U. S. Government (for the army and navy), are large consumers.

Dr. Laxness, Analytical Chemist to the Government of Great Britain, after a very careful chemical analysis and microscopical examination, says: "I consider it a most valuable preparation, containing, as it does, a concentrated extract of beef with the solid beef itself, the latter being in the form of an Impalpable powder, easily digested and assimilated.

ROBERT SHOEMAKER & CO., PHILADELPHIA.

General Agents for JOHNSTON'S FLUID BEEF for the United States.

INGLUVIN!

From the Ventricalus Callosus Gallinaceus.

A POWDER:—Prescribed in the same manner, doses, and combination as Pepsin, and superior to it in all cases.

A SPECIFIC for VOMITING in PREGNANCY, and a potent and reliable remedy for the cure of INDIGESTION, DYSPEPSIA, and SICK STOMACH, caused from debility of that organ.

A New and Important Class of Remedies.

PARVULES.

You are cautioned against cheaper and inferior imitations offered as substitutes.

ALGIN, Parv., 1.10 Gr. Med. prop.—A most desirable Cathartic.

Dose—1 to 6 at once. This number of Parvules, taken at any time, will be found to exert an easy, prompt, and ample cathartic effect, unattended with nausea, and in all respects furnishing the most desirable aperient and cathartic preparation in use. For habitual constipation, it replaces when taken in single parvules, the various medicated waters, without the quantity which they require as a dose, which fills the stomach and deranges the digestive organs.


Dose—1 to 2 every hour. Two Parvules of Calomel, taken every hour, until five or six doses are administered (which will produce but half a grain), produce an activity of the liver which will be followed by vigorous dejection and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause.

PODOPHYLLIN, Parv., 1.40 Gr. Med. prop.—Cathartic, Cholagogue.

Two Parvules of Podophyllin, administered three times a day, will re-establish and regulate the peristaltic action and relieve habitual constipation.

Prepared by WILLIAM R. WARNER & CO., 1128 Market Street, Philadelphia.

Supplied by Druggists or sent by mail on receipt of list price.