REPORT

TO THE GOVERNOR OF THE STATE OF MISSOURI

OF THE FORTY-FIFTH

MISSOURI STATE UNIVERSITY

CATALOGUE,

1886-1887

(TRIENNIAL.)

FOUNDED, 1820—ORGANIZED, 1840.

University of the State of Missouri.
LIBRARY.
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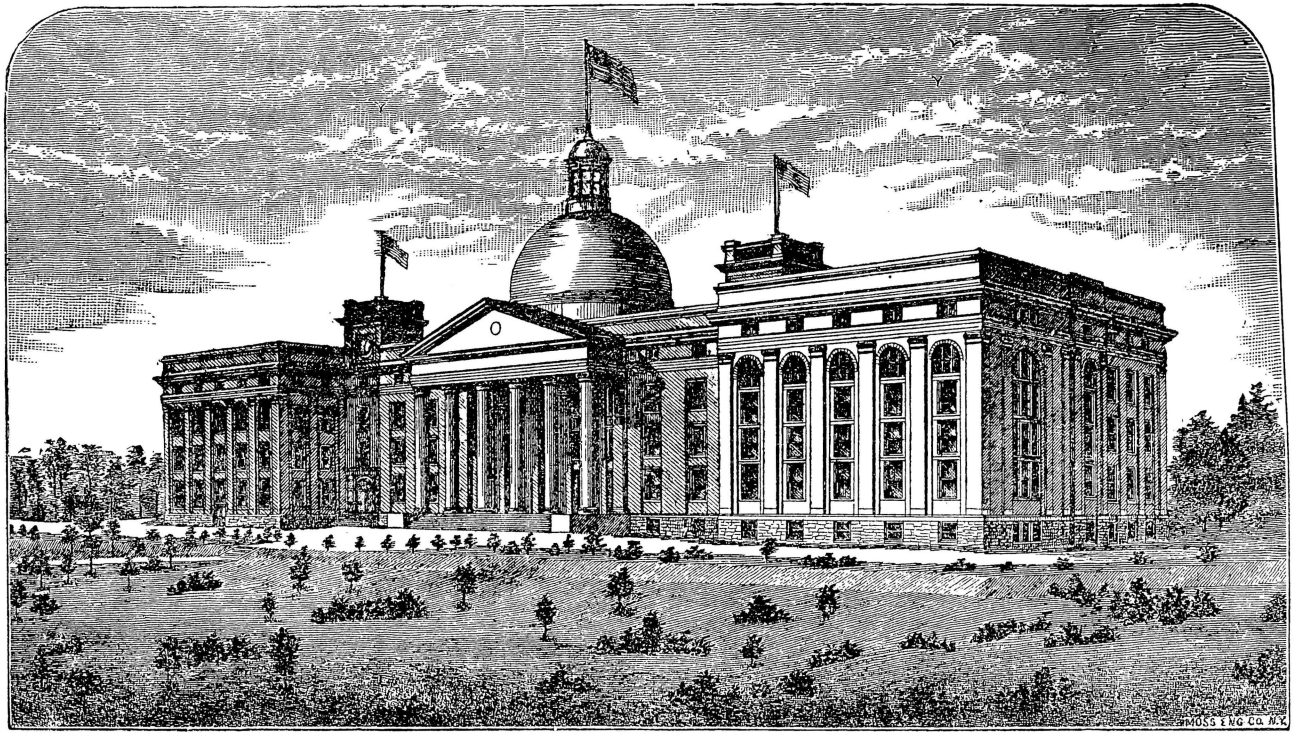
PLATE I.

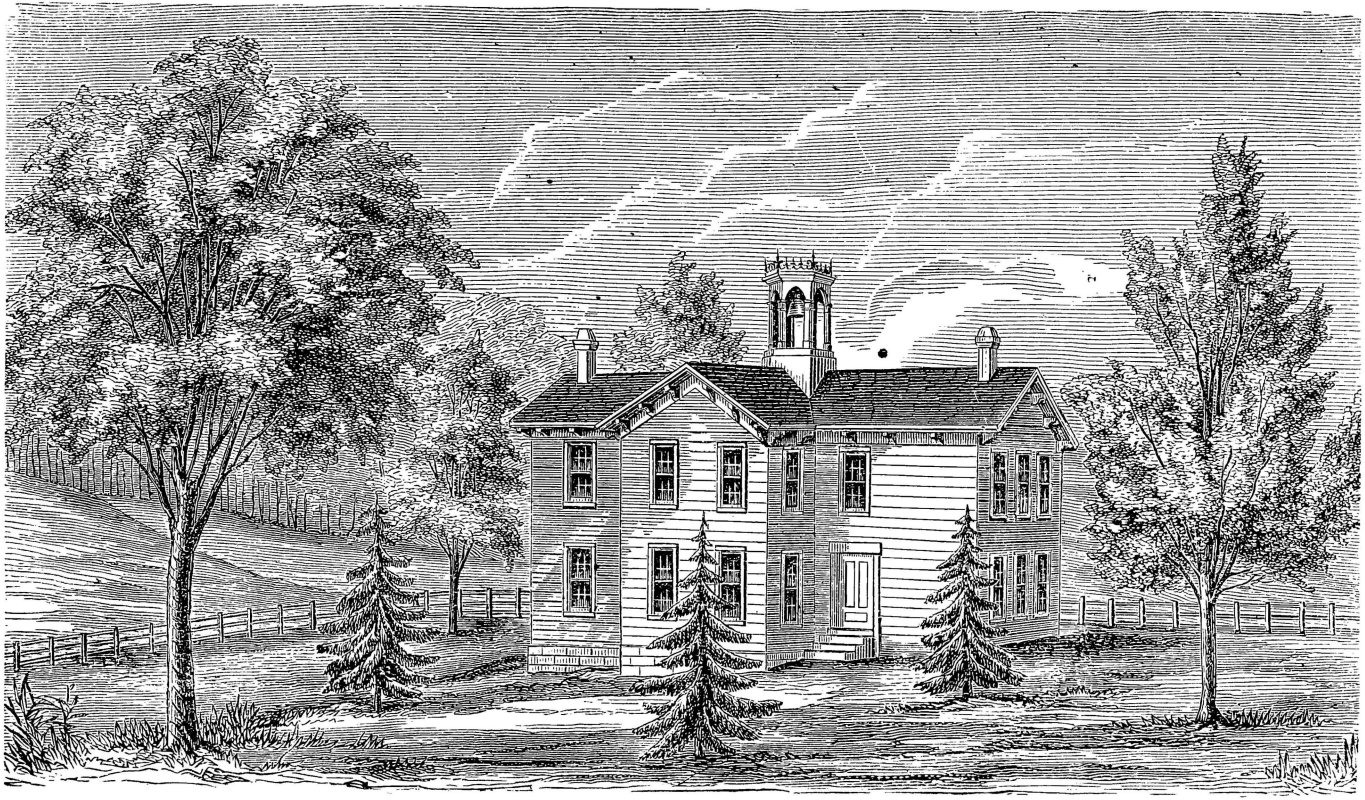


THE UNIVERSITY OF THE STATE OF MISSOURI.

PLATE I.

The beautiful cut on the opposite page presents a north front and west-end view of the University edifice as it appears since enlarged and improved. The building is four stories high with basement; is located in the south suburbs of Columbia, and faces north, presenting a front of 347 feet, the front of the old building being only 157. The new chapel or auditorium constitutes the east or left-hand wing, ground floor and gallery, with library hall above—in short, the portion of the building to the left of the eastern tower. Size of chapel 75 feet front by 110 deep, and capable of seating about 1,500 persons. Seats are hinged opera house and amphitheatre style. Between the chapel and the old building there is an entrance and stairway hall of 20 feet, running back the entire depth of the chapel. A similar hallway, under the western tower, also intervenes between the west end of the old building and the new west wing—this wing also presenting a front (including hallway) of 95 feet; depth about 115. A hallway of 23 feet width, running east and west, divides the west wing—the entire portion of it, north of this hall and fronting north, being the museum, the size of which is 75 by 47 feet. Size of wing south of east and west hall, which will be divided into recitation rooms, 75 by 45 feet. The whole building is lighted by electric light, and warmed by steam with the Heine boilers and Bundy radiators.

PLATE II.



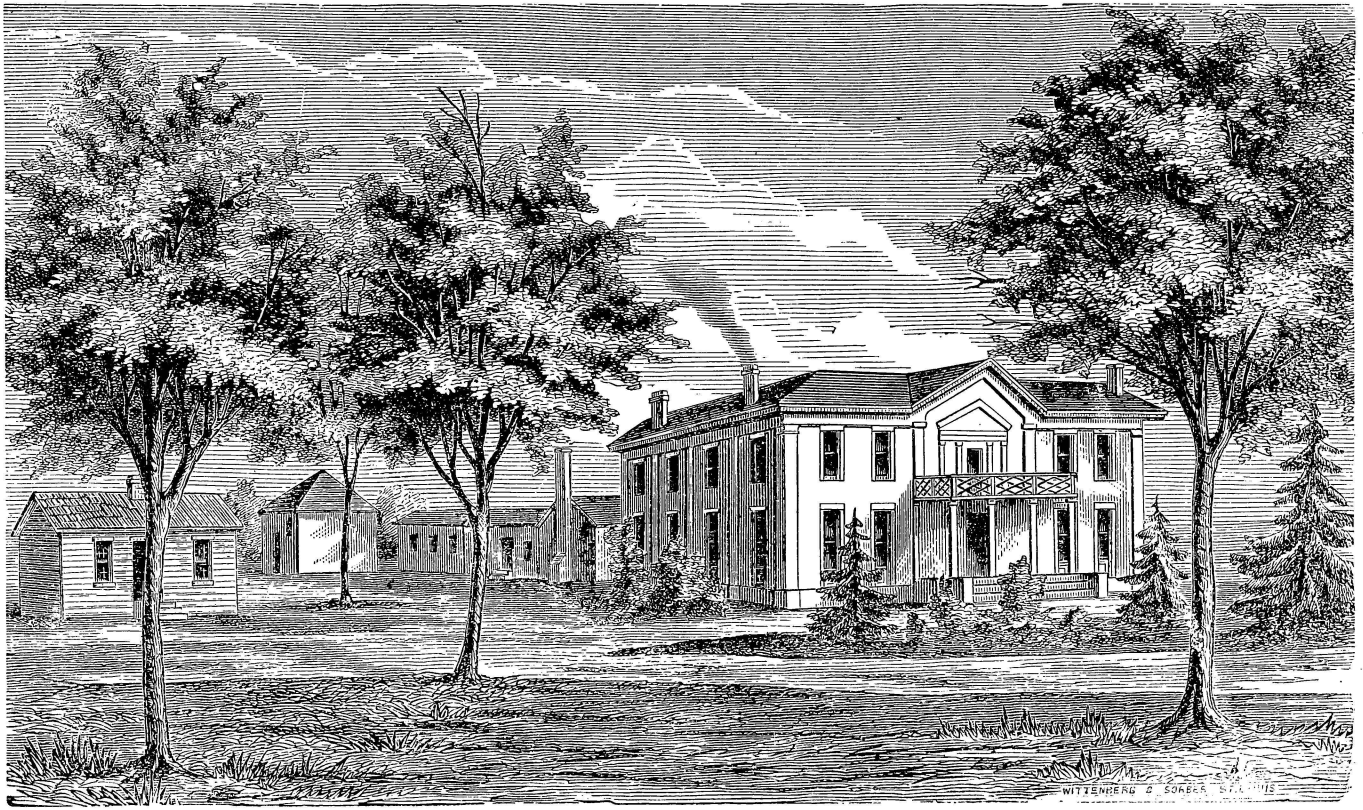
MEDICAL SCHOOL, SEC. NO. 1.

PLATE II.

THE MEDICAL SCHOOL is two stories and cruciform; nave, 73x22; transept, 60x25. It is in the northwest corner of the Campus and fronts east.

This ample and excellent building is now devoted entirely and exclusively to the use of the Medical School. It stands entirely apart and is favorably located for an out-door department and dispensatory, which should prove a valuable aid to the classes hereafter.

The presence of the State Veterinary Surgeon as an instructor and investigator in association with work of this school henceforth should give it a unique attraction to the medical students of our State.



AGRICULTURAL COLLEGE FARM-HOUSE.

PLATE III.

This house fronts west 52x44, with vestibule 18x10, and back extensions 116. There are twenty rooms, besides two cottages, two barns with stables, ice-house and other out buildings. It was built by Wm. W. Hudson, formerly President of the University. It is a large and excellent house, and beautifully located within less than half a mile from the Campus. By appointment of the Board, the Dean of the Agricultural College now occupies this house, and takes direct charge and control of all the operations on the farm. Just as the President of the University is required to live in the dwelling on the Campus, and is charged with the care of the property thereon, so the Dean of the Agricultural College is required to live in the main dwelling on the farm, and to act the practical farmer. A reasonable rent is charged, and a portion of the house is reserved for business and class purposes.

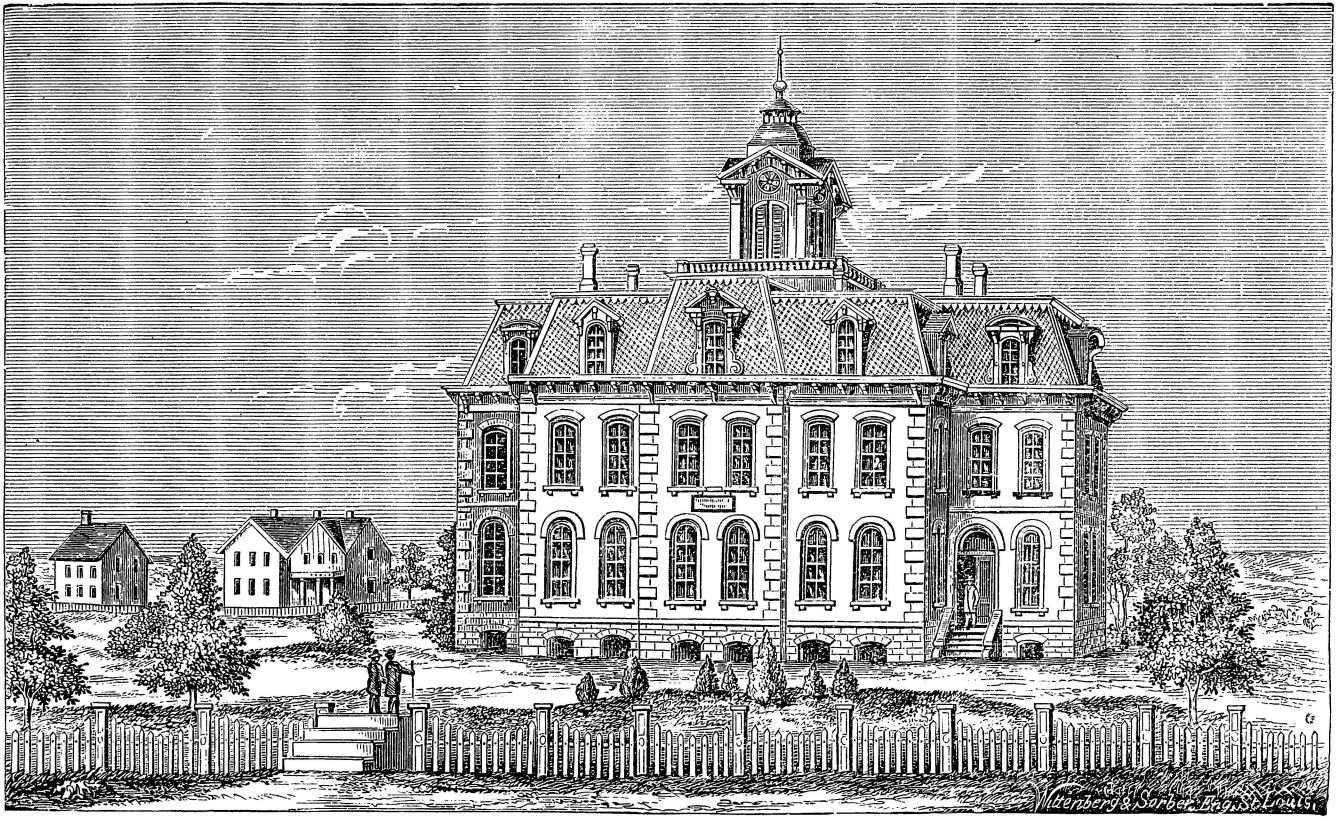
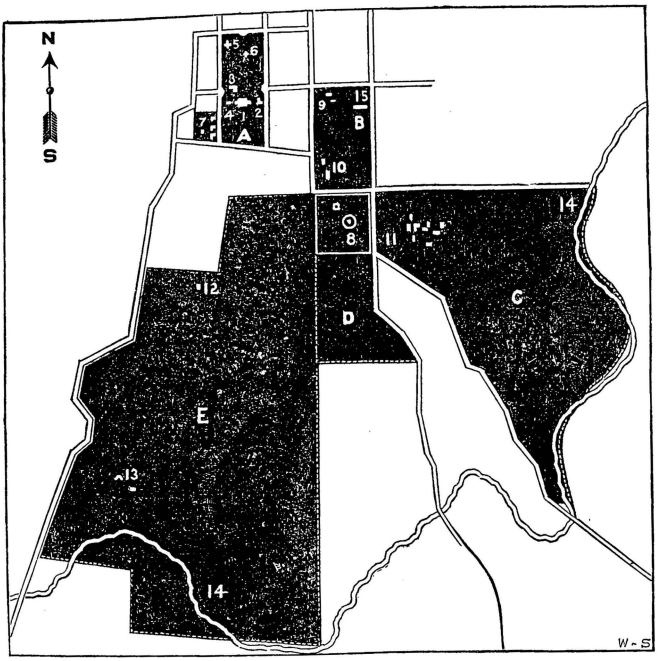


PLATE IV.—SCHOOL OF MINES AND METALLURGY, ROLLA, PHELPS COUNTY, MO.
(See that portion of the Catalogue devoted to this school.)



GROUND PLAN OF CAMPUS AND FARM.

A. Ground plan of the University Campus, (27 acres, with graded walks, and over 100 varieties of plants and grasses).
B. The Horticultural Grounds.
C, D, E. The Agricultural College Farm (640 acres) with numerical indications of the localities of the different improvements.
1. The Main Building, plate 1.
2. President's Dwelling.
3. Science Hall.
4. Observatory—has been moved to northeastern part of Campus.
5. Medical School, plate 2.
6. Mineral Spring (chalybeate).
7. Boarding Club Houses, No. 1.
8. Boone County Agricultural and Mechanical Fair Grounds, (20 acres).
9. Farm Cottage, No. 1.
10. Boarding Club Houses, No. 2.
11. Farm House, plate 3.
12. Farm Cottage, No. 2.
13. Rock Spring.
14. The Hinkson Creek, in a horseshoe bend of which the town of Columbia and the College Farm are situated.
15. Hot house.

ANNUAL CATALOGUE

OF THE

UNIVERSITY OF THE STATE OF MISSOURI

AT

COLUMBIA, MISSOURI.

1886-1887.

FOUNDED 1820--ORGANIZED 1840.

JEFFERSON CITY, MO.:
TRIBUNE PRINTING COMPANY, STATE PRINTERS AND BINDERS.
1887.

ANNOUNCEMENT FOR 1886--87.

The Academic, Agricultural, Normal and Engineering Schools will open the 2d Tuesday (13th) of September, 1887. The Law and Medical Schools also open September 13th.

The departments of instruction are:

1. The Academic Schools of Language and Science.

2. The Professional Schools of Agriculture, Pedagogics, Engineering, Art, Law and Medicine; and at Rolla the School of Mines and Metallurgy.

These Schools of the University are open to young men and to young women. Excepting in the Law, Medical and Engineering Schools (each $40.00) and the Commercial School, the entire expense for the year for tuition and contingent fees, is $20.00.

Board in private families, $3.00 to $4.50, and in the clubs at about two-thirds of these rates.

In the means of instruction and illustration, none of the institutions of learning in Missouri have superior advantages. The association of the several schools with each other is deemed a circumstance of decided advantage. When, for example, a student has entered the Law or Medical School, he has access to all the other departments of instruction without any additional expense.

Commencement day is the first Thursday of June—the 7th.

Please send for catalogue to the *Librarian*, Missouri State University, Columbia, Missouri, and not to the President.

SAMUEL S. LAWS,
President.

REPORT

OF THE

PRESIDENT OF THE BOARD OF CURATORS

OF THE

UNIVERSITY OF THE STATE OF MISSOURI.

TO THE

GOVERNOR OF THE STATE OF MISSOURI.

From "*An act donating lands to the several States and Territories*," *etc.*

SEC. 5. *An annual report shall be made* regarding the progress of each college, recording any improvements and experiments made, with their cost and results, and such other matters, including State, industrial and economical statistics, as may be supposed useful, one copy of which shall be transmitted, by mail, free, by each, to all other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior —*Laws of the United States,* (1862) Chap. cxxx.

From "*An act to locate and dispose of the Congressional land grant*," *etc.*, approved Feb. 24, 1870.

SEC. 15. At the close of each University year, the Board of Curators *shall make a report*, in detail, *to the Governor*, exhibiting the progress, condition and wants of the several colleges or departments of instruction in the University, the course of study in each, and the number and names of the officers and students, the amount of receipts and disbursements, together with the nature, costs and results of all important experiments and investigations, and such other matters, including State, industrial and economical statistics, as may be thought useful. *The Governor shall cause the same to be printed* for the use of the General Assembly and the people of the State, and shall cause one copy of the same to be transmitted, free of expense, to all the colleges which may be endowed under the provisions of the act of Congress, approved July 2, 1862, hereinbefore referred to, and also one copy to the Secretary of the Interior and one copy to the Commissioner of Agriculture at Washington City.—*Laws of the State of Missouri, R. S. 1879, Sec. 7289.*

64690

To His Excellency, GOV. JOHN S. MARMADUKE:

In compliance with the foregoing provisions of law there is herewith transmitted the Report of the Board of Curators for the Collegiate year ending June 2, 1887. The condition of the institution is prosperous and its outlook was never so encouraging.

The number of students has been 589—an increase of eighty-nine over the attendance of the year preceding. Seventeen States and eighty-seven counties in our own State have been represented. Of the total number 530 attended the University at Columbia and 59 the School of Mines and Metallurgy at Rolla. The number of young men was 489; of young ladies 100.

The financial condition is good. The University has lived within its income and is out of debt. When it is considered that its wants are constantly increasing, while its revenues have remained practically stationary, the curators feel that they have reason for congratulation that its expenditures have been confined to its resources. The Thirty-fourth General Assembly discharged with commendable liberality the constitutional obligation of providing for its wants. The appropriations for current support were larger than those of any previous General Assembly, while those for special improvements were correspondingly generous.

A MORE LIBERAL SPIRIT.

It is evident that a broader spirit obtains towards the University. It has outlived the strife and opposition which have so greatly retarded its growth in years past, and has reached that position of unequivocal permanence wherein its claims are no longer combated. That higher education is as essential to progress as lower has become an axiom of our later civilization, and that Missouri will push forward the great work begun in her University is now undoubted.

THE POLICY OF CONCENTRATION,

whereby the youth of the State may be equipped at one center of learning for the varied pursuits of life, is a wise one not only in the feature of economy, but in that it insures in every department of learning the best attainable advantages. The association of the professional or business schools of agriculture, law, medicine, art, engineering, military science, pedagogics and commerce enables students in each to avail themselves of the advantages of all—a circumstance of peculiar value when it is considered that special training in any line of work is deficient unless supplemented by general culture. The liberalizing effects of this association of these widely diverse departments can not fail to benefit the student whatever avocation he may pursue in life.

The academic department, of which these professional schools are the natural offshoots thus equips for all, enabling the State in the most economic and practicable manner possible to open the higher advantages to its sons and daughters in preparation for their varied vocations.

The policy so wisely adopted in Missouri has already been vindicated by its pre-eminent success at such institutions as Cornell, Harvard, Yale, and in fact most of the institutions in the land devoted to the higher learning. For while all may differ somewhat in the details of organization their general plan and purpose are the same—the qualification of students under one management and by one outlay for buildings and apparatus for all the duties of life. That the State of Missouri will adhere to this sensible policy is now evident, but in order to achieve for it full success an enlarged liberality is indispensable.

THE HIGHER AND LOWER EDUCATION.

If it costs the State over four millions of dollars per annum to provide for its common schools devoted to lower education it is useless to expect to reap satisfactory results from the higher by an expenditure of but $40,000, or one-hundredth the above amount. Higher education necessarily is more expensive than lower. The instructors, the buildings, the apparatus, the course of study, all contemplate a much greater outlay than simply instruction in the rudiments. Yet the expense is only commensurate with its importance. The common school but removes the child from ignorance. The Academy and University qualify him for the highest duties of citizenship and make him a potent factor in civilization.

While it is not expected that every pupil who attends the common school will seek the advantages of higher education, yet two propositions will be conceded:

1. That every student who is to become an active force in the community must have some of the advantages of higher culture.

2. That Missouri should educate her own sons.

Of the 700,000 school children in Missouri it is certain that more than the 600 in the University, or perhaps the 600 or 1,000 more in the various denominational schools of the State will seek the higher education. If Missouri does not provide them such education of course they will seek it in other States.

Space, as well as State pride, forbids that there should be here presented a statement showing

HOW MISSOURI HAS PROVIDED FOR HER UNIVERSITY,

comparatively with other States. It is enough to say that but very few States in the Union have contributed as little, while a large majority have contributed vastly more.

By a wise provision of our constitution the University is an organic part of our common school system. The obligation to provide for the one is as great as for the other. If the State will nurture the trunk of the tree as she has the roots she will not only afford ample advantages to her children for thorough equipment for all pursuits, but she will have established the greatest possible instrumentality for the elevation and advancement of her people.

Present indications point to a new era in the history of the University, and it is to be hoped that the day is not distant when Missouri, now fifth in commercial resources, will be first in educational advantages among the States of the Union.

THE WORK OF THE YEAR.

The reports of the professors in the various departments indicate with sufficient fullness the work that has been accomplished during the year. These reports embrace not only the lists of students, the conditions of the various departments, and the rules and regulations and courses of study, but besides a great deal of other valuable information.

Among the important acquisitions during the year has been a tract of 5½ acres of land which has been added to the northwest portion of the campus, and the opening and macadamizing of a new street on the west of the University grounds, all of which is now surrounded by graveled streets, the latter being made wholly

by the citizens of Columbia who never fail to respond promptly and with liberality to any movement designed to benefit the University.

The last General Assembly appropriated the sum of $20,000 for the erection of club houses for students. This wise and liberal appropriation will provide a much needed improvement—one which will enable numbers of poor young men to attend the University at an expense not exceeding $1.75 per week.

At the same session the sum of $24,750 was appropriated for the erection of a barn, vaccine laboratory, cottages, sheds and other needed improvements, and for the purchase of stock for the agricultural college farm. This is the first appropriation ever made for the farm, and is indispensable to its successful management.

Plans for all these improvements are being perfected and the whole work will probably be completed by the opening of the next session.

An elevator and fire protecting apparatus, improvements of the campus grounds, a $3,000 addition to the law library, the furnishing of the society halls and acquisitions to the zoological museum and the library are other matters provided for by the last General Assembly, and which will receive prompt attention.

The association of the Medical department of the University with the St. Louis Medical School, the terms of which contract are given elsewhere, has so far proven advantageous to both institutions. Under the arrangement the elementary work is largely done at Columbia, the clinical and other advantages being afforded by the St. Louis school.

THE ALUMNI.

In June last the Alumni association resolved to raise an endowment fund of $3,000. We are glad to be able to report that the full amount has been subscribed. The securing of this permanent endowment places the association upon a footing never held before, and will enable it to be more thoroughly identified with the University. The greatest arm of strength of any institution is its alumni. They are not only its representatives, but its product; and with the hundreds of graduates now scattered throughout the land organized into active sympathy with the institution it can marshall a strength which will make it a growing power in the work of education.

SOME OF ITS WANTS.

The greatest need of the University is a permanent income of sufficient magnitude to adequately provide for its wants and relieve its management from the effort and anxiety attendant upon repeated appeals to the legislature. No argument is needed to demonstrate the numerous advantages to accrue from a stable provision for its necessities. Its entire removal from the pale of politics, its freedom from worry about a means of subsistence, a safe basis upon which to forecast expenditures, and the relief of legislatures from constant importunity are among the many reasons in its favor. The General Assembly makes permanent provision for the common schools; why not for the University? If the foundation of our school system is thus protected why not the superstructure? The necessity of explaining its needs to each successive legislature and of constantly incurring the risk of having its means of support cut off is a labor as uncongenial as it is unnecessary and hazardous.

Among other immediate wants of the University may be enumerated: An enlargement of its library and museum, a new chemical laboratory, better provision for its medical and military departments and improvement of its grounds.

MECHANIC ARTS.

One of the most serious neglects has been the failure of the State to equip a school of mechanic arts. The mechanical feature was as much contemplated by the congressional land grant act of 1862 as the agricultural; but to this date practically nothing has been done to organize a department as was evidently intended by the act. Schools of mechanic arts or manual training are in successful operation in many of the agricultural and mechanical colleges and in every instance are proving eminently satisfactory. It is to be hoped the State will not neglect longer this manifest duty.

ARTICULATE CONNECTION WITH THE HIGH SCHOOLS.

While the University sustains by law an organic connection with the common schools—or as has been aptly illustrated it is the trunk, while the latter are the roots—there has never yet been established such articulate relation with the high schools of the State as will best subserve the greatest efficiency of our public school system. Such a relation is entirely practicable and it is most earnestly recommended. Its successful operation in Michigan and elsewhere has thoroughly vindicated its value and there should be no delay in Missouri.

COMPENSATION OF CURATORS.

I deem it proper in this connection to call attention to a provision of law which the present size of the institution renders a necessity. It is that compensation be provided for its curators. This is especially important in regard to the local members who constitute the executive committee and upon whom the chief burden of labor devolves. Disbursing annually some $100,000, and called upon to devote a large amount of time, thought and effort to the responsible and difficult work of management, justice to them no less than to the State demands that they should be remunerated for their labor. Few men capable of discharging its duties can afford as a mere labor of love to give the attention to them which their importance demands. To fill the office as it should be filled requires a large share of the thought and attention of any competent man and it is neither just nor safe in the State to impose upon its citizens duties for which it does not provide compensation. As the undersigned has but lately laid down the position himself he can with freedom refer to a matter concerning which he has the knowledge of experience.

In closing this paper I wish, on behalf of the Board of Curators, to acknowledge the kindly interest exhibited by yourself in the University; and in the liberal aid recently extended it we recognize in no small degree the influence exerted by the recommendations of your message to the Thirty-fourth General Assembly as well as a manifestation of the great confidence which the Legislature, as well as the people, have had reason to feel in you as a faithful, intelligent and discreet public servant.

All of which is respectfully submitted.

E. W. STEPHENS,

President Board of Curators of University of the State of Missouri.

CITY OF JEFFERSON, May 4, 1887.

The report of the Board of Curators of the University of the State of Missouri having this day been submitted to me, exhibiting the condition of the several departments of instruction of the University, the course of study, etc., and a catalogue of the officers and students, it is directed that an edition of fourteen thousand (14,000) copies be printed, to be distributed according to law.

JOHN S. MARMADUKE, Governor.

Approved:

MICH'L K. MCGRATH, }
JOHN WALKER, } Commissioners of the Public Printing.

HISTORIC MEMORANDUM.

The Missouri University was founded by the grant of a township of land to the State for that purpose, when, 1820, it was organized and admitted into the Union. Another township was subsequently added to this one. The practice of devoting public moneys to the use of schools was established during our colonial period. The policy of the General Government to aid the States in the work of education, by land grants, etc., grew out of this practice and was formulated by the ordinance of 1787, in the following language, to wit:

"And for extending the fundamental principles of civil and religious liberty, which form the basis whereon these republics, their laws and constitutions are erected, etc., etc.

"*It is hereby enacted and declared by the authority aforesaid*, [i. e., of the United States in Congress assembled,] that the following articles shall be considered as articles of compact between the original States and the people in the said Territory [northwest of the river Ohio,] and forever remain unalterable, unless by common consent, to wit:

* * * * * * * * * *

"ARTICLE 3. Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged."

In the act of Congress of 1812, organizing the Territory of Missouri, this article of the ordinance of 1787 was carried across the Mississippi, and somewhat amplified, as the following extract from that act shows, to wit:

"Religion, morality and knowledge being necessary to good government and the happiness of mankind, schools and the means of education shall be encouraged and provided for from the public lands of the United States in said Territory, in such manner as Congress may deem expedient."

When the State of Missouri was organized out of this Territory, Congress deemed it expedient, as above provided, to devote two townships of land to "A University," and one thirty-sixth of the entire public domain, together with saline and swamp lands, to "township [now district] schools."

The higher education was thus identified with the lower, as co-ordinate and constituent parts of the public school work of Missouri, upon the original organization of the State. Let us look at this matter a moment, for we often hear the most erroneous and pernicious views advanced on this subject—views steeped in ignorance and fraught with untold evil to the State.

The University is an integral part of the public school organization established by law, and imbedded in the successive Constitutions of this State; and it is the traditional and established policy of this State, however imperfectly realized hitherto, to support the University as the crown and glory of the public school system. This is an indisputable state of fact; this fact is conspicuous, not by inference, but by the following explicit utterances in the first and second sections of the sixth article of the first Constitution of the State, adopted in St. Louis, July 19, 1820, viz: "Schools and the means of education shall be forever encouraged in this State. * * * One school or more shall be established in each township.

"The General Assembly shall take measures for the improvement of such lands, etc., to support A UNIVERSITY *for the promotion of literature and the arts and sciences;* and it shall be the duty of the General Assemby, as soon as may be, to provide effectual means * * * *for the improvement* and permanent security of the funds and endowments of such institution." Nothing could be more explicit and unequivocal than this incorporation of the policy and duty of maintaining "A University," as an integral part of the school organization of the State, into the organic law by which the State was originally constituted. It needs no argument to prove that there clings to the State as an organized commonwealth, *an inalienable obligation* to "improve," as well as to secure the funds and endowments of its University for the *promotion* of science, art and literature. The higher education, even its *promotion* or advancement by the University, is indissolubly coupled with the lower education; and he who undertakes to sever them is false to his constitutional obligation as a citizen. In order to promote or move forward the sciences, art and literature, as stipulated and covenanted by Missouri in her original organization, her University must not be allowed to lag behind, but must be kept in the front rank of the educational institutions of the age. In this, as in all cases, duty coincides fully with interest and honor.

The maintenance of the University, as well as of the public school was, therefore, a covenant obligation, deliberately and solemnly assumed by Missouri, as one of the organic conditions on which she was constituted a State, and united with her sister States in the federal compact. Those who go hunting among the clauses of the new Constitution for their sole guidance in this matter, present a sorry spectacle to the eyes of an intelligent observer.

The munificent land grant, by act of Congress in 1862, for the establishment or aid of agriculture, industrial and military schools throughout the country, was only an instance in the line of the established policy of the General Government, not as an organizer, but as a *patron* of education. The several States are both patrons and organizers of the work of education, but the General Government is only a patron, not an organizer. It is worthy of being distinctly noted, that the individual *autonomy* of the several States in organizing and administering their work of public education has never been interfered with, nor compromised in any

manner, during the hundred years that material aid has been given to the public school work out of the common heritage of the sisterhood of States. See Const. Mo., Art. XI, § 6, 1820.

It should be said, therefore, to the honor of those who founded the State of Missouri, that the work of education, both in its lower and higher phases, embracing the district school system, and also "A UNIVERSITY *for the promotion of literature and the arts and sciences*," was no afterthought. The idea of the University is engendered or incorporated into the Enabling Act of Congress, and into the subsequent ordinance acquiescing therein, prior to the constitutional organization of the State; and the sixth article of the original Constitution gives it birth and is devoted to its elaboration as a part of the organic law of Missouri. (Poore's Federal and State Constitutions, pp. 1103, 1104, 1112, 1117-8.) This policy of our State in maintaining a University, therefore, is not open to question, having been settled from its foundation, nor can the policy of each of our States in engaging in the work of education be questioned, free from the fallacy of mistaking the nature of a free State; nor can the joining of the higher with the lower education as a necessity, be questioned, free from the fallacy of mistaking the nature of education itself.

A sound logic and a sound educational and political philosophy, therefore, fully vindicate our historic and constitutional position in maintaining the higher and the lower education—the University as well as the common school—and suggests that, as a people, we should devise the most liberal measures for the future of this commonwealth, which has come to be viewed as "the great Central Empire State of the Union." The idea of the district schools and of the University is incorporated into the very life of our State, and vitalizes its best hopes of the future.

CORPORATION.

"The University is hereby incorporated and created a body politic, and shall be known by the name of THE CURATORS OF THE UNIVERSITY OF THE STATE OF MISSOURI."—Corporate name, Rev. Stat. 1879, Sec. 7230.

JOHN S. CLARKSON, A. M.	Columbia..	Term expires Jan. 1, 1889.
JERRE C. CRAVENS, ESQ.	Springfield	
DEWITT CLINTON ALLEN, ESQ.	Liberty....	
EDWIN W. STEPHENS, A. M.	Columbia..	Term expires Jan. 1, 1891.
JAMES R. ESTILL	Howard Co	
JOSEPH CAMPBELL	Rolla.....	
J. S. MOSS, ESQ.	Columbia..	Term expires Jan. 1, 1893.
CHARLES C. BLAND, ESQ	Rolla.....	
NORMAN J. COLMAN, U. S. Com. Ag.	St. Louis...	

OFFICERS OF THE BOARD.

EDWIN W. STEPHENS, A. M. ..... President.
JERRE C. CRAVENS, ESQ ..... Vice-President.
JOSEPH H. DRUMMOND, Secretary. ROBERT BEVERLY PRICE, Treasurer.

NOTE.—After the preparation of the catalogue, E. W. Stephens and J. S. Clarkson tendered their resignations, and Dr. W. Pope Yeaman and Hon. G. C. Pratt were appointed to fill the vacancies.

SCHOOL OF MINES.

EXECUTIVE COMMITTEE.

JUDGE CHARLES C. BLAND, Chairman..... Rolla.
JERRE C. CRAVENS, ESQ. ..... Springfield.
JOSEPH CAMPBELL ..... Rolla.
D. W. MALCOLM, Treasurer ..... Office at Rolla.
HENRY WOOD, Secretary.

NUMBER.—Const. 1875, Art. XI., Sec. 5. The government of the STATE UNIVERSITY shall be vested in a Board of Curators, to consist of nine members, to be appointed by the Governor by and with the advice and consent of the Senate.

UNIVERSITY CURATOR LAW, 1877:

QUORUM—Sec. 1. At all meetings of the Board of Curators, seven members shall be necessary to constitute a quorum for the transaction of business.

RESIDENCE.—Sec. 3. The Board of Curators of the State University shall hereafter consist of nine members, who shall be appointed by the Governor, by and with the consent of the Senate, three of whom shall be residents of the county of Boone, two of the county of Phelps, two of the part of the State north of the Missouri river, and outside of the county of Boone, and two of that part of the State south of the Missouri river, and outside of the county of Phelps, and no person shall be appointed a curator who shall not have attained the age of twenty-one years, or who shall not be a citizen of the United States and a resident of the State of Missouri two years next prior to his appointment.

TERM OF OFFICE.—Sec. 4. As soon as said curators qualify, they shall divide themselves into three classes of three members each, one of which classes shall hold their office for two years, from January 1, 1877, and until their successors are appointed and qualified; one class for four years from January 1, 1877, and until their successors are appointed and qualified, and one class for six years from January 1, 1877, and until their successors are appointed and qualified.

FILLING VACANCIES.—Sec. 5. During the session of the General Assembly in 1879, and each regular biennial session thereafter, the Governor shall, by and with the consent of the Senate, fill all vacancies caused by the expiration of the term of office of any curator, and he shall also fill all vacancies occasioned by death, resignation or removal which may occur while the General Assembly is not in session, but all such appointees shall continue in office until the next meeting of the General Assembly next thereafter, and until their successors be appointed and qualified. (Rev. Stat., 1879, § 7231.)

BOARD OF VISITORS.

HON. CYRUS S. BROWN	Shelby county.
COL. ALEXANDER F. DENNY	Randolph county.
CHARLES E. LEONARD, Esq	Cooper county.
HON. E. W. FOX	St. Louis.
A. A. WALKER, Esq	Cooper county.

SEC. 16. Inasmuch as all trust funds committed to the management of the State are to be deemed a sacred deposit and to be vigilantly guarded from perversion, waste or wrongful use, it is provided that a Board of Visitors, to consist of five persons, three at least of whom shall be citizens eminent in the agricultural and mechanic arts, and not less than two graduates of the University, shall be appointed by the Governor. It shall be the duty of the visitors to make personal examination into the condition of the University, in all its departments, once at least each year, and report the result to the Governor, suggesting such improvements and recommendations as they may consider important, which report shall be published with the annual report of the Curators. The visitors shall receive no *per diem*, but they, together with the Curators, shall have their actual expenses paid. Act, February 24, 1870, Rev. Stat., 1879, § 7290.

The visitorial power holds a conspicuous and important place in European universities, and its faithful exercise with us would doubtless exert a wholesome influence.

THE UNIVERSITY FACULTY.

(Excepting that of the President the names are printed in their chronological order of appointment.)

SAMUEL SPAHR LAWS, A. M., M. D., LL. D.,
President and Professor of Metaphysics.

JOSEPH G. NORWOOD, M. D., LL. D.,
Emeritus Professor.

JOSEPH FICKLIN, PH. D., LL. D.,
Professor of Mathematics and Astronomy.

PAUL SCHWEITZER, PH. D.,
Professor of Chemistry.

HON. PHILEMON BLISS, LL. D.,
Professor of Law and Dean of Law Faculty.

ANDREW W. MCALESTER, A. M., M. D.,
Professor of Surgery and Diseases of Women and Children.

GEORGE D. EMERSON, M. E., (M. S.*),
Professor of Civil and Mine Engineering and Graphics.

WM. A. CAUTHORN, A. M.,
Assistant Professor of Mathematics.

JUDGE HENRY S. KELLEY, LL. D.,
Lecturer on Criminal Jurisprudence.

JUDGE ARNOLD KREKEL, LL. D.,
Lecturer on Federal Jurisprudence.

JUDGE SEYMOUR D. THOMPSON, LL. D.,
Lecturer on the Law of Corporations.

S. M. TRACY, M. S.,
Professor of Botany and Entomology.

M. M. FISHER, A. M., D. D., LL. D.,
Professor of Latin Language and Literature.

THOMAS JEFFERSON LOWRY, S. M., C. E.,
Professor of Civil Engineering and Dean of Engineering Faculty.

CHARLES E. WAIT, C. E., M. E., (M. S.*),
Director and Professor of Analytical Chemistry and Metallurgy.

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*Mining School.

WOODSON MOSS, M. D.,
Professor of Anatomy and Physiology and Secretary.

A. F. FLEET, A. M.,
Professor of Greek and Comparative Philology.

JAMES SHANNON BLACKWELL, A. M., PH. D.,
Professor of Hebrew and Semitic Literature and of Modern Languages.

MRS. O. A. CARR,
Principal of Ladies Department and Adjunct Professor of English.

Professor of Art.

CHRISTOPHER G. TIEDEMAN, LL. B.,
Resident Professor of Law.

J. W. SANBORN, B. S.,
Professor of Agriculture and Dean of Agricultural College.

J. W. SPENCER, B. A. SC., A. M., PH. D., (GOTT) F. G. S.,
Professor of Geology and Mineralogy.

J. C. JONES, A. M.,
Assistant Professor of Languages and Secretary of Faculty.

W. C. TINDALL, M. S.,
Assistant Professor of Mathematics.

JAMES BLACK, A. M.,
Assistant Professor of Languages.

W. H. SCHUERMANN, C. E.,
Assistant Professor of Physics and Engineering.

E. DE. W. EATON, M. S., C. E., (M. S.*),
Professor of Mathematics.

W. G. CLARK, B. S., C. E., (M. S.*),
Assistant in Mathematics and Chemistry and Secretary of the Faculty.

E. A. DRAKE, A. B., (M. S.*),
Instructor in English Branches.

L. R. TAFT, B. S.,
Assistant Professor of Horticulture, Zoology and Superintendent of Horticultural Grounds.

PAUL PAQUIN, V. S.,
Professor of Veterinary Science and Comparative Medicine, and Director of University Vaccinal and Experimental Laboratory.

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*Mining School.

LIEUTENANT E. H. CROWDER, LL. B.,
(Detailed from the Regular Army),
Professor of Military Science and Tactics.

EDWARD A. ALLEN,
Professor of English and Dean of Normal Faculty.

WILLIAM B. SMITH, PH., D., (GOTT),
Professor of Physics.

CLARENCE L. SPEYERS, PH. B.,
Assistant in Chemistry.

W. W. CLENDENIN, S. B.,
Instructor in Zoology and Geology.

HON. GEO. C. PRATT, C. E.,
Emeritus Lecturer on Engineering as Applied to Transportation.

J. H. DRUMMOND, A. B., A. M.,
Librarian and Proctor.

"The Curators shall have power to appoint and remove, at discretion, the president, professors and tutors of the University, to define and assign their powers and duties, and fix their compensation." [CURATOR LAW, 1877, SEC. 2.]

"Neither the General Assembly nor any county, city, town, township, school district or other municipal corporation, shall ever make an appropriation, or pay from any public fund whatever, anything in aid of any religious creed, church or sectarian purpose; or, to help to support or maintain any private or public school, academy, seminary, college, university or other institution of learning, controlled by any religious creed, church or sectarian denomination whatever; nor shall any grant or donation of personal property or real estate ever be made by the State, or any county, city, town or municipal corporation, for any religious creed, church or sectarian purpose whatever." CONST. 1875, ART. XI, (EDUCATION) SEC. 11.

"Neither the president nor professors are permitted to exercise the functions of a minister of the gospel, or any other learned profession, during the continuance in office," etc. The statute on which this interdict rested was repealed in 1877. Hence in the Law and Medical Schools, for example, members of faculty are not required to abstain from the exercise of the function of those learned professions, nor is it at all desirable that they should do so: *provided*, always, that Unisity duties be held paramount and of this the Curators judge.

"Sec. 7256. *President to have management of institution.*—It shall be the duty of the president of the *University*, among other things, to superintend and direct the care and management of the institution and its grounds, and to make and transmit to the Curators, at each annual meeting thereof, a report of the state and condition thereof, containing such particulars as the Curators shall require." REV. STAT., 1879.

STUDENTS.

UNDER-GRADUATES.

Name of Student.	Residence.
Adams, Minnie May	Boone county.
Alexander, Permelia Belle	Boone county.
Alexander, Albert	Schuyler county.
Allison, Thomas Edward	Ralls county.
Amick, Wm. Kennedy	Grundy county.
Anderson, Thomas Lilburn	Marion county.
Arnold, Thomas Francis	Boone county.
Arnold, Morris Allen	Audrain county.
Atterbury, Joseph William	Monroe county.
Atteberry, James	Macon county.
Atkinson, Edwin Kelly	Vernon county.
Bahn, Rudolph	Cape Girardeau county.
Baird, John White	Randolph county.
Baker, Charles Herndon	Knox county.
Ball, John Preston	Carroll county.
Ballinger, Benj. Franklin	Ray county.
Ball, Wm. Emmert	Franklin county.
Banks, John Samuel	Boone county.
Banks, William Marvin	Boone county.
Barse, William Horace	Jackson county.
Barse, Robert Peironnett	Jackson county.
Barnes, Cannie Belle	Boone county.
Barrow, Robert Wilson	Macon county.
Barnes, Robert Miller	Scotland county.
Barnett, James Edward	Macon county.
Bass, Lillian Lawrence	Boone county,
Basket, Lemuel Lee	Marion county.
Bates, Robert William	Boone county.
Bates, Anne	St. Charles county.
Baumgartner, Lula	Boone county.
Beasley, George Hamilton	Boone county.
Beery, Byron Buckingham	Clinton county.
Bicknell, John Samuel	Boone county.
Billups, Wm. Edward	Scotland county.
Bird, Abraham Thompson	Illinois.
Blakenbaker, Horace Franklin	Cooper county.
Blinco, Mary Isabel	Audrain county.
Booth, James	Franklin county.
Bosserman, David Wenrick	Boone county.
Boulton, Walter Emmett	Boone county.
Boulton, John Wofford	Boone county.
Bowden, Charles Prottsman	Bates county.
Bowden, Ella	Bates county.
Bowden, Susan	Bates county.
Bradley, Edgar	Johnson county.

STUDENTS.—CONTINUED.

Name of Student.	Residence.
Brainerd, Epaphroditus	Clark county.
Brewster, Augustus	Illinois.
Brierly, James Scott	Cass county.
Brierly, John Bridges	Cass county.
Brink, Ruth Marian	Boone county.
Britt, Haller Stonewall	Cass county.
Britt, Richard Horn	Boone county.
Brownlee, Richard	Linn county.
Brown, Henry Mortin	Mississippi county.
Brown, Irene Esther	Boone county.
Brown, Charley Walter	Boone county.
Brown, Wm. Gordon	Carroll county.
Brown, George L	St. Clair county.
Brown, Thomas Jefferson	Carroll county.
Buck, Mrs. Leila Summerline	Randolph county.
Buchanan, William David	Schuyler county.
Buckner, William Wordsworth	Greene county.
Burford, Worder McKim	Lewis county.
Burgin, Eugene Coffee	Kentucky.
Burgess, Charles Savage	Kentucky.
Burch, Frank Carter	Boone county.
Burnham, Charles Edgar	Randolph county.
Buscher, Benj	Franklin county.
Cadwell, Victor	Jackson county.
Campbell, Proctor	Lafayette county.
Campbell, Arthur	Ray county.
Cauthorn, William Broadus	Boone county.
Carter, Richard Talbott	Boone county.
Carney, Jeff. Davis	Johnson county.
Case, James	Webster county.
Chandler, Laura Katie	Boone county.
Clark, Mary Elizabeth	Dent county.
Clark, Henry Whitley	Dent county.
Clinton, Fannie Fern	Boone county.
Cole, Leander	St. Francois county.
Cole, Albert Shelbey	Jefferson county.
Cole, John Milton	St. Francois county.
Coleman, Nannie Sterne	Boone county.
Coleman, Manie Preston	Boone county.
Coleman, Olivia Karleen	Chariton county.
Collins, Charles	Howard county.
Comfort, Kirk Grant	Barton county.
Conley, Sanford Francis	Boone county.
Connett, John Allen	Buchanan county.
Conner, C. M	Arkansas.
Cooper, Louis Morris	Alabama.
Corder, Leslie Walter	Lafayette county.
Cowden, George	Boone county.
Cowden, Florence Miller	Boone county.
Cowden, Agnes Euphemy	Boone county.
Cowden, Albert Sidney	Polk county.
Cowell, Walter Talmon	Schuyler county.
Cox, Benjamin Fran	Jasper county.
Cramer, William Halleck	Ray county.
Crane, Ulysses Curtis	Boone county.
Crouse, Frank	Vernon county.
Cruzen, Amelia Blanche	Daviess county.
Cruzen, Bettie Lenoir	Daviess county.
Cullen, Patrick Henry	Boone county.
Cummings, Wm. Merrill	Miller county.
Dabbs, George Alvin	McDonald county.
Daggs, Robert E. Lee	Scotland county.
Daggs, Andrew Jackson	Scotland county.

STUDENTS. —CONTINUED.

Name of Student.	Residence.
Daily, Rosie Anna	Boone county.
Daniel, John Albert	Saline county.
Daniel, John Carroll	Audrain county.
Darby, Mark Evans	Dallas county.
Davis, Robert Harvey	Boone county.
Davis, John P	Macon county.
Davis, Jacob	Barry county.
Davis, James Ross	Saline county.
Dawson, Cecil	Ralls county.
Dawson, Sira Milton	New Mexico.
Deal, John Daniel	Mississippi county.
DeArman, Alonzo	Johnson county.
Dearing, Frank Riley	Washington county.
Dearing, Harry	Jackson county.
Denney, Jeremiah Condon	Kansas.
Denny, James Milton	Howard county.
Denny, Ulie Bell	Howard county.
Diehr, Alvah	Vernon county.
Dillard, James Duvall	Lafayette county.
Divelbiss, Frank Pierce	Ray county.
Dodson, William Rufus	Boone county.
Dodson, George Roland	Audrain county.
Dorman, John Benjamin	Henry county.
Dorbandt, Jeff. Davis	Texas
Doss, Thomas	Jefferson county.
Downing, Robert Everett	Audrain county.
Duncan, Henry Edward	Henry county.
Duncan, Wm. Courtland	Illinois.
Dunn. Harvey	Daviess county.
Duvall, Frank Jeans	Pike county.
Dysart, John Cristian	Boone county.
Elliott, Aggie May	Boone county.
Elliott, Henry Walter	Boone county.
Ellis, George Thompson	Bates county.
Ellis, James M	Barton county.
Elvins, Linn	St. Francois county.
Ely, Ernest Decatur	Audrain county.
Estes, Joseph, Jr	Boone county.
Estes, George F	Colorado.
Eubank, Peyton Adams	West Africa.
Evans, Amelia	Clay county.
Evans, Paul	Clay county.
Evans, John Morgan	Montana Territory
Faris, Chas. Breckenridge	Pemiscot county.
Faris, Robert Edward	Pemiscot county.
Farley, Robert	Boone county.
Fellows, John	Platte county.
Fenton, Samuel Jackson	Boone county.
Ficklin, Thomas Allen	Boone county.
Ficklin, John Bowman	Boone county.
Field, John Thomas	Platte county.
Field, George Joseph	Platte county.
Fielding, Edgar Fisher	Cass county.
Finegan, Charles Henry	Ralls county.
Fisher, Samuel Blair	Boone county.
Fitch, Norwood	Boone county.
Flournoy, John Perry	Jackson county.
Forbis, Calvin Franklin	Gentry county.
Fosmire, George Sylvester	Linn county.
Franklin, Thomas Sherman	Putnam county.
Franklin, Benjamin	Putnam county.
Frost, James Morton	Boone county.
Gabbert, William Hillary	Platte county.

STUDENTS.—CONTINUED.

Names.	Residence.
Galloway, Beverly Tucker	Boone county.
Gantt, Ernest Sneed	Audrain county.
Garrett, John Thomas	Holt county.
Gatewood, William Ora	Vernon county.
Geist, John Louis	Germany.
Gentry, William Richard	Boone county.
Gerling, Henry Joseph	Boone county.
Gerig, Thaddeus Hickman	Boone county.
Gerling, Frank Aloysius	Boone county.
Gerber, Philip Edward	Franklin county.
Gibbany, Edwin Samuel	Gentry county.
Gillaspy, James Boggs	Boone county.
Glenn, Robbert Berry	Boone county.
Goad, George Washington	Bates county.
Gordon, Guy Boulton	Boone county.
Gordon, Kate	Boone county.
Gorton, Charles Lee	Ray county.
Gray, Louis Napoleon Bonaparte	Moniteau county.
Growney, James	Nodaway county.
Gremp, William Albert	Boone county.
Gremp, Christopher Columbus	Boone county.
Green, Elizabeth	Lafayette county.
Guthrie, Sallie	Callaway county.
Guthrie, Ewing Chalfant	Callaway county.
Hadelick, Richard George	Cooper county.
Hagopian, Arman Sarkis	Turkey.
Haines, Robert Terrel	Jackson county.
Haley, John Lockhart	Boone county.
Hale, Wm. Benjamin	Boone county.
Hamilton, James Morton	Vernon county.
Hammond, Cooper Shelton	Lincoln county.
Hancock, Gay	Chariton county.
Hancock, Etta	Chariton county.
Hancock, Alice	Chariton county.
Hart, Lee B	Saline county.
Hartt, George Culver	Cooper county.
Harris, David Hickman	Callaway county
Harrison, Andrew Johnson	Carroll county.
Harrison, Newton Gilbert	Carroll county.
Harrison, Carter Bassett, Jr	Tennessee.
Harviell, Alonzo Mobley	Iron county.
Harlan, Thomas Bartlett	Pike county.
Harris, Louise Hickman	Callaway county.
Harper, Minnie	Caldwell county.
Hastings, Helena Grace	Boone county.
Hatton, Annie Lee	Boone county.
Hatton, Claudia May	Boone county.
Hatton, Ossian Forest	Boone county.
Hatton, Stewart Price	Boone county.
Hatton, Robert Edward	Boone county.
Hatton, Moses Wesley	Boone county.
Hayes, Emma Priscilla	Boone county.
Haydon, William Gill	Boone county.
Heather, Henry Clay	Marion county.
Heitzeberg, Henry	St. Louis.
Hendrick, John Jackson	Lafayette county.
Henderson, Frank L	St. Louis county.
Hibbs, Willis Samuel	Bates county.
Higginbotham, Moire Filmore	Washington county.
Hill, Linda	Sullivan county.
Hiner, Frank	Audrain county.
Hinton, Edward	Boone county.

STUDENTS.—CONTINUED.

Name of Student.	Residence.
Hinkle, John Adam	Holt county.
Hockaday, Rollins Mills	Boone county.
Horn, Simon Taylor	Colorado.
Horne, Mary Florence	Boone county.
Horne, Letha Ellis	Boone county.
Horne, Clara Belle	Boone county.
Houx, Nicholas Madison	Johnson county.
Hubbell, John Morton	Boone county.
Hudson, Sterling Price	Boone county.
Huff, John Sappington	Saline county.
Hume, William Allen	Boone county.
Hume, Lafayette	Boone county
Hurt, William Bruton	Boone county.
Hunt, Daniel	Cooper county.
Hunt, Sanford Conley	Boone county.
Ireland, Francis Melvin	DeKalb county.
Irwin, Henry Bailey	Jefferson county.
Jeans, William Francis	Pike county.
Jenkins, William Gordon	Kentucky.
Jenkins, Thomas Henry	Cape Girardeau county.
Jenkins, William Austin	Laclede county.
Jennings, Judith Esther	Boone county.
Johnson, William Thomas	Boone county.
Johnston, W. Thomas	Caldwell county.
Jones, Leroy	Pettis county.
Jones, Ed. Livingston	Franklin county.
Jones, Alvin Mason	Carroll county.
Jones, Richard Fred	Newton county.
Keene, William Irvin	Boone county.
Keithley, Samuel Sterling	St. Charles county.
Keller, James Thomas	Illinois.
Kelly, Jno. Henry	Nebraska.
Kemper, Jas. Austin	Lafayette county.
Kenner, Johnie Henry	Boone county.
Kinner, Edward Brown	Cape Girardeau county.
Kinsey, William Bowles	Maries county.
Kimbrell, Isaac Brutus	Callaway county.
Knox, Wm. Frederick	Pettis county.
Kuse, August Henry	Franklin county.
Lancaster, Charles Curtis	Ray county.
Lamaster, Ben Ivy	Kentucky.
Lay, Henry Parks	Benton county.
Lear, Nannie Frank	Marion county.
Lear, Peace	Marion county.
Lilly, Joseph Franklin	Daviess county.
Littlefield, Edwin Clarence	Johnson county.
Loeb, Isidor	Boone county.
Long, Laura Virginia	Boone county.
Lonsdale, Elston Holmes	Boone county.
Lovan, Alphonso Bledsoe	Dallas county.
Love, Leonidas Lewis	West Virginia.
Love, Wm. Winn	Macon county.
Lucas, Thomas Heidorn	St. Louis county.
Lugar, Chas. Shelton	Craig county, Virginia.
Lunceford, Mary	Monroe county, Illinois.
Macklind, Wm. Rudolph	St. Louis.
Mack, Wm.	York county, S. Carolina
Magruder, Lloyd Adams	Chariton county.
Magruder, Waverly T	Chariton county.
Maitland, Alex	Ray county.
Maloney, Jas. Francis	Jackson county.
Martin, David Riley	Clinton county.

STUDENTS.—CONTINUED.

Name of Student.	Residence.
Marshall, Wm	Scott county.
Marshall, Ben Franklin	Scott county.
Marr, Jno. Bradley	Clay county.
Marr, Jas. Anderson	Clay county.
Marsh, Geo. Edward	Crawford county.
Martin, Lawrence Augustine	Livingston county.
Mastin, Thomas A. J	Jackson county.
Mason, Geo. Edwin	St. Clair county.
Mathews, Percy	Boone county.
Maupin, James Lawrence	Boone county.
Maupin, Maggie Chapman	Boone county.
Maupin, Fannie Prentis	Boone county.
McAfee, Ellen Fitzhugh	Boone county.
McAfee, Mary	Boone county.
McBride, Wm. Summers	Boone county.
McCulloch, Robert Lee	Cole county.
McColley, Edward Adam	St. Clair county.
McCall, Edwin Law	Callaway county.
McConkey, Wilbur Fisk	Gentry county.
McComas, Arthur Rochford	Boone county.
McCann, James	Carroll county.
McGonigle, David Samuel	Knox county.
McKinney, J. Clarence	Boone county.
McKean, Lewis Burton	Henry county.
McKimpson, Wm. Edward	Boone county.
McMunn, Jesse Fay	Scotland county.
McNeely, Thomas Eugene	Cape Girardeau county.
Merrell, Wm. Tell	Macon county.
Meyer, Robert Samuel	Holt county.
Millard, Thos. Franklin	Phelps county.
Miller, Joseph Chenault	Howard county.
Minton, George	Holt county.
Mitchell, Robert Hood	Saline county.
Mitchell, Lee Emmett	Jackson county.
Monser, Chas. Grant	Boone county.
Moore, Joseph Lee	Scott county.
Moore, Wm. Henry	Buchanan county.
Moore, John Wadsworth	Moniteau county.
Morrison, Wm	Bates county.
Morris, Benj. Leonard	Cooper county.
Morris, Jno	Holt county.
Mountjoy, Jos. Shannon	Boone county.
Murphy, Geo. Washington	Caldwell county.
Murry, Jno. Franklin	Boone county.
Murrell, Wm. Blane	Saline county.
Nelson, Wm. Wallace	Kansas City.
Neuenhahn, Otto Francis	Gasconade county.
Nicklin, Walton Elbert	Lincoln county.
Nifong, Walter	Madison county.
O'Mahoney, Clarence	Boone county.
Paquin, Felix	Boone county.
Paquin, Ozias	Boone county.
Paquin, Elmira	Boone county.
Parmerlee, Wm	Pettis county.
Parsons, Fred. B	Knox county.
Patterson, Harry Sedgwick	Jackson county.
Paxton, Jos. Francis	Pike county.
Payne, Anna Calvin	Saline county.
Pearson, Julian Huntington	Howard county.
Perrine, Thos. Wm	Kentucky.
Peters, Una Verda	Shelby county.

STUDENTS.—CONTINUED.

Name of Student	Residence.
Phillips, Julia Gray	Boone county.
Pierce, Mary	Boone county.
Pierce, Sallie	Boone county.
Pigg, Wm	Boone county.
Pitcher, Jas. Delana	Marion county.
Pitts, Louis E	Jasper county.
Powers, Anna Maria	Franklin county.
Powell, Jesse Zedreck	Cooper county
Poynter, Wm	Laclede county.
Prather, Wm. Redmond	Boone county.
Prather, Frank Grant	Boone county.
Pratt, Geo. Cooley	Boone county.
Prewitt, Frank Elgin	Pike county.
Prigmore, Robt. Warren	Saline county.
Prigmore, Russell Young	Lafayette county.
Proctor, Marion Bailey	Monroe county.
Ragland, Wm. Alvin	Kentucky.
Records, Wm. Pleasant	Jackson county.
Redenbaugh, Nannie Maria	Boone county.
Rees, Mary Wood	Boone county.
Reid, Robt. Lee	Boone county.
Renwick, Rob't Whitney	Boone county.
Ridgely, Pierre Robert	Boone county.
Reynolds, Joseph Johnston	Buchanan county.
Rieger, Jno. Jesse	Jackson county.
Riegel, Wm. Henry	Knox county.
Riffe, Archie M	Ray county.
Robinson, Owen Harvey	Lincoln county.
Robinson, Chas. Bennett	Lincoln county.
Roberts, Richard Marcus	St. Francois county.
Robnett, Nonie Nesbitt	Boone county.
Rochford, Louise	Boone county.
Rochford, Julia	Boone county.
Rogers, Robt. Estill	Boone county.
Rogers, Chas. Webster	Kentucky.
Ross, Jno. Wilson	Carroll county, Arkansas.
Royall, Wm. Murray	Boone county.
Ruark, Robt. Ozias	Lawrence county.
Rudy, Jules Luther	St. Francois county.
Renfro, Chas. Lee	Ray county.
Russell, Jesse Lee	Newton county.
Russell, Jos. Luke	Moniteau county.
Saffarans, Geo. Verdener	Marion county.
Sandison, Wm. Henry	Randolph county.
Saunders, Louis Edwin	DeKalb county.
Saunders, Chas. Westropp	Boone county.
Savage, Chas. A	Daviess county.
Sharp, Jas. Russell	Boone county.
Schenk, Adam	Scotland county.
Scheetz, Frank Beates	Monroe county.
Schofield, Rob't Francis	Knox county.
Schofield, Rufus Byron	Knox county.
Schultze, Ernst	Franklin county.
Schweitzer, Willis Bradley	Boone county.
Schweitzer, Lizzie	Boone county.
Schwabe, Ida Bell	Boone county.
See, Thomas Jefferson Jackson	Montgomery county.
See, Geo. Washington	Montgomery county.
Seidel, Wm Florian	St Louis.
Selsor, Mark	Daviess county.
Settle, Henrietta Magdalene	Madison county.
Shelton, Mitchell Cross	St. Clair county.

STUDENTS.—CONTINUED.

Name of Student.	Residence.
Shelton, John Doak	St. Clair county.
Shinkle, Sam'l Wm	Maries county.
Shirley, Rob't E	Cass county.
Shobe, George Rodney	Boone county.
Sisk, Robert Edgar	Audrain county.
Skaggs, Myrtie Morylla	Audrain county.
Smith, Ewell Lee	Boone county.
Smith, Alfred Filmore	Ralls county.
Smith, Edward Everett	Boone county.
Smith, Lizzie	Boone county.
Smith, Judson	Vernon county.
Smith, Wm. Berry	Clay county.
Smith, Chas. Wm	Boone county.
Smithpeter, W. C	Carroll county.
Smoot, Wm. Edward	Schuyler county.
Spencer, Georgie Harding	Clinton county.
Sparks. Claudia Furber	Clay county.
Spohrer, Frank	Gasconade county.
Stepp, Kirby Wills	Clay county.
Stephens, Henson McClellan	Barton county.
Stephens. Jas. L	Boone county.
Sterne, Frank	Boone county.
Stokes, Jas. Stephens	Clinton county.
Stowers, Sterling Price	Boone county.
Sturgeon, Thos. Hume	Boone county.
Sullivan, Michael Francis	Iowa.
Summers, Grace Bliss	St. Louis.
Sutton, Rob't Edward Lee	Pike county.
Swift, Chas. Albert	Audrain county.
Taylor, Logan Hunton	Boone county.
Taylor, Jas. Rob't	Boone county.
Terry, Chas. Wyllis	Illinois.
Theilmann, Emil	Caldwell county.
Theilmann, Louis	Caldwell county.
Thompson, Burton Maude	Boone county.
Thomson, R. Gurdon	Saline county.
Thornton, Joseph Elias	Boone county.
Thompson, Geo. Howard	St. Louis.
Thompson, Wm. Dwight	St. Louis.
Thomas, Anna Gray	Boone county.
Tipton, Sam. M	Phelps county.
Tivy, Wm. Thomas	St. Louis.
Todd, Vernar Luke	Cass county.
*Todd, Plumas Farmer	Cass county.
Todd, Iva Jane	Cass county.
Toalson, Geo. Fuller	Boone county.
Trimble, Susie Harris	Boone county.
Truitt, Wm. Henry	Callaway county.
Tucker, Rob't Lee	Perry county.
Tucker, Chas. Quarles	Cooper county.
Turner, Orville, H. B	Shelby county.
Turley, Lee	St. Francois county.
Turley, Jno. Wesley	St. Francois county.
Tyler, George Richard	Vernon county.
Vandiver, Berryman	Boone county.
Venable, Monroe	Boone county.
Vest, Jno. Albert	Randolph county.

*Deceased.

STUDENTS.—CONTINUED.

Name of Student.	Residence.
Via, Willah May	Boone county.
Wafer, Moses	Pettis county.
Walker, Thos. Anderson	Lafayette county.
Walkup, Sam'l Thos	Atchison county.
Wash, Jno. Sam'l	Lewis county.
Watson, Edwin Moss	Boone county.
Weaver, Wm. Homa Hoyt	Jefferson county.
Weed, Jas. Franklin	Audrain county.
Weedin, Kirby Calhoun	Lafayette county.
Welch, Don Carlos	Bates county.
Welch, Narcissa	Jackson county.
Welch, Napoleon Bonaparte	Chariton county.
Western, Elgin Underwood	California.
Westlake, Pearl	Boone county.
Westlake, Ruby Moss	Boone county.
Wharton, J. Frank	Barton county.
Wharton, Wm. Nelson	Barton county.
Whipple, W. A.	Lawrence county.
Whitecotton, Wm. Edward	Ralls county.
Whittle, Thos. William	Boone county.
White, George Gordon	Taney county.
White, Stonewall Jackson	Lafayette county.
White, Jno. Wm	Boone county.
Wigginton, Edward Boyd	Pike county.
Wilkinson, Jno. Walter	Boone county.
Williams, Chas. Page	Jackson county.
Williams, Oscar Geo	Grundy county.
Williams, Walter Everton	Lincoln county.
Williams, Earnest	Macon county.
Willis, Jno. Samuel	Boone county.
Willis, Sallie Bettie	Boone county.
Wills, Thaddeus Loomis	Barton county.
Wilson, Benj. Steel	Boone county.
Wilson, Mary Lee	Boone county.
Wilson, Wm. Ross	Boone county.
Worley, Jeff. Garth	Boone county.
Worster, Ralph Grant	Worth county.
Wright, Jos. H.	Vernon county.
Yeager, Jos. Bernitt	Boone county.
Youmans, Fred. William	Arkansas.
Young, Arthur Byron	Ralls county.
Yowell, Brookey Ann	Boone county.

POST GRADUATES.

Name.	Residence.
Butler, Wm. Madison, Pe. P., '83, Mo. University.....	Gentry county.
Cheney, Geo. Nelson. B. S. D., '79, South East Normal....	Cape Girardeau county.
Dexter, Francis Henry, C. E., '85, Notre Dame.....	Jackson county.
Devin, Oliver Peyton, Sur., '83, Mo. University.....	Shelby county.
Dorman, Sterling Price, LL. B., '85, Mo. University.....	Henry county.
Gentry, North Todd, B. A. S., '84, Mo. University.....	Boone county.
Hatton, Jno. Harvey, Pe. P, '83, Mo. University.....	Scotland county.
Hopkins, Linn, A. B., '83, Blackburn College.....	Illinois.
Jaeger, Chas.. Sur., '84, Mo. University.....	Pike county.
Means, Wm. Foster, L. B., '85, Mo. University.....	DeKalb county.
Peters, Fredus Nelson, Pe. P., '85, Mo. University.....	Shelby county.
Smith, Jas. Allen, A. B., '86, Mo. University.....	Jackson county.
Turner, Mary Hood, Class of '86, Woodland College.....	Boone county.

STUDENTS OF THE SCHOOL OF MINES AND METALLURGY.

Name.	Residence.
Althoff, Albert Jr., *A**	Concordia.
Bishop, E. W., *T**	Rolla.
Buchanan, J. W., *T.*	Salem.
Burlingame, Eliza, *A.*	Olean.
Buskett, L. W., *A.*	Rolla.
Buskett, Mary P., *A.*	Rolla.
Buskett, Nannie H., *A.*	Rolla.
Campbell, May *A.*	Rolla.
Cansler, Allie. *A.*	Rolla.
Carssow, F. H., *T.*	Ste. Genevieve.
Cleino, Emma, *A.*	Rolla.
Coffey, Maggie, *A.*	Rolla.
Cole, George W., *T.*	St. Louis.
Deegan, Agnes, *A.*	Rolla.
Deegan, May, *A.*	Rolla.
Donnan, L. L., *T.*	Elk Prairie.
Donnan, W. Q., *T.*	Elk Prairie.
Feuerbach, W., *T.*	St. Louis.
Garner, Hugh, *A.*	Iberia.
Gault, D. A., *T*	Le Claire, Iowa.
Gilbert, J. N., *T.*	Plymouth, Illinois.
Greaber, Jas., *A.*	Rolla.
Harrison, Lizzie L., *A.*	Arlington.
Harrison, R. L., *T.*	Morley.
Hedden, Tommie V., *A.*	Rolla.
Illinski, Anielka, *A.*	Cahokia, Illinois.
Johnson, Edward, *T.*	Rolla.
Jones, Jesse, *A.*	Rolla.
Keemle, Jesse D., *A.*	St. Louis.
Kyle, Mary, *A.*	Rolla.
Lachmund, Oscar, *T.*	St. Louis.
Livingston, Jos. H., *T.*	Rolla.
Livingston, I. M., *A.*	Rolla.
Long, Eddie, *T.*	Rolla.
Loring, M. H., *T.*	Maysville.
Love, Charles F., *A.*	Rolla.
McQuade, John, *A.*	Rolla.
Millard, Fannie, *A.*	Rolla.
Millard, Mary, *A.*	Rolla.
Millard, Sallie E., *A.*	Rolla.
Morrow, Lettie, *A.*	Buffalo.
Murphy, A. P., *A.*	Dixon.
Niles, Chas. E., *A.*	Newburg.
Parker, Luman *A.*	Rolla.
Pinnell, Hiram *A.*	Summerville.
Scott, John W., *T.*	Rolla.
Scott, Luella C., *A.*	Rolla.
Seay, Minnie G., *A.*	Salem.
Seay, W. J., *T.*	Salem.
Shinneman, Etta, *A.*	Rolla.
Southgate, Maggie, *A.*	Rolla.
Staats, L. H., *T.*	St Louis.
Stern, Leonora, *A.*	Rolla.

STUDENTS—CONTINUED.

Name.	Residence.
Tate, J. A., *A*	Licking.
Wade, M. P., *A*	Benton.
Walker, E. W., *A*	Rolla.
Walker, Jennie, *A*	Rolla.
Wiles, George B., *T*	St. Louis.
Yeater, M. W., *T*	Sedalia.

*EXPLANATIONS.—The letter *T* after a student's name signifies that he is in the Technical Department; *A*, that he is in the Academic Department.

SUMMARIES.

A. SCHOOLS.

1. *Academic Schools.*	*No. of Students.*
a. Science.	
1. Physics	177
2. Chemistry	231
3. Geology and Mineralogy	169
4. Biology	333
5. Mathematics and Astronomy	351
6. Metaphysics	128
b. Language.	
1. Hebrew and Semitic Literature	57
2. Greek	139
3. Latin	315
4. Modern Continental German, French, Spanish and Italian	222
5. English	376
2. *Professional Schools.*	
1. Agriculture	30
2. Normal	90
3. Law	72
4. Medicine { Section I. 22. / Section II. 195. }	217
5. Mining School at Rolla—Technical, 19; Academic, 40	59
6. Engineering	52
7. Military Science and Tactics	160
8. Art and Drawing	—
9. Commercial	185

B. COUNTIES.

Counties.	Mining School..	University.....	Counties.	Mining School..	University.....
Atchison	.....	1	Madison	.....	2
Audrain	.....	12	Maries	.....	2
Barton	.....	6	Marion	.....	7
Barry	.....	1	McDonald	.....	1
Bates	.....	8	Miller	2	1
Benton	.....	1	Mississippi	.....	2
*Boone	.....	166	Moniteau	.....	3
Buchanan	.....	3	Monroe	.....	3
Caldwell	.....	5	Montgomery	.....	2
Callaway	.....	7	Newton	.....	2
Cape Girardeau	.....	5	Nodaway	.....	1
Carroll	.....	8	Perry	.....	1
Cass	.....	8	Pemiscot	.....	2
Charlton	.....	7	Pettis	1	4
Clark	.....	1	Phelps	35	2
Clay	.....	7	Pike	.....	8
Clinton	.....	4	Platte	.....	4
Cole	.....	1	Polk	.....	1
Cooper	.....	7	Putnam	.....	2
Crawford	.....	1	Pulaski	1	
Dallas	1	2	Ralls	.....	6
Daviess	.....	6	Randolph	.....	5
DeKalb	1	3	Ray	.....	9
Dent	3	2	Saline	.....	9
Franklin	.....	8	Scotland	.....	6
Gasconade	.....	2	Schuyler	.....	4
Gentry	.....	4	Scott	2	3
Greene	.....	1	Shelby	.....	4
Grundy	.....	2	St. Charles	.....	2
Henry	.....	4	St. Clair	.....	6
Holt	.....	5	St. Francois	.....	7
Howard	.....	5	Ste. Genevieve	1	
Iron	.....	1	St. Louis city	6	7
Jackson	.....	18	St. Louis county	.....	2
Jasper	.....	2	Sullivan	.....	1
Johnson	.....	4	Taney	.....	1
Jefferson	.....	4	Texas	2	
Knox	.....	6	Vernon	.....	8
Laclede	.....	2	Washington	.....	2
Lafayette	1	10	Webster	.....	1
Lawrence	.....	2	Worth	.....	1
Lewis	.....	2			
Lincoln	.....	5	Total (87) counties	56	496
Linn	.....	2			
Livingston	.....	1			552
Macon	.....	7			

* A number of families move into the county and sojourn for educational purposes.

C. STATES.

States.	Min. School.	University.
Alabama	.....	1
Arkansas	.....	3
California	.....	1
Colorado	.....	2
Illinois	2	7
Iowa	1	1
Kansas	.....	1
Kentucky	.....	7
Missouri	56	496
Montana Territory	.....	1
Nebraska	.....	1
New Mexico	.....	1
South Carolina	.....	1
Tennessee	.....	1
Texas	.....	1
Virginia	.....	1
West Virginia	.....	1
Total (17 States)	59	527
		586

D. FROM ABROAD.

From Abroad.	Min. School.	University.
Germany	.....	1
Turkey	.....	1
West Africa	.....	1
		3
Totals	59	530
		589

COMPARATIVE VIEWS—ATTENDANCE.

	1874-5.	1875-6.	1876-7.	1877-78.		1878-79.		1879-80.		1880-1.	1881-2.	1882-3.	1883-4.	1884-5.	1885-6.	1886-7.
				University....	Normal Inst.	University....	Normal Inst.	University ...	Normal Inst.	University...	University...	University...	University...	University....	University....	University....
At Columbia:																
Males.....	342	279	350	355	54	371	43	405	} 41	465	427	413	419	388	385	451
Females.....	54	42	49	63	38	72	36	79		93	82	78	83	71	69	79
	396	321	399							558	509	491	502	459	454	530
At Rolla:																
Males.....	73	54	48	25		42		49		71	65	92	62	.....	34	38
Females	28	16	16	18		29		22		25	17	18	9	.....	12	21
	101	70	64	418 43 92*		443 71 79‖		484 71 41		96	82	110	71	72	46	59
Totals.....	497†	391	463	553‡		593ȝ		596		654	591	601	573	531	500	589

*18 were afterwards students of the University.

†Substract 6 that were counted twice.

‡Subtract 18 as counted twice and add 3 to the School of Art, whose names have not been given, making a clear total of 538, who have been taught by the University Faculty within the year.

‖16 were afterwards students of the University, and are hence counted twice in the total.

ȝSubstract 16 as counted twice, making a clear total of 577, who have been taught by the University Faculty within the year.

STUDENTS AND GRADUATES.

Academic students and graduates of the University from 1843 to 1885, inclusive. Also, the students and graduates of the Medical Department of the University from 1845 to 1856.

Years.	Number students at Columbia.....	Academic Graduates.					Number students at Rolla.....
		A. B.....	S. B.....	Ph. B....	L. B.	A. D. B..	
1843	78	2	....	....	....	....	....
1844	80	4	....	....	....	....	....
1845	97	3	....	....	....	....	....
1846	108	7	....	....	....	....	....
1847	95	11	....	....	....	....	....
1848	81	6	....	....	....	....	....
1849	88	12	....	....	....	....	....
1850	80	6	....	....	....	....	....
1851	126	8	....	....	....	....	....
1852	143	6	....	....	....	....	....
1853	181	14	....	....	....	....	....
1854*	.....	10	....	....	....	....	....
1855	129	16	....	....	....	....	....
1856	112	13	....	....	....	....	....
1857	171	12	....	....	....	....	....
1858	188	9	....	....	....	....	....
1859	196	9	....	....	....	....	....
1860*	140	9	....	....	....	....	....
1861	168	7	2	....	....	....	....
1862	64	5	....	....	....	....	....
1863	.....	1	....	....	....	....	....
1864 Number of students from 1863 to 1865, 121	.....	2	1	....	....	....	....
1865	.....	7	2	....	....	....	....
1866	104	1	3	....	....	....	....
1867	87	7	4	....	....	....	....
1868	129	4	3	....	....	....	....
1869	144	3	2	....	....	....	....
1870	204	1	7	....	....	....	....
1871	217	....	8	....	....	....	....
1872	294	3	3	4	....	....	....
1873	407	3	16	1	....	....	75
1874	401	5	4	....	....	....	107
1875	396	4	6	2	....	....	101
1876	321	2	10	....	1	....	70
1877	399	4	7	1	2	....	64
1878	418	3	7	1	....	....	43
1879	444	6	3	8	1	....	71
1880	484	12	1	3	....	....	71
1881	558	6	11	2	....	....	96
1882	509	7	6	....	5	1	82
1883	491	7	9	....	10	2	110
1884	502	2	4	....	5	1	71
1885	459	4	7	....	5	2	72
1886	454	2	5	....	2	....	46
1887	530	†	†	....	†	†	59

In addition to the students above given, there were in the Model School in 1868, 173; in 1869, 50; in 1870, 36; in 1871, 21.

Number of graduates, A. B., from 1843 to 1860, 157; from 1861 to 1885, graduates, A. B., 106; S. B., 126; from 1872 to 1884, graduates, Ph. B., 22; N. S., 1; L. B., 29; A. D. B., 6.

*Number of students not given in our file of catalogues.

†See programme of commencement exercises.

MEDICAL DEPARTMENT FROM 1845 TO 1856.

In the year 1845 McDowell's Medical College, St Louis, was made a department of the University, but was divorced from it in 1856. The following was the attendance of students and the graduates of that department for the period named:

YEARS.	Students....	Graduates..
1846	92	29
1847	105	33
1848	146	40
1849	154	43
1850	154	36
1851	159	38
1852	.....	26
1853	.....	27
1854 — During these years the number of students averaged 100 per annum	.....	39
1855	.....	32
1856	.....	29

Years.	Normal Department.					Agricultural Department.				Law.....	Medicine..	Engineering.			Mines and Metallurgy.		Total number of Graduates each year.....
	4 y'rs.	6 years.		2 years.		2 years.	6 years.			2 y'rs.	2 y'rs.	6 years.			3 years.		
	N. G.	D. B.	Pe. B.	N. D.	Pe. P.	D. Ag	D. H.	B. A. S	Ag. B.	LL. B.	M. D.	C. E.	T. E.	Sur.	C. E.	M. E.	
1869	4					In 1860 the Faculty granted fifteen diplomas in Agriculture.											4
1870	3																3
1871	4																4
1872	6																6
1873		4							5	6							15
1874		5		7			26			13	5				2	3	61
1875		4		18			8			9	6				1	1	47
1876		1		7			1			9	13				2	3	36
1877			1		6		7			14	5				1	2	36
1878			4		15					20	8	2			2	2	53
1879			9		9		5			13	6	4	4		1	1	52
1880			6		8					14	9	2	3			2	44
1881			3		10				1	28	5	3	2		2	1	55
1882			3		8				4	20	7	6	1	3	4	1	57
1883			11		5					13	9	7	1	6	1		53
1884			7		3			5		14	4	10	5	5	3	4	60
1885			9		14					23	4	6	1	2	3	4	66
1886			2		20			1		21	3	4		4	2	1	150
1887			*		*			*		33	†92	*	*	*	*	*	....
	17	14	55	32	98	.....	47	6	10	250	176	44	17	20	24	26	....

* See programme of the commencement exercises.

† Graduated from Section No. II, Medical College at St Louis. (See Medical Dep't).

CLOSING EXERCISES.

1887.

THURSDAY EVENING, March 24.—Commencement of Law School. Annual address before the Law Class by Prof. C. G. Tiedeman, Columbia.

MONDAY, May 23, to WEDNESDAY, June 1.—Closing Examinations of all classes.

SUNDAY, May 29.—Baccalaureate Discourse.

MONDAY EVENING, May 30.—Address before the Literary Societies.

WEDNESDAY EVENING, June 1.—Address before the Alumni Association by Henry W. Ewing, Jefferson City, Mo.

THURSDAY, June 2.—University Commencement.

THE SCHOOLS OF THE UNIVERSITY.

I. THE ACADEMIC SCHOOLS.

A. SCIENCE.

I—1. Physics.
II—2. Chemistry.
III—3. Geology and Mineralogy.
IV—4. Biology.
V—5. Mathematics—Astronomy.
VI—6. Metaphysics.

B. LANGUAGE.

VII—1. English.
VIII—2. Modern Continental German, French, Spanish, etc.
IX—3. Latin.
X—4. Greek.
XI—5. Semitic.

II. THE PROFESSIONAL OR BUSINESS SCHOOLS OF THE UNIVERSITY.

XII—1. Agriculture.
XIII—2. Pedagogics.
XIV—3. Law.
XV—4. Medicine.
XVI—5. Mining and Metallurgy.
XVII—6. Engineering.
XVIII—7. Military Science and Tactics.
XIX—8. Art.
XX—9. Commercial.

GENERAL SUMMARY.

(From the report of the Board of Curators to the 34th General Assembly.)

SUMMARY 1885-6.

Total number students enrolled during the year		455
Total number males enrolled during the year		386
Total number females enrolled during the year		69
Total number males under age of 15 years		4
Total number females under age of 15 years		3
	Yrs.	Mos.
Average age of males	20	11
Average age of females	18	3
Average age of all students	20	6

SUMMARY 1886-7.

Total number students enrolled to date, January 5, 1887		484*
Total number males enrolled		417
Total number females enrolled		67
Total number males under 15 years		8
Total number females under 15 years		1
	Yrs.	Mos.
Average age of males	20	7
Average age of females	17	10
Average age of all students	20	2

SUMMARY FOR THE TWO YEARS 1885-6 AND 1886-7.

Total number of students enrolled during the two years to date, January 5, 1887		939*
	Yrs.	Mos.
Average age of males	20	7
Average age of females	18	
Average age of all students	20	4

* After the above summary was made up forty-six (46) students matriculated, making the number for 1886-7 five hundred and thirty (530) and the total for 1885-6 and 1886-7 nine hundred and eighty-five (985).

I. SCHOOL OF PHYSICS.

EMERITUS PROFESSOR NORWOOD.

PROFESSOR SMITH.

W. H. SCHUERMANN, Assistant Professor.

Work in this school is of two kinds: Class and Laboratory. The first falls into four courses:

1. In Elementary Physics, five hours weekly, the first half of the second year. Text-book: Gage's *Elements of Physics.* Requisite for admission: a passing grade in the Mathematics of the first year, i. e., Arithmetic and Elementary Algebra.

2. In Advanced Physics, five hours weekly, the whole of the fourth year. Text-book: Daniell's *Principles of Physics.* Requisite for admission: a passing grade in the Mathematics of the second and third years, i.e., Algebra, Geometry and Trigonometry.

3. In Elementary Mechanics, five hours weekly, the second half of the fourth year. Text-book: ————. Requisite for admission: a passing grade in Analytic Geometry.

4. Post-graduate. One or more of the subjects: Heat, Light, Electricity, etc., will be treated, both mathematically and experimentally, according to the judgment of the teachers, who will defer in proper measure to the wishes of the students, while also guiding them in the study of the special treatises of the great masters. For the successful prosecution of this course an elementary acquaintance with Differential Equations is desirable if not indispensable.

Course 1 is required of all students in the second year; course 2, of all in the fourth year; course 3, of all in the courses in Science and Engineering; course 4 is optional.

Laboratory work consists of exact measurement and the determination of

physical constants, varied according to the resources of the Laboratory, which, while leaving much to be desired, are steadily increasing and are richest in the domain of Electricity.

Students in the course in Science work in the Laboratory five hours per week the first, and nine hours per week the second, semester of the fifth year; students in the courses in Arts and Letters work in the Laboratory five hours per week one semester of the fifth year.

The Laboratory is open for students on Tuesday from two to four P.M., and on Wednesday from two to five P. M., during the first semester, and on Thursday, Friday and Saturday from two to five P.M., during the second semester. Students pay a fee of five dollars per semester for the use of apparatus, and are also responsible for its proper preservation. Requisite for admission: a passing grade in Advanced Physics.

The following is the enrollment of students the past year:

Elementary Physics	115
Advanced Physics	40
Elementary Mechanics	6
Laboratory	16
Total	177

A strict enforcement of the requisites for admission kept down the numbers, particularly in course 1.

II. SCHOOL OF CHEMISTRY.

PROFESSOR SCHWEITZER.

CLARENCE L. SPEYERS, Ph. B., Assistant.

I. ARRANGEMENT OF CLASSES BY SEMESTER.

FIRST SEMESTER.

10–11. Agricultural Chemistry (half study).
10–11. Physiological Chemistry and Toxicology (half study).
11–12. Rational Chemistry (full study).

LABORATORY:
Appleton: The young Chemist (half study).
Cairns: Manual of Quantitative Chemical Analysis (full study).

SECOND SEMESTER.

10–11. Phenomenal Chemistry (full study).
11–12. Organic and Applied Chemistry (half study).
11–12. Domestic Chemistry (half study).

LABORATORY:

Beilstein: Lessons in Qualitative Chemical Analysis (half study).

Elderhorst: Blowpipe Analysis, and use of Balance, Spectroscope, Polariscope, Calibration of tubes, taking of specific gravities, measurement of volumes, etc., (half study).

II. CONSECUTIVE ARRANGEMENT OF CLASSES.

1. Phenomenal Chemistry (4th semester, full study).
2. Laboratory: Appleton, The Young Chemist (5th semester, half study).
2a. Agricultural Chemistry (half study—students in Agriculture).
3. Laboratory: Beilstein, Lessons in Qualitative Chemical Analysis, (6th or 10th semester, (half study).
3a. Domestic Chemistry (6th semester, half study—students in Girls Course).
3b. Physiological Chemistry and Toxicology (half study—students in Medicine).
4. Rational Chemistry (9th semester, full study).
5. Organic and Applied Chemistry (10th semester, half study).
6. Laboratory: Elderhorst, Blowpipe Analysis and use of Instruments, (10th semester, half study).
7. Laboratory: Cairns, Manual of Quantitative Chemical Analysis, (11th semester, full study).

III. REQUIREMENTS FOR GRADUATION.

(Numbers referring to previous table.)

No. 1 to 7. Students in Science, in Girl's Course in Arts (including 3a), in Civil Engineering.

No. 1 to 7. (passing 6). Students in Letters.

No. 1 to 5. Students in Arts and in Medicine (including 3b). (*)

No. 1 to 3. Students in Topographical Engineering and Pedagogics (Pe. P.)

IV. SYNOPSIS OF WORK.

1. PHENOMENAL CHEMISTRY.

An elementary course of instruction, consisting in experimental demonstrations of the facts of the science, and embracing both the metalloids and the more common of the metals; calculations of quantities by weight and volume, of changes in the volumes of gases by changes of temperature and pressure, writing of reactions, and establishing of formulas upon proper physical facts accompany the work. (Ira Remsen: An introduction to the study of Chemistry.)

2. a. AGRICULTURAL CHEMISTRY.

General introduction; function of the plant, including production, conversion transportation, deposition of organic matter; physiological structure of the cell; respiration; the green cell an apparatus for doing work dependent upon light and heat; nitrogenous constituents of the plant and their relation to free and combined nitrogen; mineral constituents; membranous diffusion; assimilation; condition of vegetation.

Soil, its formation, composition, alteration by mechanical, chemical, biological agencies ; its relalion to light, heat, moisture.

Manures, natural and artiiicial ; their composition, application, value.

3. a. DOMESTIC CHEMISTRY.

Food : preparation of food ; cooking vessels ; condiments ; tea, coffee, alcoholic drinks.

Cosmetics : face powders and washes ; enamels, hair dyes and restorers ; tooth powders, soaps, pomatums, essences.

Fuel and heating.

Fibre and clothing.

Dye-stuffs and dyeing.

Dust and Dusting.

3. b. PHYSIOLOGICAL CHEMISTRY AND TOXICOLOGY.

General introduction ; constituents of the body, inorganic histogenic and products of retrogressive metamorphosis ; blood and related fluids; milk and other secretions ; urine, healthy and pathological.

Poisons, their classification, description, recognition ; action of poisons ; their detection and isolation in judicial investigations.

4. RATIONAL CHEMISTRY.

The principles of chemical Philosophy with a general review of inorganic Chemistry. (J. P. Cooke : Principles of Chemical Philosophy, Part 1st.)

5. ORGANIC AND APPLIED CHEMISTRY.

General arrangement of subject matter; monatomic alcohols, acids and derivatives, including ethers; aromatic compounds; compound ammonias ; selected polyatomic acids, and alcaloids.

Air : respiration, vitiated air and ventillation ; infection, contagion, germ theory of disease.

Water : Potable water, hard and soft ; impurities in it, such as lead and sewage matter, and their effects upon health and life ; mineral and other waters.

Food : Composition and general properties ; bread, meat, milk, sugar ; preservation of food and adulterations.

Illuminants : Disinfectants ; Antiseptics.

6. LABORATORY WORK.

In each of the four classes the work to be done understandingly and with neatness, dispatch and accuracy.

2. Appleton, The Young Chemist.
3. Beilstein, Lessons in Qualitative Chemical Analysis.

(*) Students in Medicine may substitute No. 7 for No. 4.—See "Requirements for Graduation," p. 38.

6. Elderhorst, Blowpipe Analysis. The amount and kind of work involving the use of instruments, to be assigned in each case separately.

7. Cairns, Manual of Quantitative Chemical Analysis ; 10 analyses according to blanks.

V. RULES FOR THE GUIDANCE OF STUDENTS, WORKING IN THE LABORATORY.

1. Each student must make a deposit of $10.00 before he can draw his apparatus from the supplies of the University ; this is returned to him, upon the return of the apparatus, subject to a small percentage for its use, and after deducting the value of such articles as he may have broken or injured.

2. Each student must make an additional deposit of $10.00, when drawing the apparatus for Quantitative Analysis.

3. No article will be received back which is not in a sufficiently good condition to be re-issued again.

4. Articles may be purchased for cash.

5. The charge to students for ordinary chemicals has been fixed at the rate of $3.00 per month.

6. The Laboratory is open to students daily from 9 A. M. to 5 P. M., Mondays excepted.

VI. NUMBER OF STUDENTS IN THE CLASSES OF THIS SCHOOL DURING THE SCHOLASTIC YEAR JUST ENDED.

159 Students in Phenomenal Chemistry.
24 Students in Rational Chemistry.
2 Students in Agricultural Chemistry.
— Students in Physiological Chemistry and Toxicology.
35 Students in Applied and Domestic Chemistry.
122 Students in Laboratory of whom (*a*) 65 Appleton—Young Chemist.
(*b*) 42 Beilstein—Qualitative Analysis.
(*c*) 15 Fresenius — Bolton — Quantitative Analysis.

342 Students.
Number of individual students admitted to the school, 231.

III. SCHOOL OF GEOLOGY AND MINERALOGY.

PROF. SPENCER.

MR. W. W. CLENDENIN, *Instructor*.

MINERALOGY AND LITHOLOGY.

These subjects extend through the first semester of the junior year. For admission to this class, students are required to have taken a course in Chemistry.

The course in Mineralogy embraces crystallography and the physical characters of minerals, and the description of those minerals which are important, (*a*) in rock making; (*b*) as ores of the useful metals; (*c*) as constituting the gems, and (*d*) on account of their economic value.

The course in Lithology embraces the study of the composition, structure and origin of the most important rocks.

Besides the lectures, which are extensively illustrated by the natural specimens, each student is required to do laboratory work on these subjects. The students are also required to furnish themselves with small elementary collections of minerals at a small cost. Text book, "Dana's Manual of Mineralogy."

GEOLOGY AND PALÆONTOLOGY.

These subjects cover daily lectures for the second semester of the Senior year. For admission to the class, students are required to have completed the course in Physical Geography, Mineralogy, Lithology and Zöology. Half of a semester is devoted to Physical and Dynamical Geology, and half of the semester is devoted to Palæontology and Historic Geology.

The instruction is by lectures, illustrated by charts, lantern projections, and specimens. Besides attendance at the lectures on these subjects, all students are required to take the course of practical work in the Geological Laboratory and Museum. Text book, Le Conte's Elements of Geology.

PHYSICAL AND ECONOMIC GEOLOGY AND MINERALOGY.

This course is intended especially for the Engineering and Agricultural students, but any regular student of Geology is permitted to attend the class. The instruction, by lectures, is upon Economic Mineralogy, Lithology, Physical Geology and geological surveying, and embracing the study of building materials, decomposition of rocks and production of soils, useful minerals occurring in veins and beds, coal deposits, natural waters, various ordinary useful mineral sub-

stances, and surface geology applied to Engineering and Agriculture.

This course extends over one semester, but it is supplemented by a special course of practical work in the Mineralogical and Lithological Laboratory.

PHYSICAL GEOGRAPHY.

During a portion of the first semester of the Freshmen Year, there is provided a course in Physical Geography, which is illustrated by charts, lantern projections and specimens. In part it may be regarded as an elementary course in Physical and Dynamical Geology. Text book, Geikie's Physical Geography.

Number of students in this school, 169.

GEOLOGICAL LABORATORY, MUSEUM AND FIELD WORK.

Three hours of one afternoon each week during the autumn semester are devoted to Laboratory work in Mineralogy and Lithology, which all students in these subjects are required to attend.

Besides the inexpensive collection of minerals, which each student must provide for himself, a fee of one dollar is charged. During the second semester, each student in Historic Geology and Paleontology is required to work in the laboratory (from 2 P. M. until 5 P. M.) every Tuesday, Wednesday and Friday for six weeks. Fee one dollar.

The B. Sc. and L. L. B. students are required to devote another period of six weeks in the Geological or Mineralogical Laboratory. Fee one dollar.

The Engineering students have four weeks of work in the Lithological Laboratory. A lapidary's diamond saw and grinding wheels, driven by steam, are now added to the laboratory appliances, and provide means for the preparation of microscopic sections of fossils, minerals and rocks. Additional microscopes will be obtained during the coming summer.

Occasional excursions for geological field work about Columbia will be undertaken when practical.

All students doing museum and laboratory work are required to make a deposit of ten dollars, which will be returned less fee and any breakage, loss or damage.

THE MUSEUM.

PROFESSOR SPENCER, *Director.*
W. W. CLENDENIN, *Curator.*

The new Museum occupies the north half of the new west wing of the Main Building. Its inside dimensions are 45 by 70 feet, and consist of the ground floor and four galleries—making one large and magnificent room. It is 59 feet high, well lighted by ten windows on each floor, and a large sky-light reaching the length of the well. The cases have not yet been placed in the building, as funds have not been appropriated for the purpose. It has a capacity for 950 longitudinal feet of upright cases; 480 feet of continuous table cases around the well, forming the balustrade; and 600 square feet of other flat cases, besides the space

in the centre of the ground floor. Attached to the Museum are suitable lecture and work rooms and laboratories.

The additions which have been made to the Museum collections during the last four years have been so numerous and important that the original so-called "Cabinet" is not recognizable. During the session of 1882-3, the private collections of Dr. G. C. Swallow, and of Dr. J. G. Norwood, became the property of the Museum. The following year some additional fossils and minerals were obtained; all of which, collectively, have been noticed in the catalogues of the University. The old collections of the Geological survey of this State were also turned to account by the labors of G. C. Broadhead, Esq., late State Geologist.

By some additional specimens obtained, the collections of minerals and fossils have had their general value increased. But at present, it is impossible to give a full catalogue of the additions to the Geological Department, made under the present directorship.

The Zoological Collection, five years since, was of no practical value. In fact, so inadequate was it for any purposes, that much of the money which was needed for the other departments of the Museum, has been bestowed upon it. Various general notices of additions have been made in the recent University reports, but only the Zoological Collection has been catalogued. (See Report for 1886-7.)

In the selection of the specimens, the primary object was their value in teaching Systematic and Structural Zoology, and Comparative Anatomy. Out of so many interesting forms, attention might be called to a group of gorillas—which approach so nearly to the form of man—and to the skeleton and stuffed skin of "Emperor," one of the largest of the Indian elephants, which has ever been in America. These two specimens of the elephant are still the property of President Laws, and the skin is mounted in the heroic attitude of fighting a Royal Bengal tiger—rendered appropriate, owing to his former possession of a ferocious temper, which caused him to kill no fewer than five of his keepers.

IV. SCHOOL OF BIOLOGY.

PROFESSOR TRACY.

PROFESSOR SPENCER.

Assistants—PROFESSOR TAFT AND MR. CLENDENIN.

A. BOTANY AND ENTOMOLOGY.

PROFESSOR TRACY.

In the course in Science, Botany occupies three and one-half semesters. Descriptive Botany is studied during the last half of the second semester, the work being designed and arranged especially with a view to cultivating the powers of close observation and accurate description of natural objects. More attention is given to plants than to the text-book, and each student is required to observe for himself their form, habits, actions and the arrangement of their parts, and to compare them carefully with each other.

After students have acquired an elementary knowledge of chemistry and other branches of Natural Science, the study of Systematic and Economic Botany is taken up in the second semester of the Sophomore year. The work of this semester consists principally in studying the characteristics of the different families of plants, their relations to each other, and the important plants of each. The instruction is given by lectures, supplemented by means of living plants from the University greenhouse, and objects from the Museum. An outline is given of the sources and processes of manufacture of vegetable products used as food, clothing, drinks, oils, dyes, etc. The last month of the semester is given to the analysis and classification of wild plants with the use of Gray's Manual.

During the Junior year the students spend the afterenoons of Thursday, Friday and Saturday, of the first semester, and of Tuesday and Wednesday, of the second semester, in the Botanical Laboratory.

A large portion of the work in the Laboratory consists in the study of the minute structure of plants, Vegetable Histology and Cryptogamic Botany by the use of compound microscopes, with which the Laboratory is supplied. The student here learns the use of the instruments, makes microscopic measurements and permanent mounts, and does original and independent work.

To cover the expense of material used in the Laboratory a fee of three dollars is charged on enrollment.

During the last half of the Senior year special work in Botany may be taken as fulfilling the requirement of "Special Work in Science" as given in the synchronistic table--the particular line of work being optional with the student and the professor.

In the "A. D. B." course a half semester of Horticulture and Landscape Gardening is given; and in the Medical School, a half semester of Medical Botany. In

the course in Agriculture special attention is given during the Senior year to the study of rusts, smuts, mildews and other injurious fungi, and in the course of Engineering one-third of a semester is given to the study of the strength, durability and special uses of the different kinds of timber.

Ample arrangements are provided for post graduate work in several lines which may be varied to meet the wishes of the individual students.

Instruction in Entomology is given by a brief course of lectures, for which the large collection of insects in the University Museum affords a valuable means of illustration. Especial prominence is given to the life history and habits of injurious species, and the methods of checking their ravages.

The enrollment of students during the year has been as follows:

Elementary Botany	101
Economic and Systematic Botany	53
Botanical Laboratory	13
Entomology	31
Medical Botany	15
Total	213
Deduct twice counted	22
Total individuals	191

B. ZOOLOGY.

PROF. SPENCER.

L. R. TAFT, *Assistant.*
W. W. CLENDENIN, *Instructor.*

During the first semester of the first year there is a course of instruction in Elementary Zoology upon three days a week. As this class is large there are three sections.

During the fifth semester Dr. Moss of the Medical School gives a course of lectures in Human Anatomy, Physiology and Hygiene.

In the ninth semester (first of Junior year) there is a more extended course of lectures in Zoology, embracing descriptive and comparative Anatomy and Physiology of the classes and orders of the animal kingdom. For admission to this class the students are required to have completed the courses in Human Anatomy and Physiology and Elementary Zoology.

The students in the elementary course of Zoology are engaged once a week in the Zoological Laboratory, whilst those in the advanced class receive practical instruction twice a week. A fee of one dollar is charged to the students in Elementary Zoology to pay for supplies, and an additional deposit of one dollar is made; this, hower, will be returned at end of semester, unless there be loss, breakage or damage. The students of the advanced class are required to deposit ten dollars, which will be returned, less fees (two dollars), and any loss, breakage or damage at the end of the semester. Text-books: Packard's Zoology—Handbook of Comparative Anatomy.

Zoological students during the session 1886-7, numbered 142.

V. SCHOOL OF MATHEMATICS AND ASTRONOMY.

PROFESSOR FICKLIN.

Assistants, { WM. A. CAUTHORN, W. C. TINDALL.

The studies in this department are pursued in the following order:

FIRST YEAR.

First Semester.—Arithmetic, beginning at Percentage.
Second Semester.—Elements of Algebra.

SECOND YEAR.

First Semester.—Elements of Algebra and Plane Geometry.
Second Semester.—Plane Trigonometry and Solid Geometry.

THIRD YEAR.

First Semester.—Higher Algebra.
Second Semester.—Spherical Trigonometry and Spherical Astronomy.

FOURTH YEAR.

First Semester.—Analytical Geometry.
Second Semester.—Differential and Integral Calculus.

FIFTH YEAR.

First Semester.—Method of Least Squares.
Second Semester.—Spherical and Physical Astronomy.

The branches of mathematics belonging to the first two years are taught by Professor Ficklin's assistants, and under his immediate direction.

Special attention is given to the mental discipline of the student. The development of the intellectual powers, and the formation and cultivation of correct habits of thinking and reasoning, by a constant reference to the Logic and Philosophy of Mathematics, are made the paramount object of every recitation.

Prominence is also given to the great practical utility of Mathematics. As far as possible, every principle demonstrated is also illustrated by some useful application of it to the arts.

The recitations are conducted with the aid of well selected text-books, and such additional illustrations and explanations as may be necessary are given, in order to impart to the student a thorough philosophical and practical knowledge of the subjects taught.

Original problems in the various branches are given to the student, to test his knowledge of the subject, and to make him self-reliant and independent.

During the course, lectures are delivered on the Philosophy, Utility, and History of Mathematics.

Students in Astronomy, in connection with the theory of the subject, are required to go into the Observatory and apply their theories in the determination of Latitude, Longitude, Time of Day, Right Ascension, Declination, etc.

CLASS WORK.

Number of students in Arithmetic	140
Number of students in Elements of Algebra	219
Number of students in Higher Algebra	26
Number of students in Plane Geometry	132
Number of students in Solid Geometry	73
Number of students in Plane Trigonometry	72
Number of students in Spherical Trigonometry	42
Number of students in Spherical Astronomy	39
Number of students in Analytical Geometry	23
Number of students in Differential and Integral Calculus	15
Number of students in Least Squares	5
Number of students in Spherical and Physical Astronomy	7
Number of students in Methods of Teaching Mathematics	38
Number of students in the Department	351

THE OBSERVATORY.

Personnel.

Director, Joseph Ficklin.

Assistants, Thomas J. Lowry, Wm. A. Cauthorn, W. C. Tindall.

Geographical Position.

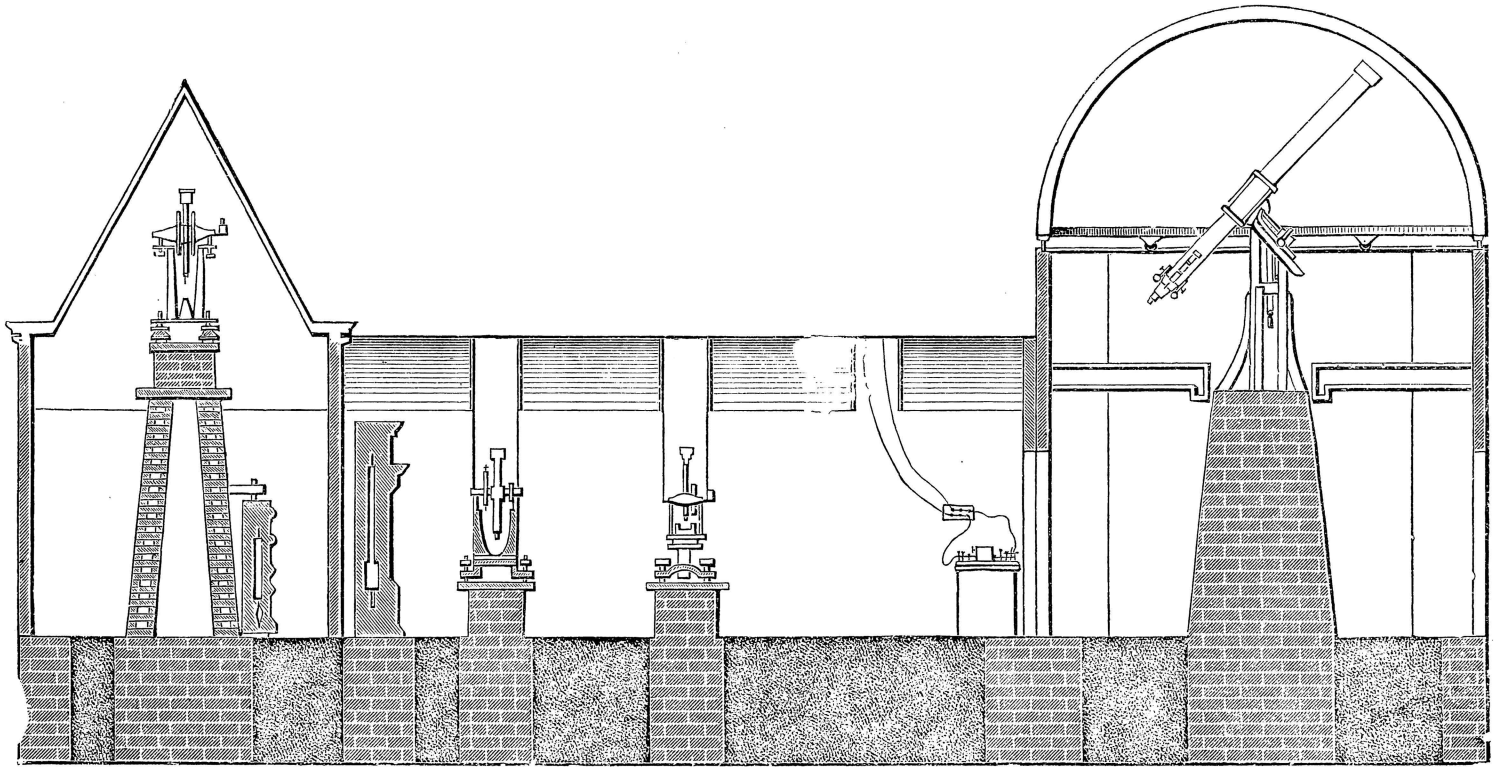
Longitude from Washington, 1 h. 1 m. 6 s. west.
Latitude 38 deg. 56 m. 51.5 s. north.

Description of the Building.

The Observatory Building stands on the beautiful eminence in the Campus near the Chalybeate Spring. The whole building is sixty-three feet long, from east to west, and fronts east.

The Equatorial room (*A*) is in the form of a regular octagonal prism, surmounted by a hemispherical dome. Its width on the inside is eighteen feet; the ceiling of the lower part is ten and one-fifth feet high, and the top of the dome is fourteen and two-thirds feet above the second floor.

The dome revolves upon six grooved wheels of cast iron, which run on a circular iron rail. Motion is communicated to the dome by a train of wheel work gearing into a rim of cogs attached to the interior face of the base plate of the dome.


7
6
5
4
3
2
1
C
B
A

The aperture in the dome, which is 22 inches wide and extends a little beyond the zenith, is closed by four shutters.

The pier for the support of the Telescope is built of hard brick laid in hydraulic cement. It extends 6 feet below the surface of the earth, and is 6 feet square at the base. That part of the pier which is below the first floor is in the form of a square prism, and is surrounded by a brick wall, which does not touch the pier, in order to prevent the communication of vibrations by the passing of carriages and wagons. The top of the pier is 4 feet square, that portion of it above the first floor being in the form of the frustum of a square pyramid. Upon the top of the pier is laid a square cap-stone, 4 feet square and 5 inches thick, which supports, by 4 bearings, the wooden stand on which the Telescope is mounted.

The Alt-azimuth room (*C*) is 13½ feet long from east to west, 13 1-5 feet wide, and the ceiling of the lower part is 9¾ feet high. It is surmounted by a roof in the form of a cone, which revolves on three cannon balls.

The aperture in this dome, which is 15 inches wide, is closed by two shutters. The pier, which extends 4 feet into the ground, is built of the same kind of material, and in the same manner as that of the Equatorial.

The transit room (*B*) is situated between the Equatorial room and the Alt-azimuth room. It is 28½ feet long from east to west, 13 1-15 feet wide, and 8 feet high. This room contains three piers, constructed as those already described, for the support of the Meridian Circle, the Transit Theodolite, the Sidereal Clock, and the Chronograph. There are two meridian observing slits 17 inches wide, one for the Transit Instrument, the other for the Transit Theodolite. These slits begin 4 feet 5 inches from the floor and extend through the roof, thus affording an uninterrupted view of the celestial meridian down to the horizon.

DESCRIPTION OF THE INSTRUMENTS.

The instrumental equipment consists of a *Telescope*, a *Meridian Circle*, an *Altitude and Azimuth Instrument*, a *Transit Theodolite*, a *Sextant* and *Mercurial Horizon*, a *Sidereal Clock*, a *Solar Clock*, a *Chronograph*, a *Tele-Spectroscope*, and a *Twenty-inch Celestial Globe*.

The Telescope (1) is an equatorial refractor of 7½ inches clear aperture and 10 feet 7 inches focal length, made by Merz & Son, of Munich, Germany. The mounting is admirably executed, combining great delicacy with great strength and stability, and differs, in some respects, from that of any other instrument in this country. It is furnished with a filar and annular micrometer, the wires of which may be illuminated, in either a bright or dark field, at pleasure. There are six positive eye-pieces of the Ramsden form, varying in power from 100 to 570, five of Gundlach's Periscopic eye-pieces, with powers from 85 to 1016, and eight negative eye-pieces, with powers from 70 to about 600. The instrument is also furnished with reflecting prisms and sun-shades. The hour circle is 10 inches in diameter. It is graduated on silver to single minutes, and reads by two verniers to 4 seconds of time. The declination circle is 15 inches in diameter. It is graduated on silver to 10 minutes, and reads by two verniers to 10 seconds of arc.

The finder was made by Alvan Clark & Sons, of Cambridgeport, Massachusetts. It has an aperture of 1⅞ inches and a focal length of 17½ inches. The reading microscopes were made by R. B. Gans, of Boone county, Missouri. The telescope is furnished with a driving clock, by which any heavenly body may be kept apparently at rest in the field of view.

This telescope has an interesting history. It was ordered in 1848 from the establishment of Merz & Mahler, of Munich, for the use of Shelby College, Shelbyville, Kentucky. It was received at Shelbyville in November, 1850, and cost, when

mounted, $4,000. It was mounted under the direction of Prof. Joseph Winlock, and used by him while he was a professor in that institution. After Prof. Winlock went to Cambridge, Massachusetts, he borrowed this telescope, and, in connection with Dr. B. A Gould, established there the Cloverden Observatory. In "Loomis's Recent Progress of Astronomy," published in 1856, under the head of "Cloverden Observatory, Cambridge, Massachusetts," the following statement is made respecting this instrument, which was then the fourth in magnitude on the continent:

"The great telescope belonging to Shelby College was temporarily loaned to Prof. Joseph Winlock, and was removed to Cambridge, Massachusetts, where temporary accommodations were provided for it, and this establishment is known by the name of 'Cloverden Observatory.'" * * * * * "Numerous observations on comets, and on some of the newly discovered planets have been made with this telescope by Dr. B. A. Gould and Prof. Joseph Winlock, some of which have been published in 'Gould's Astronomical Journal.' This great telescope has recently been returned to Shelby College."

In 1869 Prof. Winlock, who was then Director of the Observatory of Harvard College, went with his assistants to Shelbyville, Kentucky, and there used this telescope in observing the total eclipse of the sun, which occurred on the 7th of August of that year.

In January, 1880, our four-inch refractor and ——— dollars were given in exchange for this telescope. It was received in Columbia January 20, and mounted March 13, 1880.

The Meridian Circle (4) was made by Brunner, of Paris. The object glass has a clear aperture of 2 1-16 inches, and a focal length of 23 inches. The circle is 10½ inches in diameter. It is graduated on silver to five minutes, and reads by two verniers and microscopes to three seconds. At the focus of this instrument there is a system of thirteen vertical lines and one horizontal line ruled upon glass. This system of lines may be illuminated by light reflected from either of two silvered mirrors, one of which may be placed in the axis of the instrument, the other in front of the object glass. The eye-piece is furnished with a reflecting prism, and with sun-shades. There are two spirit levels belonging to this instrument, one of which is attached to the circle, the other a striding level to be used on the axis. The usefulness of this instrument has been greatly increased by the addition of a filar micrometer, made by W. T. Gregg, of New York.

The Alt-Azimuth Instrument (7) was made by E. & G. W. Blunt, of New York. The object glass has a clear aperture of 2⅛ inches, and a focal length of 22 inches. The circles are 12 inches in diameter, and graduated to 10 minutes. The horizontal circle has 4 verniers with microscopes, and the vertical circle 2; and each reads to 10 seconds. This instrument is furnished with direct and reflecting eye-pieces, a collimating eye-piece and sun-shades. At the focus there is a system of five vertical wires and one horizontal wire, and the arrangement of the levels is the same as in the Meridian Circle. The illumination of the wires is effected by means of a silvered mirror placed in the axis.

In the old observatory this instrument was mounted under an opening in the roof, which allowed motion only in or near the meridian. It is now mounted under the dome at the west end of the new building. In this position it can be directed to any point above the horizon, and thus be made more serviceable than it could be in its old position.

The Transit Theodolite (3) was made by Gregg & Rupp, of New York. The object glass has an aperture of 1⅛ inches, and a focal length of 18 inches. The horizontal circle is 10⅜ inches in diameter, and reads by a vernier to one-half a minute;

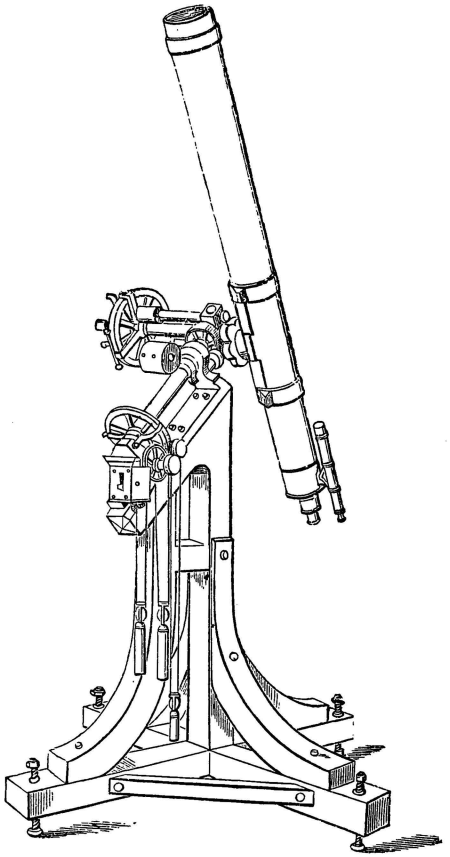
the verticle circle is 8 inches in diameter, and reads to one minute. The magnetic needle carries a vernier at each end, by means of which the arc of the compass box can be read to single minutes. This instrument has two wires, illuminated in the same way as in the alt-azimuth instrument. Belonging to this instrument is a strong portable tripod used for field work.

The Sextant was made by E. & G. W. Blunt, of New York. The arc is graduated on silver, and reads by a vernier and microscopes to ten seconds.

The Solar Clock (6), which was made by Gregg & Rupp, of New York, has a mercurial pendulum.

This clock stands on a pier on the east side of that which supports the alt-azimuth instrument. This is the old Sidereal Clock, which has been converted into a mean-time clock by lengthening the pendulum.

THE TELESCOPE.



This cut is taken, by consent of the publishers, Messrs. Harper & Brothers, of New York, from Loomis's Practical Astronomy, a work that has been used as a standard for a long time in this Observatory. Comparing the cut with the Equatorial here, one would infer that it must have been intended to represent our instrument.

The Sidereal Clock, *the Chronograph*, and two *Astronomical Spectroscopes* were purchased during 1883 from Messrs. Fauth & Co., Washington, D. C.

The Sidereal Clock (5), used in connection with the Meridian Circle and Chronograph, has a mercurial pendulum with Dennison's gravity escapement, and Prof. C. A. Young's break-circuit attachment, which gives no spark, thus saving the contact points from oxidation. The rate of the clock is controlled by small iron weights put into a small cup attached to the pendulum rod. These weights can be added, and, by means of a small magnet, removed at pleasure, without stopping the clock.

The Chronograph is mounted on a brick pier near the eastern end of the transit room. The cylinder of the Chronograph is 7 inches in diameter, 14 inches long and revolves once in a sidereal minute. By pushing a button the speed of the cylinder may be doubled, an arrangement which is very convenient in exchanging clock-signals in longitude work. A sheet of paper fastened on the cylinder by metallic springs is sufficient to contain the record of two hours' continuous work The clock breaks the circuit on the even seconds, except that a break is made at the 59th second in order to mark the end of the minute. A signal pen pressing against the paper records the clock-signals and those of the observer. The pen carriage is moved by a screw whose time of revolution is the same as that of the cylinder.

The Spectroscope is arranged to be used either with diffraction grating or prism. The collimator and the view telescope have objectives of 1½ inches aperture and 12 inches focus. The collimator is connected with the draw-tube of the equatorial by means of four stiff rods fitted to an adapter. When the spectroscope is thus connected with the equatorial, the combination is called the *Tele-Spectroscope*.

McLean's Star Spectroscope consists of a cylindrical concave lens in front of a direct vision prism. This spectroscope is fitted to the draw-tube of the equatorial by means of an adapter. For observing the spectra of the fixed stars, this instrument is more convenient than the large spectroscope.

The Observatory is connected by a loop with the lines of the Western Union Telegraph Company, thus furnishing the means for illustrating the method of findind the longitude by electric signals.

The present greatly improved condition of the Observatory is due to the liberality of the President, Dr. S. S. Laws, who, for the advancement of astronomical science, gave to the University the means to procure the telescope and put it in complete working order, and to move and enlarge the Observatory building.

The Board of Curators have established a prize in the form of a gold medal, to be known as "THE MISSOURI UNIVERSITY ASTRONOMICAL MEDAL," to be awarded annually to that student who shall stand highest in Theoretical and Practical Astronomy.

WORK DONE IN THE OBSERVATORY.

During the year, in addition to the usual drill given to students of Astronomy in the use of the instruments, observations on the sun, moon and planets were made.

POST GRADUATE COURSE IN MATHEMATICS AND ASTRONOMY.

The General Theory of Equations; Determinants; Differential and Integral Calculus; the Solution of Differential Equations; the Method of Least Squares; Quarternions; Spherical and Practical Astronomy with the use of astronomical instruments.

VI. SCHOOL OF METAPHYSICS.

PROFESSOR LAWS.

Psychology—Hamilton's Metaphysics, Mahan's System and Sully's Outlines, Lectures.

Logic—Jevons, Hamilton, Mill, Lectures.

Ethics—Paley, Wayland, Alexander, Lieber's Political Ethics, Porter, Lectures.

Social Science—Lieber's Civil Liberty, Spencer's Sociology, Lectures.

Philosophy—Lectures.

The History of Philosophy—Schwegler, Ueberweg, Lectures.

Notes on all lectures are required, criticised and graded for literary character, as well as for matter. The instruction is chiefly by lectures.

Æsthetics and Political Economy are taught in the English school.

Constitutional and International Law—The academic students join the law class in these subjects, and receive from that department instruction in the law of contracts.

VII. SCHOOL OF ENGLISH.

PROFESSOR ALLEN.

Assistant MRS. CARR.

Assistant PROFESSOR BLACK.

Instruction in this Department is given in three courses, corresponding to the 4th, 5th and 6th years' scheme of work in the English language and literature, as laid down in the "Course in Letters." (See Table of Academic Courses of Study.)

Less of books about the literature and more of the literature itself has been the leading thought in organizing these courses of study.

Method of instruction: Lectures, text-books and recitations.

I. (4th year.) The history of English literature and the history of the English people are begun in the first semester, carried on with equal pace, and completed in the second semester. The classics of the modern English period—beginning with Chaucer and following in historical order with Spenser, Shakespere, Bacon, Milton and other representative writers in prose and verse—are studied and critically read in the class room through the entire session.

First semester : 5 hours a week.

Second semester : 3 hours a week.

Text-books : Stopford Brooke's History of English Literature (Appleton's Primer Series) ; Green's Short History of the English People ; English Classics (Clarendon Press Series).

For reference : Minto's Manual of English Prose ; Ward's English Poets ; Stedman's Victorian Poets.

II. (5th year.) In the first semester the history of the English language is given by lectures and text-book, and masterpieces of the literature are read with special reference to the structure of the language. Five hours a week.

In the second semester the principles of rhetoric are studied, and English authors read with special reference to qualities of style. Essays are required of this class at regular intervals. Three hours a week.

Text-books, 1st Sem. : Lounsbury's History of the English Language ; English Classics.

2d Sem.: A. S. Hill's Principles of Rhetoric ; English Classics.

III. (6th year.) The studies in this course are philological rather than literary. The historical study of the language is pursued through both semesters, beginning in the first semester with the oldest forms of the language, and continuing by the study of specimens, to the close of the old English (Anglo-Saxon) period, about 1150 A. D. Two hours a week.

In the second semester the study of specimens is continued through the Middle English (semi-Saxon) period to about 1350, when modern English properly begins ; then on through the age of the founders, Mandeville, Langland, Wicliff, Chaucer, to 1400—a date which marks the death of Chaucer, and brings us well into the modern English period, where the literature of course I. begins. One semester's work in German, at least, is recommended to students before entering this class. Two hours a week.

Text-books. 1st Sem. : Sweet's Anglo-Saxon Reader ; Earle's History of Anglo-Saxon Literature.

2d Sem. : Sweet's Primer of Middle English ; Morris and Skeat's Specimens of Early English, Part II.

A post graduate course will be arranged for students desiring to carry on further their studies in English. The following will indicate in a general way the work to be done in this course :

Prose Readings ; Beowulf ; ten Brink's Early English Literature. Original work in English Philology will be required in this class.

Less advanced courses are provided for students seeking a review of elementary English studies, or who, from insufficient training, are not prepared to enter any one of the three courses already described.

The instruction, given in several sections by the head of the department and by assistants, embraces a thorough course of grammar, composition and Rhetoric and U. S. History. The course of study for the first, second and third years remains unchanged. See "Table of Courses."

In this department instruction is also given in Political Economy and Political Science, one semester each, two hours a week. Prof. Black.

All new students, as a condition of admission to the institution are required to pass a satisfactory examination in English grammar, and, if expecting to enter an advanced Academic Class, are examined on all the studies in the English course previous to that class.

Two terms of lessons in Elocution will be given during the year by a competent teacher.

A special medal, known as the "McAnally Medal," is offered for competition in the Senior year. It is for the best Essay, Thesis or Poem by members of the Senior Class, competing under certain rules laid down by the founder of the prize. The subject for 1887-8 is "Milton as a Statesman."

ENROLLMENT IN ENGLISH DEPARTMENT.

Classes.	1st Semester.	2d Semester.
English Grammar (Mrs. Carr)	119	.....
English Grammar	97	.....
Rhetoric (Mrs. Carr)	.....	90
United States History	.....	78
English History and Literature	75	70
English Language and Literature	18	16
Anglo-Saxon	13	8
Political Economy	.....	17
Political Science	.....	54
Rhetoric (Mrs. Carr)	.....	44

Individual students ..... 376.

VIII. SCHOOL OF MODERN LANGUAGES.

PROFESSOR BLACKWELL.

Assistant PROFESSOR BLACK.

The languages taught in this department are German, French, Spanish and Italian. Elementary classes in German are formed at the beginning of the first semester; elementary classes in French, Spanish and Italian at the beginning of the second, The elementary course is outlined as follows:

GERMAN—*First Semester*—Whitney's Brief German Grammar, Wenckebach's Unterricht conversations, exercises; Elementary Reader.

Second Semester—Brandt's Grammar, Buchheim's Prose Composition, Readings in prose and poetry, conversations, philological exercises.

Third Semester—Schiller's and Gœthe's Plays, Lectures on the German Language and Literature, Prose composition.

The post-graduate course will embrace special studies in Lessing and Herder; progress of the language from Old High and Middle High German, Paul's Mittelhochdeutsche Grammatik, Der arme Heinrich, lectures on the Nibelungen Lied, and studies in comparative Teutonic phonology.

FRENCH—*First Semester*—Joyne's-Otto's Grammar, Reader, conversations, exercises.

Second Semester—Tableaux de la Revolution Francaise, selections from De Musset and Victor Hugo, exercises in syntax, composition and idioms.

The post-graduate course embraces studies in Corneille, Racine and Moliere, readings in Old and Middle French (Bartsch's *Chrestomathie de l'ancien Francais*). Lectures on Romance Philology and history of Romance studies.

SPANISH—*One-half Semester*—Knapp; readings from Selgas and Canovas del Castillo, composition, oral exercises.

ITALIAN—*One-half Semester*—Grammar and exercises, Goldoni's Gl'Innamorati.

The post-graduate course includes studies in Valera, Calderon, Cervantes, Alfieri, Tasso, Dante; Comparative Romance Morphology, and work in Catalonian and Provencal.

Report.—The number of students enrolled in the classes in modern languages during the scholastic year 1886-7, without duplication, is as follows:

In German	108
In French	95
In Spanish	10
In Italian	9
Total in modern languages	222

IX. SCHOOL OF LATIN LANGUAGE AND LITERATURE.

PROFESSOR FISHER.

PROFESSOR JONES, *Assistant*.

The subjects taught in this Department are the Latin Language and Literature; the Geography, Mythology, Antiquities and History of the Romans.

FIRST YEAR.

Collar and Daniell's Beginner's Latin Book, Fisher's Three Pronunciations of Latin.

Sub-Freshman—Second Year.

First Semester.—Nepos, Cæsar, Grammar, Composition, Reading at Sight.

Second Semester.—Virgil-Æneid, Cicero—Orations, Compositions, Prosody and Scanning, Classical Geography, Reading at sight.

Freshman—Third Year.

First Semester.—Cicero—Pro Archia, Livy, Grammar, Composition, Mythology, Latin at Sight.

Second Semester.—Horace—Odes and Epodes, Prosody, Composition completed, Latin at Sight, Antiquities.

Sophomore—Fourth Year.

First Semester.—Horace—Satires and Epistles, Tacitus—Agricola, Grammar, Second Latin Writer, Latin at Sight, Roman History.

Second Semester.—Cicero—Tusculan Disputations, De Amicitia, De Senectute; Grammar, Latin at Sight, Translations into Latin, Roman History.

Junior—Fifth Year.

First Semester.—Plautus—Captives, Pliny's Letters, Critical Study of the Grammar, Translations into Latin, Sight Translations, Lectures in Latin.

Second Semester.—Tacitus—Histories, Selections from Latin Prose, Translations into Latin, Review of the Grammar, Lectures on Roman Literature, Lectures on Ancient and Modern Rome, Pompeii, Comparative Mythology and Fine Arts, illustrated by the magic lantern.

Senior Class.

Second Semester.—Selections from the Latin Poets.

Sight, oral and written Latin in all classes.

Candidates for the Freshman class, who have pursued their preparatory studies in other institutions, will be examined in the following books or their equivalents:

Latin Grammar (including Prosody), Harkness' Latin Composition to lesson 71, four books of Cæsar, four books of Virgil (including Scanning), Cicero's Orations (four), Classical Geography.

The Appleton prize is offered for competition in the Sophomore and Junior classes. It will be awarded in 1887-8 to the student who makes the best translation of Macaulay's speech on his installation as Lord Rector of the University of Glasgow, from the beginning through the words, "the wreck of the Byzantine Empire."

Text-Books.

Harkness' Grammar, Cæsar, Cicero and Composition; Greenough's Virgil; Ginn and Heath's Classical Geography; Baird's Classical Manual; Anthon's Horace; Bennett's Second Latin Writer; Creighton's History of Rome; Harring-

ton's Plautus; Tyler's Tacitus; Latin Prose Selections—Weale's Classical Series; Crowell's Selections from the Latin Poets; Lincoln's Livy; Chase & Stuarts Tusculan Disputations; De. Amicitia and De. Senectute.

Books of Reference.

Harper's Latin Dictionary; Smith's Dictionary of Roman Antiquities; Mommsen's History of Rome; Teuffel's History of Roman Literature; Ramshorn's Latin Synonyms; Becker's Gallus, Daubeny's Roman Agriculture; Guhl and Koner's Life of the Greeks and Romans; Grammars of Gildersleeve, Madvig and Roby; Fisher's Three Pronunciations of Latin.

The English pronunciation is carefully taught and strictly followed in the class-room. The Junior and Senior classes are made acquainted with the Roman mode also, and taught to use it.

The Appleton Prize was awarded to J. P. Flournoy, Independence, Mo., the Gold Medal to F. B. Wright, Independence, Mo., in 1886.

Post-Graduate Course.

I.

Higher Etymology; Application of Grimm's Law; Ovid—Metamorphoses; Early Latin Remnants; Plautus—Miles Gloriosus and Trinummus; Terence—Adelphi; Comparative Mythology; Mommsen's History of Rome; Maine's Ancient Law.

II.

Cicero—De Officiis and De Natura Deorum; Quintilian—Institutiones Oratoriae, Book XII.; Tacitus—Histories, Books I., III., V.; Teuffel's History of Roman Literature; Hadley's Lectures on Roman Law; Latin Synonyms; Klein's History of the Roman Drama.

III.

Juvenal—Satires, I-VI.; X-XV.; Seneca—Moral Essays; Suetonius—Octavius; Becker's Gallus; Modes of Teaching Latin; Merivale's History of the Romans under the Umpire; M. Muller's Science of Language, Second Series; Sight Translation from Latin into English and from English into Latin; Post-classical Latin.

The instructors in this Department will be always ready to give proper assistance in the way of advice and guidance. Written translations of selected passages from the authors named will be required as the work progresses. Candidates for the degree of A. M., in addition to work laid down, will be required to furnish a Thesis in Latin on some subject given by the head of the Latin Department.

STUDENTS IN THE SCHOOL OF LATIN.

ADMISSIONS BY SEMESTER.

First Semester	260
Second Semester	249
Total by Semesters	504
Whole number enrolled without duplication	315

Translations at Sight, of passages from both prose and poetry *will be required* of all who seek admission to the University Classes.

X. SCHOOL OF GREEK AND COMPARATIVE PHILOLOGY.

PROFESSOR FLEET.

ASSISTANT, PROFESSOR JONES.

ASSISTANT, W. E. COONS.

The subjects taught in this Department are the Greek Language and Literature, the Geography, History, Mythology, and Antiquities of Greece and Comparative Philology.

In the preparatory classes the student is thoroughly drilled in the inflections of the language, and the forms are constantly impressed upon the memory by written translation from Greek into English, and from English into Greek. These written exercises, generally taken from the Grammar, are continued daily for the first two years. Throughout the rest of the course, translations from the best Greek authors are regularly made by the Professor, and the students are required to render these back into the original. These exercises are criticised, and returned, and full explanations given of the principles involved. In this way the Syntax is illustrated by all the different constructions which occur in the language.

In the translation of the classic authors, a close and critical examination is made of the text assigned for reading, the peculiarities of the author's style are brought out, and the contents of the language, as illustrated in the light of Comparative Philology, are constantly discussed.

The requirements for entrance into the Freshman class, are as follows: Harkness' First Greek book, including the translation of all the exercises from Greek into English, and *vice versa*; Hadley's Grammar, used especially with reference to the verbs; four books of Xenophon's Anabasis, Jones' Greek Prose Composition.

First Year.

Second Semester.—Harkness' First Greek Book to Syntax.

Sub-Freshman—Second Year.

First Semester.—Xenophon's Anabasis, Hadley's Greek Grammar, Jones' Greek Prose Composition.

Second Semester.—Xenophon's Anabasis, Hadley's Greek Grammar, Jones' Greek Prose Composition, Classical Geography.

Freshman Class—Third Year.

First Semester.—Lysias, Prose Composition, Grammar, History.

Second Semester.—Herodotus, Prose Composition, Grammar History.

Sophomore Class—Fourth Year.

First Semester.—Homer (Iliad) Translations into Greek, Lectures on Grammar; Gladstone's Homer.

Second Semester.—Plato, Translations into Greek, Lectures on Grammar, Antiquities.

Junior Class—Fifth Year.

First Semester.—Sophocles, Translations into Greek, Lectures, Comparative Philology.

Second Semester.—Thucydides, Translations into Greek, Lectures, Greek Literature.

Text-Books.

Harkness' First Greek Book; Kuehner's Elementary and Hadley's Grammars; Jones', Jackson's, Sidgwick's Greek Prose Composition; Baird's Classical Manual; Goodwin's Moods and Tenses; Tozer's Classical Geography; Fyffe's History of Greece; Mahaffay's Old Greek Life; Jebb's Greek Literature; Peile's Comparative Philology; Long's Classical Atlas; Yonge's English-Greek Lexicon; Liddell and Scott's Greek-English Lexicon.

For students sufficiently advanced to profit by such instruction, there will be formed for the session of 1886–7, a Post-Graduate Class, in which will be discussed the Lyric and the Comic Poetry of the Greeks. In this connection the Professor will read with the class as much as practicable from the Odes of Pindar and the Comedies of Aristophanes.

Text-books: Gildersleeve's Pindar; Humphrey's Clouds of Aristophanes.

During the whole course, lectures on Greek Art will be delivered to all the students in the Department. These lectures will be illustrated by several hundred views, representing every phase of ancient architecture, sculpture and statuary,

thus giving the students such an idea of the perfection of Greek Art as they could not acquire by lectures alone.

Report.—The number of students in the Department of Greek and Comparative Philology during the year 1886–7 :

Senior Class	9
Junior Class	7
Sophomore Class	11
Freshman Class	14
Sub-Freshman Class	24
First Class	28
Greek Education	46
Total by Classes	139

XI. SCHOOL OF HEBREW AND SEMITIC LITERATURE.

PROFESSOR BLACKWELL.

This Department is concerned with the study of the Hebrew Language and Literature on a scientific basis, in order to supply, in their original dress, a knowledge of the important records which have become the heritage of humanity—the source, to no small degree in the world's history, of religion, ethics, law and government.

COURSE IN HEBREW.

First Semester.—Hebrew Grammar, including translations from English into Hebrew, and from Hebrew into English, both oral and written ; History of the Eastern Nations until the conquest of Alexander. Text-books : Green's Elementary Grammar, and Rawlinson's History.

Second Semester.—Reading and Analysis of the Hebrew Language, with studies from Genesis, the Psalms, and Isaiah ; Hebrew method and syntax ; the growth, style, limit and purpose of the Hebrew Literature. Text-books : Green's Hebrew Grammar, Driver's Hebrew Tenses.

The Post-Graduate course will include Old Testament Introduction, studies in minor Prophets, Pentateuch Gesellschaft, post-biblical literature, apocryphal, Talmudical, and rabbinical. Helps : Strack, Delitzsch, Dillmann, Noldeke, Smend, Welhausen, Kuenen, Bissell, Harman, etc.

Instruction may be had in the following Semitic tongues :

I. Aramaic.—Noldeke's Grammatik, Luzzatto's Grammar, the Peshitto, the Targums, etc.

2. Arabic.—Lansing's Grammar, Chrestomathies, with selections from the Alf Laila wa Laila and Tabarrj's Annals, etc.

3. Assyrian.—Lyon's Grammar, Lenormant's Letters, Delitzsch's Lesestucke, etc.

Report.—The whole number of students to whom instruction was given in this department for the year 1886-7, is fifty-seven.

LADIES DEPARTMENT.

MRS. O. A. CARR, PRINCIPAL.

The Board of Curators of Missouri State University recognizing the justness and the national importance of the higher education of woman, opened to her in 1872, by act of Legislature, the doors of Missouri State University, thus placing her with regard to educational advantages, on an equality with the young men of the State. Five years, however, previous to her admission to all the departments of the University she was admitted to the classes of the Normal Department. As the number of young women attending the University multiplied year after year, there was a growing need of special provisions for them. This increasing want suggested the appointment, in 1879, of a lady principal, in which capacity I have the honor to preside. I also share the class-room labor of the English Department.

In submitting to you my report for 1886-7, I feel gratified to state with increased confidence that the provisions of this department of service have been duly appreciated by the young ladies, and that to their hearty co-operation in the inculcation of right principles of action is largely attributable whatever success I may have attained in my supervisory work. This year I have met them socially more frequently than in previous years, and my association with them has been correspondingly more pleasant to me and I trust in some measure profitable to them. It gives me no little pleasure to be able to state that, as a rule, they have been quiet and lady-like in their demeanor, give evidence of development in genuine womanhood.

UNIFORM.

It is desirable, for many reasons, that the dress of the young women be simple and inexpensive. Simplicity in dress, right in itself, is peculiarly becoming in a student, for it saves time, money and thought to be consecrated to higher uses. It

is desirable also that the young women identified with the University be distinguished from all others, and that distinction in the class-room between the rich and the poor be avoided. By the adoption of a uniform this can be readily and effectively accomplished. Therefore to avoid extravagance on the part of some and embarrassment on the part of others, and to disarm criticism, *all* young ladies attending the University *are required to adopt, as their daily attire*, (the weekly and special holidays excepted), the following uniform : A walking suit of *black* woolen goods with *trimmings of the same color*. During the first month of the first semester and the last month of the second semester, a white waist or basque may be substituted for the black waist or basque. The *shape* and *material* of the *hat* are determined by the taste of the wearer; the *color* and *trimmings* must be uniformly *black*.

The trimmings must be characterized by simplicity, and all flowers, feathers and ornaments are excluded from the uniform hat.

Each young woman must be provided with a water-proof cloak, with an umbrella and with rubber overshoes. In winters of this climate, it is imperative that our lady students take every necessary precaution toward the preservation of their health.

The above regulation dress is prescribed by the faculty, and made a condition of admission or continuance in the institution, under the special authorization of the Board of Curators, and a penalty of ten demerits is entered for each day's violation of this rule; and it will be borne in mind that 100 demerits exclude the student from the institution, and 25 debar from all public appearances in the Literary Society exhibitions or contests.

Physical Education.

As the young ladies do not live on the University grounds, but at their homes in the town, there is, of course, a considerable amount of out-door, wholesome exercise in walking to and from their class-rooms daily. By the use of overshoes, water-proofs and umbrellas, there is freedom from liability to harm from exposure; and no sickness has occurred from this cause where the proper care has been taken.

But, besides this, the young ladies are greatly favored in having the opportunity of a military gymnastic drill by the Prof. of Military Science and Tactics, who is always a graduate of West Point and an officer of the regular army of the U. S. This drill of the young lady cadets is substantially that for young men, which has received the sanction of the schools.

This is a new feature in the physical education of girls, and our experience in the past two years warrants the assurance that this new style of gymnastics for girls secures results that never could be reached by Calisthenics alone. It gives erectness of person, gracefulness of carriage, development of lung power, strength of the chest, and locomotive muscles, and altogether tends to health, and beauty of form and motion. The light musket that is handled in giving precision to some of the movements, only taxes the muscles gently, as would light gymnastic weights or clubs or bells. But in this, as in every gymnastic drill, the young ladies must exercise without corsets. Otherwise, from the efforts of the muscles and organs under compression and restraint, harm instead of benefit results, the body must have perfect freedom of action. These exercises of the young ladies will be private.

As a matter of fact, it has occurred that friends of the young ladies, without knowing the explanation, have remarked upon the physical improvement resulting from this drill in the course of a single year.

Literary Society.

The young women have one literary society, the Philalethean. The young ladies of the more advanced classes have a larger representation in the Philalethean Society this year than ever before in its history; and the exercises of its last open session, especially the original exercises—the addresses, orations and essays—were pronounced by competent judges as very creditable.

Through the late magnificent additions made to our University, the Philalethean Society was provided with a larger and more convenient hall. Their hall can be lighted by either gas or electricity, is carpeted and handsomely but inexpensively furnished, and is one of the most commendable for good taste in the State. These generous provisions have very naturally stimulated the girls to greater interest in society work, and their membership is steadily on the increase.

The young ladies are provided also with a neatly furnished study hall communicating with the lady principal's private room, and also with a convenient dressing room and cloak room. These rooms all lie together on the first floor of the east wing and make a genteel and admirable suit for the convenience and comfort of the young ladies. They have free access to the Library, also as a Study hall.

Music.

The University has no music department, but superior instruction in music, both vocal and instrumental, can be readily obtained in private classes in the town and in the music departments of Christian College and Stephens College located here. Quite a number of our young ladies have availed themselves of this instruction.

Girls Course in Arts.

This course is equivalent in work and culture to any one of the other academic courses, yet it is identical with neither. In this way it is intended to avoid the fallacy of confounding co-education with identical education. This course is made up substantially of studies selected from the various academic courses previously established, with additional work in literature, composition and criticism, and diversified by studies peculiarly adapted to the culture of woman, such as gymnastics, music, physiology, domestic chemistry and economy.

Believing that women are able to meet the demands of the case, the Girls Course in Arts is made co-ordinate in rank with the other academic courses, their equivalent in acquisition and their equal in honor, and it takes its place by them in the Synchronistic Table.

The degree of A. D B. (Artium Domesticarum Baccalaurea) is conferred on each student who completes sccessfully the studies prescribed in this course, and its graduates will have all the privileges and immunities extended to the graduates in the other academic courses. Only young ladies are admitted to this course and to this degree.

The Girls Course in Arts is optional, but thus far its history is that of similar courses in other institutions; that is, it is more popular with the young ladies than any other of the Academic Courses.

This year there is one lady candidate far graduation in an Academic Course. Among the lady students there are eight candidates for graduation in the Elementary Normal Course and one for graduation in the Academic Normal Course.

In this connection I feel constrained to say that it becomes more evident each year that the lady teachers whom we send forth should have a knowledge of music, both vocal and instrumental, even as the demand from school boards for such teachers increases each year.

Our State has provided generously for her daughters; but let our next General Assembly make an appropriation for the erection of a building meeting the requirements of a home for girls and a conservatory of music in connection with her University, then she will greatly multiply the number of its lady students, and make it the dispenser of a greater good to the State and to the nation.

II. The Professional or Business Schools

OF THE

MISSOURI UNIVERSITY

XII.—1. Agriculture—Agricultural and Mechanical School.
XIII.—2. Pedagogics—Normal School.
XIV.—3. Law School.
XV.—4. Medical School.
XVI.—5. School of Mining and Metallurgy.
XVII.—6. Engineering School.
XVIII.—7. School of Military Science and Tactics.
XIX.—8. School of Art.
XX.—9. Commercial School.

A GENERAL VIEW OF THE RELATION OF THE COLLEGE OR ACADEMIC AND OF THE PROFESSIONAL SCHOOLS.

The primary aim of the Academic Schools of Science and Language (I—XI.) is culture; that of the Professional Schools (XII—XX.) is practice. Self is the end of culture, but self is the instrument of practice. The academic training views man himself as the end; but the professional training views the man as the means, and the calling (as farming, teaching, law, medicine, mining, engineering, art, etc.,) as the end or business pursuit for which he is to be fitted. The academic or general training fits for no line of business in particular, but it furnishes culture as the condition of the highest attainment in any special vocation. The man, cultured, has more fullness and strength, as a specialist, than the same man uncultured.

But as all kinds of culture have not an equally important bearing on every line of activity in life, there is occasion for discrimination and choice, as to the subjects to be pursued in the Academic Schools, when any one of the professional or business courses is in contemplation. Hence, there are arranged, as will be seen in the *Synchronistic Table*, several under-graduate academic courses, or curricula, for the convenience of students in conforming their efforts to this natural principle of selection. As a matter of fact and of experience, it is found that a student usually

accomplishes very little till a settled and definite purpose presides over his movements. The energies of youth are limited; and hence, to qualify them for life's work, which is the great aim of scholastic education, as much definiteness as is practicable should be given to their efforts to save them from waste.

In every properly arranged educational institution, the whole course of study is a crystallized selection. A selection of those subjects and of those practical or professional activities, which alone have been deemed most effective in conserving, improving and transmitting the civilization of any age, have been singled out for school work. In this elective sense, and in this sense alone, every age has taught what it knew and all it knew. In former days, the physical sciences were not taught, because they were not known; they are taught now because they are known; and a proper interpretation of the senses in the order of the acquisition of knowledge, as chronologically preceding abstraction, assigns these sciences in their phenomenal and empirical aspects, a place in the foreground. The sciences deal with the subject matter of language, and rationally precede its forms.

It is important to note that the word science, here used respecting the schools of the University, is not to be understood in its popular and etymological sense, as designating simply knowledge or information, whether in a miscellaneous or in a classified form, but technically and strictly as a term of art, in which sense, *Science is a systematic classification of the laws of phenomena.*

Progress in science, according to this definition, can only be effective, either by adding to the stores of our knowledge a new fact, referable to known laws, or by adding a new law. It is the business of the teacher as such, to put his pupils in the possession of the sciences as known, rather than to add thereto.

There are two thoughts which seem to be entitled to preside over the department of language. The first is that the professors should be able to think, write and speak the leading languages which they teach. What would be thought of a professor of English who did not have such a mastery of it; and this case is not peculiar. The second thought is, that in language, as in science, the mind is fed more by the contents of the forms than by the forms themselves. It is truth possessed, and not truth pursued merely, that disciplines and unfolds the powers of the soul. Hence, the five chairs of language, by teaching the literature, antiquities and history of the peoples who used these forms of speech, map out the world's history, especially so far as it has been bound up in that of our race. Man, who has thus revealed himself, is the most conspicuous part of nature, and hence the schools of language are by way of eminence, in a popular sense, schools of natural science.

As the languages pre-suppose their subject matter in the sciences, so the professional courses of instruction pre-suppose, as their natural antecedents, the academic courses. The foregoing tabulated and texual exhibit of the academic and professional schools, is believed to rest on a rational method.

It will be observed that our group of professional schools, and their association with the academic group, is somewhat unique, although it is in the general line of our American Universities, however unlike those of Europe. The distinguishing features of our University, which are of home growth, including the internal autonomy, adjustment and dove-tailing of the associated schools, give it an adaptation to our wants, institutions and condition, such as no exotic possesses. Our disposition, therefore, is to apologize for these unique characteristics, not by way of deprecation, but only, in the old sense of the word, and that is, by way of defense. This, however, is not the place for discussion, but only for statement and announcement.

XII. AGRICULTURAL AND MECHANICAL SCHOOL.

FACULTY.

SAMUEL SPAHR LAWS, LL. D., PRESIDENT,
Professor of the Sciences of the Mind.

JEREMIAH WILSON SANBORN, B. S., DEAN,
Professor of Agriculture, and Farmer.

JOSEPH FICKLIN, PH. D., LL. D.,
Professor of Mathematics.

PAUL SCHWEITZER, PH. D.,
Professor of Chemistry.

SAMUEL M. TRACY, M. S.,
Professor of Botany, Entomology and Horticulture.

THOMAS J. LOWRY, S. M., C. E.,
Professor of Surveying.

EDWARD A. ALLEN, A. M.,
Professor of English.

WM. B. SMITH, PH. D.,
Professor of Physics.

J. W. SPENCER, B. A. SC., PH. D. (GOTT), F. G. S.,
Professor of Geology and Zoology.

L. R. TAFT, B. S.,
Assistant Professor of Horticulture and Superintendent of Hot Houses and Horticultural Grounds.

PAUL PAQUIN, M. D., M. V.,
Professor of Veterinary Sciences, Comparative Medicine, and Director of Univvrsity Experimental Laboratory.

The act of Congress, 1862, "donating lands to the several States and Territories for the benefit of agriculture and the mechanic arts :"

SEC. 4. *And be it further enacted*, That all moneys derived from the sale of the lands aforesaid by the States to which the lands are apportioned, * * * shall constitute a perpetual fund, the capital of which shall remain forever undiminished, * * the interest of which shall be inviolably appropriated by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one college, where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, TO TEACH such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

In pursuance of the act of Congress, from which the foregoing citation is made, we find the following proceeding recorded on the part of Missouri :

Be it resolved by the General Assembly of the State of Missouri, That the said act of the Congress of the United States is assented to and accepted by the State of Missouri, with all the conditions, restrictions and limitations therein contained ; and the faith of the State of Missouri is hereby pledged to the faithful performance of the trust thereby created. Approved March 17, 1863.

The failure of the State to properly equip the college, especially its farm, has had its influence upon the attendance of students. But this failure to equip the college was but a manifestation of the general lack of interest in agricultural education, which lack is thus seen to exist at the farm homestead.

The word was is used to represent the past state of affairs as they existed when this section was first written. We are now pleased to chronicle a marked evidence of advance not only in an increased attendance of students but in the passage of a bill for the equipment of the Agricultural College farm, with only twenty-eight dissenting votes. By this appropriation the college receives : For sheds, tool houses and hog barn, $1,000 ; for cattle and sheep barn, $5,000 ; for dairy house, ice house and repairs $2,000 ; for two cottage houses, $1,200 ; for the purchase of sheep of the various breeds, $500 ; for the purchase of swine of different breeds, $250 ; for the purchase of breeds of cattle, $3,500 ; for the purchase of horses, tools, &c., $2,000 ; for experimental work, $2,000 ; for student labor, $1,000 ; for horticultural building, $1,300 ; for veterinarian's laboratory and apparatus, $5,000.

These sums will give the college a much enlarged opportunity of illustrating its work and will place it among the best equipped Agricultural Colleges of the country.

It is now in condition to do good work and to fully warrant the attendance of young men upon its technical course who are designing to become farmers. Already there is evidence of an awakened interest in the college and of a great increase in its attendance.

In the new improvements of the University a magnificent workshop, with power, has been provided. It is a primary laboratory of the relations of the sciences to the mechanic arts.

It is firmly believed that if our farmers and industrial citizens fully understood the advantages of this school, especially in agriculture, that it would be overrun with students. All things are now ready and waiting for them. Instead of 500 we can now accommodate 1,000 students.

TERMS OF ADMISSION.

Candidates for admission must pass satisfactory examinations in arithmetic to percentage, and in geography and elements of English grammar.

Candidates for advanced standing must pass examinations in those studies that have been pursued by the class which they propose to enter. This can be learned from the course laid down in the following table.

LECTURES IN AGRICULTURE.

Instruction in agriculture is given mainly by lectures, text-books being used in connection with the lectures when they are available. These lectures cover the history and development of agriculture through early, mediæval and modern times; the location, construction and sanitary condition of farm buildings; farm fences, and implements; drainage; tillage; soils, their origin, composition, physical properties, and how to improve them; plant nutrition, or fertilizing the soil both by yard manure and chemicals; farm crops, their history, improvement by breeding and selection, their cultivation, harvesting, and preservation; veterinary science; farm law; stock feeding, covering the laws of animal nutrition and the art of feeding; dairying, its art and science, in brief, the field of general agriculture and horticulture is covered. As ours is a great stock State especial attention is given to stock husbandry.

AGRICULTURAL CHEMISTRY.

General introduction; function of the plant, including production, conversion, transportation, deposition of organic matter; physiological structure of the cell, respiration; the green cell an apparatus for doing work dependent upon light and heat; nitrogenous constituents of the plant and their relation to free and combined nitrogen; mineral constituents; membranous diffusion; assimilation; condition of vegetation.

Soil, its formation, composition, alteration by mechanical, chemical, biological agencies; its relation to light, heat, moisture.

Manures, natural and artificial; their composition, application, value.

HORTICULTURE.

The class-room instruction in horticulture is by lectures, supplemented by written abstracts and a discussion of the matter gone over.

The subjects treated are: plants, their structure and the functions of the different organs, with the effect of different conditions of the atmosphere and soil on their development; propagation of plants, by seeds, cuttings, layers, buds, grafts, etc.; the nursery and its operations; forestry; fruit growing; glass structures, their use, construction and management; market gardening; floriculture and landscape gardening.

Students are required to devote enough time to work on the Horticultural Grounds to familiarize themselves with the different operations, and if they desire to make a specialty of horticulture, an opportunity is offered of working there for wages during their spare hours.

Descriptive Botany is studied during the last half of the second semester of the junior year, the work being designed and arranged especially with a view to cultivating the powers of close observation and accurate description of natural objects. More attention is given to plants than to the text-book, and each student is required to observe for himself their form, habits, actions and the arrangement of their parts, and to compare them carefully with each other.

After students have acquired an elementary knowledge of chemistry and other branches of Natural Science, the study of Systematic and Economic Botany is taken up in the second semester of the senior year. The work of this semester consists principally in studying the characteristics of the different families of plants, their relations to each other, and the important plants of each. The instruction given is largely by lectures which are supplemented by means of living plants from the greenhouse, and objects from the Museum, which contains a large number of objects illustrative of the vegetable products in general use, together with their processes of manufacture. Special attention is given to the study of the structure, habits and development of the more common injurious fungi, and in this work the student is familiarized with the use of the compound microscope, and with the best methods of fighting these enemies of the farmer.

STUDIES IN VETERINARY SCIENCE.

The first semester is devoted to lectures on general pathology and principles of hygiene, and also special pathology and treatment of most common and destructive diseases of domestic animals. The last lectures are on contagious diseases and their prevention. Several of the students of the Medical Department (who are all at liberty to attend these lectures) manifested encouraging interest in this field of medicine.

This department of studies being new, the outlook is certainly very promising.

These veterinary studies, by virtue of certain arrangements, will cover more time than appears in the catalogue, or about a year in the regular course. A State law makes the teacher of veterinary science State Veterinary Inspector, whose duties are to visit cases of contagious diseases occurring in the State. This brings him in contact with the troublesome maladies of our domestic animals and fits him for the practical teaching of our youths.

In the course of these studies students are, when practicable, taken to witness operations upon and the treatment of the varied ailments of our various domestic animals.

Great interest has been manifested in these illustrations, and information of the greatest value is fixed thereby upon their minds.

VETERINARY MEDICAL FEATURES.

Laboratory. A vaccine and experimental laboratory has been organized during the past year for the cultivation of vaccine virus and study of obscure diseases. This department of work is in charge of Dr. Paul Paquin, who has visited France to study under the great masters of the science and art of the culture and use of these viruses.

It is confidently anticipated that great good will come to the State from the work proposed, and for the carrying on of which a suitable building will soon be equipped.

Comparative Medicine. Arrangements have been made with the Medical School

of the University, whereby a course of studies is laid out that is crowned with the degree of M.C.D. (Doctor of Comparative Medicine). This object, however, cannot be attained yet for want of funds to organize a full faculty, and proper and sufficient hospital accommodations and dissecting rooms.

Human and comparative medicine rest upon the same broad principles of Anatomy, Physiology, Pathology and Therapeutics. Every farmer may in time have the services of an expert in animal medicine and himself become better acquainted with the subject.

Human medicine is now acquiring vast stores of valuable data from the study of animal maladies. The acquisition of this compound information will be of great value to practitioners in our stock interests.

COURSE OF STUDY.

Hour.	Junior Year.—*First Semester.*
VI.	English Composition.
II.	Agriculture in its practical and scientific processes.
IV.	Physics.
III.	Zoology, 3–5. Anatomy, Physiology and Hygiene, 2–5.
	Second Semester.
I.	Agriculture in its practical and scientific processes.
II.	Chemistry.
III.	Botany. Drawing, or English.
IV.	Horticulture, Landscape Gardening, Forestry, etc.
	Senior Year.—*First Semester.*
I.	Agriculture in its practical and scientific processes.
II.	Agricultural Chemistry and Laboratory.
III.	Mathematics and Land Surveying.
IV.	Practical Geology and formation of soils, 3–5. Entomology and Bee Culture. Cryptogamic Botany.
	Second Semester.
I.	Botany—Systematic and Economic.
II.	Agriculture.
III.	Practical Geology, 2–5.
IV.	Veterinary Science.
V.	Book-keeping, 3–5. Mental Science.

A Short Course for Farmers.

It has been decided to form a special course in agriculture of one month's dura-

tion for the especial benefit of farmers, young or old, who feel a desire to gain the advantages that may be offorded by the specialists and the equipment of the Agricultural College.

This course will cover those specific fields of the science and art of agriculture that will have a direct business value to farmers. Fundamental principles of science in its relation to agriculture will be so far presented as to reveal the laws upon which certain operations of agriculture rests while at the same time a discussion of the world's best method, as gained by experience, will be required, the equipment of the college and its farm affording some aid in the work.

There will be lectures by the teachers of agriculture by successful farmers, by the professors of Horticulture. Veterinary Science, Chemistry, Botany, and by others. These lectures will occur in winter.

Fuller particulars will be given in a special announcement at a later date.

Degree.

The degree of B. A. S. (Bachelor of Agricultural Science) will be conferred upon those who complete the course and pass the final examinations.

All students receiving a degree must prepare a thesis on some agricultural subject to be presented by the college.

Expenses.

The expense of the course is very moderate and within the means of any young man desiring to complete it. A detailed statement of expense will, from the index, be readily found elsewhere in this catalogue. From the following statements it will be seen that room rent is free and opportunity for work is provided for and required of the professional students of the Agricultural College.

Museums, Apparatus and Farm Library.—A small but valuable library of farm books has been collected to which additions are being made. In addition to the Agricultural library, the students of the Agricultural College have access to the libraries of all the associated schools.

Agricultural Museum.—Large additions have been made to this Museum of objects especially adapted to illustrate the lectures in agriculture and agricultural botany. The World's Exposition at New Orleans was the source of much valuable matter. This Museum now contains an unusually fine collection of wool and of cotton fibres, numbering about 600 specimens. These fibres represent most all civilized sections of the world. The wool fibres include the various breeds of sheep, affording as a whole, opportunity to study the influence of climate, soil and breed on wool fibre. Various fibre-producing plants are well represented, and are often accompanied by their various manufactured products. Nearly all of the woods of the State are represented by three feet of the trunk of each tree, so prepared as to show its heart and sap in the rough and under polish. The grasses of the State are represented by 125 species, collected by a graduate of the Agricultural College. In addition to the grasses of the State the Museum contains one of the finest general collections of grasses in the country. In seeds it contains ninety Japanese varieties, 150 species of American farm seeds and a great number of varieties of wheat, corn, oats and barley. It has 170 different grades of the milling products of wheat. It contains several hundred models of farm machinery. Sorghum and all its varied products are represented by forty-six objects. A large collection of miscellaneous materials of great value that cannot be enumerated.

This list contains many woods and their products from the States of this country and from South America and Europe; also a long list of plants and their products.

In addition to these means of illustration, 250 lantern slides have been already collected of the larger number intended. These are found to be a very great aid to the lecture room.

Chemical and Physical Laboratories.—Laboratories in each of these departments are well supplied with modern appliances for illustrating lecture-room teachings.

Club Houses.—A group of club houses on the farm will accommodate a large number of students, and are devoted to their free use to facilitate the instruction given in field work. It is desired that students avail themselves of rooms at the club house. The students of Agriculture will have the preference of rooms in the Agricultural Boarding Club buildings, which are situated on the Horticultural Grounds, provided application be made before the opening of the First Semester, September 13, 1887; the charges will be paid the same as by other students, but to those students who continue their agricultural studies and course as prescribed, to the end of the year, the room rent will be refunded.

Green House.—A greenhouse which is connected with the Horticultural Department affords invaluable assistance in connection with the botanical studies, and for the improvement of plants.

Farm.—The farm is divided into two departments—Farm and Horticultural, both of which are well equipped with buildings, stock and tools of modern character. The former consists of 600 acres of land of varying quality and is well adapted to its purpose of instruction and experiment work. The students will be required to perform all of the labor on the farm that is deemed necessary for the acquirement of proficiency in the methods taught and will be compensated according to the character and amount of the work done, ten cents being the maximum pay per hour. In addition to this field labor, students will be required to perform farm labor whenever it is desirable to illustrate lecture room teachings. Such work will be done without pay.

Experiments will be constantly carried on for the farming interests of the State and for lecture room work. Students will be required to assist in the experiments.

The Horticultural Department will stand in the same relation to the lecture room and to the public that the farm does. It is an indispensable aid in teaching the student small fruit culture, grafting, budding, pruning, hot-house propagation, vegetable gardening, etc.

The Horticultural department is provided with two greenhouses—one 25x100 feet and the other 16x80 feet, and has also about 1,000 feet of hot-bed sash for propagating purposes. In the orchard and fruit garden are about eight hundred varieties of fruits, which are used in illustrating lecture room work and for experimental purposes.

As an experiment station, the farm has organized many experiments in stock-feeding, tillage and crop improvement. It has already published, under the present management, twenty-seven bulletins of results. This work comes under the eye of the student and teaches the habit of observation.

XIII. NORMAL SCHOOL.

FACULTY.

SAMUEL SPAHR LAWS, LL. D., PRESIDENT OF THE UNIVERSITY.
Professor of Mental Science.

EDWARD A. ALLEN, DEAN,
Professor of Pedagogics and English.

JOSEPH FICKLIN, PH. D., LL. D.,
Professor of Mathematics and Astronomy.

PAUL SCHWEITZER, PH. D.,
Professor of Chemistry.

WM. A. CAUTHORN, A. M.,
Assistant Professor of Mathematics.

S. M. TRACY, M. S.,
Professor of Botany and Entomology.

MICHAEL M. FISHER, A. M., D. D., LL. D.,
Professor of Latin and Lecturer on Roman Education.

A. F. FLEET, A. M.,
Professor of Greek and Lecturer on Greek Education.

JAMES SHANNON BLACKWELL, PH. D.,
Professor of Modern Languages and Lecturer on Oriental and Madiœval Education.

MRS. O. A. CARR,
Principal of Ladies Department and Adjunct Professor of English.

Professor of Art.

WOODSON MOSS, M. D.,
Professor of Anatomy and Physiology.

WILLIAM B. SMITH, PH., D.,
Professor of Physics.

J. W. SPENCER, B. A. Sc., A. M., PH. D., (GOTT),
Professor of Zoology, Mineralogy and Physical Geography.

CHRISTOPHER G. TIEDEMAN, A. M., LL. B.,
Lecturer on Missouri School Law.

J. P. ROYALL,
Instructor in Book-Keeping

The enrollment of the Normal Class for the past year has been as follows:

First Semester	50
Second Semester	40
Total for the year	90
Candidates for graduation:	
Elementary Degree, Pe. P	31
Academic Degree, Pe. B	5
Total Candidates	36

CONDITIONS OF ADMISSION TO THE NORMAL SCHOOL.

No student shall be admitted to any class of the Normal College until he shall have had recorded to his credit, on the books of the University, a grade of 80 on a scale of 100 in the following subjects: English Grammar, Arithmetic, Geography and United States History, and a passing grade in Elementary Algebra as far as quadratics. This grade may be obtained either by regular work in the academic classes, or, in the case of new students, by special examinations, which examinations will, in all cases, be under the direction of the heads of those departments to which the subjects above mentioned respectively belong.

Students may, upon satisfactory examination, be admitted to advanced standing in the department, under the general rule of the Faculty governing promotions.

DEGREES GRANTED BY THE NORMAL COLLEGE.

I. Principal in Pedagogics (Pe. P.).
II. Bachelor of Pedagogics (Pe. B.).
III. Master of Pedagogics (Pe. M.).

Students are graduated in two distinct Normal courses, one academic and the other elementary.

The *Elementary Normal Degree* (Pe. P.) is conferred upon those students who complete the "Public School" Normal course, extending over two years, and arranged to meet the requirements of the School law of the State in the preparation of teachers for the district schools of Missouri. The work necessary for this degree will be found in the course of study which follows:

COURSE OF STUDY FOR ELEMENTARY DEGREE.

	Junior Year.	Hour.
First Semester.	English Analysis	VI.
	Elementary Algebra and Plane Geometry	II.
	Physiology and Hygiene, 3-5	III.
	Physical Geography, 2-5	
	Pedagogics	V.
Second Semester.	U. S. History and American Literature	IV.
	Rhetoric and Composition	III.
	Elementary Botany, 1-2.	II.
	Book-keeping, 3-5	
	Pedagogics	V.

Senior Year.

First Semester...	English History and Literature	III
	Elementary Physics	IV
	Zoology	
	Pedagogics	V
Second Semester.	English History and Literature 3-5	III
	Political Science 2-5	
	Chemistry and Laboratory	II
	Botany, Systematic and Economic	I
	Pedagogics	V

"Section 7077 (Revised Statutes of Missouri) Public School Laws of Missouri:

"No person shall be granted a certificate to teach in the Public Schools established under the provisions of this chapter, who is not of good moral character, and qualified to teach Orthography, Reading, Penmanship, Arithmetic, English Grammar, Modern Geography, the History of the United States and Civil Government.

"No certificate shall be granted for a longer period than one year, unless the person examined, in addition to the above, is found capable to impart instruction in the elements of the Natural Sciences and Physiology."

The work to be done in the common school is thus provided for by law.

The Academic and Elementary classes are united for work in Pedagogics during the Senior Year

Academic Normal Degree (Pe. B).

The higher degree, that of Bachelor of Pedagogics, is conferred upon regular graduates of the University in any one of the four academic courses who supplement their academic work by two semesters of Normal instruction. Students

graduating from this course are qualified by the accurate and extended study upon which their professional work rests, to take positions in the secondary and higher schools of the State or to superintend the work of others. It is hoped that all students graduating from the University, with the intention of teaching, will so adjust their studies as to connect themselves, during the last year of their course with the Normal department. The extended course of academic study leading to this degree is shown in the Table of Synchronistic Curricula.

The work in Pedagogics corresponds with that laid down for the Senior Year of the elementary course.

The conditions of entrance to Normal classses, so far as the passing grade of eighty in elementary subjects is concerned, apply also to academic graduates.

Degree of Master of Pedagogics (Pe. M).

The third degree granted by the Normal College is that of Master of Pedagogics (Pe. M). This degree is conferred only after due examinations in the five schools of science, and in any four of the five schools of language.

State Certificates.

A business advantage is afforded to graduates of the Normal Department of the University in receiving from the State Superintendent of Public Schools, State Certificates, entitling them to teach, upon proper contract with the local board, in any county of the State without re-examination. The language of the State Superintendent on this point is as follows:

"*To graduates from your full course I will issue State Certificates (on parchment and permanent). To those from your lower course (the Pe. P's), a special for two years.*"

This secures to all our graduates, about to enter upon their professional duties, legal certificates, upon which valid contracts may be made with Boards of Directors.

Special attention is given to letters of inquiry from persons desiring assistance in employing teachers, and the graduates of the Normal Department are thus put in direct correspondence with those who wish their professional services.

During the past two years most of the technical work of the Normal Department has been divided among the members of the Academic Faculty, and instruc-

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Mr. Kelley's Normal Diploma Bill will be found below in full: "Section 7179a. The normal diploma conferred upon those completing a four years' course shall entitle its holder to teach school in any county in this State without further examination, until annulled by the board of regents or curators granting the same or by the county school commissioner or State Superintendent of Schools, for incompetency, cruelty, immorality, drunkenness or neglect of duty, and the graded certificate now granted upon the completion of a two years' course shall, in like manner, entitle the holder to teach the several branches of study named therein for a period of four (4) years from the date of graduation, unless such certificate be sooner annulled by said board or county school commissioner or State Superintendent of Schools, for one or more of the causes above specified. The provisions of this secshall apply also to the normal department of the University of Missouri and of Lincoln Institute."

tion has been given in courses of lectures, each professor dealing with the subjects and methods that come in his line of work. These courses of special lectures comprised the history of education among the ancients, both Oriental and European, during the middle ages and in modern times. Besides the history of education, practical instruction in the best methods of teaching grammar, arithmetic, algebra, history, botany and other subjects was given by the professors in charge of these branches, and to complete the work, the President of the University has each year given a course of lectures on the "Relation of Psychology to the work of the Teacher."

During the first semester, lectures are given by the Dean of the Department with special reference to English, while the available time of the second semester has been divided as appears in the following table:

Subject.	*Professor.*	*Time, weeks.*
Chinese and Indian Education	Blackwell	1
Greek Education	Fleet	1
Roman Education	Fisher	2
School Law	Tiedeman	2
Arithmetic Methods and Metric System	Cauthorn	1
Algebra Methods	Ficklin	1
Botany	Tracy	2
Farm and School	Sanborn	1
Metaphysics or Mental Science	Laws	2

AMENDMENT TO SCHOOL LAW.

Section 7077 was amended by the Thirty-third General Assembly, 1885, to read as follows: "No person shall be granted a certificate to teach in any of the public schools established under the provisions of this chapter who is not of good moral character, and qualified to teach orthography, reading, penmanship, arithmetic, English grammar, modern geography, history of the United States and civil government: provided, that if any patron of any public school in this State demands, in writing, that instruction in physiology and hygiene, with special reference to the effects of alcoholic drinks, stimulants and narcotics generally upon the human system, shall be given in the public schools of which such person is a patron; then it shall be unlawful for the board of directors, or the board of education of such school district to exclude such instruction from such public school. But such instruction shall only be given to the child or children of such patron or patrons demanding the teaching of the same. And provided further, that after the 1st day of September, A. D. 1886, no certificate shall be granted to any person to teach in the public schools of this State, and no teacher shall hereafter be authorized to teach therein who shall not have passed a satisfactory examination in physiology and hygiene with special reference to the effects of alcoholic drinks, stimulants and narcotics generally upon the human system."

Instruction in accordance with the provisions of this section was given during the second semester to the candidates for graduation.

THE LAW DEPARTMENT

OF THE

UNIVERSITY OF THE STATE OF MISSOURI.

FACULTY.

SAMUEL S. LAWS, LL. B., LL. D.,
President of the University, Professor of Logic and Ethics.

PHILEMON BLISS, LL. D.,
Resident Professor of Law and Dean.

CHRISTOPHER G. TIEDEMAN, A. M., LL. B.,
Resident Professor of Law.

HON. ARNOLD KREKEL, LL. D., U. S. DISTRICT JUDGE,
Lecturer upon Federal Jurisprudence.

HON. HENRY S. KELLEY, LL. D., JUDGE OF THE 29TH CIRCUIT,
Lecturer upon Criminal Law, Pleadings and Practice.

HON. SEYMOUR D. THOMPSON, LL. D., JUDGE ST. LOUIS COURT OF APPEALS,
Lecturer upon Law of Corporations.

HON. JNO. HINTON, JUDGE OF PROBATE, COLUMBIA,
Lecturer upon Probate Law and Practice.

PAUL SCHWEITZER, PH. D.,
Lecturer upon Toxicology.

ANDREW W. MCALESTER, A. M., M. D.,
Lecturer upon Criminal Jurisprudence.

MEMBERS OF THE SENIOR CLASS.

Name.	Residence.
Thomas Edward Allison	Perry, Ralls county, Mo.
Charles Herndon Baker	Edina, Knox county, Mo.
James Booth	Union, Franklin county, Mo.
Augustus William Brewster	Whitehall, Ill.
James Scott Brierly	Strassburg, Cass county, Mo.
Benjamin Franklin Cox	Joplin, Jasper county, Mo.
Jacob S. Davis	Washburn, Barry county, Mo.
Robert Harvey Davis	Claysville, Boone county, Mo.
Frank Riley Dearing	Blackwell, Washington county, Mo.
Francis Henry Dexter	Kansas City, Mo.
George F. Estes	Longmont, Col.
John Morgan Evans	Deer Lodge, Montana.
Norwood Fitch	Columbia, Boone county, Mo.
George Washington Goad	Appleton City, St. Clair county, Mo.
James Charles Growney	Conception, Nodaway county, Mo.
David Hickman Harris	McCredie, Callaway county, Mo.
Lee B. Hart	Brownsville, Saline county, Mo.
John Jackson Hendrick	Higginsville, Lafayette county, Mo.
William Mack	Lamar, Barton county, Mo.
William Foster Means	Clarksdale, DeKalb county, Mo.
John Franklin Murry	Columbia, Mo.
Will. Parmerlee	Sedalia, Mo.
William Alvin Ragland	Humansville, Polk county, Mo.
Charles Bennett Robinson	Louisville, Lincoln county, Mo.
Owen Harvey Robinson	Louisville, Lincoln county, Mo.
James Allen Smith	Kansas City, Mo.
Henson McClellan Stephens	Lamar, Barton county, Mo.
James L. Stephens	Centralia, Boone county, Mo.
William Henry Truitt	Millersburg, Callaway county, Mo.
Napoleon Bonaparte Welch	Keytesville, Chariton county, Mo.
Elgin U. Western	Kansas City, Mo.
Jacob Franklin Wharton	Nashville, Barton county, Mo.
William Nelson Wharton	Lamar, Barton county, Mo.
Theodore Loomis Wills	Lamar, Barton county, Mo.
Ralph Grant Worster	Grant City, Worth county, Mo.

MEMBERS OF THE JUNIOR CLASS.

Name.	Residence.
Thomas Lilburn Anderson	Palmyra, Marion county, Mo.
Robert Wilson Barrow	Macon City, Macon county, Mo.
William Henry Barse	Kansas City, Mo.
William Edward Billups	Melton, Iowa.
Walter Emmett Boulton	Columbia, Mo.
Grant Comfort	Verdella, Barton county, Mo.
Albert Sidney Cowden	Goodnight, Polk county, Mo.
Patrick Henry Cullen	Columbia, Mo.
George Alvin Dabbs	Rocky Comfort, McDonald county, Mo.
Charles Henry Finegan	New London, Ralls county, Mo.
North Todd Gentry	Columbia, Mo.
Nicholas Madison Haux	Columbus, Johnson county, Mo.
Henry Clay Heather	Palmyra, Marion county, Mo.
Simon Taylor Horn	Bailey's, Park county, Col.
Wm. Gill Haydon	Ashland, Boone county, Mo.

MEMBERS OF THE JUNIOR CLASS.—CONTINUED.

Name.	Residence.
John Sappington Marmaduke Huff	New Frankfort, Saline county, Mo.
Henry Bailey Irwin	Rush Tower, Jefferson county, Mo.
James Austin Kemper	Wellington, Lafayette county, Mo.
Isaac Brutus Kimbrell	Centralia, Boone county, Mo.
Edwin Law McCall	Reform, Callaway county. Mo.
Robert Samuel Meyer	Mound City, Holt county, Mo.
Otto Francis Neuenbahr	Hermann, Gasconade county, Mo.
Walton Elbert Nicklin	Ellsberry, Lincoln county, Mo.
James Delano Pilcher	Ester, Marion county, Mo.
Robert Warren Prigmore	Brownsville, Saline county, Mo.
Marion Bailey Proctor	Monroe City, Monroe county, Mo.
Joseph Johnston Reynolds	Agency Ford, Buchanan county, Mo.
John Jesse Rieger	Kansas City, Mo.
Jesse Lee Russell	Grangeville, Newton county, Mo.
Robert Francis Schofield	Knox City, Knox county, Mo.
Judson Waller Smith	Nevada, Vernon county, Mo.
Robert Lee Tucker	Silver Lake, Perry county, Mo.
Thomas Anderson Walker	Page City, Lafayette county, Mo.
John Samuel Wash	Maywood, Lewis county, Mo.
Oscar George Williams	Edinburgh, Grundy county, Mo.
Benjamin Steele Wilson	Columbia, Mo.
SPECIAL STUDENTS.	
Lynn C. Hopkins	Carrollton, Ill.

SUMMARY.

Senior class	35
Junior class	36
Special students	1
Total	72

GRADUATES OF THE YEAR 1887.

Name.	Name.
Thomas Edward Allison.	John Jackson Hendrick.
Charles Herndon Baker.	William Mack.
James Booth.	William Foster Means.
Augustus William Brewster.	John Franklin Murry.
James Scott Brierly.	Will Parmerlee.
Benjamin Franklin Cox.	Charles Bennett Robinson.
Jacob S. Davis.	Owen Harvey Robinson.
Robert Harvey Davis.	James Allen Smith.
Frank Riley Dearing.	Henson McClellan Stephens.
Francis Henry Dexter.	James L. Stephens.
George F. Estes.	William Henry Truitt.
John Morgan Evans.	Napoleon Bonaparte Welch.
Norwood Fitch	Elgin U. Western.
George Washington Goad.	Jacob Franklin Wharton.
James Charles Growney.	William Nelson Wharton.
David Hickman Harris.	Theodore Loomis Wills.
Lee B. Hart.	

Terms of Admission.

For admission to the Junior class, no special examination is required; but the student, if unknown to the Professor, must bring testimonials of good character. Those who pass examinations in the Law studies of the Junior year, and in English Grammar and Prose Composition, will be admitted to the Senior class.

Course of Instruction.

The Law term commences on the second Tuesday (13th) of September and closes the 29th of March. The full course is for the term of two years, and embraces the various branches given below. Instruction is given by daily examination upon the text-books, by lectures upon special titles, and by the exercises of a moot court.

No one will be admitted to the Senior class as a candidate for a degree unless he shall be able to sustain an examination upon the studies of the Junior year. In exceptional cases, when there is a failure upon one or two branches only, the examination as to those branches may be postponed to some period during the term.

The Junior class will take an elementary course in common law, will study thoroughly the law of contracts, the law of torts, outlines of the law of real property, international and constitutional law, logic and ethics. The chief text-books will be Ewell's or any other edition of Blackstone, Parsons on Contracts, and Cooley on Torts.

It is contemplated that the work of Mr. Bishop on Contracts (enlarged edition) will be used as a text-book, instead of the work of Mr. Parsons, supplemented by lectures on Personal Property, and the use of small treatises on Bailments, Sales, etc., wherever such can be conveniently used. Students, therefore, are warned against the purchase of any work on Contracts, before reaching Columbia. A definite announcement will not be made until the opening of the school in September.

The instruction in international and constitutional law, logic and ethics, will be principally by lectures, but with reference to, and examinations from, Kent's or Woolsey's International Law, Creasey's English Constitution, Cooley's Treatise upon the Federal Constitution, Jevon's Lessons in Logic, Wayland's or Haven's Ethics. In International and Constitutional Law, further reference is had to Dana's Wheaton, to Freeman and Stubbs on the English Constitution, and to the larger works upon our own Constitution, which the student will have opportunity to consult.

The Senior class will study the Law of Evidence, of Pleadings, of Real Property, of Bills and Notes, Equity Jurisprudence and Medical Jurisprudence, and will review the Law of Contracts with the Junior class. The text-books used will be Stephens' Digest of the Law of Evidence, Chase's Edition, Bispham's Equity, Heard's Civil Pleading, Bliss on Pleading, Tiedeman on Real Property, Pollock on Partnership, etc. Lectures will also be given upon Practice, upon Commercial Paper, and upon extraordinary remedies.

Logic and Ethics are taught by the President of the University, the other branches by the Professors of law, and, in addition, the non-resident lecturers will give courses of lectures upon the special subjects named.

The members of the Junior class will be examined upon the topics above

named to be studied by them, and will also be examined by the Professor of English upon English Grammar and Prose Composition, and if successful, they will be entitled to admission to the Senior class.

A knowledge of Book-keeping is so essential to the practical life of a lawyer, that its study, here or elsewhere, will be insisted on before graduation. An opportunity is given for its study under the Professor in charge, and a certificate from him will be required.

The classes are favored at times with lectures by gentlemen not connected with the School.

Students who do not wish to take the full course, and who are not candidates for the degree of Bachelor of Laws, will be permitted to take an elective course, and pursue any branches whose recitations do not interfere with each other.

The Law Faculty are more and more satisfied that the highest results cannot be reached by lectures alone or chiefly, however clear and thorough they may be, but that the students should, as far as possible, be required to study the text-books and be subject to a daily examination upon their contents, accompanied by oral explanations by the teacher In this way, and this only, can the subject be fixed in his memory, and by this only can be secured the formation of proper habits of study. The lecture has been combined with study, and, in subjects, which for want of time and proper books cannot be otherwise taught, is chiefly relied on.

The additional studies of the Junior year will compel ordinary students, although they enter with some preparation, to take the full two years course. The Law Faculty have seen, with pain, the labors of bright and promising young men in cramming themselves for examination by substantially one year's study. Their success is their greatest misfortune. They must have time before daring to think of themselves as lawyers, to grow into the habits of thought, into the language, the spirit of the profession; and this can only be the work of years. A writer in the American Law Review, in speaking of those who successfully pass examination after one year's study, says: "Their rapidly acquired knowledge will not stay by them; they have eaten but not digested. They have, however, gained the title of lawyers, they are admitted to the bar, they have no longer the stimulus to study, and careful observation shows that their studies practically cease. On the other hand, had a definite time of pupilage been required, these same students would have lost none of their ambition and zeal, and by taking their studies more slowly, would have called other faculties than memory into constant play. Their studies would have been spread over three or five years instead of one; they would have had time to review their work, to comprehend its full bearing, to discern 'the reason whereof,' without which 'the law is unknown,' and for which time and spontaneous thinking are requisite. They would imbibe and digest principles instead of cramming facts, and could see these principles applied to actual cases, and thus get some understanding of the practical side of their profession, of the discipline and habits of business, while responsible to no client for their errors. In the end such students would be apt to become sound lawyers, instead of drawfing their prospects at the very outset."

The Moot Court

Is held every Monday, and is made to represent some actual court, with its clerk and sheriff; and the matters discussed arise in some supposed cause. Regular pleadings are required—many of them drawn according to the Common Law and Equity system—and, when the cause is supposed to be in the Supreme Court, in

addition to the pleadings, papers are prepared, necessary in actual practice, as the writ of error, assignment of errors, bill of exceptions embodying the instructions to the jury, rulings upon the admission or exclusion of evidence, motions for new trial, or in arrest, etc. Briefs of points and authorities must also be filed, and no one in default will be permitted to argue a cause. A member of the Senior class is called to sit as special judge in each cause, who, the next week, gives his opinion in writing subject to appeal to the presiding professor. Essays upon legal topics are also read each week.

Library.

Heretofore our law library has been so small that we did not deem it worthy of much notice in our catalogue; but at the late meeting of the General Assembly of Missouri, a reasonable sum of money was appropriated for the library of the law school, with indications that the appropriations for that object would be continued by future legislatures; and the students of 1887–88 may expect to find a fair working library at their service.

Degree LL.B. (Legum Baccalaureus.)

Those of the Senior class who sustain an examination will be entitled to the degree of Bachelor of Laws.

Every candidate for this degree is required to file with the faculty an essay or thesis upon some topic connected with his studies.

All who receive the degree are by law admitted, without further examination, to practice in the Missouri Courts. (See Session Acts of 1874.)

This provision of the law was left out of the revision of 1879. But it has been repeatedly held by the Supreme Court and circuit courts of the State, that the omission of the clause did not operate as a repeal.

Expenses.

Tuition is as follows: For the first year, $50, payable in advance; for the second year, $40; for candidates for the Senior class, who have not been members of the Junior class, $50. Boarding is had in clubs at $2.25 per week, and in families from $3 to $4.50. No fee for incidentals. The law students have access to any of the other schools, without any additional expense.

For further information, address either of the Professors of Law, and for catalogue, address J. H. Drummond, Librarian of the University.

XV. MEDICAL SCHOOL.

Contract of Co-operation Entered Into by and Between the Curators of the University of the State of Missouri, at Columbia, Missouri, and the Missouri Medical College, at St. Louis, Missouri.

UNIVERSITY BOARD ROOM,
COLUMBIA, MO., June 4, 1886.

Copy taken from minutes of Board Curators of the University of the State of Missouri, meeting of June 2, 1886.

J. H. DRUMMOND,
Secretary of Board.

LETTER OF JUDGE MARTIN.

ST. LOUIS, May 28, 1886.

Dr. S. S. Laws—Dear Sir: I have prepared a scheme of co-operation, which has been submitted to Dr. Prewitt, and meets his approval. I believe it embodies your ideas also. It can be easily changed or modified to meet the wishes of the Board of Curators.

The Missouri Medical College, as existing at present, rests upon an act of the General Assembly, approved April 2, 1885. (Sess. Acts, 1885, p. 99.) In pursuance of that act the Circuit court, upon a petition filed, made a decree giving it all the authority contained in the old charter of 1845. (Sess. Acts, 1845, p. 110.)

Therefore, for purposes of this contract, you need consult only the decree, the act of 1885 and the charter of 1845. Dr. Prewitt will take up with him or send a copy of this decree.

As to the legality of the scheme of co-operation I have no serious doubt. Neither corporation is merged in the other, and neither has any substantial control over the other; neither can be held liable for the other's debts. The two corporations, with a single aim of advancing the objects of their incorporation, unite in furnishing to the students resorting to both institutions, with advantages and benefits peculiar to each.

The whole plan is protected from any serious or continued injury to either party by the reservation of the right of revocation or dissolution upon short notice.

Hoping that the scheme may meet with a favorable consideration,

I remain, truly yours,
ALEX. MARTIN.

CONTRACT.

This contract of co-operation, entered into this second day of June, 1886, by and between the Curators of the University of the State of Missouri, at Columbia, Mo., and the Missouri Medical College, at St. Louis, Mo.,

Witnesseth: Whereas, the said contracting parties are convinced that the students in the Medical Department of said University would derive superior advantages by being admitted to the lectures and instructions of the Missouri Medical College, at St. Louis, and that the students before entering said Missouri Medical College would derive superior advantages in being admitted to the lectures and instructions enjoyed by medical students in said University; now, therefore, in consideration of the premises, and for the sole purpose of securing said benefits, it is stipulated and agreed by and between said contracting parties as follows:

1st—The present Medical School of said University shall be designated and known in this arrangement of association as Section No. 1, of the Medical Department of the University of the State of Missouri; and the said Missouri Medical College, at St. Louis, shall be designated and known as Section No. 2, of the Medical Department of the University of the State of Missouri.

2d—Students who shall complete the preparatory studies and also the studies prescribed in the Junior year of Section No. 1, shall receive a certificate to that effect, properly signed by the President, and also the tickets of the several professors of said Section No. 1.

3d—Any student on the presentation of such certificate and tickets to the said Missouri Medical College, designated as Section No. 2, shall be entitled to all the privileges of said Section No. 2, but shall be required to pursue only the subjects of study not completed in Section No. 1, and shall be required to pay only for the matriculation ticket, and for the tickets to the subjects of study and instruction required of him in Section No. 2.

4th—Each student from Section No. 1 who completes the course of study and instruction in Section No. 2, as provided in these articles of agreement, upon passing satisfactory examination shall be entitled to a diploma jointly issued by the authorities controlling both sections, and all diplomas of Section No. 2, as well as the joint diplomas, shall be signed and delivered by the President of said University.

5th—In the event of prizes, medals or distinctions being awarded, the standing of students from Section No. 1 shall be credited to them in all such contests.

6th—The authorities controlling Section No. 2 are to exercise an active influence, in all circulars and catalogues, to induce students to first complete their Junior course in Section No. 1, at Columbia.

7th—There shall be a joint annual catalogue or circular issued by the two sections, which shall be submitted to each section for approval, before the printing and circulation thereof.

8th—It is covenanted and agreed between said parties that neither the University nor its Board of Curators shall be liable for any debt, damage or default on account of said Section No. 2, and in like manner said Missouri Medical College shall not be liable on account of any debt, damage or default on account of Section No. 1.

9th—This contract of co-operation having been entered into for the mutual advantages of the contracting parties, may be terminated or discontinued at the option of either party, by giving six months' notice of the intention to terminate and discontinue the same.

10th—The separate and independent personality of the said contracting parties shall remain the same as heretofore, and the government of each section by its proper and legal authorities shall not be affected in any manner by this contract of co-operation.

Witness the signatures and seals of said parties this day and year first above written.

E. W. STEPHENS,
President of the Board of Curators, University of the State of Mo.

CHARLES GIBSON,
President of the Board of Trustees of the Mo. Medical College.

The above papers are true copies of those now on file in my office, and which papers have become part of the minutes of this Board.

ATTEST: J. H. DRUMMOND,
Sec. Board of Curators.

SECTION NO. 1, LOCATED AT COLUMBIA, MO.

(Founded 1845.)

FACULTY.

SAMUEL S. LAWS, LL. D.,
President of the University.

PAUL SCHWEITZER, PH. D.,
Professor of Chemistry and Toxicology.

ANDREW W. MCALESTER, A. M., M. D.,
Professor of Surgery and Obstetrics.

SAMUEL S. LAWS, M. D., LL. D.,
Professor of History and Philosophy of Medicine.

WOODSON MOSS, M. D.,
Professor of Anatomy and Physiology, and Secretary.

S. M. TRACY, M. S.,
Professor of Medical Botany.

W. B. SMITH, PH. D.,
Professor of Physics.

PAUL PAQUIN, M. D., V. S.,
Professor of Comparative Medicine, and Director of Vaccine Laboratory (optional).

THE JUNIOR MEDICAL COURSE OF SECTION NO. 1, 1887-8.

Studies.	First Semester—Sept 8 to Jan. 18.					
	Monday....	Tuesday....	Wednesday	Thursday..	Friday.....	Saturday...
Principles of Obstetrics.....	8-8.45	8-8.45	8-8.45	8-8 45	8-8.45	8-8.45
Anatomy	9-10	9-10	9-10	9-10	9-10	9-10
Physiology	10-11	10-11	10-11	10-11	10-11	10-11
Advanced Chemistry.....		11-12	11-12	11-12	11-12	11-12
Medical Botany.....		12-1	.....	12-1	.....	12-1
Materia Medica and Therapeutics.....	Laboratory and special work.	.....	12-1	.....	12-1	... ..
The Microscope and Experimental Laboratory.....		2-4	2-4	2-4	2-4	2-4
Dissecting.....		8-10	8-10	8-10	8-10	8-10

Studies.	Second Semester—Jan. 18 to June 1.					
	Monday....	Tuesday ...	Wednesday	Thursday..	Friday	Saturday...
General and Spec. Pathology	8-8.45	8-8.45	8-8.45	8-8.45	8-8.45	8-8.45
Physiology	9-10	9-10	9-10	9-10	9-10	9-10
Comparative Medicine.....	10-11	10-11	10-11	10-11	10-11	10-11
Applied Chemistry and Toxicology.....		11-12	11-12	11-12	11-12	11-12
Materia Medica and Therapeutics.....	Laboratory and special work.	12-1	.....	12-1	.....	12-1
History and Philosophy of Medicine.....		.....	12-1	.....	12-1	.....
Laboratory.....		2-4	2-4	2-4	2-4	2-4
Dessecting.....		8-10	8-10	8-10	8-10	8 10

Laboratory work comprises work done in the Laboratories of Chemistry, Physics, Botany, Zoological and Vaccine

In addition to the above Junior Medical Course, all students before receiving the certificate which secures to its holders certain important advantages in Section No. 2, as matriculants from Section No. 1, must pass a satisfactory examination upon the following subjects, to-wit:

First Semester.	Second Semester.
II. Latin.	II. Chemistry.
III. Physics.	Political Science,
IV. Zoology and drawing.	English Composition.
English Composition.	Botany and Book-Keeping.
Arithmetic and Metrical System.	

These subjects are arranged in a continuous year's course for such as may have only an imperfect common school education.

Those who fail to make good this elementary academic work will only have as hitherto their tickets to show for work done in the Junior Medical Course.

Fee for year of Academic work, $20.00.

Fee for Junior Medical Course, including Demonstrator's ticket, $50.00.

Session 9 months, and board, $3.00 to $4.50 a week.

No fees will be remitted.

Remark—It must be distinctly understood that students can still enter both schools the same as formerly; the above conditions being arranged for the benefit of such as may desire to avail themselves of the special advantages of the co-operation of the two sections as provided. The degree of M. D. will not be conferred by Section No. 1, except jointly with Section No. 2.

LIST OF TEXT-BOOK.

Anatomy—Gray. *Physiology*—Dalton. *Chemistry*.
Obstetrics—Playfair. *Mat. Medica*—Barthalow. *Medical Botany*.
General and Special Pathology.

GENERAL PLAN OF INSTRUCTION.

Instruction in this school is given by lectures and recitations.

It has occurred, in an instance of marked interest, that the Diploma of our Missouri University Medical School has been recognized by one of the leading German Universities after careful inquiry, and its holder was, without examination, honored as Doctor of Medicine.

The length of the session, NINE MONTHS, renders it practicable to distribute the different branches among the teachers in the most satisfactory manner, and in their natural order and succession. The student is thoroughly drilled each day by examinations upon the lectures of the previous day, and by recitations from the text-books.

By this method of teaching, it is claimed that we avoid the process of cram ming—a deleterious practice, too prevalent in the general system of medical education. We believe that the proposed method of teaching will do more to elevate the standard of medical education, and to exalt the dignity of the profession, than any other measure that could be adopted.

The duties of the school are so distributed as to allow of the study of branches which, while they are of vital importance to the well educated physician, are almost entirely ignored in many of the schools of this country.

Besides the ordinary instruction in Chemistry, a special course is given to advanced students in Toxicology, the material and appliances for teaching, which are not excelled by any institution in the United States.

The students are also taught the use of the microscope, both in relation to pathological and physiological studies. For instruction in this most important and beautiful subject, the students are arranged in classes of five each. Besides the microscope the Department has the benefit of two superior Magic Lanterns. For illustrating lectures with the above instruments, there are over 500 slides.

Among the advantages offered by this school, is the privilege granted without further cost, to all students who enter the Medical Department, of pursuing such studies as they may desire in the academic course. Or academic students may take Anatomy and Chemistry in the medical course, preparatory to entering on the full medical course, after graduating in Arts, Science or Letters. Some students pursue this plan every year.

This department is equipped with models in clastic and papier mache, plaster casts, drawings and other appliances for the illustration of the lectures on anatomy, surgery and physiology.

Among the many valuable preparations for demonstrating anatomy and surgery is Dr. Auzoux's Clastic Man, a complete and accurate model of the male human body. The figure is five feet ten inches in height, and is composed of ninety-two separate parts, which may be detached from one another. It exhibits over two thousand details of the viscera, muscles, nerves, blood-vessels, etc.; in short, all that is usually embraced in a complete treatise on anatomy.

Also, Auzoux's female pelvis, with the external organs of generation, the lumbar vertebræ, diaphragm, muscles, aponeuroses of the perineum, vessels and nerves.

Also, his collection illustrating ovology. These models are on an enlarged scale, and exhibit the modification of the ovum, envelopes and viteline vesicle, etc.

In addition to the above, are eight uteri, in clastic, containing the products of conception at the first, second, third, fourth, eighth and ninth months, with examples of tubular and ovarian pregnancy.

Another model, to which we deem it proper to call special attention, is Dr. Auzoux's synthetic model of the brain, which exhibits the structure of that organ upon an immensely magnified scale. Designed in conformity with the new anatomical indications furnished by Dr. Luys, this model presents a resume of all the researches of ancient and modern anatomists. This entirely new method of studying the brain opens an immense field for the research of physicians and philosophers.

The models of the Eye and Ear are greatly enlarged and very accurate, showing the complete gross structure of these organs, as described by modern anatomists.

The preparation of the Head is most admirably executed. The bones are disarticulated, and mounted according to the methods of Beauchene.

Besides these invaluable models and preparations, we have a complete set of the German anatomical models in plastic, made at Leipsic.

No physician can truthfully claim to be cultivated in his profession who is ignorant of the history of its rise and progress, and of the grounds upon which rests its claims to rank among the sciences. Nor is any man thoroughly qualified to prac-

tice medicine who is ignorant of the science of Psychology. The lectures on psychological medicine are illustrated by models and drawings of the most accurate and artistic construction. An epitome of the Science of Psychology, in a course of twelve lectures, will be given to the class next year by Dr. Laws.

Practical Anatomy.

Every facility is afforded the student for the study of practical anatomy. Adequate provision is made for a supply of subjects amply sufficient for the number of students. The dissecting rooms are large and well ventilated, and will be open during the whole winter season, where, under the guidance of the Demonstrator, the student must, by dissection, acquire a practical knowledge of the human body in all its parts.

President Laws has placed at the service of the Medical School, his rare lecture-room helps, including a complete set of Marshall's Plates, large and small, last edition; the entire collection of over one hundred colored plates used, by the late Dr. Crosby in his lectures, and prepared at an expense of about $1,500; also the plates of Hirschfield, Rudinger and others, together with over 400 projections, etc., etc.

It is the aim of this department to make its honors testimonials of merit, and not mere certificates of an attendance on a prescribed course of instruction.

Medical students are required to take a prescribed course in Analytical Chemistry under the direction of the Professor of Chemistry and Toxicology.

The next session will begin on the 2nd Tuesday, September 13th, 1887; the Junior course will close the 1st Thursday in June, 1888. The fee for tuition for the term of eight or nine months is $40.00; for demonstrator's ticket, $10.00; *both are payable at the time of matriculation, and required of every student. No deductions are made for students entering after the beginning of the session.*

Purchasing Text-Books.

All works used as text-books in the school, as well as books of reference, can be purchased here on as favorable terms as in any of the Eastern cities.

For any further information, in relation to the school, address,

WOODSON MOSS, M. D.,
Secretary Medical Faculty, Columbia, Mo.

Vaccine and Experimental Laboratory.

The following minute of the Medical Faculty explains itself, and has been approved by the Curators, to wit:

"Whereas, The attention of the Medical Faculty has been called to the importance of establishing a vaccine and experimental laboratory by the Board of Curators of the Missouri University for the purpose of aiding in furnishing pure small-pox lymph and other vaccine matter for the prevention of the infectious diseases of man and animals; and has also learned that the State Board of Health favors the same; and still further, that a farmers Institute of the Missouri State Board of Agriculture recently expressed itself warmly in favor of there being a vaccine and experimental laboratory opened by the State in connection with the Missouri Agricultural College, for the purpose of pursuing the Methods of Pasteur and others, so beneficial in the mitigation and control of infectious diseases of man and animals; now, therefore,

Resolved, That this faculty learns of this movement with great satisfaction, recommends to the Curators the establishment of such a laboratory, and will gladly co-operate in the same, and would express confidence in Dr. Paquin's competence to take charge of the same."

The following plan for organizing the vaccine and experimental laboratory is recommended:

1. "It shall be styled the Missouri State University Vaccine and Experimental Laboratory.

2. "Its officers shall be as follows: General Superintendent, Dean of Agricultural College; Chief Operator of Laboratory, State Veterinarian; assisted by one member of Medical Faculty.

"Board of Inspectors; the State Board of Health and Medical Faculty of University."

The above plan and resolution was recommended to the Board of Curators by the Medical Faculty.

The Missouri University Faculty has the competence and the enterprise to do, and to do well, what is here undertaken in the interest of the commonwealth; and it behooves us as a great and growing State to develop primarily our own resources and to cultivate self-reliance in dealing with the issues before us.

SECTION NO. 2, THE MISSOURI MEDICAL COLLEGE, AT ST. LOUIS.

BOARD OF TRUSTEES.

Charles Gibson, Esq., President. C. A. Todd, A. M., M. D.
Edward Bredell, Esq. T. F. Prewitt, M. D.
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FACULTY.

SAMUEL S. LAWS, LL.D.,
President of the Faculty.

WM. M. McPHETERS, M. D.,
Emeritus Professor of Materia Medica and Therapeutics.

G. M. B. MAUGHS, M. D.,
Emeritus Professor of Obstetrics and Diseases of Women.

P. GERVAIS ROBINSON, M. D., LL.D.,
Professor of Practice of Medicine, Clinical Medicine and Hygiene, 3411 Washington Av.

J. K. BAUDUY, M. D., LL.D.,
Professor of Sychological Medicine and Diseases of the Nervous System, 2808 Olive St.

CHARLES E. MICHEL, M. D.,
Professor of Ophthalmology, 2925 Washington Avenue.

H. TUHOLSKE, M. D.,
Professor of Clinical Surgery and Surgical Pathology, N. E. Corner Jefferson Avenue. and Locust Street.

OTTO A. WALL, M. D., PH. G.,
Professor of Pharmacy, 2111 South Second Street.

C. A. TODD, A. M., M. D.,
Professor of Anatomy and Diseases of the Ear and Throat, 2645 Washington Avenue

J. P. KINGSLEY, PH. B., M. D., SECRETARY,
Professor of Materia Medica, Therapeutics and Diseases of Children, 2330 Washington Avenue.

T. F. PREWITT, M. D., DEAN,
Professor of Principles and Practice of Surgery and Clinical Surgery, Corner 22d and Olive Streets.

C. O. CURTMAN, M. D.,
Professor of Chemistry and Director of Chemical Laboratory, 3718 N. Ninth St.

G. A. MOSES, M. D.,
Professor of Obstetrics and Diseases of Women, 2901 Washington Avenue.

LUDWIG BREMER, M. D.,
Professor of Physiology, Histology, and Pathological Anatomy ; Director of the Biological Laboratory, 2023 Park Avenue.

W. A. HARDAWAY, A. M., M. D.,
Clinical Professor of Dermatology.

C. A. TODD, A. M., M. D.,
Demonstrator of Anatomy.

A. V. L. BROKAW, M. D.,
C. H. DIXON, M. D.,
Assistant Demonstrators.

ASSISTANTS.

JUSTIN STEER, PH. B , M. D.,
Adjunct to Professor of Practice of Medicine and Lecturer on Clinical Medicine.

F. STUEVER, A. M., M. D.,
Adjunct to Professor of Ophthalmology.

F. D. MOONEY, M. D.,
Clinical Assistant to the Chair of Gynæcology.

A. V. L. BROKAW, M. D.,
Clinical Assistant to the Chair of Surgery.

O. E. FORSTER, M. D.,
Clinical Assistant to the Chair of Otology and Laryngology.

F. R. EVERSOLE, M. D.,
Clinical Assistant to the Chair of Dermatology.

T. A. MARTIN, M. D.,
Clinical Assistant to the Chair of Diseases of Children.

PETER FINING,
Janitor.

LIST OF TEXT-BOOKS.

Anatomy—Gray, Allen, Weisse, Holden's (Dissector).
Surgery—Gross, Holmes, Bryant, Billroth, Hamilton, Thompson on Urinary Organs.

Practice of Medicine—Flint, Niemeyer, Aitkin.

Materia Medica—Bartholow, Farquharson, National Dyspensary.

Physiology—Kirke, Foster, Dalton, Carpenter, Landon.

Chemistry—Roscoe, Richter, Simon, Fownes, Norton's Natural Philosophy.

Chemical Laboratory--Beilstein-Curtman, second edition (for reference: Fresenius, Classen).

Texicology—Taylor, Beck, Tidy.

Pharmacy—U. S. Pharmacopeia, Parrish.

Obstetrics—Hodge, Playfair, Lusk.

Diseases of Women—Thomas, Emmet, Barnes.

Diseases of Children—Smith, Meigs & Pepper, Vogel, Day.

Clinical Medicine—Barclay's Medical Diagnosis, DaCosta's Medical Diagnosis, Tanner's Clinical Medicine.

Nervous Diseases—Bauduy, Hammond, Todd, Rosenthall.

Insanity—Maudsley, Bucknill, Tuke.

Histology—Schæfer, Klein.

Ophthalmology—Nettleship, Wells, Carter.

Otology—St. John Roosa.

Diseases of the Throat—Mackenzie.

Dermatology—Duhring, Fox, Hardaway on Vaccination.

FEES.

Lecture Fees for the Course.....$60 00
Matriculation Fee (good until the following March)..... 5 00
Admission to the Dissecting Room (material plenty and at cost)..... 10 00
Examination for Degree (not returnable). Students examined at end of the second year in the Graded Course pay one-half this fee..... 30 00
Admission to the College clinics.....FREE.

Students from Section No. 1 are not obliged to take out tickets in those branches finished in that section, nor do they pay examination fees in those branches.

No fee charged for graduation or diploma.

The fees *must* be paid *promptly* at the beginning of the term, as the tickets will be required to be exhibited after the expiration of the second week of session.

Physicians residing in or passing through the city are cordially invited to attend the lectures and clinics of the College.

Graduates of this school may enjoy the privileges of attending the lectures and clinics free of charge.

Students may attend the lectures of one or more Professors on paying the Matriculation Fee, and purchasing single tickets at $10 each.

Students may select their seats in the lecture rooms when they take their tickets, or the Secretary will select for them, on receipt of the matriculation fee, $5, previous to the opening of the session; *seats thus taken, if not occupied by the end of the second week of the winter term, will be forfeited and assigned to students who are present to occupy them.*

Students on arriving in the city should call on the Janitor, the Dean or the

Secretary at the College, N. E. Corner of Twenty-second Street and Lucas Avenue.

For further information address with stamp or postal card enclosed,

T. F. PREWITT, M. D., *Dean.*

PRELIMINARY EXAMINATIONS.

A preliminary examination, as stated in previous catalogues, is required as a condition of admission to the regular Winter Course of Lectures. This examination will be held at the beginning of the Winter or Spring term, as the student enters. It will embrace the branches of a good English education, such as are taught in the public schools, namely: Mathematics, Elementary Principles of Physics, and English Composition, a short paper being written upon a given subject.

Gentlemen who are graduates of a literary or scientific college, academy, or high school, or who have passed the entrance examination of a literary college in good standing; those who have a County or State teacher's certificate; graduates in medicine; and students taking lectures for a special purpose other than securing the degree, will be exempt from this examination.

Gentlemen are advised to bring with them documentary proof of their preliminary education, as explained above, and thus save themselves the necessity of the examination at St. Louis.

For any further information, in relation to Section No. 2, address,

T. F. PREWITT, M. D.,
Corner Twenty-second and Olive Streets, St. Louis, Mo.

There were in attendance during the past session (195) one hundred and ninety-five students. There were (92) ninety-two graduates.

MISSOURI UNIVERSITY

SCHOOL OF MINES AND METALLURGY,

ROLLA, PHELPS COUNTY, MO.

REPORT FOR THE YEAR ENDING JUNE 9TH, 1887.

BOARD OF CURATORS.

JOHN S. CLARKSON, A. M.	Columbia..	Term expires Jan. 1, 1889.
JERRE C. CRAVENS, ESQ.	Springfield.	
DEWITT CLINTON ALLEN, ESQ.	Liberty....	
EDWIN W. STEPHENS, A. M.	Columbia..	Term expires Jan. 1, 1891.
JAMES R. ESTILL	Howard Co.	
JOSEPH CAMPBELL	Rolla.....	
J. S. MOSS, ESQ.	Columbia..	Term expires Jan. 1, 1893.
CHARLES C. BLAND, ESQ	Rolla.....	
NORMAN J. COLMAN, U. S. Com. Ag.	St. Louis...	

OFFICERS OF THE BOARD.

EDWIN W. STEPHENS, A. M. ..... President.
JERRE C. CRAVENS, ESQ ..... Vice-President.
J. H. DRUMMOND, Secretary. ROBERT BEVERLY PRICE, Treasurer.

SCHOOL OF MINES.

EXECUTIVE COMMITTEE.

JUDGE CHARLES C. BLAND, Chairman..... ..... Rolla.
JOSEPH CAMPBELL..... Rolla.
JERRE C. CRAVENS, ESQ..... Springfield.
D. W. MALCOLM, Treasurer..... Office at Rolla.
HENRY WOOD, Secretary Executive Committee.

FACULTY.

SAMUEL S. LAWS, LL. D.,
President.

CHAS. E. WAIT, C. E., M. E., (Director),
Professor of Analytical Chemistry and Metallurgy.

† MAJOR GEO. D. EMERSON, M. E.,
Special Lecturer on Mine Engineering.

‡.....
Professor of Civil and Mine Engineering and Graphics.
(To be supplied.)

E DE W. Eaton, M. S., C. E.,
Professor of Mathematics.

W. G. CLARK, B. S., (C. E.),
Assistant in Mathematics and Chemistry and Secretary of the Faculty.

E. A. DRAKE, A. B.,
Instructor in English Branches.

W. G. CLARK,
Librarian.

GRADUATES.

Duncan, Gustavus H., C. E.	1874	Boulder, Col.
*Gill, John H., C. E.	1874	U. S. Eng. Dep., Washington D. C.
Pack, John W., M. E.	1874	Assayer, Helena, Montana.
Deegan, Francis J., C. E.	1875	Eng. on St. L. & San Francisco R. R.
Hare, Almon W., M. E.	1875	Leadville, Col.
Emerson, Cyrus H., C. E.	1876	Denison, Texas.

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*Deceased. †For 1886-7. ‡The work during the past year was in charge of Mr. Clark.

Garvens, Oscar E., M. E.....1876	.....Lead City, Dakota Ter.
Greason, John D., M. E.....1876	.....Druggist, Ironton, Mo.
McGrath, John D., C. E.....1876	.....U. S. Coast Survey.
Minger, William C., M. E.....1876	....Boulder, Col.
Ohmann-Dumesnill, A., H. M. E....1877	.....M. D., St. Louis.
Pack, James A., M. E.....1877	.....Assayer, Butte City, Montana.
*Milsaps, Thomas H., C. E.....1877	
Brown, Wilton R., M. E.....1878	Assayer of Shakespeare Gold and Silver Min. Co., Shakespeare, Grant county, New Mexico
Grabill, Lee R., M. E.....1878	.....Assayer, New Mexico.
Bean, William Y., C. E.....1878	.....Engineer, Missouri Pacific R. R.
*Coppedge, Lindsay L., C. E.....1878	.....Engineer, Missouri Pacific R. R.
Winters, Chas. F., M. E.....1879	.....Assayer, New Mexico.
Hoyer, Rudolph C., C. E.....1879	.....U. S. Eng. Dep., City of Mexico.
Carson, Arthur C., M. E.....1880	.....Assayer, Butte City, Montana.
Smith, Lorin X., M. E.....1880	....Mining Engineer, Silver City, N. M.
Smith, Lorin X., C. E.....1881	.... " " " " "
Summers, Edward B.....1881	.....Engineer, U. S. Topog. Survey.
Wishon, Walter, W.....1881	.... Colorado Springs, Col.
Gibb, Frank W., C. E., M. E.....1882	.....Mining Engineer, Little Rock, Ark.
Painter, W. R., C. E.....1882	.....County Surveyor, Moberly, Mo.
Schrantz, A. B., C. E.....1882	.....Engineer, U. P. R. R.
Van Devander, H. N., C. E.....1882	..... Engineer, Frisco Railway.
Ross, B., M. E.....1882	.... Houston, Mo.
Davis, Floyd, C. E., M. E., Ph. B....1883	Professor of Assaying and Metallurgy, Dak. School of Mines, Rapids City, Dakota, Ter.
Alexander, Curtis, C. E., M. E.....1884	.... Maryville, Mo.
Claypool, W. M., C. E., M. E.....1884	.....Chemist, Fairbank, Ariz. Ter.
Gallaher, P. C., M. E.....1884	.....Assayer, Leadville.
Neustaedter, A., M. E.....1884	.... Assayer and Chemist, Belleville, Ill.
Wilson, Frank, C. E..... 1884	.....Engineer, Frisco Railway.
Owen, J. R. D., M. E.....1885	..Chemical Laboratory, School of Mines.
Van Frank, Phil. R., M. E.....1885	....Engineer, Mo. P. R. R.
Wilson, Fremont, C. E.....1885	.....Eng., St. L., K. C. & Col. R. R.
Martinez, J. G., M. E.....1886	.. .... Ass't Chemist, Coahuilo, Mexico.
Cullings, Jay, C. E.....1886	.....Eng., U. P. R. R.
Fulcher, Jas. E., C. E.....1886	..... R. R. Mail Clerk, St. L. & S. F. Ry.

COURSES OF STUDY.

The work of the school is done in two departments: Academic and Technical.

* Deceased.

ACADEMIC DEPARTMENT.

At the last session of the Legislature of Missouri, a bill was passed providing for the establishment of an academic course of study at the School of Mines. In pursuance of the provisions of this act the Faculty of the School of Mines, at their first meeting in September, arranged the following course, which has since been duly approved by the Executive Committee of the School:

COURSE OF STUDY.

	First Term.	Second Term.
First Year:	Arithmetic.	Algebra, (c).
	Grammar and Word Analysis.	Composition and Rhetoric.
	U. S. History.	Physical Geography.
	Drawing, (d).	Physiology.
		Drawing, (c).

	First Term.	Second Term.
Second Year:	Latin, (d).	Latin, (c).
	Algebra, (b).	Algebra, (a).
	Geometry, (b).	Geometry, (a).
	Physics.	Civil Government.
	Drawing, (b).	Drawing, (a).

	First Term.	Second Term.
Third Year:	Latin, (b).	Latin, (a).
	Trigonometry.	Land Surveying, or Botany.
	English Literature.	Chemistry.
	Book-keeping.	Political Economy.

Rhetorical exercises (compositions, readings, etc.) weekly throughout the entire course.

Upon the satisfactory completion of this course a diploma will be granted.

The text-books, not mentioned elsewhere, used in the Academic Course are David J. Hill's Elements of Rhetoric and Composition, Guyot's Physical Geography, Steele's Physiology, Townsend's Analysis of Civil Government, Shaw's History of English and American Literature, Rohrer's Book-keeping, Gray's Botany, Wayland's Political Economy; in Latin, Dr. Smith's *Principia Latina*, Allen and Greenough's Cæsar (four books), Allen and Greenough's Virgil (four books of the Æneid).

This course is designed for the benefit of those students who do not wish to enter the Technical Department, and who still wish to complete a more extended course of studies than is offered in the Preparatory. It is believed that the course will especially commend itself to young men who wish to fit themselves for successful business pursuits, and to teachers who wish to prepare for the higher work of their profession.

While the time devoted to this course is short, much will be gained by the necessary concentration of attention and effort. It is designed to make the course equal in every respect to those offered at the best Academies in the West. The instruction given is of the best; and, while the amount of work required is not beyond the capacity of the average student, that degree of application is expected without which the best results in way of intellectual training cannot be secured.

PREPARATORY COURSE.

This course is still maintained for the benefit of those who may wish to prepare themselves for the work in the Technical Department.

COURSE OF STUDY.

First Year.

First Term.	Second Term.
Arithmetic.	Algebra (c).
Grammar and Word Analysis.	Composition and Rhetoric.
U. S. History.	Physical Geography.
Drawing (d).	Drawing (c).

Second Year.

First Term.	Second Term.
Algebra (b).	Algebra (a).
Geometry (b) Plane.	Geometry (a).
Physics (b).	Chemistry.
Drawing (b).	Physics (a).
	Drawing (a).

Rhetorical exercises (compositions, readings, etc.,) weekly throughout the entire course.

The satisfactory completion of this course shall admit to the Technical Department without further examination, and shall also entitle the student to a certificate, should he desire it, showing the studies pursued and the grade in each.

TECHNICAL DEPARTMENT.

Candidates for admission will be examined in all the studies of the Preparatory Course.

COURSE OF STUDY:

For the Degree of Mining Engineer.

	First Term.	Second Term.
First Year:	Chemical Philosophy.	Chemical Technology.
	Blowpipe Analysis.	Qualitative Analysis.
	Trigonometry.	Descriptive Geometry.
	Drawing.	Analytic Geometry.
		Drawing.

	First Term.	Second Term.
Second Year:	Quantitative Analysis.	Quantitative Analysis.
	Metallurgy.	Metallurgy.
	Differential Calculus.	Mine Engineering.
	Surveying.	Intregral Calculus.
	Shades, Shadows and Perspective.	Steam Engine.
	Determinative Mineralogy.	Assaying.
	Geology.	

	First Term.	Second Term.
Third Year:	Quantitative Analysis.	Quantitative Analysis.
	Metallurgy.	Graduation Thesis.
	Analytic Mechanics.	

FOR THE DEGREE OF CIVIL ENGINEER.

	First Term.	Second Term.
First Year:	Chemical Philosophy.	Chemical Technology.
	Blowpipe Analysis.	Qualitative Analysis.
	Trigonometry.	Descriptive Geometry.
	Drawing.	Analytic Geometry.
		Drawing.

	First Term.	Second Term.
Second Year:	Roads and Railroads, etc.	Surveying.
	Surveying.	Steam Engine.
	Differential Calculus.	Integral Calculus.
	Shades, Shadows and Perspective.	Civil Engineering.
	Astronomy.	Assaying.
	Geology.	

	First Term.	Second Term.
Third Year:	Railroad Location.	Practical Topography.
	Mechanism.	Applied Mechanics.
	Analytic Mechanics.	Graduation Thesis.
	C. E. Design.	C. E. Design.

The Mining students will be required to draw the equivalent of two years and the Civil students three.

The courses of study will be rigidly enforced upon all students, candidates for the degrees of the Institution. The degrees awarded are Civil Engineer (C. E.) and Mining Engineer (M. E.).

Certificates and diplomas are issued only at the public commencement.

DEPARTMENTS OF INSTRUCTION.

MATHEMATICS.

Professor Eaton.

Algebra and Geometry are taught by Mr. Clark, and Arithmetic by Mr. Drake.

The practical utility of Mathematics in the arts is the ultimate aim of instruction. While a clear demonstration of every principle involved is required, the application of these principles is made prominent. The solution of a large number of practical examples is required, and the text-books are selected with regard to this practical aspect of the subject.

Their application to the solution of problems is the best method of fixing principles in the memory; and the mental discipline inseparable from such drill is eminently adapted to fit the technical student for future duties.

A thorough training in Mathematics necessarily precedes and is essential to a good knowledge of Engineering. It is pretty generally admitted by engineers, both civil and mining, that students require a thorough course in mathematics before entering the field or office as engineers' assistants to complete their knowledge as practical engineers.—Dr. Bowser.

The aim of the course is to ground the students firmly in the elementary mathematics; so that after graduation they may be able to pursue understandingly and continuously an advanced course of pure and applied mathematics, or to read intelligently advanced works and current literature on engineering.

As the course is progressive, students desiring to take up any subject must present a satisfactory record in subjects appearing above it in the list.

The studies of this department are as follows:

IN THE PREPARATORY COURSE.

Junior Year.

First Term.—Arithmetic (completed), Barnes' National by Ficklin, five hours per week.

Second Term.—Algebra (c, beginning), Olney's Complete, to Calculus of Radicals, five hours per week.

Senior Year.

First Term.—Algebra (b) to Quadratics, five hours per week.
Geometry (b) (Plane), Olney, five hours per week.

Second Term.—Algebra (a) (book completed), five hours per week.
Geometry (a) Solid and Spherical, five hours per week.

IN THE TECHNICAL COURSES.

First Year.

First Term.—Trigonometry, Plane and Spherical, Chauvenet, four hours per week.

Second Term.—Analytic Geometry, Plane and Solid, Bowser, four hours per week.
Descriptive Geometry, Church, Part I., four hours per week.

Second Year.

First Term.—Differential Calculus, (Bowser completed), four hours per week.
Shades, Shadows and Perspective, Church, Part III., two hours per week.
Railroad Curves and Calculation of Earthwork, Searles, for students in Civil Engineering, two hours per week.

Second Term.—Integral Calculus with application to Geometry, Bowser, completed, four hours per week.

Third Year.

First Term.—Analytic Mechanics, Bowser, four hours per week.

Second Term.—Applied Mechanics, Rankine, four hours per week for students in Civil Engineering.

As elementary Algebra and Geometry lie at the basis of any substantial attainments in mathematics as well as in engineering, great care is taken to secure a thorough mastery of these subjects in the preparatory course.

The course in Rankine's Applied Mechanics has special reference to the Theory of Structures, Strength of Materials, including the more useful and elementary problems in Stress and Elasticity, and Hydrostatics and Hydrodynamics, "Motion of Fluids." Oral and written notes are given to explain difficult and peculiar solutions.

Text-books are not strictly adhered to, but special methods of instruction are used both in supplementing and in substitution for parts of the text.

The Library contains many of the best works on Analytic Geometry, Calculus and Mechanics, which are frequently referred to.

Special arrangements may be made for advanced mathematical study if desired.

GENERAL CHEMISTRY.

PROFESSOR WAIT.

Instruction in this department is given to two classes—the Preparatory, and First Class.

PREPARATORY CLASS.

In this class chemistry is commenced with the second term, and is continued throughout the term. The class is taught the elements of the subject, being fully illustrated by instructive and interesting experiments, and such information is given, aided by suitable text-books, as will prepare them for the higher classes in Chemical Philosophy and Chemical Technology, and also for entering upon laboratory work, which is commenced the following year.

FIRST CLASS.

(Text-books), Chemical Philosophy (Cooke), Chemical Technology (Wagner).

The duties of this class continue throughout the year; there are four recitations each week. Chemical philosophy is first introduced and continued through the first term. The application of Arithmetic to chemistry is given a prominent place in this class. Students are required to perform numerical examples, thereby fitting themselves for the solution of many questions constantly occuring in the advanced department of analytical chemistry.

The second term is given to a course in Chemical Technology. Among the subjects discussed in this course are: Products of Chemical Industry; Glass; Mortars; Cements; Paper; Sugar; Wine making; Oils; Paints; Dyeing and Printing; Bleaching; Gas; Fuel, etc., etc.

ANALYTICAL CHEMISTRY.

PROFESSOR WAIT.

First Year.—Blowpipe Analysis (Elderhorst's Manual); Qualitative Analysis (Fresenius).

Second Year.—Quantitative Analysis (Fresenius); Quantitative Analysis (Fresenius); Assaying (Mitchell).

Third Year.—Quantitative Analysis (Fresenius).

Instruction in this Department is thoroughly practical, and extends throughout the first, second and third years.

First Class.

The students in this class spend four hours each day at practical work; each one is provided with a working table, apparatus and chemical reagents.

The course is begun with blowpipe work; the student is made acquainted with the reaction of known bodies, and he is then required to perform the experiments for himself, thus becoming familiar with the behavior of such bodies before the blowpipe, and enabling him to detect the composition of substances given to him for identification

Qualitative analysis is also taken up, and is taught by lectures and experiments, the student being required to repeat at his working table the tests for bases and acids which have been shown to him. After passing through a systematic course of qualitative analysis, he is required to analyze and report upon substances, including mixtures of salts, also alloys, ores of lead, copper, zinc, antimony, iron, etc., etc., soils, insoluble sillicates and mineral waters.

Second and Third Classes.

Quantitative analysis constitutes the work of these classes. Those students who have completed satisfactorily the work given to them during the first year, and who have passed a practical examination, lasting one week, are allowed to commence quantitative analysis.

The quantitative course includes analyses, either partial or complete, of the following series, each estimation being, at least, duplicated:

(*1) *Zinc Sulphate;* (2)*Barium Chloride;* (3) *Alum;* (4) *Chrome Alum;* (5) *Sulphate of iron and Ammonia;* (6) *Blue Vitriol;* (7) Calcite; (8) Calamine; (9) Galena; (10) Chalcopyrite; (11) Orthoclase; (12) Kaolin; (13) Hematite; (14) Pyrolusite and Chlorine, valuation; (15) Soda Ash, valuation; (16) Bleaching Powder, valuation; (17) Cerusite; (18) Smithsonite; (19) Blende; (20) Coal, proximate; (21) Coal, ulitimate and heating power; (22) Stibnite; (23) Realgar; (24) Blast Furnace Slag; (25) Lead Furnace Slag; (26) Pig Iron; (27) Bismuth Litharge; (28) Commercial lead; (29) Spelter; (30) Regulus; (31) Beryle; (32) Illmenite; (33) Chromite; (34) Saltpetre soil; (35) Mineral Water.

Besides this course there is the usual practice in the fire assay of the ores of lead and silver, of argentiferous and auriferous native compounds and artificial products, and in the docimastic valuation of the ores of the most prominent metals.

A short course in quantitative blowpipe analysis is required. Also a course in determinative mineralogy.

Special students may pursue, at their discretion, the study and analysis of any class of ores or metallurgic products. Young men, who have neither the time nor means to spare to take the full course, may accomplish much in the way of chemical analysis by devoting their entire time to it during the course of a single year.

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*Those in italics are *partial* analyses.

THE NEW CHEMICAL LABORATORY.

The new Chemical Laboratory has been in use one year, and has been found satisfactory in every respect. It was planned and built solely with reference to the work in the school, and the entire building is used by the Chemical Department.

In this building there are the following apartments: The quantitative laboratory; the qualitative laboratory; director's laboratory; lecture room; assay laboratory and weighing room; a quantitative and qualitative evaporating room; preparation room; a supply room, and two basement rooms.

Facilities for securing heat, light and ventilation are very perfect, ample provision is also made for carrying off foul and dangerous gases. All parts of the building are thoroughly and judiciously equipped, nothing has been left undone to make this laboratory one of the most complete in the country.

Students who enter this department will have every facility offered them for doing chemical and metallurgic work under the most favorable and satisfactory conditions possible. In order that the friends of the school may see for themselves, they are particularly invited to visit this new building.

A circular giving a complete and detailed description of this laboratory has been issued, and will be mailed to any one applying for it.

METALLURGY.

PROFESSOR WAIT.

The instruction in this department is given by lectures, supplemented by laboratory practice, and is illustrated by diagrams, models and specimens. The course is introduced by zinc, and is followed by lead, silver, nickel, mercury, copper, iron, antimony and gold. The principles of furnace construction, of slag formation, and of general metallurgical operations, are discussed throughout the course, and special illustrations are given of all the methods described. The students are required to solve problems involving the discussion of the desirable methods of treatment of ores of stated composition, under given economical conditions, and to accompany the solution with plans and estimates for works to carry

out the method. In the lectures and other exercises of this department, full cognizance is taken of the peculiar economic conditions surrounding metallurgical industry in this country, and especial reference is had to the staple metallic products of Missouri—iron, lead and zinc. Studies are made of the local iron establishments, and excursions are made to other iron works, as well as to those at which lead and zinc ores are practically treated.

GEOLOGY AND MINERALOGY.

In the second year, the students have recitations, lectures and laboratory exercises, in the determination of a series of fifty-five well selected mineral species, with special reference to the ores of the metals and their associated ganges. These exercises are followed by lectures and recitations (based on Dana's Manual) on dynamical and historical geology. The lectures on Lithology, and on mineral veins and ore deposits, together with an account of the chief geological features and modes of occurrence in the principal mining districts, complete the course.

CIVIL ENGINEERING.

PROFESSOR EMERRSON.*

In this department, practical work in the field forms a prominent feature. The use of instruments in the field, by the students of Civil Engineering, begins with the second year, and is continued through the remainder of the course. A complete familiarity with the manipulation of all the instruments in common use by engineers and land surveyors, is taught to the students by systematic practice, in the room and in the field. He is made familiar with the chain and its capabilities; the needle compass, the solar compass, the transit instruments, the leveling instrument, the sextant, the plane table, the barometer, and the various tools used in drawing and plotting. Half of each day for one term is devoted to practice in the field, and where necessary, a long time is taken for excursions to the mines, furnaces, bridges and railroad constructions of the country.

The field practice consists of land and railroad surveying, by all the methods in use. Tracts of land, roads and streams are surveyed and plotted; contours of the adjacent country are made with the leveling instrument, the barometer, etc.;

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*Resigned.

railway curves are calculated and set out upon the ground, earthwork is measured and estimated from the embankments and excavations of the railroad. A general system of triangulation of the country about Rolla, is begun from a base line carefully laid by the students, which will be extended from time to time for their instruction.

Such parts of astronomy as relate to land surveying or engineering, are carefully studied, and are illustrated by stellar and solar observations.

A general course of descriptive engineering, on the basis of Mahan's Civil Engineering, revised, by Professor Wood, runs through the second term of the second year.

Gillespie's treatise upon Roads and Railroads, and Huntington's Road Master's Assistant, form two of the studies of the Engineering course.

DRAWING.

MR. CLARK.

During the preparatory course the students are instructed and drilled in freehand drawing and the elements of geometrical drawing. The freehand includes drawing in outline and shading, both from copy and model, with pen and pencil. The geometrical drawing includes practice in the use of instruments, elementary projection drawing and some practice in lettering.

Instruction in crayon and water-colors is provided for those who show themselves able to profitably take such work.

During the technical course the instruction in drawing embraces the following subjects:

First Year.—Topography, Lettering and Mechanical Drawing.

Second Year.—Problems in Projection drawing, Stereotomy, Masonry and Machine drawing.

Third Year.—Engineering drawing and Practical Topography.

During the first year the student is exercised in lettering in order to acquire a rapid and neat system of letter formation. The topographical and mechanical drawings are neatly finished in ink, and the latter are appropriately colored to represent the different materials employed.

In the second year exercises are given in the construction of problems in descriptive geometry, and in shades, shadows and perspective. The problems are drawn with pen and India ink, and are constructed on mathematical principles, displaying all the difficult problems of the intersection of curved surfaces, and the representations of warped surfaces having two or three directrices.

The drawing during the second and third year consists in the solution and complete representation on paper of practical problems, such as the draughtsman meets in practice. Neatness and accuracy of execution, as well as a thorough familiarity with each of the subjects, is required.

MINE ENGINEERING.

PROF. EMERSON.

This is taught entirely by lectures. The subjects of system and attack and exploitation of mineral deposits; of shafts, adits and levels; timbering of mines; subterranean transportation, hoisting, pumping, surface transportation, and mechanical concentration, are considered in elaborate detail.

The course is fully supplemented by extended field practice, the important parts of the civil engineering course, and by extended instruction in assaying and analytical chemistry, and in drawing plans and sections of mines and practical work.

MECHANISM.

PROFESSOR EMERSON.*

An extended series of lectures is given upon this important subject, which is intended to be a descriptive epitome of the principles which govern, and the forms and mode of construction of machines used in industrial pursuits, embracing prime movers, machines of transmission, and as much as is possible in the course of applied machinery.

STEAM ENGINE.

A series of lectures is given, historical, descriptive and theoretical, of the steam engine, embracing all the varieties in use, and their special applications.

FEES, EXPENSES, ETC.

The fees for instruction, etc., at the School of Mines and Metallurgy, are the same as at the other departments of the University, viz: An annual entrance fee of $10, besides an assessment of $5 per term for incidentals and for the use of the library. Special students are subject to the same charges; all laboratory students furnish their own blowpipes, plantinum, crucibles and apparatus, silver and gold solutions, and pay for gas and fuel consumed and for apparatus damaged or broken.

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*Resigned.

A deposit of $5 per term, covering the value of the apparatus and chemicals issued, is required to be placed in the hands of the Treasurer by each laboratory student. This deposit, less the value of material consumed, is returned at the close of the year.

The exercises of the drawing room require also a small expenditure, annually, for materials. Text-books and all requisite materials for students can be procured in Rolla, either from dealers, or, in the case of chemical apparatus, from the school, at the usual rates.

A fee of $5 must be paid, before graduation, for the degree; a fee of $1 for either the elementary certificate or the academic diploma.

Good boarding, at places approved by the Faculty, can be obtained at from $3.50 to $4.00 per week.

The following is a careful estimate of necessary expenses for a college year:

Tuition	$20 00
Contingent expenses for laboratory	20 00
Board, fuel, washing and lights from	$96 to 150 00
Books, stationery, etc	8 to 20 00

ADMISSION.

Before matriculation or entrance upon the duties of the school, the Treasurer's receipt for entrance fee and for the incidentals of the term [or a statement from the Director that the time of payment has been extended], and also certificates of examination giving the grade made in each study, and signed by the instructor conducting the examination, must be presented to the Secretary of the Faculty.

No student shall be entitled to have his name enrolled on the class register of any instructor, nor be admitted to any class as a member, until he shall have signed his name on the Secretary's book and received a certificate to that effect, stating the course for which he has entered.

All students are requested to present themselves for admission on Monday and Tuesday, September 19th and 20th, 1887.

The collegiate year opens on the third Monday in September. There is no suspension of exercises other than for examination between the two terms of the year.

Historical, Etc

The School of Mines and Metallurgy—a department of the University of the State of Missouri—is located at Rolla, Phelps county, on the line of the St. Louis & San Francisco Railroad, one hundred and thirteen miles southwesterly from St. Louis. The locality is pre-eminently healthful, is in the midst of an extensive and rapidly developing iron section, with districts abounding in lead and zinc deposits, within easy access, and thus affords excellent opportunities for the field study of some of the modes of occurrences of the ores of these metals, as well as for the

practical investigation of their methods of treatment. Excursions for such purposes will constitute a prominent feature in the instruction of the advanced classes.

The institution was created by the legislative act of February, 1870, disposing of the Congressional grant of land for agricultural and mechanical colleges. It was formally opened November 23, 1871. The first class, of three members, graduated in June, 1874, having completed the full course. The fifteenth year of the Institution closes with this report.

The design of the School of Mines and Metallurgy, in connection with the Agricultural College, is to carry out, to its amplest extent, the intention of the act of Congress, providing for education in the industrial arts. This has been kept prominently in view in arranging the curriculum of the school, in the selection of its apparatus, in providing its equipment and in the organization of its Faculty. It is a school of Technology, with Civil and Mine Engineering and Metallurgy, as specialties.

The school is furnished with apparatus, instruments, and other appliances for practical instruction and demonstration. It has a supply of excellent surveying, engineering and drawing instruments, physical apparatus, embodying the newest forms for illustration and research, together with diagrams and models for the illustration of metallurgic processes and engineering construction. The new chemical laboratory has been completed and is amply furnished with apparatus and reagents necessary for practical instruction, and for any line of chemical and metallurgical research. The library has been selected with special reference to supplementing the labors of the class and lecture rooms, and consists, therefore, largely of standard reference works on the physical science, mathematics and technology

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CALENDAR.

1887.

June 9th, Thursday, 10 A. M.	Annual Commencement.
September 19th, Monday	First Term begins.
September 19th and 20th	Entrance Examinations.
December 23rd, Friday	Close for Christmas Holidays.

1888.

January 10th, Tuesday, 9 A. M.	Exercises resumed.
January 23rd, Monday	Examinations begin.
January 28th, Saturday	Examinations close.
January 31st, Tuesday, 9 A. M.	Second Term begins.
June 14th, Thursday, 10 A. M.	Annual Commencement.

XVII. SCHOOL OF ENGINEERING.

FACULTY.

SAMUEL S. LAWS, LL. D., PRESIDENT,
Professor of Logic and Ethics.

THOMAS J. LOWRY, S. M., C. E., DEAN,
Professor of Civil and Topographical Engineering.

JOSEPH FICKLIN, PH. D., LL. D.,
Professor of Mathematics and Astronomy.

PAUL SCHWEITZER, PH. D.,
Professor of Chemistry.

E. H. CROWDER, LL. B.,
(Detailed from the Regular Army),
Professor of Military Science and Tactics.

P. BLISS, LL. D.,
Professor of Law and Contracts.

S. M. TRACY, M. S.,
Professor of Economic Botany.

J. W. SPENCER, B. A. SC., PH. D., F. G. S.,
Professor of Geology and Mineralogy.

WILLIAM B. SMITH, PH. D.,
Professor of Physics.

W. H. SCHUERMANN, C. E.,
Assistant Professor of Physics and Engineering.

HON. GEO. C. PRATT, C. E.,
Lecturer on Engineering as Applied to Transportation

VISITING LECTURERS ON ENGINEERING:

MAJOR CHAS. R. SUTER, *Corps of Engineers of U. S. A.*

LIEUTENANT SMITH S. LEACH, *Corps of Engineers of U. S. A.*

NOTE.—These important announcements are made by permission.

GENERAL STATEMENT.

The School of Engineering is designed to furnish the students the means of acquiring a thorough knowledge, theoretical and practical, of those sciences and arts which are playing the most important parts in the development of the material resources of our country, and the advancement of our civilization.

Beside the application of the higher analysis to engineering investigation, the professional preparation of the students comprises the following subjects: The location and construction of roads, railroads, canals and water-works; the surveys and improvements of coasts, harbors, rivers and lakes; the determination of astronomical and geographical co-ordinates on land and at sea; the design and construction of roofs, trusses, girders and suspension bridges; drawing and constructing the various kind of arches; the design, application and construction of wind, hydraulic and electric motors, dynamos, air and steam engines; blowpipe analyses of minerals, and economic geology, mineralogy, chemistry, elementary and applied; the art of war; the preparation of the various kinds of projections and drawings used by the military, topographical, civil and mine engineer, and the selection, tests and application of materials used in constructions, and papers and essays on professional subjects.

The sphere of the engineer is so broad and diversified that it is impossible for any one to become proficient in all the various specialties into which the profession has been so divided. To meet the demands for special engineering studies and training from the end of the third year of the academic studies laid down in the Engineering Synchronistic Table (see page 117). Four parallel courses have been arranged, so as to allow of option and diversity of special studies. This department will thus foster the development of special fitness in each student, by offering him work in the line of his preferences. These courses are:

I—Civil Engineering.
II—Topographical Engineering.
III—Military Engineering.
IV—Electrical Engineering.

The great subdivisions of engineering, which are embodied in these courses, are road and railroad engineering, hydraulic engineering, bridge architecture and construction, topographical engineering, (and, as prerequisite to the auxiliaries of these, engineering geodesy and practical astronomy) and electrical engineering.

The course in civil engineering is designed for those who wish to make either road and railroad engineering, bridge construction, or river improvement, a specialty.

The course in topographical engineering is arranged for those students who find distasteful the application of the higher mechanics to civil constructions, and

	Semester	Hours	Course In Civil Engineering C. E.	Hours	Course in Topographical Engineering. Top'l Eng'r.	Hours	Course in Military Engineering. Mil. Eng.	Hours	Course in Electrical Engineering. Elec. Eng.
FIFTH YEAR.	X		Project and Thesis 1-2. Mechanism 1-2. Assaying 1-2. Law of Contracts 1-2.		Project and Thesis. Drawing, Room and Field Work. Law of Contracts 1-2.		Project and Thesis 1-2—Military Law and Law of Contracts 1-2 Military Engineering (Permanent Fortifications, Siege operations and military mining)		Thesis 1-2—Law of Contracts 1-2. Mechanics of Machinery. Electric Motors.
		III II	Designing Structures. Hydraulic Engineering (Rivers and Harbors.	VI II	Geodesy. Hydraulic Engineering (Rivers and Harbors).	III	Art and Science of War Designing Structures.		Physical Laboratory (electric testing).
	IX	V I IV III II	Hydrographical Surveying 1-3. Logic 1-3—Economic Botany (Timber) 1-3. Steam Engine. Framed Structures. Isometric Projection and Stereotomy.	I V VI	Logic 1-3—Field Work 2-3. Navigation, Maritime and Coast Surveying. Triangulation and Topographical Surveying (with plane table, also with transit and stadia). Magnetic and Meteorological Surveying. Chart Projections 1-2—Colored Typography 1-2.	III II	Ordinance and Gunnery 1-2. Art and Science of War. Field Fortifications. Framed Structures. Isometric Projections and Stereotomy 1-2.	IV II	Steam Engine. Isometric Projection 1-3—Drawing 2-3. Dynamo-Electric Machinery—Elecricity and Magnetism (Maxwell).
FOURTH YEAR.	VIII	I III IV V	Map Drawinw and Field Work. Shades, Shadows and Perspective with Draughting. Applied Mechanics (Kinematic and Dynamics). Topographical Surveying (Transit and Stadia). Sextant Astronomy 1-4.	I IV V	Map Drawing and Field Work. Shades, Shadows and Perspective with Draughting. Spher. and Physical Astronomy. Hydrographic Surveying 3-4—Sextant Astronomy 1-4.	I III IV	Map Drawing, Field Work and Sextant Astronomy 1-2. Military Signaling, 1-2. Shades, Shadows and Perspective with Draughting. Applied Mechanics (Kinematics and Dynamics). Topographical Surveying (Transit and Stadia).	I III	Shades, Shadows and Perpective with Draughting. Applied Mechanics. Electricity and Magnetism (Maxwell) Physical Laboratory (electric Testing).
	VII	III I II IV	Applied Mechanics (Theory of stress and of the strength and elasticity of materials). Descriptive Geometry and Draughting. Least Squares 1-2—Diff. Equasions 1-2. Higher Surveying and R. R. Surveying and Engineering.	I II IV	Top'l Drawing and Field Work. Descriptive Geometry and Draughting. Least Squares 1-2—Theory and Adjustment of Instruments 1-2. Levelling and R. R. Surveying.	III I II IV	Applied Mechanics (Theory of stress and of the strength and elasticity of materials. Descriptive Geometry and Draughting. Least Squares 1-2—Diff. Equations 1-2. Tactics 1-2—R. R. Surveying and Engineering 1-2.	III I II	Applied Mechanics. Descriptive Geometry and Draughting. Least Squares 1-2—Diff. Equations 1-2. Telegraphs, Telephones, etc.

	Semester.	Hours.....	Academic studies necessary for graduation in the Civil, the Topographical, or the Military Engineering Course.	Hours.....	Academic studies preparatory to the course in Electrical Engineering.
FIRST YEAR.	VI.	III.	Calculus.	III.	Calculus.
			Lithological and Geological Laboratory 2-5.		Physical Laboratory.
			Physical Laboratory 2-5.		Chemical Laboratory—Quantitative Analysis.
			Chemical Laboratory--Quantivative Analysis.	IV.	Elementary Mechanics.
			Drawing.		
		IV.	Elementary Mechanics.		
	V.	I.	Analytical Geometry.	I.	Analytical Geomotry.
		II.	Mineralogy and Economic Geology.		Chemical Laboratory—Quantitative Analysis.
			Chemical Laboratory—Quantitative Analysis.		Mechanical Drawing.
			Roads, Streets and Pavements and Field Work.		Electricity and Magnetism (Cumming).
			Mechanical Drawing.		
SECOND YEAR.	IV.	I.	Spherical Trigonometry and Spherical Astronomy.	I.	Spherical Trigonometry and Spherical Astronomy.
		II.	Advanced Physics.	II.	Advanced Physics.
		III.	Advanced Chemistry ½—Drawing ½.	III.	Advanced Chemistry.
			Land Surveying and Navigation.		Mechanical Drawing.
	III.	IV.	Higher Algebra.	IV.	Higher Algebra.
		II.	Advanced Physics.	II.	Advanced Physics.
		III.	Advanced Chemistry.	III.	Advanced Chemistry.
			Mechanical Drawing.		Mechanical Drawing.
		V.	*French.	V.	*French.
THIRD YEAR.	II.	IV.	Plane Trigonometry and Solid Geometry.	IV.	Plane Trigonometry and Solid Geometry.
		II.	Elementary Chemistry.	II.	Elementary Chemistry.
		VI.	*German or	VI.	*German or
		V.	*French.	V.	*French.
			Mechanical Drawing 2-5—Book-keeping 3-5.		Mechanical Drawing 2-5—Book-keeping 3-5.
	I.	II.	Algebra and Plane Geometry.	II.	Algebra and Plane Geometry.
		IV.	Elementary Physics.	IV.	Elementary Physics.
		I.	English Composition and Rhetoric.	I.	English Composition and Rhetoric
		VI.	*German.	VI.	*German.

* Either two Semesters of German, or two Semesters of French, are required.

NOTE.—While the student is pursuing the above Academic studies he will be considered an Academic student and his tuition will be $20 per year and not $40.

who may show, instead, special aptitude for geodetic work, and hydraulic engineering, viz.: Trigonometrical, topographical and geological surveying, practical astronomy on land, and *the surveys and improvements* of rivers, lakes, bays and coasts. Since the U. S. Government began the geodetic, topographical and geological surveys of her territories, and gave fresh impetus, by liberal appropriations, to the surveys of her coasts, and the chain of great lakes on her north, there has been an incessant demand for men specially fitted for the important duties of the explorer, astronomer, topographer, and geogarphical engineer. And now, that the attention of the nation is turned to surveying and improving the great rivers of the Mississippi basin, a broad field, inviting the labor of topographers, hydrographers and hydraulic engineers, is open at our doors. To provide for these and similar demands, the course in topographical engineering was instituted, and is now in full operation. The facilities for instruction in this course are very complete. Students taking the course in topographical engineering will have an opportunity, and be required to perform work as accurately as is done in the actual details of the U. S. Coast Survey, the geodetic surveys of our lakes and territories, and the surveys and improvements of our rivers, lakes, bays, harbors and coasts by the U. S. A. Engineer Corps. The course in Military engineering is essentially that of the U. S. Military Academy at West Point.

The course in Electrical Engineering appears for the first time in this catalogue, and is intended to meet a steadily growing want created by the rapid extension of electric lighting, the telephone, and the electric transmission of power. With the appropriation made by the Thirty-fourth General Assembly, will be purchased a few more instruments for electric testing, and these with the electric apparatus already in the Physical Laboratory and the plant of two Edison dynamos and an Armington & Sims engine, will enable us to begin this course at once.

We especially ask the attention of those young men who desire to fit themselves for the duties of *county surveyor* and of *government land surveyor*, to the fact that every effort will be made to enable them to accomplish this within a short time. To this end, at the beginning of each year, a class will be organized and instructed (theoretically and practically) in land surveying, with compass, theodolite and solar compass; in the surveys for, and location and construction of, roads; and in the surveys for, and location of, and in the designs for, and construction of, wooden bridges, and in locating and surveying base lines, meridians, and township and section lines, and in retracing old government township and section lines. This class will also be instructed in drawing. This course can be completed in thirty-eight weeks; and the degree of surveyor (with its diploma) will be conferred upon those who complete this course.

The Professor of Engineering is the sworn deputy of the county surveyor of Boone for the corporate limits of the city of Columbia, and hence, the surveys he here makes are legal—they are accurately made, carefully computed and plotted, and properly recorded on the records of the county. The fees received for this work are regulated by statute (see General Statutes of Missouri.)

These surveys not only serve as *means of instruction* for the Surveying and Engineering classes, but they are also a *source of financial aid* to the students. The students assisting in these surveys will receive the *fees* provided by law for such work.

The methods of instruction embrace the use of text-books, which are changed from time to time, lectures (illustrated by diagrams of the great engineering and

surveying operations and results of the present age) and actual field and observatory practice. And recognizing the truth of what Dr. Laws so well expresses that "the primary aim of the academic schools of science and language is culture; that of the professional schools is practice; that self is the end of culture, but self is the instrument of practice," the field and observatory practice and work in the chart room are made to bear a large proportion to the theoretical instruction. The data thus obtained, by actual field surveys and practice in the observatory, serve both to elucidate the principles and formula, and insure their ready and accurate application in professional life.

In addition to the field, class room, observatory and chart room work, the engineering students have access from 8 A. M. to 5 P. M., each day, except Sunday, to the University Library, and also to the private library of the Professor of Engineering, which together contain nearly all the standard works on surveying, engineering geodesy and astronomy. These they are expected to make constant use of, and thus enlarge, by careful reference and judicious reading, their acquaintance with the subjects presented in the text-books and lectures.

We desire to call special attention to the increased facilities which this University now enjoys for teaching astronomy. It offers facilities for instruction in theoretical and practical observatory and sextant astronomy, equal to any in the United States. The most refined astronomical methods of the U. S. Engineer Corps and the U. S. Coast Survey, are taught by the head of the mathematical department, assisted by those who have had years of instruction and training at West Point and on the Coast Survey. With these facilities, young men can prepare themselves for efficient service on the astronomical parties of the great geodetic surveys of our States and Nation; and can also acquire the nautical astronomy required in navigating a ship.

The attention of those interested in Military Engineering, is asked to the report of Prof. Crowder, and also to the Engineering Synchronistic Table.

The attention of those interested in engingeering and astronomy, is especially asked to the reports of Professors Schweitzer and Ficklin (see pages 37 and 46).

Our present professional force, and the increased facilities in apparatus and room furnished the department of Chemistry, Physics, Geology, Mathematics, Astronomy and Engineering, by the enlightened liberality of the Thirty-second, Thirty-third and Thirty-fourth General Assemblies, are such that we can now offer a complete theoretical and practical treatment of the above great subdivisions of Engineering, Surveying and Astronomy.

During the summer of 1881 we visited the U. S. Military Academy, the Rensallear Polytechnic Institute, School of Mines Columbia College, Stevens Institute of Technology, Massachusetts Institute of Technology, Lawrence Scientific School, West Point, Troy, Sheffield Scientific School, the U. S. Naval Academy, and Washington University, almost all of the first-class Engineering Schools in the United States; and had the pleasure of gaining an insight into the internal workings of these schools, *i. e.*, as to what they were doing, and how. And after a careful survey of the field of American Engineering, and a critical consideration of the work of our co-laborers in these schools, we found reason for few and very slight changes, indeed, in our courses.

Report.—The following is the report of the Engineering Department for the year ending June 2, 1887.

Senior class	Regulars	9
Junior class	Regulars	8
	Irregulars	7
Sophomore class	Irregulars and Regulars	28
Total		52

The classes in topographical surveying and engineering have, by frequent practice in the field, familiarized themselves with the use of the theodolite, sextant, spirit and water levels, leveling rods, chain and compass, and plane-table. And the class in surveying, by frequent practice in the field, have familiarized themselves with the use, manipulation and capabilities of the theodolite, compass and chain, and leveling-rods and spirit levels, and the solar compass.

The energy, enthusiasm, painstaking care and accuracy displayed by these classes, have confirmed me in the opinion previously formed from observations and experience of seven years with field officers of the U. S. Coast Survey and Navy, that the American mind possesses a fertility of resources, a power of adapting means to ends, and an acuteness of perception which peculiarly fits it for an observer in the exact arts.

The engineering classes of 1877-78-80, laid an acurate base line and completed a trigonometrical survey of the University campus, horticultural grounds, and a part of the agricultural farm. In this trigonometrical frame work they filled the detail topography with the plane-table—plotting in the five-feet contour lines with the greatest accuracy. This system of triangulation and plane-table topography, thus begun, was last year extended over the agricultural farm; and after this, it is hoped, will be gradually expanded till it eventually covers the entire State of Missouri.

With the money appropriated by the 32d General Assembly, this Department has purchased 1 plane-table, 1 level, 1 steel tape, (from Buff & Beyer); 1 patent telescope compass, (T. F. Randolph); 1 planimeter, 1 three-arm protractor, (Fauth & Co.), 1 pantagraph.

With the money appropriated by the 34th General Assembly, this Department will purchase a machine for testing the strengths of building materials (viz.: iron, steel, wood, stone, etc.), and will also purchase additional enginering books for reference.

Members of the Senior and Junior classes have surveyed (subdivided into blocks and lots), marked and plotted, for Babb and others, an addition of eighteen acres to the town of Columbia.

The Engineering School has a room fitted up with apparatus for taking copies of Drawings by the "Blue Print Process."

Drawing has been made a more prominent feature of the course; and Warren's entire series of engineering drawing books is now used as the text. McCord on Mechanical Drawing, and Smith on Topographical Drawing, are also used as texts.

The course in Topographical Engineering has been strengthened by giving greater prominence to the subjects of Hydrographic Surveying and Hydraulic Engineering.

The fact that we have been able to secure positions (on the surveys and improvements of the Missisippi and Missouri rivers, on the cost survey, on railroad surveying and engineering parties, and on government land surveying parties), for the graduates from this department, has assisted materially in awakening an in-

telligent interest—a healthy enthusiasm—in the cause of engineering education at this University. And the present revival in the industries which demands engineering and chemical skill, has already increased, and promises to further increase the number of students in this department.

THOMAS J. LOWRY,
Dean of the Faculty.

ENGINEERING GRADUATES AND THEIR OCCUPATION.

Year.	Name.	Occupation—Location.
1878..	Bates, J. P., C. E.....	Engineer, Leavenworth, Kansas.
	*Davis, J. H., C. E.....	U. S. Assist. Engr. Mississippi R. Impr'ment.
1879..	Bird, Geo. F., C. E	U. S. Coast Survey.
	*Cowherd, W., C. E.....	Hydraulic Engr. Mississippi R. Improvement.
	Davis, H. B., C. E.....	U. S. Surveyor and Engineer, Helena, M. T.
	Hoffstrom, F. H., C. E.....	Co. Surveyor and Engineer, St. Clair, Mo.
	Beatty, J. W., T. E.....	Railroad Engineering, New Mexico.
	Hayes, Lee, C. E.....	U. S. Dep. Mineral Surveyor and Engr., Col.
	Wade, John, C. E.....	U. S. Surveyor and Engineer, Helena, M. T.
	McKinney, W. S., T. E.....	Illinois.
1880..	Green, E. D., C. E.....	U. S. Hydraulic Engineer. Mississippi River.
	*Phillips, Hiram, T. E.....	U. S. Asst. Engr., Mississippi R. Impro'ment.
	Phillips, J. L., T. E.....	Engineer Mex. Central R. R. Ysleta, Texas.
	Thomas, T. C., C. E.....	U. S. Asst. Engr. Missouri R. Improvement.
	*Harrison, C. L., C. E.....	" " Mississippi "
1881..	Guild, F. E., T. E.....	Engineer, Missouri R. (U. S.) Improvement.
	Mitchell, C. P., C. E.....	Engineer Union Pacific Railroad.
	*Payne, J. T., C. E.....	U. S. Asst. Engr. Missouri R. Improvement.
	Seddon, W. L., C. E.....	Engr. Electric R. R. and Power Co., St. Louis.
	Stubblefield, J. L., C. E.....	Railroad Engineering, Kansas.
1882..	Seddon, J. A., C. E.....	Chief Physical Data Bureau, Mo. River Com.
	Taylor, J. M., C. E.....	Engineer, Union Pacific Railroad.
	Armstrong, F. C., C. E.....	U. S. Assistant Engineer, River Imp., Ga.
	Williamson, W. S., C. E.....	Engineer, Santa Fe, N. M.
	Sterne, Frank, C. E.....	Drainage Engineer, Chariton River, Mo.
	Walker, John H., C. E.....	Engineer, Kansas City, Missouri.
	Henderson, R. P., T. E.....	Surveyor, Missouri River Improvement.
1883..	Reynolds, S. P., C. E.....	Guthrie, Missouri.
	Mitchell, S. A., C. E.....	Engineer, Kansas City, Missouri.
	Pollard, E. C., C. E.....	Railroad Engineering, Montana Territory.
	Fawver, C. C., C. E.....	Railroad Engineering, Kansas.
	Chowning, J. L., C. E.....	Monroe county, Missouri.
	Smith, B., C. E.....	U. S. Asst. Engineer Mo. River Imp.
	Cooper, J. M., C. E.....	United States River Improvement.
	Alford, T. P., T. E.....	New London, Missouri.
1884..	Boeger, E. A., C. E.....	Engineer, F. W. & Denver Col. R. R.
	Wall, E. E., C. E.....	Engineer, B. M. R. R., Lincoln, Nebraska.
	Smith, E. E., C. E.....	Kansas City, Missouri.
	Sullins, R. A., C. E.....	Engineer, F. W. & Denver Colorado R. R.
	Grady, R. F., C. E.....	Hydrographic Data Office Mo. River Com.
	Hughes, T. C., C. E.....	Chf. Eng. Suburban Elec. R. R., Wichita, Kas.
	Sanders, J. J., T. E.....	U. S. Assistant Engineer. Mo. River Imp.
	Haydon, G. C., T. E.....	Engineer, "'Frisco Railroad."
	Morris, J. W., T. E.....	Engineer, K., Colorado & T. R. R.
	Malone, J. W., C. E.....	Cape Girardeau, Missouri.
	Sturtevant, C. W., C. E.....	U. S. Asst. Engineer, Red River Imp.
1885..	Williams, W. S., C. E.....	Engineer, Denver, Memphis and A. R. R.
	Stowe, J. H., C. E.....	Engineer, Martinsburg, Missouri.
	Phillips, R. H., T. E.....	Bridge Engineer, St. Louis Bridge Co.
	Grigsbe, J. T., C. E.....	Engineer, Florida, Missouri.
	Harrison, M. D., C. E.....	U. S. Dep. M. Surveyor and Engr., N. M.
	Alexander, J. S., C. E.....	Bridge Engineer, Council Bluffs, Iowa.

ENGINEERING GRADUATES—CONTINUED.

Year.	Name.	Residence—Location.
1886..	Jaeger, J. A., C. E.	Engineer, Missouri Pacific Railroad.
	Garrett, J. E., C. E.	Engineer, A., T. & Santa Fe Railroad.
	Gerig, Wm., C. E.	Engineer, "'Frisco Railroad."
	Hardesty, W. P., C. E.	Engineer, Kansas City, Missouri.

*NOTE.—Opposite the names marked thus (*) is given the position occupied when last engaged in professional work.

XVIII. MISSOURI STATE MILITARY SCHOOL.

FIRST LIEUT. E. H. CROWDER,
8th Cavalry, U. S. A., Professor of Military Science and Tactics.

An officer of the regular army is detailed by the War Department as Professor of Military Science and Tactics to carry out the provisions of the act of Congress of 1862, which, in endowing this and similar institutions, stipulates that military tactics shall be taught.

The military organization is as follows:

The President of the University is at the head of the department.

STAFF AND NON-COMMISSIONED STAFF.

Adjutant.....First Lieut. George N. Cheney.
Quartermaster.....First Lieut. Edward W. Hinton.
Sergeant-Major.....Robert P. Barse.
Color Sergeant.....Lee Mitchell.

COMPANY "A."

Captain.....Henry Heitzeberg.
First Lieutenant.....Charles B. Faris.
Second Lieutenant.....E. Brainard.
First Sergeant.....Eddie B. Wigginton.

COMPANY "B."

Captain.....Charles W. Terry.
First Lieutenant.....Robert T. Haines.
Second Lieutenant.....R. M. Hockaday.
First Sergeant.....Paul Evans.

Appointments to office are based on soldierly qualities and attainments, preference being given to those who take the course in Military Engineering.

There has been organized among the cadets a military band, which has made commendable progress during the present year. The University now owns a complete set of first-class instruments, which are issued to the members of the band for their use free of charge. The band is reorganized at the beginning of each college year.

SUPPLIES.

One hundred and fifty Springfield cadet rifles (breech loaders), two light 12-pounder bronze guns with carriages and implements and a limited supply of ammunition are furnished by the general government.

The department is in receipt of liberal supplies of ordnance stores from the State.

UNIFORMS.

Uniforms are required to be worn at all drills and may be worn on all occasions. Arrangements have been perfected by which tailor-made uniforms are supplied to students at an aggregate cost of seventeen dollars ($17) each, including caps and gloves. No other expense whatever is incurred.

These suits are of good material, well finished, and are far more economical than ordinary citizens dress. Many cadets prefer wearing their uniforms at all times and there is no necessity nor occasion for any other suit. Students are requested to bear this in mind in bringing clothing with them.

INSTRUCTION.

Students desiring to take the degree of Military Engineer will find explanations of the course of study in the report of the School of Engineering. Cadets may elect to join the classes in Military Engineering for the purpose of pursuing the studies of Tactics, Military Signalling, Field Fortifications, Military Law, and Art and Science of War; and those who pass the required examinations in these branches will receive a certificate of proficiency in the same.

All the students of the department are required to take a practical course of instruction which consists of drill in the school of the soldier, company battalion, skirmish drill and target practice. A select squad is also drilled in the manual of the piece and service of the foot-battery.

Lectures on military subjects are given during the winter term to the entire class. The requirements of the department are so adjusted as to harmonize with the regular academic work of the students.

It is the desire of the present management of the institution that all students should enroll themselves as cadets. The drill is especially valuable to health and personal bearing by counteracting the stooping tendencies which invariably attend

desk work and school life, and by developing an erect and soldierly carriage. It is made imperative upon all the students of the department to take the outdoor exercises so necessary to their health and physical development, and which, students, if left to follow their own inclinations, generally neglect to do.

During the present school year 160 students have received instructions in this department.

E. H. CROWDER,
1st Lieut. 8th Cavalry, U. S. A.,
Professor of Military Science and Tactics.

XIX. SCHOOL OF ART.

PROFESSOR ————.

FIRST YEAR.

1.—Recognition, naming and representation of all surface-forms by which regular solids are bounded. 2.—Laying out the superficies of solids (development), and folding of the same. 3.—Carving of solids out of soft substance. 4.—The four free curves of ornamentation. 5.—The drawing of these through fixed points. 6.—Color sensations produced by the mixture of pigments. 7.—Projected shadows of objects. 8.—Action of light upon solids. 9.—Pictorial representation by the students of objects at home—*one each week.*

SECOND YEAR.

1.—Representation of all the measures of solids by plan drawing. 2.—Plane cuts through them (*sections*). 3.—The most important problems of geometric construction. 4.—Representation of projecting and inverted surfaces by gradations of light, in light, shade and shadows. 5.—The finishing forms of architecture. 6.—Surface decoration. 7.—Manifestations of the law of symmetry. 8.—The laws of the beautiful. 9.—Pictorial representation of objects at home—*one each week.*

THIRD YEAR.

1.—The vanishing points and lines of perspective. 2.—The various means employed for reproducing or multiplying a unit of ornament. 3.—Application of design. 4.—Style in ornament. 5.—Orders of Greek architecture. 6.—Gothic tracery. 7.—Anomalous vagaries harmonized by art. 8.—The line, considered as the only means for the portrayal of motion and emotion. 9.—Pictorial representation of objects at home—*one each week.*

The expenses incident to this study are:

1.	Drawing-book	10 cents.
2.	Package practice paper, per 20 sheets	10 cents.
3.	No. 4 pencil (Anchor 5 cents, Faber 10 cents)	15 cents.
4.	Three cakes of water-colors	60 cents.
5.	One box of instruments	50 cents.
6.	Three brushes	15 cents.
7.	Manual, Linear drawing No. 11	75 cents.
	Total	$2 35

The book and paper will, when properly used, last one year; the water-colors from two to three years.

Report.—With the better accommodations in the new additions to the main building, the students of the Art Department will enjoy the advantages of drawing from real objects in the class rooms, especially as the appointments of these rooms are much the same as are those of Professional Art Schools.

The following important points cannot be too seriously urged on the attention and consideration of students—whatever be their aim or chosen vocation.

1. Geometry is the foundation of all the Sciences, of the Industries and of the Fine Arts. The Art Department deals with Constructive Geometry, which is a practical independent subject that is complete in itself, and without which Analytical Geometry were not. Constructive Geometry is not only the soundest preparation for the study of Mathematics, but it is the complement of the higher branches thereof.

2. Orthographic Projections (plan of working drawings) and Linear Perspective are based on Constructive Geometry.

3. The training of the eye to a correct observation of shapes of relative light or dark, and the exercise of the hand to make correct notations of such, constitute the sum total of free-hand perspective drawing. Of all organs the eye is the most essential in practical life—as it is the most useful. One well trained eye can direct many skilled hands. Among those that are destitute of one sense, the blind are the most helpless—and must be cared for—either by their relatives or by the State. In the Academic Course it is the highest aim to educate the sense of sight. Correct observation, alone, leads to correct imitation, and conversely, correct imitation develops the powers of observation, of understanding, of knowledge.

4. A correct judgment of visual forms and phenomena is impossible without a cultivated sense of color, and hence, special attention is given to this subject. Mary D. Livermore says: "To-day an educated sense of color has a commercial value."

5. Of art forms only such are presented in the Academic Course, as embody general principles that are active in nature. The most abstract Art conception will be utterly void unless it be clothed with the garb of nature to render it intelligible.

6. Form is the language of the Industries. All the sciences are pressed into the service of the Industries. The Industries are the chiefest source of a Nation's wealth—and amongst them Art Industry is the most lucrative, hence, the most important. That which distinguishes Art Industry from the Industries in general, is Art proper, which enters into it as a necessary ingredient, and therefore it is to be hoped that in the near future the most liberal advantages may be afforded by

the University of the people of Missouri to the gifted youth of the State for the pursuit of professional Art Study; *i. e.*, Art as a subject for developing the feelings for "the *True*, the *Good*, and the *Beautiful*," to a full consciousness in the minds of individual students—and not to serve as a means for imparting mere mechanical drill in the practice of processes, at the expense of Art Culture and refinement, and to the utter suffocation of the understanding and of creative growth—and this, not from any ideal, sentimental or visionary notions, but from the practical, hardheaded standpoint of dollars and cents.

Every student that is qualified to enter upon the University course—whether he bring to the work of the Art Department a conscious predilection (natural talent) or not—will make a progress in the study of Form and Art, that is fully commensurate with his efforts. The most faithful student in this, as in any branch of study, will ever achieve the best results.

XX. COMMERCIAL SCHOOL.

BOOK-KEEPING.

J. P. ROYALL, *Instructor.*

This department has been in successful operation during the past seven years in charge of J. P. Royall, a practical accountant and an experienced teacher of book-keeping.

There has been a continuous annual increase in the number of students enrolled, and an improvement in the work performed, both in quality and quantity.

An arrangement has been effected by which the academic students of the University are instructed during three-fifths of the second semester without any charge. This course will cover fifty-four lessons, and embrace single-entry and double-entry book-keeping adapted to an ordinary wholesale and retail mercantile business, the opening and closing of books, partnership settlements and mercantile forms, including drafts, notes, accounts-current, etc. Those students who desire to pursue this branch further than is provided for without charge, and, who stand well in their other studies, will be permitted to have this subject every day during the semester by paying a fee of five dollars.

Those who choose to pursue the more elaborate course, or who may study it as a profession, besides being practiced in the before-mentioned work, will be instructed in the shorter methods, and the most modern and approved forms of books in their adaptation to the various kinds of business.

The student is not permitted to copy his work from a text-book, nor is he required to study an elaborate treatise on the subject. The teacher has prepared for the student a small manual containing the fundamental rules, definitions and principles, and memoranda embracing a concise history of a series of business transac-

tions, such as occur in a mercantile house, simple at first and gradually becoming more intricate, so that the student is placed in *the actual work of keeping books;* and, after a few weeks of class work, each is required to keep books as if he were alone and the only one doing the work, so that his time is employed in learning *the art of keeping books* rather than in studying the science of book-keeping.

The student is not assisted in work that he can accomplish without aid. Thus his efforts are not superseded by the work of the teacher, but he is encouraged and stimulated to habits of self-reliance, and, when these are attained, he readily becomes a competent book-keeper. The actual work of the counting-house is thus introduced into the school-room.

An opportunity is here offered the students, both ladies and gentlemen, while pursuing their other studies, to acquire incidentally as it were, a thorough knowledge of this important branch of a practical business education. By dilligence the average student may accomplish this work in one semester.

Persons who desire to do so, may enter as *special students* in this department without joining other classes in the University, and, by devoting their whole attention to the subject, may acquire, in a very short time, a thorough knowledge of book-keeping.

Expenses to Students Who Pay.

Tuition Payable in Advance.

For Students of University, first semester	$10 00
For Persons not connected with the University, one semester or full course	20 00
For academic Students, two-fifths of second semester	5 00

All students must provide themselves with Book of Instruction, Blank Books, Stationery, etc., which will cost about two dollars.

Report.—The following is the report for the Department of Book-keeping for the year ending June 2, 1887.

Students were enrolled as follows:

First Semester	36
Second Semester	150
Total	186
Less number enrolled both semesters	1
Whole number of individual names enrolled	185
Whole number enrolled last year without duplication	175
Increase	10

The following list comprises the names of students, who, having completed the prescribed course, and having obtained a grade of eighty-five, have been awarded certificates as competent book-keepers:

Anderson, Thos. L.
Baird, J. W.
Brown, H. M.
Cox, B. F.
Cullen, P. H.
Davis, R. H.
Finegan, C. H.
Growney, J. C.
Heather, Clay
Irwin, H. B.
Kemper, J. A.
Means, W. F.
Neuenhahn, O. F.
Pilcher, J. D.
Parmerlee, Will.
Parsons, F. B.
Thomas, Annie G.
Wharton, J. F.
Williams, O. G.

It is impossible at this time (April 4) to give a correct list of the names (nor the accurate number) of the students now pursuing this branch who will be entitled to certificates at the close of the current year. It is estimated, however, that, in addition to those already issued, at least fifty more will be awarded during this scholastic year.

J. P. ROYALL,
Principal.

UNIVERSITY LIBRARY.

The following is submitted as the eleventh annual report of the Librarian of the University:

ACCESSIONS FOR 1886-7.

Source.	Bound Vols.
Baker & Co., (Publishers, Dorchester, Mass.)	1
Callagin & Co., (Publishers, Chicago)	1
Call, R. E	17
Government, U. S	147
Hamilton, M. R., (State Librarian, N. J.)	2*
Hammond, A. C	1
Harper & Bros., (Publishers, N. Y.)	2
Harvard University	1
Heywood, J. C	1
International Tract Society	10
Johnson, G. W., (Director Conn. Exp. Station)	13
Laws, S. S	4
Lindsley, J. B., (Narshville, Tenn.)	5
Pratt, Geo. C	1
Purchased	30
Royal, J. P	2
Sanborn, J. W	1
Secretary Illinois State Board of Agriculture	7
" Iowa " "	23
" Kentucky " "	5
" Michigan " "	8
" N. Hampshire " "	6
" S. Carolina " "	3
" Vermont " "	5
Sims, William	1
State of Missouri	12
Taft, L. R	3
Thompson, S. D	2
Wright, C. D, (Commissioner of Labor.)	1
	315

PERIODICALS FOR THE CURRENT YEAR.

Academy—The.
Agricultural Gazette, (London).
Albany Law Journal.
Journal of Royal Microscopic Society.
Journal of Science, (London)
Kansas City Daily Journal.

*Presented by publishers.

*American Digest.
American Journal of Science.
American Law Journal.
American Law Register.
American Law Review.
American Microscopic Journal.
American Naturalist.
American Chemical Journal—The.
Annalen der. Phys. and Ch.
Atlantic Monthly.
Bibliotheca Sacra.
Blackwoods.
*Boone County Sentinel.
*Breeder's Gazette.
British Quarterly.
*Carrollton Democrat.
*Central Baptist.
Central Law Journal.
Century Magazine.
Chemical News.
*Champion of Freedom and Rights.
*Christian Register.
*Christian Standard.
*Colman's Rural World.
*Columbia Herald.
Comptus Rendus.
Critic—The.
*Disciple—The.
Electrician—The.
Edinburg Review.
Education—The.
Engineering, (London).
Engineering News, (New York).
Forum—The.
Frank Leslie's Illustrated Newspaper.
Geological Magazine.
Harper's Bazar.
Harper's Monthly.
Harper's Weekly.
*Independence Sentinel.
Independent—The.
*Industrialist—The.
*Jefferson City Tribune.
Journal of Education, New England.
Journal of Chemical Society.
Journal of Mental Science.
*Kentucky Live Stock Record.
Knowledge—R. A. Proctor.
Latine et Graece.
Live Stock Record.
London Law Magazine and Review.
London Quarterly.
Magazine of American History.
*Manifesto—The.
*Mexico Intelligencer.
Mind.
*Mining Journal.
*Missouri Deaf-Mute Record.
Missouri Republican.
*Missouri Statesman.
*Missouri School Journal.
*Musical Record—The.
*National Temperance Advocate—The.
Nation—The.
Nature.
*New York Medical Journal.
North American Review.
Observatory, (England).
*Official Gazette of U. S. Patent office.
Philosophical Magazine and Journal of Science.
Political Science Quarterly.
Popular Science Monthly.
Quarterly Journal of Microscopic Science.
Review of Science and Industry, K. C.
Revue des Deux Mondes.
Royal Geographical Society—Proceedings of.
*Saline County Democrat—The.
Sanitarian.
Sanitary Engineer.
Science.
Sidereal Messenger.
Scribner's Monthly.
St. Louis Globe-Democrat.
St. Louis Post-Dispatch.
*The Teacher.
*Traveler's Record.
*Voice—The.
*Western Agriculturist.
Westminster Review.
*Westliche Post.

(*Presented by publishers.)

LIBRARY MATTER.

	Books.	Pamps.
University library	13,012	13,602
University library, accessions 1886-7	315	163
Athenæan Society library	525	
Union Literary Society library	348	
Columbia library	809	
Total in general library	15,009	13,765

The library room covers the entire third floor of the east wing, the inside dimensions being 106x71 feet and height of story 24 feet. The room is accessible by two stairways leading directly from the chapel, which is immediately below, and it also has a side entrance from the corridors which connect with the main entrances of the building. The room is by side lights and sky lights well lighted, and by flues in the walls well ventilated. It is heated by steam and in every way admirably suited to the purpose. Books are very heavy and some idea can be formed of the strength of the floor from the fact that it rests on Howe trusses five feet in depth with a span between iron columns of only 42 feet and resting on outside walls 3 feet in thickness. This magnificent room has no columns in it, the roof being self-supported. Its capacity and capability as a library and study hall are exceptionally good.

There have been some few donations in the way of portraits, resolutions, etc., which have been given places on the walls of the library room. Among the portraits presented, may be mentioned that of Geo. C. Pratt, who held the professorship of languages, in the University from 1843 to 1850. This is a crayon made by Fred. Morse, a former University student but now of St. Louis. In view of the fact that the new library room will accommodate a much larger collection than that now in our possession, may we not expect to see it greatly increased in the near future, both by purchase and donation?

The books belonging to the society libraries have recently been moved into the Athenæan and Union Literary Society halls, where they are now under the complete control of the respective societies.

Members of the Faculty alone are allowed to draw books and periodicals from the University Library for use outside the room—each member being entitled to six books for two weeks.

Members of the Columbia Library Association, also including those who pay a monthly fee (to students 20c.) or an annual fee of $3, are allowed to draw books from this collection for use outside of the room.

Marking, turning down leaves, tearing, soiling or otherwise injuring any book is a violation of Library rules, and the borrower will be held responsible.

The reading room is open every day of the year, Sundays and legal holidays excepted, from 8 A. M. to 5 P. M. Students, when not engaged in recitations, or in study at their own rooms, are required to be in the Library during the hours from 9 to 1 and 2 to 4. A strict observance of the rules of the room is enforced at all times, and idlers are not permitted to make the room a resort. The Librarian or

his assistant is always present, and renders assistance to any who may desire help in looking up library matter.

Certain books of reference are kept on tables set apart for this purpose, to afford the greatest convenience in consultation.

The Law Library, consisting of over 900 volumes, forms a part of the General Library, but is in a separate room, adjacent to the Law Lecture room. By means of the appropriation made by the last General Assembly, the number of books will be doubled (by purchase of new books) at the beginning of the next school year. Members of the Law classes have free access to the books in this Library during library hours.

J. H. DRUMMOND,
Librarian.

J. S. SNODDY,
Assistant Librarian.

UNIVERSITY ANNOUNCEMENTS.

SYNCHRONISTIC TABLE.

(See pp. 136 and 137).

This is a time-table and programme of the class room work for both Students and Faculty.

I. It exhibits to the eye four Academic courses of study, taught simultaneously, each of which is crowned with a degree and attested by a diploma.

II. It does not embrace the Law, Medical, Agricultural, Normal, Engineering and Mining School courses, as each of these has its independent curriculum; each also awards its appropriate degree, attested by a diploma. For information respecting these schools, see the respective portions of this catalogue.

III. The four Academic courses and degrees are:

1. The course in *Arts;* degree A. B., *Artium Baccalaureus-a*, Bachelor of Arts. This is the old-fashioned college or classical course, only slightly modified. Latin and Greek complete.

2. The course in *Science;* degree S. B., *Scientiae Baccalaureus-a*, Bachelor in Science, or Scientific Bachelor. This course gives modern languages the place of the classics, and makes the sciences more prominent. The mathematical course is here complete.

3. The course in *Literature;* degree L. B., *Litterarum Baccalaureus-a*, Bachelor of Letters. This course is such that the sciences yield the pre-eminence to the languages, as the languages yield to the sciences in the S. B. course. English course entire.

4. The course in *Literature and Domestic Arts* for young ladies; degree A. D. B., *Artium Domesticarum Baccarlaurea*. Only young ladies will be graduated with this degree. The course embraces *Form-study* (drawing), Anatomy, Physiology and Hygiene, Music, Italian, Laboratory Work, and Domestic Economy distinctively. Into certain of its classes only young ladies are admitted. This course is intended to avoid the fallacy of confounding co-education with identical education, by giving the young ladies a more elegant and useful culture for their allotted spheres than is provided in either of the other courses.

The course in instrumental music, embraced by the degree A. D. B., is optional, but ample provision is made for it by giving up a corresponding amount of time from other subjects to the extent of a single semester each, and in the following order, viz: (1.) Chemistry. (2.) Modern Languages (German and French). (3.) Latin. (4.) Mathematics.

It should be observed that the English word Bachelor, as a degree word, like the word author or poet, has no reference to sex. Hence, in the Latin of the heading of the first three curricula both genders of the adjective are given, as girls may take any of those degrees; but the degree of the fourth course (A. D. B.) is reserved to them alone. The degree itself points to home life as the destined sphere of woman as distinguished from the public, professional and business life of man. In this course, whose distinctive and valuable features the diverse resources of our Faculty enable us fully to realize, the general and liberal culture equals that of the other courses, and the special culture, with reference to the practical aims of a true education of woman, excels them.

IV. The Academic Bachelor degrees, (A. B., S. B., L. B., A. D. B.,) are not compliments or favors, but acquisitions. They are conferred by the Curators as an award for having successfully completed a given line of work. The recommendation on which the awards are made is that of the Faculty. The diploma is delivered as a sufficient and documentary evidence of such award. Hence the propriety of the professors who teach, and endorse the work of the student by recommending for graduation, signing the diploma, and also the propriety of the diploma bearing the seal of the corporation. The value of these degrees and diplomas will correspond with the standing of the University.

V. These four Academic courses and degrees severally embrace the same time and amount of work, and are equivalent in culture and equal in honor, but have distinctive adaptations to diverse aims in life.

VI. No student will be allowed to graduate in any one of the four Academic courses, who shall deviate from the prescribed work as laid down in the Synchronistic time-table, except by permission of the faculty, obtained prior to making the contemplated change.

VII. Elective courses are permitted to all the students, but subject to certain necessary regulations, such as that—

a. Studies cannot be taken without proper preparation to enter the classes pursuing them.

b. This choice must conform to the *Synchronistic table*; students cannot "get up" classes, except upon this programme of work as laid down.

c. Each student, unless by permission of the faculty, must have 45 hours of work for each week, and at least 15 of these hours must be occupied in class room It is assumed that each student will have four recitations a day, of an hour each, for five days in the week, and that the average student will require about one hour and a half to prepare each recitation. Six hours of preparation, and four hours of

recitation, will be ten hours work a day. Monday is given to the societies, and Sabbath to the churches.

d. When studies have once been selected and arranged for any student, and his name has been entered by the Professors upon class rolls, such student will not be permitted to make any change by discontinuance of studies or by taking other or additional studies, except by the knowledge and approval of the Faculty. A disregard of this rule would turn everything into confusion. It must, therefore, be strictly observed.

VIII. It is left to the head of each department to arrange the special cases arising in his department, with former students, on account of changes in courses of study made in 1884.

IX. In the professional schools, it will be noted that the medical course has been graded, and an entrance examination is required. The Normal course is reshaped and graded with three distinct and fitting degrees and diplomas. The degree of Pe. M. (Master of Pedagogics) is the highest and most scholarly degree of the University. Professors of colleges and general scholars may reasonably be expected to aspire to its difficult attainment. The agricultural course is recast, and the Engineering Department is complete.

X. *a.* The synchronistic curricula (pp. 136–7) are the settled Academic courses for recommendation for the Academic degrees.

b. The English and the Latin are fixtures in the course in letters, and are not open to substitution.

c. The privilege of a student to withdraw from a department at the close of a semester without permission from the Faculty, is restricted to cases where the subject is completed.

The modification of the course in 1884, as given in the above table, had in view the realization of one main idea, to wit: That of giving greater prominence than hitherto to the physical sciences in the Academic work of the University. This is accomplished in two ways: 1st. By bringing the sciences to the front, in the early part of the course, and associating them with language work for elementary disciplinary purposes: 2d. By organizing the science work, in the successive stages of the courses, so as to provide for progressive advancement to higher attainments therein than is otherwise practicable. An intelligent glance at the present programme will readily detect the improvements in both of these respects.

The fallacy that has vitiated much of the discussion respecting the educational value of language or of science has been that of attempting to *prove too much* for the one or for the other. The conflict is virtually over, and it is a drawn battle. Both parties are in possession of the field. Neither can vindicate its claim to exclusive occupation. The work of the present and of the future is that of harmoniously and symmetrically adjusting and balancing these two factors in our organized school work. The completeness with which the mathematical and the language work has been for ages organized into successive and progressive stages must command the admiration of every intelligent educator. It is believed that physical science work admits of and claims similar organization, as the great desideratum of the present, and this revised tabulation is a contribution of the Faculty of the Missouri University towards it attainment.

There is another feature of this programme of work which has been on trial and is also of the nature of a method and on which it is desired to fix attention. The old style was for students to have three hours of recitation daily, each recitation

TABLE OF ACADEMIC

PRESCRIBED CURRICULA

	Semester	Hour	1. COURSE IN ARTS. *Artium Baccalaureus-a.* A. B.	Hour	2. COURSE IN SCIENCE. *Scientiae Baccalaureus-a.* S. B.
Sixth Year.	XII.	I. II. * 	Ethics and Philosophy. Geology and Paleontology. G'logical Lab'tory & F'd W'k 1-3. Physical Laboratory 1-2. Special work in classics.	I. II. 	Ethics and Philosophy. Geology and Paleontology. Geological Laboratory & Field Work 2-3. Special Work in Science with Theses
	XI.	I II. IV. VI. **	Psychology and Logic. Mineralogy and Lithology. {Old English (Anglo-Saxon). {Semitic Lan. & Anc. History 1-2. German and Mediæval History. Mineralogical Laboratory, 1-3.	I. II. III or IV 	Psychology and Logic. Mineralogy and Lithology. { Projection and Perspective to Scale { and Surveying **Mineralogical Laboratory 1-3. Quantitative Chemical Analysis.
Fifth Year.	X.	II. III. IV. V.	{English Lan. and Literature 3-5. {Political Economy 2-5. Chemistry and Laboratory. Latin 1-2, Greek 1-2. French and Modern History.	II. III. IV. *	{ English Language and Literature 3-5. { Political Economy 2-5. Chemistry and Laboratory. Spherical and Physical Astronomy. Botanical Laboratory 1-2. Physical Laboratory 1-2.
	IX.	I. II. III. IV.	†Zoology 3-4, Entomology 1-4. English Language & Literature. Chemistry Latin 1-2, Greek 1-2.	I. II. III. *	†Zoology 3-4, Entomology 1-4. Least Squares 1-2. Chemistry. Physical Laboratory. Botanical Laboratory 1-2.
Fourth Year.	VIII.	I. II. III. IV.	Botany—Systematic & Economic. Physics. {English History & Literature 3-5. {Political Science 2-5, or Calculus. Latin 1-2; Greek 1-2.	I. II. III.	Botany—Systematic and Economic. Physics. Calculus. Elementary Mechanics.
	VII.	I. II. III. IV.	Analytical Geometry. Physics. English History and Literature. Latin 1-2, Greek 1-2.	I. II. III. V.	Analytical Geometry. Physics. English History and Literature. French.
Third Year.	VI.	I II. III IV.	Spherical Trigonometry and Spherical Astronomy. Greek. Latin U. S. History & Amer. Literature.	I. V. VI. IV.	Spherical Trigonometry & Spherical Astronomy. French and Modern History. Drawing 1-2, (Military Science) Chemical Laboratory 1-2. U. S. History and American Literature.
	V.	I. II. III. VI.	Greek. Latin. {Physiology and Hygiene 3-5. {Physical Geography 2-5. Drawing 1-2 (Military Science). Chemical Laboratory 1-2.	I. IV. III. VI.	German. Higher Algebra. {Physiology and Hygiene 3-5. {Physical Geography 2-5. Drawing 1-2 (Military Science). Chemical Laboratory 1-2.
Second Year.	IV.	I. II III. IV.	Latin. Chemistry. Greek. Plane Trig. & Solid Geometry.	I. II. VI IV.	Form Study (Military Science). Chemistry. German. Plane Trigonometry & Solid Geometry.
	III.	I. II. VI. IV.	Latin. Algebra and Plane Geometry. Greek. Physics.	I II. VI. IV.	English Composition and Rhetoric. Algebra and Plane Geometry. German and Mediæval History. Physics.
First Year.	II.	I or IV. II. I. III.	{Algebra. Latin 1-2, Botany 1-2. Greek. Drawing 2-5 (Military Science). Book-keeping 3-5.	I. II. IV. III.	Algebra. Latin 1-2, Botany 1-2. English Composition and Rhetoric. Drawing 2-5 (Military Science). Book-keeping 3-5.
	I.	II. III. IV. VI.	Latin. Arithmetic. †Zoology 3-5, Drawing 2-5 (Military Science) English Composition.	II. III. IV. VI.	Latin. Arithmetic †Zoology 3-5, Drawing 2-5 (Mil. Science). English Composition.

*2—5 p. m. Wednesday, Thursday and Saturday. **2-5 p. m. one afternoon per week.
†Zool. Laboratory once a week additional.

COURSES OF STUDY.

AND THEIR DEGREES.

Hour	3. COURSE IN LETTERS. *Litterarum Baccalaureus-a.* LIT. B.	Hour	4. GIRLS COURSE IN ARTS. *Artium Domesticarum Baccalaurea.* A. D. B.
I.	Ethics and Philosophy.	I.	Ethics and Philosophy.
II.	Geology and Paleontology.	II.	Geology and Paleontology.
	Geological Museum and Field Work 1-3.		Geological Museum 1-3.
	Latin Classics.		Horticulture & Landscape Gardening 1-2.
IV.	Middle English (Semi-Saxon.)	IV.	Middle English (Semi-Saxon).
I.	Psychology and Logic.	I.	Psychology and Logic.
II	Mineralogy and Lithology.	II.	Mineralogy and Lithology.
IV.	Old English (Anglo-Saxon)	IV.	Old English (Anglo-Saxon).
	Semitic Language & Ancient History 1-2.		Semitic Language & Ancient History 1-2.
**	Mineralogical Labratory 1-3.	**	Mineralogical Labratory 1-3
	Quantitative Chemical Analysis.		Quantitative Chemical Analysis.
II.	{English Language and Literature 3-5.	II.	{English Language and Literature 3-5.
	{Political Economy. 2-5.		{Political Economy 2-5.
III.	Chemistry and Laboratory.	III	Chemistry and Laboratory.
IV.	Latin 1-2	I.	Italian 1-2, Art 1-2.
I	Spanish and Italian.		
I.	†Zoology 3-4, Entomology 1-4.	I.	†Zoology 3-4, Entomology 1-4.
II.	English Language and Literature.	II.	English Language and Literature.
III.	Chemistry.	III.	Chemistry.
IV.	Latin 1-2.	V.	Literary Criticism and Select Readings.
*	Physical Laboratory 1-2.		
	Botanical Laboratory 1-2.		
I.	Botany—Systematic and Economic.	I.	Botany—Systematic and Economic.
II.	Physics.	II.	Physics.
III.	{English History and Literature 3-5.	III.	{English History and Literature 3-5.
	{Political Science 2-5 or Calculus.		{Political Science 2-5.
IV.	Latin 1-2, Drawing 1-2, (Military Science).		
I.	Analytical Geometry.	VI.	Art 4-5, Greek Life 1-5.
II.	Physics.	II.	Physics.
III.	English History and Literature.	III.	English History and Literature.
V.	French	V.	French.
IV.	Latin 1-2.		
I.	Spherical Trigonometry and Spherical Astronomy.	I.	Spherical Trignonometry and Spherical Astronomy.
V.	French and Modern History.	V.	French and Modern History.
III.	Latin.	III.	Domestic Chemistry and Laboratory.
IV.	U. S. History and American Literature.	IV.	U. S. History and American Literature.
I.	German.	I.	German.
II.	Latin.		Calisthenics.
III.	{Physiology and Hygiene 3-5.	III.	{Physiology and Hygiene 3-5.
	{Physical Geography 2-5		{Physical Geography 2-5.
IV.	Drawing 1-2, (Military Science).	VI.	Art 1-2.
	Chemical Laboratory 1-2.		Chemical Laboratory 1-2.
I.	Latin.	I.	Latin or English.
II.	Chemistry.	II	Chemistry.
VI.	German.	VI.	German.
IV.	Plane Trigonometry & Solid Geometry.	IV.	Plane Trigonometry and Solid Geometry.
I.	Latin.	I.	English Composition & Rhetoric or Latin.
II.	Algebra and Plane Geometry.	II	Algebra and Plane Geometry.
VI.	German and Mediæval History.	VI	German and Mediæval History.
IV.	Physics.	IV.	Physics.
I.	Algebra.	I	Algebra.
II	Latin 1-2, Botany 1-2.	II.	Latin 1-2, Botany 1-2.
IV.	English Composition and Rhetoric.	IV.	English Composition and Rhetoric.
III.	Drawing 2-5, (Military Science.)	III.	Drawing 2-5.
	Book-keeping 3-5.		Book-keeping 3-5.
II.	Latin.	II.	Latin.
III.	Arithmetic.	III.	Arithmetic.
IV.	†Zoology 3-5, Drawing 2 5, (Military Science)	IV.	†Zoology 3-5, Drawing 2-5,
VI.	English Composition.	VI.	English Composition.

implying two hours of work outside of class room. This was a total of nine hours. By our present method, the students have four hours a day with the Faculty, each hour implying one hour and a half for preparation, making a total of ten hours a day, But it will be noticed that this extra hour is one of intercourse and contact with the living teacher and fellow pupils. With the same time in individual labor, by this increased aid of accomplished specialists, and of class stimulation, students are enabled to attain a higher plane in the great variety of subjects which make up the school work of the present. This personal feature of our work is especially adapted to our situation in Missouri.

The great burden of expense in the work of education in this age is connected with the physical sciences. More than one-fourth of the improvements now in progress is specially devoted to their interest. The museums, hot-houses, apparatus and other advantages provided for pursuing these sciences at the University and the competence of the present Faculty fully warrant all the prominence that is here given to them.

The principle on which school teachers have acted in all ages seems to have been the same. They have always taught what they knew, or what they supposed that they knew. When they knew nothing about the physical sciences, they taught nothing about them. Now that we know a good deal about them, naturally enough we undertake to teach a good deal about them. This is a legitimate demand of this practical and industrial age, and the needed helps and accommodations to fully meet it will doubtless be provided by the State, that her University may proudly stand in the front rank.

The University Town.

The University is situated near the centre of the State, in Columbia, Boone county, in a beautiful and picturesque limestone region, on elevated rolling table land, a few miles back from the north side of the Missouri river. Were the selection of the site to be made anew perhaps no spot in the State could be found combining so many desirable elements as the seat of the State University. The town contains four thousand inhabitants, and the county is the fifth of the State in population; and in its healthfulness and scenery, and especially in those social, moral and religious influences which tend to preserve the character of youth, and promote among them gentlemanly and lady-like conduct, good order and studious habits, it can hardly anywhere be surpassed.

There are located here two highly popular colleges for female education—Christian College and Stephens College—so that Columbia is peculiarly an educational centre, and for fifty years schools have been encouraged at this place.

Directions for New Students.

1. Reach Columbia, if possible, as early as the Friday preceding the opening of the session.

2. If assistance is desired in obtaining board, report to the Proctor or to any member of the Faculty, at the University buildings.

3. Before entering the University, $15.00 must be paid to Mr. R. B. Price, Treasurer, at the Boone County National Bank, and his receipt obtained. The law student pays $40.00; the medical student $40.00, and $10.00 for the Demonstrator's ticket.

4. The Treasurer's receipt should be at once presented to the Proctor at the University, when the name of the student will be entered upon the University roll.

In case of continued delinquincy to enroll, and of loitering about the town, the person so delinquent will not be received as a member of the University. No one can be enrolled until the receipt of the Treasurer, as above specifieed, be presented. No student can enter a class with any Professor, until he shall have been matriculated or regularly enrolled by the Proctor.

5. The professional student must present the card received from the Proctor to the Secretary of the Faculty, who will enroll his name and issue to him his ma triculation ticket, with the instructions necessary for enabling him to have hi name entered on class roll.

6. The academic student must present the Proctor's card to the Secretary of the Faculty, who must issue a matriculation ticket, admitting new students to their examinations, and former students to the advanced classes, for which, according to the Faculty record book, they have been examined. Students cannot enter classes without having borne an examination therefor,

7. Young people coming to Columbia, intending to enter the University, are cautioned against delaying their entrance without good reason, as such delay not only injures the work of the entire session, but leads to unfavorable inferences concerning the character and intentions of the student.

8. Report to the Professor of English to obtain a certificate of competent knowledge of English before having cards signed by any other professor.

When an applicant for admission into the University has been connected with any other institution, he or she must present satisfactory evidence to the Faculty of an honorable standing in the institution from which he or she comes. The applicant must be of good character and qualified to enter organized classes.

Classes are retained in their class rooms by the Professors until the tap of the bell; five minutss are allowed for transitions of classes after the tap of the bell. This rule applies also to the Library as a study room.

Required of Students.

1. To have four, and only four hours of recitation daily, unless otherwise prescribed by the course or allowed by the Faculty for good reasons; and to take such part as may be assigned in all class room or general exercises of the University. When class cards are filled by the Professors with the prescribed work they must not be changed without the knowledge and approval of the Faculty.

2. To be present at daily worship in the University Chapel, and at all recitations and other exercises that may be assigned, and to make due preparation therefor. Absolute promptness and punctuality are required. When the students convene for worship they are required not to loiter about the building, but to go at once to their numbers and there to be seated, observing the same order as would be expected in a church.

3. Faithfully to observe "study" hours, and not to be found in the streets, in shops, stores and other places of business, except on business. During recitation hours, that is to say, from 9 A. M. to 1 P. M., and from 2 P. M. to 4 P. M., students, unoccupied in class room, are not allowed to be on the campus, nor about the buildings, at any season of the year, but they are required to withdraw to their homes, or to go to the library room for study, subject to its rules.

4. It is expected and enjoined that students, on Sunday, attend the church of

their choice, or that of their parents, and observe the day as good and orderly citizens of a Christian community.

5. In general terms it is required of students to be quiet, orderly and industrious; to observe the rules of the recitation room by abstaining from whispering or other communication; from spitting on the floor of the class rooms, library and chapel, under penalty of five demerits for each offense; from all unseemly postures, and at all times, to observe the conduct and deportment of well-bred youths. The students are expected to deport themselves as ladies and gentlemen, and to be respectful and courteous in their bearing toward each other and toward the members of the Faculty.

6. It must be distinctly understood that the University is for the good and virtuous young people of the State, and not for the idle and disorderly, the vile or vicious.

7. Professional students are required to comply with the regulations of the University upon the same conditions and penalties as academic students.

8. Violations of the general laws and rules established by the Curators and the Faculty for the government of the University, negligence of duties, habitual and prolonged absence from lectures, will prevent a professional as well as an academic student from obtaining a degree.

The following resolutions were recently adopted by the Faculty:

(1). *Resolved*, That any student who shall write, dictate, have printed, circulate or lend his influence to bring into existence what is known as a "Bogus," shall be publicly expelled.

(2). *Resolved*, That any student who shall, by any means whatsoever, be guilty of entering any part of the University buildings secretly, or without specific permission, or any class room or cases or furniture or private office connected with the University, shall suffer immediate expulsion; and, farther, that the taking or moving from any of the rooms of the Institution by any student the property of any member of the Faculty or of the Institution without permission, shall be deemed a like offense and so be visited with expulsion.

These offenses are too near akin to the crimes of burglary and theft to require any explanation.

Secret Societies.

Whereas, The interest of the Literary Societies of the Missouri University are by the Faculty felt to be of great importance to our students, and the influence of College Secret Societies, so-called, is believed to be prejudicial to them and harmful to the Institution; and,

Whereas, It is deemed of vital consequence that only such societies should be allowed to claim the attention of the students as are recognized and approved by the Falculty; therefore, be it

Resolved, That all our students are hereby discouraged from joining such secret societies.

College Government.

The fourth thing which I wish now to mention is this: By law, the government and control of this University are lodged in the Board of Curators. The Curators have lodged the exercise of government and discipline in the Faculty. In my acceptance it is made a condition, and by the explicit acquiescence therein by the Board, it has become an agreement that there is to be no appeal by the

students from any action of government or discipline on the part of the Faculty to the Curators. If the Faculty, as a body, is incompetent for the work assigned to it, of government and discipline as well as teaching, then clear the decks and man the vessel with a crew that understands and can be trusted to perform its duties. This is the accepted and existing state of things. I am pleased that this is so. The Curators are thereby wisely exempted from a needless and incompetent responsibility, and nothing unreasonable is developed or demanded of the Faculty.

This point lifts to view the whole subject of college government, which is conceded to be one of great delicacy and difficulty. It is not meant to go into that subject at this time, farther than simply to enunciate the general principle which seems to underlie and to pervade it, and by a proper appreciation of which we probably have one of the best guarantees of efficiency and harmony.

This matter of college government is esteemed the opprobium of our higher institutions of learning, and yet there does not appear to be any good reason why, if the students and authorities of a college understand themselves clearly, there should be any trouble. It is conceived that there is a principle which presides over this subject, and that it is obvious on enunciation and all comprehensive in its application. That principle is simply this: *The authority of government in a school is not derived from the pupils, nor is it dependent on them, in any sense whatever.* This holds true, whether it be a private school or a public school, an academy, a college, or a university. In no case is the authority of the schoolmaster derived from his pupils. In the private school, it is an extension of parental authority; in public schools of all grades, including the university, it is an extension of the authority of the State. But in no case is the authority of the school house derived from the scholars. It is not from below; it is from above. Scholars, then, do not come to a school to govern it, nor to take any part in the government. They come to obey and be governed, by submitting to the rules and regulations which they find in force. A proper understanding of this very simple and comprehensive principle of action, takes all the windy conceit and swollen importance out of the self-constituted leaders of college broils and rebellions. The only alternative to a pupil in school is to obey or leave, willingly or by constraint.

Any other theory works its own inevitable destruction. Take the popular, but utterly fallacious and pernicious alternative, that young gentlemen, in an institution of learning, are to be thrown upon and guided by a sense of honor. The question at once arises, whose sense of honor? Is each to be a law to himself? Hardly any two, in many cases, can be expected to agree. Most flagrant misbehavior, not infrequently, has the sanction of the guilty party's sense of honor. By the operation of this principle, every one would do that which was right in his own eyes, which is a natural description of a state of barbarous anarchy. Between the loyal and orderly subordination of the pupils to the constituted authorities of the school house, and the lawless and disgraceful subordination of a Faculty to their own scholars, no sound, well-informed and unprejudiced judgment can hesitate, in its choice, for a moment. Whatever the college or the school house laws, they are entitled to vindication by enforcement, till altered or repealed by the proper authorities in a proper way. The school in its organization and operation is not a democracy, nor a republic, any more than is the family. The authority in the family does not come from the children. To recognize the children as the source of power, or the governing authority in the family, would destroy the household. Any other view tends to breed anarchy and lawlessness; and that, too, not only in school days, but in the after life of pupils as citizens. "The heir, as long as he is

a child, differeth nothing from a servant, though he be lord of all; but is under tutors and governors until the time appointed by the father."

In its measure, this enunciation holds good of the professional schools, just the same as of the under-graduate schools. Underneath all their freedom of personal action and exemption from surveillance, there are certain established rules which are not established nor changed at their bidding and to which the professional or proper Universisy students must conform, as a condition of pupilage and recognition. It may be truly said of them, as of the contestants in the Grecian games—"If a man also strive for masteries, yet he is not crowned, except he strive lawfully." A student is not entitled to the benefits nor to any of the honors of an institution of learning, except upon the condition of loyal compliance with its requirements.—*From the Inaugural Address of President Laws.*

THINGS FORBIDDEN TO STUDENTS.

1. To enter a billiard or drinking saloon, upon any pretext whatever; to carry concealed weapons, or to use profane or indecent language, or to use intoxicating drinks of any kind. The sending or the receiving of a challenge will operate a dismissal. The property and peace of the citizens are in no way to be disturbed.

2. Noisy and disorderly conduct about the University buildings, assembling about the doors, whistling, sitting in the windows, shouting or calling aloud from the windows, or assembling in the halls, before or after recitation or other exercises.

The classes are required to make their transition from one recitation room to another, promptly, at the proper signal, and five minutes are allowed for the change.

3. To smoke in the building or on the campus. Betting and gambling in every form are prohibited. "Idleness persisted in is to be treated as wantonness and rebellion."

4. In any way to injure or mar the University building or furniture by whittling, cutting, marking, or in any way defacing the same. All University property is to be guarded and preserved as a sacred trust, and to be used without abuse; and in every case, if a student injure or deface benches, tables or other furniture, he shall be required to pay the full cost of the articles injured or defaced, and in other cases to pay for all the damage done. Each student is assigned a number on the seats in the chapel, and is not allowed to change without permission, and is responsible for the condition in which it is kept—note being taken of marking, or of any damage. Wilful damage to property may subject one to removal from the Institution.

5. To leave town without the permission of the President, obtained beforehand, or to change a recitation which has been assigned, without the permission of the Faculty. Such excuse by the President, is reported at Faculty meeting, and operates an excuse from the several rolls. With this exception, each Professor alone excuses absences from his roll call. The President alone excuses from chapel.

6. No student will receive an honorable dismission who is under a charge, or who has failed to pay all University dues, or who has not returned all library books.

7. All those things are forbidden which tend to deteriorate moral character, to prevent intellectual and moral advancement—in short, all those irregular, wicked and immoral practices and habits which would be forbidden in good and

cultivated families, and which tend to prevent preparation and training for good citizenship.

8. Profanity, quarreling, fighting and obscenity of language or conduct on pain of dismission.

☞The attention of students is especially called to the foregoing rules, and they will not be permitted to plead ignorance of them, when called to account for delinquency. A willful violation of any regulation is a just and sufficient ground for sending the offender from the Institution. It must be borne in mind that these rules of order apply as rigidly to professional as to academic students, as all are associated in the same University community. No fees are returned to any one removed by discipline, as offenders forfeit their rights and privileges of citizenship and good standing in the University.

Discipline.

The discipline of the University is intended to be mild and suasive, as far as circumstances will permit. If, however, students manifest such moral obliquities, or such idleness, as render them unworthy members of the body collegiate, they are returned to their friends without exposure, when it is practicable so to do; and it is only in cardinal offenses that the Faculty resort to PUBLIC AND EXEMPLARY punishment

When a student enters the University, the discipline of the Institution allows him a credit of one hundred merit marks; and he is charged on the record with such demerit marks as arise from misconduct and neglect of college duties. When it is ascertained that his demerits reach fifty, a leter of notification is sent to his parent or guardian; and when the number reaches one hundred, he is excluded from the Institution by the operation of law, which is rendered effective by an announcement of the fact by the President, or by an official communication by the Secretary of the Faculty to the individual, and to the parent or guardian.

Rules of Conduct.

These are few, and are designed to promote the good order and welfare of the University community, and the best interests of the individual student. Their rigid enforcement must be expected.

SOME BOARD REGULATIONS.

[1872.]

The President.

"The President shall be the chief executive officer of the University; he shall preside in the meetings of the general Faculty, and when present in those of special faculties, also at the Commencement and on other public occasions of the University.

"It shall be his duty to be present at the meetings of the Board of Curators when required.

"He shall see that the laws and regulations of the University, and the plans in relation thereto as adopted by the Board of Curators are faithfully executed; and that all rules or orders of the Board for the general government of the University or any of its departments shall be fully carried into effect.

"He shall, at each annual meeting of the Board of Curators, make a report, presenting the progress, condition and wants of the University, and recommend such measures as in his judgment will promote its interests.

"He shall at the other meetings of the Board, as may be required, or as he may deem expedient, make report touching the interests of the University, or any special matter pertaing thereto.

"It shall be the duty of the president to superintend and direct the care and management of the Institution and its grounds.

"He shall have power to grant leave of absence to students, or with the assent of the Faculty, to excuse from any particular class, and to transfer to a different class.

"He shall keep himself duly informed in regard to all departments of the University, its property and workings, and shall have the right to make such examinations and inquires as may be necessary to furnish him full information.

"He shall be present at daily prayers, or when necessarily absent, shall inform the oldest professor in commission, who shall in that case preside in the chapel.

"He is in general terms charged with the superintendence of the interests of the University, with its good order and the maintenance of its reputation at home and abroad, and also with the general oversight of its property.

PROFESSORS.

"The University Faculty shall consist of the professors in the several departments of the University, and of assistant professors representing complete departments.

"The assistant professors and instructors shall attend the Faculty meetings, shall participate in the consultations of the Faculty and give their opinions, but not vote.

"All professors, assistant professors and instructors shall be members of the Faculties of the departments to which they respectively belong, and they may be members of as many different Faculties as the departments in which they may be giving instruction.

"The University Faculty shall meet each week; other Faculties when called together by their dean, or by the president of the University, for consultation in regard to their special departments.

"A majority in all cases shall constitute a quorum.

"It is the duty of the professors and instructors to use their best efforts to carry into complete effect the laws of the institution and the plan of management and organization, as adopted by the Board or Legislature. *They are constituted officers both of discipline and instruction.* They are, in the recitation room and out of it, to use their influence and authority to preserve order and good conduct among the students, to bear a just proportion of such systems of visitation and moral influence as may be adopted in the Faculty for the benefit of students, and by all the means in their power to promote the reputation and welfare of the University.

"The business of the Faculty at their meetings shall be, to consider the order and condition of the University, the conduct and progress of the students, to review the rolls, to administer discipline in cases which may be deemed worthy of Faculty notice, to make rules for the government of the students not inconsistent with those of the board, to consult in regard to advancing the interests of the University, to discuss questions of educational policy, or to hear and debate papers which may be presented by any of the instructional corps as may be agreed upon and thought best.

"Professors are required to be punctually present at the daily convocation for worship in the chapel, and so far as in their power to give their aid in rendering the religious services appropriate and solemn.

"The Faculty shall appoint a secretary who shall be a professor or teacher in the University, and who shall keep a faithful record of the members of the Faculty present and of the proceedings of each meeting of the Faculty, and enter the same in a permanent book, which shall be laid before the Board for examination at each stated meeting, and he shall do such other business as properly pertains to his office.

"The special or professional Faculties shall first pass upon all degrees, certificates or honors to be conferred in the respective departments, and report the same for the consideration and action of the University Faculty.

STUDENTS.

"It is the duty of students to obey the laws and rules which may be made by the Board of Curators or by the Faculty, for the government of the University.

"Whenever the Faculty are satisfied that a student is not fulfilling or likely to fulfill, the purposes of his residence at the University, or is *for any cause* an unfit member thereof, his parents or guardians shall be notified, that they may have opportunity to withdraw him, and if not withdrawn within a reasonable time, he shall be peremptorily dismissed. This rule is not intended to prevent instant dismission for those graver offenses which may require it.

"Students must comply with the rules of the Library and the rules relating to the Chemical Laboratory, on penalty of being debarred their use.

"The presenting of petitions or other papers to the Board of Curators in regard to the government of the University, or to the appointment or dismissal of professors or officers, or the holding of meetings to criticise the government of the University, is regarded as improper and disorderly, and any student engaging in such practices may be dismissed by the Faculty.

"Presents to officers of the University from the students or any class of them are prohibited, and officers are required to decline their acceptance, if tendered.

"Meetings of the students, or of a class or section of students, are not to be called without the knowledge and consent of the President.

"No society or association, or club is permitted to meet after night in the University building except under such rules as may be adopted by the Faculty for the safety of the building and property, and in such manner that due accountability shall be secured. The President is particularly enjoined to see that rules are made and enforced for the safety and preservation of the University property, and if this cannot be done without the exclusion of the regular society meetings, or other minor associations, or if the societies manifest an unwillingness to comply with these rules or do not observe them, night meetings must be wholly prohibited, and the Faculty is authorized and required to issue an order to that effect and enforce it.

"In case of injury, accidental or otherwise, done to the University property, the damage shall be paid for by the student who has done it, or by the occupants of the room in which the injury occurs, or if done to a building by the occupants of the building. All rooms are rented upon this express condition.

"The business agent is required to assess the damages and immediately to cause the injury to be repaired.

"If a student is expelled from a boarding club by the action of the club, he is

immediately to leave his room in the club house, and no part of his rent will be remitted.

"In general terms students are held responsible for good order and the diligent use of their time. The University is no place for idlers, for the disorderly, or those who do not propose to give their whole time to the work allotted them by the Faculty. The loss of a single recitation not only injures the student but all connected with him.

"Leave of absence will not be granted but in cases of absolute necessity, and the student should not apply for it, nor the parents or guardians in his behalf, except in such cases.

"Students and Faculty are assembled daily for prayers fifteen minutes before the hour for morning recitations. At this time all public announcements are made, and the President also gives directions and instruction in regard to all their general duties as members of the University.

"No candidate for any of the degrees of this University shall be permitted in any public exercise, to deliver an address or oration which is either sectarian or partisan in character; and a violation of this rule shall debar the offender from any honor of this institution.

"All students, unless sick or absent, are earnestly requested to attend public worship at least once on the Sabbath, at such places as they, their parents or guardians may designate, and all practices inconsistent with the due observance of the Lord's day are expressly prohibited.

"The diploma fee shall be five dollars, to be paid to the Treasurer of the University, whose receipt shall be presented before delivery of the diploma, which shall be prepared by the Faculty.

"Certificates of proficiency shall be conferred in the same manner, and the fee shall be one dollar, to be paid in the same manner. If the student shall have attained extraordinary excellence in a particular branch, that excellence shall be noted in his certificate as the Faculty may determine.

"The proficients as well as graduates shall, when required, perform public exercises on commencement day under such rules as may be made by the Faculty."

Act of the Legislature Respecting the Town of Columbia.

Sec. 6. No by-law or ordinance of the corporate authorities of said town, and no police regulations of said authorities shall be passed, and no powers of the officers of the said corporation shall be exercised so as to interfere with any by-law or regulation of the Curators or the Faculty of the University of Missouri.

Leave of Absence.

When a student wishes to leave the University, either temporarily or permanently, he should confer with the president, in order that charges of absence may not accumulate against him on the record of demerit. But it is hoped that absences from the Institution for the purpose of visiting friends, etc., will be discouraged by parents and guardians, because such absences interrupt a student's progress, and greatly diminish the pleasure and profit of his literary pursuits.

In case of withdrawal, written authority from the parent or guardian may be required. Parents and guardians are again urged not to encourage withdrawals, nor permit them, save for controlling reasons.

The Faculty would add emphasis to this statement by the declaration that they consider the evil of withdrawing before examination, and prior to the close of the session, to be so injurious, both to the individual student and to the good order of the University, that they cannot advise students, having such intentions, to enter the University at all. It should be understood that the student, by withdrawal, not only loses the benefit of the closing exercises in his studies—the most important of them all in fixing them in his mind—but escapes the responsibility of final examinations, and loses the incentives which the contests and aspirations of a public institution present.

Absent Marks.

1. There are three kinds of absence marks—those from chapel, from town and from class room.

2. The absence from chapel, indicated by the unoccupied numbers on the seats, shall be noted every morning by monitors, appointed by the Faculty, and the slips used for this marking shall be handed to the secretary of the Faculty immediately after chapel every Saturday morning.

3. The presiding officer alone shall excuse absences from chapel and from town.

4. The several professors shall excuse from their class room exercises, with the exception that an excuse for absence from town shall operate as an excuse from chapel, and from all class rooms, during the time for which it is granted.

5. The absence marks on class rolls are of three kinds:

a. Those cancelled.

b. Those uncancelled, after an excuse has been called for, and no satisfactory excuse has been given.

c. Those uncancelled, for which no excuse has yet been demanded, and for which no sufficient reason is known.

Class room absences of the first kind (a), *i. e.*, when cancelled, shall be reported as *excused absences,* and recorded with the reason for cancellation; absences of the second kind (b), shall be reported as *unexcused absences,* and entered on the roll of demerit; and all undetermined absence marks shall be determined, *i. e.*, converted into either excused or unexcused absences, before they are reported to the secretary of the Faculty.

6. All excused and unexcused absence marks shall be reported to the secretary of the Faculty, at every regular Faculty meeting. At the end of the semester all undetermined absence marks are reported as unexcused.

7. Careful note shall be taken of all absences before entering upon class room exercises.

8. All class room excuses shall be called for, and given in the presence of the entire class, except in extraordinary cases.

9. Every student against whose name there is entered upon his class roll an absence mark, shall be called on for the reason of absence, upon first appearing in class room after its entry.

10. When, upon the calling of the roll, it shall appear that a student is absent for a reason unknown to the Professor, due diligence shall be exercised to learn the probable reason, by inquiry of the class, whether the absence be due to sickness or other cause, that proper attention may be directed to each case as it arises.

11. Students must account for their absences from chapel every Tuesday

morning. The reason of absence from chapel must be given, and it is delivered to the Secretary of the Faculty in the lists signed by the President.

12. In making their reports to the Secretary of the Faculty, the Professors shall use a prescribed blank.

13. Unexcused absences, once reported, can only be excused by Faculty action.

14. Every unexcused absence from chapel or from class rooms, counts two demerit marks.

Rules for Grading Students.

A system of marking proficiency and conduct of students for classification and future reference being a matter of necessity, it is resolved :

1. The grades given by Professors for class-room work, examinations or other exercises, shall be embodied in a semi-annual report, and handed to the Secretary of the Faculty for safe keeping and record, on the scale of 100, *i. e.*, the knowledge of the student in any particular subject shall be expressed in per cent. of the knowledge that may be justly demanded of the class, measured *not* by the amount of subject matter within the scope of such subject, but by the amount of it actually gone over and taught in the class-room.

2. The grades thus made out shall be filed and recorded by the Secretary for the purpose of enabling him to make out the annual reports for undergraduates and to obtain the average full course grade of the candidates for graduation.

3. The Secretary shall make out and mail to all undergraduates or their legal representatives, at the close of each college year, an annual report of the work done by them during the year, which report shall be worded as follows, to wit: A standing or grade in any subject of less than 60 to be designated by the words, *not passed;* a standing or grade of 70 and up to under 90 by the words, *second rank;* a standing of 90 and over by the words, *first rank;* and those of first rank having 96 or over to be designated *first rank with distinction.*

4. No other grade than that of rank without numerical standing as here provided shall be communicated or given to any student or patron of the University by either a Professor or the Secretary of the Faculty.

5. All students, who have finished the work in any department, and who have reached in it an average grade of 96 to 100, shall be named by the Professor in charge of such department in his annual report to the President of the University for *honorable mention* in the catalogue; this fact of honorable mention shall likewise be stated on the Commencement programme in the case of graduates.

6. The average full course grade of the academic graduates shall be made out by the Secretary of the Faculty from the records of the professors' reports on file, counting as equivalent each hour's work per day with the Faculty, in any study, and the detailed report, shall be examined by two additional Professors appointed by the Faculty, who shall testify to its correctness by their signatures.

In counting the grades given to students in fractional studies, such grades shall have corresponding fractional values in making out the general averages.

7. The pass-grade for ordinary class-room work shall continue to be 60 as heretofore, an average full course grade of 70 shall, however, be the prerequisite for graduation.

8. Recognition to be given to graduates in the following manner on the Diploma and on the Commencement programme, to wit: All students graduating with a full course average of 70 to under 90 to receive the ordinary Diploma here-

tofore given; those graduating with a full course average of 90 to under 96 to have inserted in their Diplomas the words, *first rank;* those graduating with a full course average of 96 and over to have inserted in their Diplomas the words, *first rank with distinction;* provided, however, that college discipline incurred for misconduct, or a grade for same of 90 or under, or demerits beyond the number of 25 for unexcused absences, given in the Senior or any other year, shall forfeit the right of any student to such distinction, and to recognition in any rank except by special dispensation.

On the Commencement programme the names of the graduates shall appear in the order of graduation, with the above mentioned proviso, distinguishing in the manner indicated in the ranks of the graduates, and notice shall be made of previous honorable mention in the catalogue.

9. Only those Seniors who shall have attained the grade of *first rank with distinction* shall be voted for by the class for the honor of valedictorian at commencement. If there are not two or more Seniors thus eligible, the Senior who has the highest grade in the Academic course shall be *ipso facto*, the valedictorian of his class, *i.e.*, without election by the class, and the person to be so designated shall be determined by the Secretary of the Faculty on comparison of the relative grades made by the first of May in each year.

Adopted by the Faculty April 22, 1884.

Students admitted to standing in any of the classes shall be graded in the several subjects of study, according to the system of marking proficiency, on the scale of 100 adopted in this University, and said standing shall be placed on the record.

No evidence of proficiency in any study, pursued outside of this University, shall be accepted by any professor in lieu of his own examination.

All professional students who enter regular academic classes shall be dealt with in those classes as other academic students, in grading and in marking absences, and in deportment.

The standing of all students shall be reported by the Professor to the Secretary of the Faculty, at the end of each semester, indicating whether it is given after examination, or is merely class standing, and for how long a time; in the latter case it shall not entitle the student to a claim involving future graduation.

Students who fail to reach a respectable standing in their studies:

1. If the failure arises from the fact that the student has too much work, he shall be excused by the Faculty from part of it.

2. If the failure arises in any department, or departments, from a want of application, the case shall be promptly reported to the Faculty by the head of the department. It shall then become the duty of the Secretary of the Faculty to send to such student and to his parent or guardian a notice, stating that the name of said student has been before the Faculty for class-room delinquencies, naming the department where such delinquency has occurred. If the name of such student is again presented to the Faculty under the above regulation, by the same or any other Professor, during the same semester, the Faculty shall drop said student from the department last reporting him, or send him home.

3. If from bad health the Faculty may either excuse him from the study or send him home.

4. If the failure in any class arises from want of capacity, or from the fact that the student is classed too high, the head of the department must assign him to a lower class within his department, if there be one for which he is fitted; if

there be no such class, the fact shall be reported to the Faculty at their next regular meeting, and the Faculty may excuse the student and assign some other study, or studies, in which he can work to advantage.

5. Whenever a student is dropped twice within the same semester, his connection with the University shall cease, and the Secretary shall give notice of the fact to his parent or guardian; and whenever a student is dropped from any department, it shall be the duty of the Secretary of the Faculty to inform the parent or guardian, as the case may be, of the fact.

Notice to Patrons of the University.

The patrons of the University will please note the following explanations and suggestions:

1. It is not found practicable to send out reports oftener than at the close of each collegiate year in June. But the Professors in charge of the students keep, carefully, a daily record, and the Secretary of the Faculty keeps a personal account with each student, from all of which the semester reports are made up. At any time, if friends especially request it, the standing of any particular studies will be promptly furnished by the Secretary of the Faculty. In European Universities only post-graduates are admitted to the classes, and hence the absence of the marking and reporting system there affords no criterion of our American Universities where we have an academic department and under-graduate students.

2. In marking and grading, a scale of ten (or one hundred) is used for simplicity and convenience by the entire Faculty, and when the figures are translated into ranks, they have about the following meaning: 60-70 no rank; 70-90 second rank; 90-95 first rank; 96-100 first rank with distinction; 60 barely passable; below 60 means that a student is so deficient or imperfect as to be put back, or as not to be allowed to go ahead to more advanced studies. Conduct is also graded on the scale of 100, every student is, on entering, credited with 100 as perfect, and all deductions from this ideal standard are by demerits. Each unexcused absence from University duty counts two demerits, and misconduct is demerited according to its aggravation.

3. Students are graded on deportment by the scale of figures and adjectives given in the preceding paragraph.

4. It is deemed very important for parents and guardians to understand that, not including clothing nor railroad fares, the entire expense of a student here for the two semesters, or entire college year, should fall within two hundred dollars. If a student spends more than that amount, he should be called strictly to account, as the probability is that his associations or habits are not what they should be. The fact is, it would be for the interest of the University and of the State, that students who propose to spend more than the above amount should go elsewhere. On page 155 of this catalogue, a student who has had several years' experience, gives the expense of living in one of the clubs, and makes in that connection this statement: "We know the expense to each of several of our most studious members to have been no more than one hundred and fifty dollare for the last year, including all expenses, excepting neither clothing nor railroad fare. There are many cases where students succeed on less, but economy itself would dictate the above amount." The clubs ara as genteel and comfortable as any plain private families. There is probably no institution in our country where equal advantages can be enjoyed at less cost. Unnecessary expenditure does add to the respectability of any student, and it certainly does not imperil his character and scholar-

ship. There is nothing more pernicious to our youth than habits or indulgence of extravagance.

Examinations and Graduation.

There are three examinations in the University:

1. An examination of the new students is held at the beginning of the session, for the purpose of ascertaining their scholarship, and of assigning them to the classes for which they may be qualified.

Every student who takes an examination will be required to sign the following pledge, to be written on the examination paper handed in: "I hereby pledge my honor that I have neither given nor received any aid during this examination."

In order to meet the requirements in English, it has been resolved—

a. That before any student (coming to the University for the first time), shall be admitted to any of the academic classes, he shall be examined by the Professor of English, and obtain from him a pass card, certifying that he possesses a competent knowledge of English—the word competent being understood to mean such a degree of knowledge as will qualify the pupil to labor profitably and creditably in the class he proposes to enter, it being referred to the several heads of departments to arrange with the head of the English Department the cards of examination which shall pass the pupils to their several classes.

b. That the Secretary of the Faculty direct the students to report to the Professor of English, before having their cards signed by any Professor.

On the occasion of entrance examinations, the Faculty generally recommend a full course of study to students whose age and means render such a course advisable.

Special students, in any department, may be admitted without previous examination, but no students are accounted special students unless recognized and entered as such by the Faculty.

2. An intermediate examination of all the classes, partly oral and partly in writing, is held at the close of the first semester. There is no suspension of class room exercises, except for intermediate examinations, for the holidays, Thanksgiving Day and Washington's birthday.

3. A general examination of all the classes is held during the ten days preceding commencement, for the purpose of ascertaing the year's progress of the students, and of deciding what students shall graduate or be promoted to higher classes.

Review and Re-examination.

1. A student may, either by or without entrance into a class, review any subject in which he has a passing grade, and by permission of the Faculty previously obtained, be re-examined on such subject at the time of the regular class examination. *The grade thus obtained shall be substituted for the first.*

2. The regular times for class examinations are the only occasions on which a student having a passing grade may present himself for re-examinations, except in cases where it is clearly impossible for him to be present. In such cases the Faculty *may* set some other time for his examination.

3. The re-examination provided for by the two preceding rules shall be limited to subjects pursued or passed on by the student during the *scholastic year immediately preceding* the proposed examination, but this re-examination shall not be allowed more than once.

4. All private examinations granted under the rule (2), *i. e.*, those which are asked for after the public examinations have taken place and at which a student failed to be present, shall be conducted in writing.

Students cannot be examined privately otherwise than as above provided, but must pass the public examination of their classes, or lose their class standing.

No student who has been absent from his class for more than a third of the time devoted to the particular subject, shall be admitted to the regular class examination for the purpose of obtaining his final grade; such student may, however, on petition to the Faculty, be granted a special written examination, to cover the whole subject gone over, and the secretary shall keep and preserve the examination paper, graded and signed by the professor in charge.

The mathematical department was exempted from the operation of this rule.

Each candidate, as a condition of enrollment by the Faculty for recommendation to the Board of Curators for graduation, is required to prepare a thesis, oration or essay, which may be given in public or not, at the discretion of the Faculty, and the same, on thesis paper, must be filed with the University Librarian, to be kept in the archives.

Students in the course in science are required to present, not an oration but a thesis or essay upon a scientific topic, for graduation.

Cheating.

Whereas, Cheating in recitation or in examination, by using helps of any kind forbibben, or not allowed in common to all the members of a class, results in gaining dishonorable advantage over class-mates, and in deceiving instructors and is ruinous to the character and scholarship of such as resort to such reprehensible practices, and hence, should not be tolerated in any institution of learning; therefore, in order to guard the students of this University against this grave evil, the following rule is hereby enacted:

Part I.—For the *first* offense of cheating it is hereby ordered:

1. That the recitation or examination thus vitiated shall be marked zero.

2. That no special or private examination shall be allowed for the relief of the offender.

3. The fact of such cheating shall be stated in the conduct column.

4. That 25 demerits shall be at once entered against the offender.

The penalty for the first offense of cheating is not understood, of itself, to debar a student from continued work in the department where it occurs, nor to place the student at any disadvantage other than may arise out of his scholarship or general standing.

Part II.—For the *second* offense of cheating it is hereby ordered:

That the fact of any student thus cheating in any recitation or examination shall operate as a dismissal from the University, and as a barrier to the readmission of the guilty party to the University.

Part III.—The written statement of the fact of cheating aforesaid, giving the name of the guilty student, the subject, recitation or examination, the time and place of the same, and the names of at least two who are cognizant of the same,

one of whom may be the guilty party, presented to the Faculty at any regular meeting by the head, or Professor in charge of the department in which the offense occurred, shall, with the approval of the Faculty, be entered on the minutes, and have the effect of adjudging the penalties as defined under parts I. and II. of this rule; and a copy of the minute shall be sent to the parent or guardian, and a *duplicate* may be given to the offender.

Degrees.

Degrees are conferred by the Curators, on the recommendation of the University Faculty. The regular Academic degrees are: Bachelor of Arts, Bachelor of Science, Bachelor of Letters and Bachelor of Domestic Arts, according to the particular course of study which the student has pursued. Each of these courses, entire, occupies six years, and is intended to be of equal honor and educational value. The professional degrees correspond to the several courses pursued.

The degree of Master is conferred three years or more after graduation, upon such Bachelors as pursue a professional or literary career.

The Curators may, of course, in addition to these, confer any of the usual honorary degrees and titles.

Certificates and Diplomas.

If students desire certificates to show their attainments, it has been decided that instead of individual members of the Faculty giving testimonials—

1. A graduate be referred to his diploma.
2. An undergraduate have a certified copy of his card from the Secretary of the Faculty.

Fees and Expenses.

Annual *entrance* fee $10, Library and incidental fee, per semester, $5—that is the student who enters the first semester pays $15, and for the second semester only $5, having paid his entrance fees for the year, upon admission. If he enters the second semester he pays $15—*i. e.*, entrance and semester fees. These charges are so low as properly to be considered merely nominal.

Law, medical and engineering students are charged $40 for the year, to be paid upon entrance. This includes the incidental fee. Demonstrator's ticket $10, payable by the medical student upon matriculation.

The fee for diplomas is $5. This must be paid to the Treasurer of the University, and his receipt handed to the Secretary of the Faculty before the name is recommended to the Curators for the degree.

Boarding.

Board in private families, with lodging, washing and fuel, may be obtained for from three to four and a half dollars a week. By entering clubs, this amount may be reduced to two dollars and a quarter.

The allowance for clothing, books and pocket money, will vary with the character of the student. It is hoped that parents will bear in mind that too liberal an allowance of money exposes a youth to temptation, interferes with his habits of study, and adds nothing to his happiness or respectability. No student should

spend over two hundred dollars a year, including everything, except clothing and traveling expenses to and from Columbia. In every case where a student exceeds this amount, it may be set down that there is something wrong, which compromises both usefulness and respectability.

Young men working on the College Farm or in the gardens, will be allowed compensation, according to their skill, fidelity and industry, to be determined by the Dean of the Agricultural College.

The University does not provide boarding for students, nor oblige them to adopt any particular plan; but to insure cheap boarding, and prevent any sudden or excessive rise in the price of boarding in private families, the Universiry has erected two groups of cottages, or club buildings, with dining halls, about a third of a mile apart, sufficient to accommodate two clubs of forty each.

The students who board themselves in the cottages, form themselves into clubs, appoint their own commissaries and other officers, establish and keep up their own police, punish members by fine and expulsion, and, on each Monday, meet to hear reports, and consider the welfare of the clubs, and generally to attend to their business affairs. The weekly expense of board, including a small admission fee to keep up the furniture, also rent payable to the University, has not exceeded $2.25 per week.

Living in the Clubs.

There are two club organizations in which are enjoyed all the accommodations of a plain private family at the actual cost of living. A genteel white woman has charge of each, who is paid an agreed-on sum of money, and is allowed the board of her children and of a certain number of servants, for the following service, viz: To clean up the rooms daily, wash the sheets, pillow slips and towels; wash clothing; cook and serve the food provided. Under this management the clubs are like private families. The members of the club have their own organization—captain, commissary and secretary. They assess themselves, collect the same, and buy thir own provisions, so that if insufficient or not of the right sort, they can only blame themselves. The matron is only responsible for the cooking and serving. The husband in each case pays his board the same as one of the students. Formerly the clubs were a nuisance, but this plan works admirably, and below is presented a perfectly reliable statement from one of the students, prepared by request:

University of the State of Missouri,
Columbia, Boone County, Mo., June 25, 1879.

Dr. S. S. Laws, *President:*

Dear Sir: At the request of parties interested in the boarding clubs of the University, I hereby hand you, for the benefit of those seeking such information, an estimate of all necessary expenses of a student availing himself of the advantages of the present club system. This estimate will perhaps possess no additional value to similar ones, other than that it is based on several years actual experience, and consequently, is more reliable and satisfactory than a mere approximation.

The following is for the benefit of those desiring an itemized account:

Room rent (payable to the University), two semesters, $7.50 each			$15 00
Furniture for room:			
Bedstead	$2 25		
Mattress	3 00		
Stand-table	1 75		
Washstand	2 00		
Chairs, 2	1 00		
Lamp, etc., etc.,	2 00		
Total	$12 00	One student one-half	6 00
Fuel and light			5 00
Initiation fee of club (life membership)			4 00
Board and washing per week, $1.50 (forty weeks)			60 00
Total expenses for school year			$90 00

The maximum price of furniture is given, the cost of which is borne equally by two persons, the rooms being sufficiently large for their accommodation. The only item of cost omitted, worthy of mention, is that of bed-clothing, which may be brought from home. As to other items of expense not connected with the club, such as tuition, incidental fees, etc., etc., they may be found in the University catalogue. It would, perhaps, be more satisfactory to state that we know the expense, to each of several of our most studious members, to have been no more than $150.00 for the last year, including all expenses, excepting neither clothing nor railroad fare. There are many cases where students succeed on less, but economy itself would dictate the above amount.

Although the club buildings are under the immediate control of the University management, as is also the appointment of the matron, the entire business of the club is conducted by the members themselves, they being formed for the purpose into an organization which has, in addition to a commissary, all the officers necessary to a deliberative body.

The present system, as perfected in the last two years, has solved the question of cheap boarding, and at the same time has given the club the advantages which were formerly found only in private families.

J. H. DRUMMOND.

Each student furnishes his own room, which may be done at cheap rates. If convenient, he may bring furniture, at least in part, from home. All may bring bed-clothing, and had better do so.

Very young students ought not to enter the boarding clubs. While the president and professors frequently visit the rooms of the clubs the police duty devolves mainly upon the young men themselves, and is more effectively carried out than it could be by the Faculty. The rules are strict, and students of known shiftless ways or noisy habits are not admitted; or, if admitted, are soon cut off. Good behavior and quiet habits are indispensable, and none other than those possessing these characteristics can enter or continue members of the clubs.

It ought to be remarked that the health of the members of the clubs has been the average of the students of the Universty.

In many cases, it is best that boarding should be obtained in good private families.

Renting Rooms.

Students, in order to rent rooms at the cottages, or any other building belonging to the University, must apply to the proctor, and receive them upon the following conditions, viz:

1. To keep the rooms in a proper and cleanly manner; in no way to injure or deface them, and to open them to the proper officers for inspection.
2. To avoid boisterous and improper conduct.
3. To observe the rules of the house or club, and be subject to removal for non-payment of assessments, fines or charges, or a violation of said rules.
4. No student occupying a University room can exchange it with another student, or under-rent it, except by permission of the proctor.
5. Rent is to be paid in advance, and before occupying the room.

The proctor shall, in all cases, be the judge of the violation of these rules; and have full power to remove a student therefor; and in case of such removal, there shall be no re-payment of rent.

ROLLINS AID FUND.

[*Extract from the will of Anthony W. Rollins, M. D, dated 1843, and probated December 10, 1845, Prob. Record, Book B., pp. 743-4.*]

Item 7. Having felt the great disadvantage of poverty in the acquisition of my own education, it is my will that my executors, hereinafter named, shall, as early after my death, as they may deem most expedient, raise the sum of ten thousand dollars and by the sale of any lands of which I may die seized, and which I have not specifically bequeathed in any of the foregoing items, which sum of ten thousand dollars, I desire may be set apart for the education of such poor and indigent youths of Boone county, both male and female, as are unable to educate themselves.

Item 8. When my executors shall have raised the sum of ten thousand dollars in the manner specified above, it is my will that they pay over the same to Alexander Persinger, Gilpin S. Tuttle and James W. Dailey, justices of the county court of Boone county, or their successors in office, who may compose the county court of Boone at the time, and that said fund shall remain with, and be vested in, said courts as a permanent fund, for the promotion of the object specified in the seventh item of this will above.

Item 9. It is my will that the judges of the county court shall loan out the fund thus vested in them, at an annual interest of ten per centum per annum, and in every instance upon good personal security, with mortgage upon real estate, at least in value to the sum loaned, and in such manner as will insure the payment of the interest thereon at the expiration of each year; it is my will, further, that three fourths of the interest thus annually accruing shall be set apart, or so much thereof as may be necessary, to pay the tuition of such youths as may have entered the Columbia Female Academy or the State University, under the provisions hereinafter named and the one-fourth of the interest thus annually accruing, and so much of the remainder as shall not have been appropriated for any one year as above, shall be annually added to and become a part of the permanent fund.

Item 10. It is my will that the President of the State University of Missouri, and the Principal of the Columbia Female Academy, shall in each year visit the common schools of the different neighborhoods of Boone county, and select from amoung the indigent boys and girls of the different schools or neighborhoods, such of them as are inclined to avail themselves of the advantages of the fund set apart as above, always having reference in their selection to the moral and intellectual qualities of the youths above; and further, that the President, at each annual com-

mencement of the University, shall direct the public attention to this subject, invite the citizens who may be present to subscribe by way of enlarging the fund from year to year, thus appropriated to the education of the poor; and, further, that in selecting boys as above, preference may be given to such as evince and inclination to preach the gospel.

NOTE THAT—

This fund is held by the county court of Boone county and invested in Boone county 8 per cent. bonds. About sixteen hundred dollars a year are available for aiding students.

As the Columbia Female Academy is defunct, it is the duty of the President of the University to "select" the beneficiaries as students of the University. (Item 10.) This choice is regulated by several circumstances, as that—

1. The beneficiaries must belong to Boone county, in good faith and not merely nominally. (Items 7 and 10.)

2. They may be "both male and female," but must be needy, *i. e.*, "unable to educate themselves." (Item 7.)

3. Regard must be had to "moral and intellectual qualities." (Item 10.) Hence, (a) preference will be given to such as show superior capacity, whether in the University classes or in the schools; and, perhaps, a system of examinations might aid in the wise and impartial determination of the choice. Hence, also, (b) aid from this fund will, in all cases, be withdrawn from students who incur College discipline, or who fail to maintain a reputation for exemplary conduct and scholarship. The incurring of marks of demerit may be considered such discipline, and falling below the required standard of scholarship, in any study, such failure. Disorderliness is aggravated by being a beneficiary, and any part of an appointment not paid may, on that account, be recalled at any time.

4. Other things being equal, "in selecting boys as above, preference may be given to such as evince an inclination to preach the gospel." (Item 10.)

5. Whilst aid is not limited to tuition (Item 7) it is plainly first in the contemplation of the benefactor. (Item 9.) This fund, therefore, has in it the virtue of strengthening the University, whilst it provides for the specific and legitimate exercise of its educational functions, in the interest of the needy, in its own immediate locality.

The will does not provide at whose direction, nor in what sums, the money is to be apportioned, and this, therefore, is left to the good understanding of the county court and the President of the University. In order to aid as large a number as possible, it is ordered by the court that not more than the sum of $60 per annum shall be appropriated to any one pupil; and in some cases, it is found that only part of the tuition and contingent fees is needed, so that the aid which has been extended to over forty during the past year, has ranged from $10 to $60—those receiving the largest sums being exceptional.

6. If the applicants are "youths" of Boone county, unable to educate themselves, and of good moral and intellectual qualities, whilst a preference is allowed to those having the ministry in view (Item 10), yet there appears to be nothing which excludes such as may have in contemplation any of the professional courses of the University. As the donor, for example, had struggled to abtain his professional education, it would be unnatural to suppose that, by any implication, the "indigent" and worthy professional student would be excluded.

The provision that one-fourth of the interest must annally be added to the principal of this fund, may ultimately become a question of great magnitude, which will require judicial determination.

Applications for aid from the Rollins fund, must hereafter be in writing; a blank form will be furnished, embracing the points presented above, and when filled, it will be considered and placed on file, for open inspection and preservation. Should any mistake or misrepresentation of consequence be brought to light at any time, proper steps will be promptly taken. The applicants must appear in person at the opening of the first semester, September 13, as no reservations will be made.

It is very desirable that those who receive aid from this fund, according to the provisions of the will, should not feel themselves humiliated nor compromised in any respect. The money belongs to the worthy beneficiaries, and they are morally and legally entitled to it, just as if so much of the estate, out of which it has arisen, had been set apart and left to them by name in the will. It is the desire that none except those entitled to it shall, by mistake or otherwise, appropriate any of it; and, also that the lawful beneficiaries shall themselves receive, severally, only their just apportionments.

Dr. Anthony W. Rollins, who founded this aid fund, was the father of the Hon. James S. Rollins, who was for a number of years President of the Board of Curators, and who, when a young man (1839) actively participated in the efforts which secured the location of the Missouri Universty to Boone county.

RESIDENT GRADUATES.

It is hereby resolved by the Board of Curators, That hereafter all regular graduates in any department of the University, and every regular graduate of the Normal Schools, established by law within this State; also all regular graduates of "Christian Female College," and "Stephens Female College," located in Columbia, and the graduates of all other regularly chartered literary and scientific colleges in this State, with regular college classes established therein, and that are authorized by law to confer degrees and to grant diplomas to their students, shall be entitled to enter all the departments of the State University, including the Mining Department at Rolla, as *Post Graduates*—free of the payment of tuition fees, and to receive instruction in the same manner as other students, in the Practical, Literary and Scientific Departments or classes (and all students taught in the University), and which they may choose to enter: Provided, however, that neither Law nor Medical students are included in this resolution; and also, that they may have full access to the Library of the University, with all other students, on such terms, and under such rules as may be prescibed by the Executive Committee. [The Engineering School is also excepted.]

By an act of the Board of Curators, June, 1874, it is provided:

1. That the graduates of certain institutions, named and designated in said act, shall be admitted to all departments of the University, except those of Medicine, Law and Engineering, "to receive instruction in the same manner as other students," without the payment of tuition fees; but on payment of $5 00 per semester incidental fees.

2. That said resident graduates shall have the privileges of the library, on such terms and under such rules as the Executive Committee may determine.

3. That prelimary to admission, each entrant shall exhibit his or her diploma, in evidence of such graduation, to the President of the University, or at Rolla, to the Director. (This third point is made in the volume of Laws, published by order of the Board.) Therefore,

Resolved—First, That this memorandum of the aforesaid state of fact be spread on the minutes of the Faculty for convenience of reference; and,

Second, That it is the understanding of the Faculty, that whilst resident graduates, thus admitted, are to be allowed optional attendance on the classes, without

being required to recite, unless it be as a condition of acquiring a class standing; yet, otherwise, they are to be subject to all the rules of behavior and discipline of under-graduates.

County Court Appointments Abolished.

The statute by which the county courts were entitled to appoint students, equal to the number of representatives from the county, to be free from tuition fees was abolished by the Legislature, 1874-5.

Literary Societies.

There are two societies of young men connected with the University, viz: The "Athenæan," and the "Union Literary." These societies have spacious and well furnished halls in the University edifice, and hold weekly meetings for improvement in debate, declamations, oratory and composition.

These societies are in a flourishing condition, and form a most important means of culture, especially in speaking and writing.

An address is delived before them, united, during commencement week, and diplomas are given to such members as belong to the graduating class.

On October 21, 1878, these societies petitioned for *night meetings*, and the Faculty granted permission on the following conditions, viz.:

1. That gas be introduced into the halls, and no separate lamps or lights be used therein.
2. That the University janitors be entrusted with the fires; and,
3. That there be no disorders consequent on said night meetings.

The Philalethean Society is the literary society of the young women. (See Ladies Department.)

Public Speaking.

Whereas, The Faculty of this University is entrusted with the guardianship and care of the students; and,

Whereas, The public holds them responsible for the intelligence and general worthiness of all speakers on public occasions; and,

Whereas, The exercise of power corresponding to this responsibility, is thereby rendered a duty, to be discharged in the interest of the authorities and patrons of this institution and of the public, whose educational interest it represents; therefore,

Resolved, That no person shall appear on any public occasion before the societies or students of this University, to deliver an address, oration, or in any other literary performance, without the previous approval of the Faculty.

The said approval may be of a list of names before choice, or all choices of persons not thus previously approved, shall be subject to said approval.

All students appointed to appear in *any* public entertainment, *shall* present their orations, declamations, or other exercises to the Professor of English, at least ten days before the appointed day of such public appearance.

If a student has incurred twenty-five demerits, or fails to submit his exercise to previous supervision, he is not permitted to appear and take part in any public exercise in the University, on penalty of expulsion from the Institution for so doing and forfeiture of all claims to any honors or prizes; and the same penalty of expul-

sion and forfeiture shall attach to taking part in the publication of any college paper without compliance with the regulation of the Faculty respecting a like previous supervision of the final proof sheets of the same.

Resolutions Regarding the Enrollment of Candidates for Graduation.

Resolved—1. Every student proposing to graduate in any of the four academic courses is required to notify the Secretary of the Faculty before the close of the junior year, *i. e.*, before the close of the 10th semester's work, of the degree or degrees, which he expects to take.

2. Every student having, in the manner indicated, given notification of his expected graduation, shall receive from the Secretary of the Faculty, besides the usual report of the work done by him during the previous year, an additional statement of any deficiencies, which appear against him on his requisition card, and these he must make good, before his name can be enrolled as a candidate for graduation.

3. Every student who, at the end of the eleventh semester, shall have made good all such deficiencies and shall in addition have passed on the studies of the 11th semester, shall be enrolled by the Secretary of the Faculty as a candidate for graduation.

4. The names of all candidates for graduation thus enrolled shall be reported by the Secretary of the Faculty at the second regular meeting of that body after the opening of the second semester, for approval; and all candidates thus approved shall be entitled to the privileges of the senior class.

5. If a candidate for graduation, after having passed through the formalities before described, shall at the beginning of the 12th semester be found deficient in one class only, measured by one hour's daily work during one semester, his name, with the facts in the case, shall be reported by the Secretary at the time fixed in resolution 4, when the Faculty may by special vote enroll such student provisionally as a candidate for graduation, without, however, granting him any of the privileges of the senior class.

6. There shall be no other time or method for enrolling and approving candidates for graduation from the list of students attending this University; and recommendations to the Board of Curators for academic degrees shall be made only from the lists of such enrolled and approved students.

Adopted by Faculty June 4, 1884.

Valedictorian.

The academic class, and each professional class, chooses its own valedictorian.

Rules for election of academic valedictorian, and class representation:

1. That the valedictorian shall be elective.

2. That only those Seniors who take one or more of the following degrees, viz.: A. B., S. B., L. B., A. D. B., and shall have attained the grade of *first rank with distinction* shall be voted for by the class for the honor of valedictorian at commencement. If there are not two or more Seniors so eligible, the Senior who has the highest grade in the Academic course shall be *ipso facto* the valedictorian of his class, *i. e.*, without election by the class, and the person to be so designated shall be determined by the Secretary of the Faculty on comparison of the relative grades made by the first of May in each year.

3. That the right to vote for valedictorian be accorded to those only recognized

by the Faculty as candidates for graduation with one or more of the above named degrees.

4. That an essay or thesis be required as representing each of the classes graduating from the Normal, Agricultural and Engineering schools; the manner of selecting said essay or thesis being left to the heads of several departments.

Pronunciation.

Whereas, Uniformity of pronunciation is extremely necessary among the co-workers in an educational institution; and,

Whereas, This uniformity can be secured only by the adoption of some standard authority and strict adherence to its teachings; therefore,

Resolved, That the standard of pronunciation in the University of Missouri shall be Webster's Unabridged Dictionary of any edition not earlier than that of 1864.

Prizes.

In Oratory—Founded by Hon. James L. Stephens, a retired merchant of Columbia, and annually awarded for the best oration of Senior Class.

A book in defense of the Christian religion and a *Gold Medal*, for the purchase of which the annual interest on $500 is available.

The following resolutions in regard to Stephens Medal were passed by the Faculty January 15, 1884:

Resolved, 1. That contestants for the Stephens Medal shall, prior to the last Saturday of March, furnish to the Faculty satisfactory evidence of fulfilling all the requirements for graduation at the coming commencement.

2. That their subjects shall be submitted to the Professor of English for approval on, or before, the last Saturday in February; and their finished orations on, or before, the last Saturday in March.

3. That the judges for the contest shall be selected by the Faculty.

4. That in case of the failure of the successful contestant to graduate, the medal for that year shall not be given.

Junior Medal.—This prize, offered by the Literary Societies for the best oration, is open to all students of the University below the senior year.

In Declamation.—*The Literary Societies*, to best speakers in declamation contest.

In Physics.—$10 in money, by Charles Dachsel, engineer, Jefferson City, Mo., for best *Thesis on Steam Engine.*

Subject for "English Medal," 1887-8, Milton as a Statesman.

For the Appleton prize for competition in the Sophomore and Junior classes and the Medal for the Senior class, see Latin Department.

Prof. J. W. Sanborn will give $25 in prizes: $15 for first and $10 for second, to successful competitors in a section of the work of the Agricultural College yet to be determined.

The heads of the several departments dispense prizes and distinctions in their discretion.

HONORABLE MENTION.

1886-7.

All students, who have finished the work of any department, and who have reached in it an average grade of 96 to 100, shall be named by the Professor in charge of such department in his annual report to the President of the University for *honorable mention* in the catalogue; this fact of honorable mention shall likewise be stated on the Commencement programme in the case of graduates —[From rules for grading students, adopted April, 1884.]

DEPARTMENT OF BOTANY.—Fredus Nelson Peters, James Stephen Stokes.

DEPARTMENT OF CHEMISTRY.—Henry Whitley Clark, Fredus Nelson Peters

DEPARTMENT OF ENGLISH.—George Rowland Dodson.

DEPARTMENT OF GEOLOGY AND MINERALOGY.— Henry Whitley Clark, Fredus Nelson Peters.

DEPARTMENT OF HEBREW.—Anne Bates.

DEPARTMENT OF LATIN.—Anne Bates, George Nelson Cheney, Henry Whitley Clark, George Rowland Dodson, Fredus Nelson Peters.

DEPARTMENT OF METAPHYSICS.—Anne Bates, William Winn Love.

DEPARTMENT OF MODERN LANGUAGES. —Anne Bates.

DEPARTMENT OF ZOOLOGY.—Henry Whitley Clark.

PROMPT ATTENTION TO FACULTY NOTICE.

Students for whom special appointments, assignments or requirements are made by the Faculty, shall be notified of the same by notice upon the University bulletin board, on the morning following the meeting at which such minutes are made All students failing to meet the requirements by noon of the succeeding Thursday, shall suffer a penalty of 10 demerits for each day of such failure.

CO-EDUCATION.

Since 1868, girls have been admitted to the classes of the Missouri University. This experience is favorable.

The theory of the case may be enunciated thus:

Conceding that the work of education is a legitimate function of the State, and also that the right of the girls to an education is as valid as that of the boys—then, either the State should provide for the girls the means of a separate education, relatively equal or equivalent to that provided for the boys, or else, admit them, on equal footing, to the same advantages. No question can be successfully raised over the competence of the State as an educator; nor, over the rights of the young women to educational provisions in their behalf, comporting with those made for the young men; and hence, it becomes the plain practical question:—Whether the State is likely to provide such advantages separately? As there is no likelihood of this being done, we are shut up to the alternative of co-education in our State institutions, unless experience be adverse to the policy of it. However, as a matter of fact, experience favors it—seventeen years of experience here, in the Missouri University, favor it; not to speak of a like favorable experience on the part of others.

It is urged on parents, in placing their children at the University, sons and daughters, to come with them and to arrange with private families for a suitable domestic oversight and care. It is believed to be a great misfortune for youth of either sex to be isolated from proper domestic supervision, whilst in a course of education. May not reliance be placed on private families to provide accommodation for the students, equal to the growing demands of the University? The whole community thereby become the University community, and all prosper together. (For further information, see Ladies Department, page 62).

ALUMNI.

The Alumni Association is composed of graduates of the University. It holds an annual meeting on Wednesday and Thursday of commencement week, and is addressed in the University chapel by an orator previously selected from its own body.

The objects of this society are the promotion of education, especially in the halls of the Alma Mater, the reunion of early friends and co-laborers in literary pursuits, and the revival of those pleasing associations which entwine themselves about academic life.

The fee for membership is $2. This is added to the permanent fund, the interest of which, only, is used. It is hoped that all graduates of the University, whether academic or professional, will become members of the Association. The Librarian solicits aid in securing facts for the next triennial, and will be thankful for published notices of, or books, or pamphlets and articles, published by officers and graduates.

R. L. Todd, Columbia, President; Col. John Williams, 1st Vice-President; Hon. R. B. Oliver, 2d Vice-President; J. S. Clarkson, Columbia, Treasurer; C. B. Rollins, Columbia, Secretary; Orators, Judge Warwick Hough, Class '54, of St. Louis, and Hon. Henry W. Ewing, Class '72, of Jefferson City.

A subscription to the amount of $3,000 has now been raised and will be collected at once and put at interest. The attention of the Alumni is called to this fact. The time has come for effective work. Nothing can be done without an efficient organization. Come and let us organize. Our *Alma Mater* needs our co-operation. She sees that her greatest strength in the future must come from those who know best her true aims, real wants and who feel the most pride in her prosperity. In union there is strength. Come to the re-union June 1 and 2, 1887.

CALENDAR.

1887.

September 13, Tuesday.....All Academic and Prof. Schools open.
November 5, Saturday.....Union Literary Society open session.
November 19, Saturday.....Athenæan Society open session.
December 22, Thursday.....Close for Holidays.

1888.

January 3, Tuesday.....Reopen.
January 16 to January 21.....Examination at the close of 1st Semester.
January 23, Tuesday.....Second Semester begins.
January 28, Saturday.....Junior Medal Contest.
February 11, Saturday.....Exhibition of Young Ladies Society.
February 18, Saturday.....Societies appoint prize Declaimers.
March 17, Saturday.....Inter-Society Contest.
March 29, Thursday.....Law School closes.
April 14, Saturday.....Prize Declamation Contest.
April 21, Saturday.....Contest for Stephens Medal.
April 28, Saturday.....Exhibition of Athenæan Society.
May 12, Saturday.....Exhibition of Union Literary Society.
June 2, Sunday.....Baccalaureate Discourse.
June 5, Tuesday.....Curators meet.
June 5, Tuesday.....Address before Societies.
June 6, Wednesday.....Oration before Alumni.
June 7, Thursday.....Commencement.
June 14, Thursday.....Commencement School of Mines at Rolla.

ABBREVIATIONS.

A. B.,	Bachelor of Arts.....(6 years)	T. E.,	Topographical Engin'r (4 years)
A.M.,	Master of Arts.....	a.,	Academic Gradutes.....
Ag.B.,	Bachelor of Agriculture (6 years)	ag.,	Agriculture.....
Ag.M.,	Master of Agriculture.	b.,	Banker.....
C.E.,	Civil Engineer.....(4 years)	b. v.,	Board of Visitors.....
D. Ag.,	Diploma in Agriculture (2 years)	c.,	Curator.....
D. B.,	Bachelor of Didactic...(6 years)	d.,	Dead or died.....
D. H.,	Dip. in Horticulture...(2 years)	div.,	Divinity.....
D.P.&C.	Dip. in Phys. and Chem. (special)	f.,	Faculty .....
L. B.,	Bachelor of Letters....(6 years)	l.,	Law.....
LL. B.,	Bachelor of Laws.....(2 years)	m.,	Medicine.....
L. M.,	Master of Letters.....	ma.,	Manufacturer.....
M. E.,	Mining Engineer.....(4 years)	me.,	Merchant.....
N. G.,	Normal Graduate.....(4 years)	m. s.,	Mining School.....
N. D.,	Normal Diploma.....(2 years)	p.,	Professional Graduates.....
N. S.,	Natural Science.....(special)	t.,	Teaching .....
Pe. B.,	Bachelor of Pedagogics(6 years)	e.,	Engieering.....
Pe. P.,	Principal of Pedagogics(2 years)	s.,	Surveying.....
Ph. B.,	Pachelor of Philosopy..(6 years)	br.,	Broker.....
Ph. M.,	Master of Philosophy.....	ed.,	Editor.....
S. B.,	Bachelor of Science....(6 years)	st.,	Student .....
S. M.,	Master of Science.....		

SUMMARY OF GRADUATES.

ACADEMIC:		
A. D. B.....	6	
A. B.....	264	
S. B.....	131	
Ph. B.....	22	
L. B.....	26	
N. S.....	1	
		450
PROFESSIONAL:		
Sur.....	70	
D. Ag.....	15	
N. G., or D. B., or Pe. B.....	86	
Ag. B.....	10	
LL. B.....	250	
N. D., or Pe. P.....	130	
D. H.....	47	

SUMMARY OF GRADUATES—CONTINUED.

M. D.	456	
C. E.	66	
M. E.	25	
D. P. & C.	1	
T. E.	17	
B. A. S.	6	
		1,179
Total		1,629

CURATORS.

MEMBERS OF THE BOARD.

ENTERED		RETIRED.
1839	Thomas M. Allen, President, Vice-President, d.	1843
1839	E. E. Bass	1849
1839	I. O. Hockaday	1841
1839	John A. Henderson	1841
1839	J. J. Lowry, M. D., d.	1841
1839	R. Hughes	1841
1839	T. A. Smith	1841
1839	M. M. Marmaduke, Vice-President	1841
1839	G. C. Host	1841
1839	G. Tutt	1841
1839	William Scott, President	1843
1841	R. W. Wells	1841
1839	J. Spalding	1841
1839	T. Allen	1841
1839	David Weir	1841
1841	William Shields	1843
1841	Thomas D. Grant	1849
1841	John Slack, Vice-President, President, d.	1844
1841	A. W. Rollins, M. D., d.	1843
1841	R. S. Thomas, Secretary	1843
1841	Warren Woodson, Vice-President, President, Treasurer, d.	1849
1841	T. West	1843
1841	G. M. Bower	1843
1841	James W. Morrow	1843
1843	W. A. Robards, Secretary	1849
1843	C. W. Flanagan	1845
1843	W. Carson	1845

MEMBERS OF THE BOARD--CONTINUED.

ENTERED.		RETIRED.
1843	M. J. Moss	1845
1843	M. Blair	1845
1843	W. G Minor	1844
1843	W. B. Napton	1846
1843	J. H. Stone	1844
1843	Caleb S. Stone, Vice-President, President, Secretary	1856
1843	J. Carpenter	1847
1843	F. Wright	1845
1844	Thomas M. Allen, d	1849
1844	W. H. Duncan, M. D., Treasurer	1856
1845	John Slack, d	1849
1845	W. J. Minor	1848
1845	Claiborne F. Jackson	1846
1845	Alexander Persinger	1849
1845	Moss Prewitt, President, d	1849
1845	A. H. Robinson	1849
1846	J. C. Edwards* Governor of the State	1849
1846	F. K. Martin* Secretary of State	1849
1846	P. G. Glover* Treasurer of State	1849
1846	Jas. R. McDearman* Auditor of State	1849
1846	J. H. Lathrop* LL. D., d	1849
1846	Allen B. Orear	1847
1846	John Ellis	1849
1847	James S. Rollins	1849
1848	Allen B. Orear	1849
1849	T. R. H. Smith, Secretary	1852
1849	Alton Long	1853
1849	W. J, McElhaney	1851
1849	R. Brown	1856
1849	W. D. McCracken, Vice-President	1856
1849	Asa Ellis	1856
1849	J. A. Brown	1856
1849	H. C. Dunn	1851
1849	F. R. Palmer, President	1856
1849	C. H. Hughes	1851
1849	John Corby	1853
1849	James A. Clark	1856
1749	Addison M. Lewis	1853
1849	James Ellison	1856
1849	W. C. Jones	1851
1851	W. J. Minor	1853
1851	H. F. Garey, Secretary	1856
1851	N. C. Orear	1853
1851	B. H. Emerson	1853

*Ex officio members of the Board.

MEMBERS OF THE BOARD.—CONTINUED.

ENTERED.		RETIRED.
1851	D. Patten	1853
1851	H. Fullbright	1853
1853	Wm. G. Elliott, Jr	1856
1853	R. G. Roberts	1856
1853	W. H. Buffington	1854
1853	Joseph Chew, M. D	1858
1853	Henry Slack	1855
1853	Wm. A. Hall	1854
1853	Charles A. Hayden	1856
1854	George W. Hough	1856
1854	John B. Clark	1856
1856	James W. Morrow	1858
1856	John Slack, d	1865
1856	Allen B. Orear	1860
1856	P. H. McBride, President	1860
1856	M. Horner	1860
1856	G. L. Pollard	1860
1856	Charles L. Rogers	1857
1856	John D. S. Dryden	1858
1856	Peter Carr	1858
1858	John A. Snell	1860
1856	H. W. Cross	1860
1856	Calvin F. Burnes	1857
1856	C. P. Bullock	1857
1856	W. S. Mosely	1858
1856	Wm. E. Brady	1860
1857	Wm. A. Seay	1860
1857	George H. Hall	1860
1857	Peter S. Wilkes	1860
1858	Michael Bright	1860
1859	John W. Harris	1860
1859	A. S. Walker	1860
1860	D. H. Hickman, d	1862
1860	Ira Divoll	1864
1860	J. W. Tucker	1862
1860	Wm. H. Duncan	1862
1860	Eli E. Bass, Vice-President	1862
1860	Wm. H. Allen, President	1864
1860	Mathew R. Arnold	1864
1860	I. W. Boulware	1863
1860	A. W. Flournoy	1862
1860	J. W. Hailey	1862
1860	W. P. Hall	1863
1860	A. W. Doniphan	1862
1860	F. M. Cockrell	1862
1869	J. L. Minor	1862
1860	J D. Hill	1862

MEMBERS OF THE BOARD.—CONTINUED.

ENTERED.		RETIRED.
1860	P. R. Smith	1862
1860	J. J. Brady	1862
1860	R. A. Hatcher	1862
1860	Robert L. Todd, Secretary	1873
1862	Thomas B. Reed	1864
1862	Mordecai Oliver	1863
1862	Wm S. Mosely	1863
1862	George O. Yeiser	1863
1862	P. B. Locke	1863
1862	John F. Philips	1863
1862	Sample Orr	1863
1862	F. T. Russell	1871
1862	John F. Williams	1864
1862	James H. Birch	1863
1862	J. J. Brady	1863
1862	Odon Guitar	1864
1863	Fred. Overstoltz	1864
1863	Wm. Carter	1864
1863	W. A. Gibson	1864
1863	J. H. Moss, d	1864
1863	P. B. Locke	1864
1863	T. R. H. Smith	1864
1864	S. M. Breckenridge	1865
1864	Lemuel Dunn	1865
1864	Henry A. Nelson	1866
1864	Elijah Perry, Vice-President	1875
1864	John Sutherland	1870
1864	Francis Kellerman	1867
1864	James Lindsay	1867
1864	John B. Clark of Dade	1866
1864	John R. Weaver	1866
1864	George Longan	1866
1864	Thompson J. Kelly	1866
1864	Franklin Cooley	1867
1864	L. M. Lawson	1870
1864	Bennett Pike	1865
1864	George L. Hewitt	1866
1864	Alex. McMurty	1866
1864	James H. Robinson	1866
1864	Wm. Robinson	1865
1865	Enos Clarke	1866
1865	E. F. Esteb	1867
1865	Gustavus Bruere	1868
1865	Moss Prewitt, President, d	1869
1865	Charles E. Leonard	1867
1866	Edward L. King	1867
1866	John P. Clark	1867

MEMBERS OF THE BOARD.—CONTINUED.

ENTERED.		RETIRED.
1866	Thomas M. Allen, Vice-President, d	1872
1867	J. M. Woods	1868
1867	J. W. Mathias	1873
1867	Andrew J. Shepherd	1868
1867	J. H. Baker	1870
1867	George R. Smith	1868
1867	Theo. S. Case, M. D	1870
1867	A. J. Barr	1869
1867	Philemon Bliss	1873
1867	B. F. Northcutt	1871
1867	Eugene Williams	1868
1867	Paul Hubbard, M. D	1875
1868	A. J. Conant	1875
1868	Edward Wyman	1875
1868	G. A. Moser	1871
1868	C. P. Townsley	1869
1868	W. C. Mattison	1870
1868	J. M. Martine	1871
1869	James H. Kerr	1871
1869	Orville S. Reid	1872
1869	William H. McLane	1873
1869	W. W. Orrick	1872
1869	James S. Rollins, LL.D., President	1886
1870	Henry T. Mudd	1875
1870	George W. Kinney	1873
1870	James Moore	1871
1870	George Husmann	1873
1870	Barnabas Smith	1871
1870	Norman J. Colman	1877
1871	J. W. Barret	1875
1871	Samuel G. Williams	1875
1871	William S. Dyer, M. D	1873
1871	William T. Essex	1875
1871	J. T. Wielandy	1875
1871	J. D. Vincil, D. D	1874
1872	John E. Worth, Esq	1873
1872	Henry Smith	1875
1872	William F. Switzler	1875
1873	John F. Bush	1874
1873	Jerre C. Cravens	
1873	Alex. H. Dockery, M. D	1874
1873	John W. Harris	1875
1873	C. P. Jones, D. D	1875
1873	Joshua LaDue	1877
1873	James H. Moss., d	1874
1873	William Starke	1875
1874	Martin S. Clardy	1875

MEMBERS OF THE BOARD.—Continued.

ENTERED.		RETIRED.
1874	Alexander M. Dockery, M. D	1875
1874	Henry Clay Ewing	1877
1874	W. T. Lenoir, M. D	1875
1874	Edwin W. Stephens	1875
1874	Squire Turner	1875
	Board to consist of thirteen members.	
1875	John S. Clarkson, A. M	1887
1875	Luther T. Collier	1877
1875	John A. Flood	1877
1875	William E. Glenn, M. D., Vice-President, d	1880
1875	Samuel H. Headlee, M. A	1879
1875	John Hinton	1878
1875	John E. Hutton, M. D	1877
1875	Robert F. Lakenan	1877
	Board to consist of nine members—Const., 1875, Art. XI, Sec. 5.	
1877	H. H. Middlecamp, M. D	1878
1877	John D. Perry	1878
1877	Alexander M. Dockery, M. D	1881
1878	J. K. Rogers, A. M	1882
1878	William H. Lackland, Esq., d	1883
1879	Charles C. Bland, Esq	
1879	John Walker	1882
1880	A. M. Millard	1884
1881	James E. Lincoln	1884
1882	Wm. F. Switzler	1885
1883	Norman J. Colman	
1882	James R. Estill	
1884	Joseph Campbell	
1885	Robert Beverly Price	1885
1884	Dewitt Clinton Allen,	
1885	Edwin W. Stephens, A. M	1887
1886	J. S. Moss	
1887	Geo. C. Pratt, C. E	
1887	W. Pope Yeaman, D. D	

PRESIDENTS OF THE BOARD.

1839	William Scott	1840
1840	Thomas M. Allen, d	1843
1843	John Slack, d	1843
1843	Warren Woodson	1848
1848	Caleb S. Stone	1850
1850	F. R. Palmer	1853
1853	Caleb S. Stone	1856
1856	P. H. McBride	1860
1860	W. H. Allen	1863
1863	Thomas M. Allen, d	1865

MEMBERS OF THE BOARD.—CONTINUED.

ENTERED.		RETIRED.
1865	Moss Prewitt, d	1869
1870	James S. Rollins, LL. D	1886
1886	E. W. Stephens, A. M	1887

VICE-PRESIDENTS.

1839	Thomas M. Allen, d	1840
1840	M. M. Marmaduke	1841
1841	John Slack	1843
1843	Warren Woodson	1843
1843	Caleb S. Stone	1848
1848	James L. Mathews	1853
1853	W. D. McCracken	1856
1856	Major Horner	1860
1860	E. E. Bass	1863
1868	Thomas M. Allen, d	1872
1872	Elijah Perry	1875
1875	William E. Glenn	1880
1880	Jerre C. Cravens	

SECRETARIES.

1839	Wm. Cornelius	1841
1841	Robert S. Thomas	1843
1843	Wm. A. Robards	1849
1849	T. R. H. Smith, M. D	1851
1851	H. F. Garey	1856
1856	Caleb S. Stone	1860
1860	R. L. Todd, A. M	1885
1885	J. H. Drummond, A. M	

TREASURERS.

1840	Warren Woodson	1841
1841	W. H. Duncan, M. D	1855
1855	W. T. Lenoir, M. D	1862
1862	T. B. Gentry	1867
1867	James H. Waugh	1873
1873	R. B. Price, M. S	

BUSINESS AGENTS.

1870	Paul Hubbard, M. D., (Curator)	1877
1877	O. L. Runyan	1878
1878	James P. McAfee, (Proctor)	1880
1880	J. H. Drummond, (Proctor)	

MEMBERS OF THE BOARD.—CONTINUED.

AGENTS FOR THE SALE OF AGRICULTURAL LANDS.

ENTERED		RETIRED
1870	J. W. Sutherland. Removed	1879
1883	Fisher & Rollins	1886

FARM SUPERINTENDENTS.

1870	O. A. A. Gardner	1871
1871	Robert T. Maddex	1883
1883	Levi Chubbuck	1885
1885	C. M. Woodward	1886

SCHOOL OF MINES, AT ROLLA.

EXECUTIVE COMMITTEE.

1876	William E. Glenn, M. D., chairman, Rolla, d	1880
1876	Jerre C. Cravens, Springfield	
1876	Samuel H. Headlee, M. D., St. James	1879
1879	Charles C. Bland, Esq., Rolla	
1880	A. M. Millard	1884
1884	Joseph Campbell	

SECRETARY.

1874	Prof R. W. Douthat	1884
1884	Henry Wood	

TREASURER.

1872	H. Demuth	1878
1878	C. H. Frost, Rolla	1884
1884	Henry Wood	

BOARD OF VISITORS.

ENTERED		RETIRED
1870	J. V. C. Karnes, Kansas City	1882
1870	Hon. Cyrus S. Brown, Shelby Co	
1870	Col. Alex. F. Denny, Huntsville	
1870	Charles E. Leonard, Bellair	
1870	Hon. E. W. Fox, St. Louis	
1884	A. A. Walker, Cooper county	

FACULTY.

1843	*John H. Lathrop, LL. D., Prof. Law, Ethics, Political Economy; Pres., elect. '41. Resigned	1849
1843	R. S. Thomas, A. M., Prof. Metaphysics, Eng. Literature; Librarian, '50-3	1853
1843	*William W. Hudson, A. M., Prof. Mathematics, Physics, Astronomy, '43-56; Pres. *pro tem.*, '49-50; Pres. '56-9; Prof. Physics, Astronomy Engineering, '56-9. Died	1859
1843	George C. Pratt, A. M., Prof. Ancient Languages	1850
1843	E. H. Leffingwell, M. D., Prof. Chem., Geol., Anat., Physiology	1848
1846	R. A. Grant, Tut. on Mathematics	1851
1848	A. Litton, M. D., Prof. Chem., Mineralogy, Geol., Anat., Physiology	1849
1849	E. H. Leffingwell, M. D., Prof. Chem., Mineralogy, Geol., Anat., Physiology	1851
1849	*W. C. Shields, A. M., Tut. of Lang's, '49-51; Adju. Prof. of Lang's, '51-6; Ass't Prof. Latin, '56-60	1860
1850	*James Shannon, LL. D., Prof. Law, Ethics, Political Economy; President	1856
1850	*George H. Mathews, A. M., Prof. Ancient Lang's and Literature. Died	1868
1851	George C. Swallow, A. M., Prof. Chem., Geol., Anat., Physiology	1853
1851	Bolivar S. Head, A. M., Tut. Math., '51-3; Adju. Prof. Math., '53-6; Prof. Math., '56-60. Librarian, 56-60	1860
1852	*Sterling Price, A. M., Tut., '52-4: Adju. Prof. Eng. Lit., '55-6; Normal Prof., Inst. in Greek, '55-60	1860
1863	J. J. Jacobs, A. M., Prof. Metaphysics, Eng. Lit., '53-60; Law, Ethics, Political Economy, '56-60	1860
1853	John Lock, M. D., Prof. Chem., Mineralogy, Geology, Anat., Physiology	1857
1856	W. Alexander, Prof. of Drawing	1860
1856	Ignaice Hainer, Inst. in Modern Languages	1860
1856	J. J. Searcy, Princ. in Primary Department	1861
1856	W. A. Buckner, Ass't in Primary Department	1857
1857	W. J. Thompson, Ass't in Primary Department	1859

*Deceased.

FACULTY.—CONTINUED.

ENTERED		RETIRED
1857	George C. Swallow, A. M., Prof. *pro tem.* Chem., Mineralogy, Geol., Anat., Physiology	1860
1859	George M. Catron, A. B., Tut. in Natural Science	1860
1860	*John H. Lathrop, LL. D., Prof. Metaphysics, Eng. Lit., '60-2; Chairman of Fac., '60-5; Prof. Law, Ethics, Polit. Economy, '62-6; Pres. '65-6; d.	1866
1860	Edward T. Fristoe, A. M , Prof. Math., Phys., Astronomy, Librarian.	1862
1860	A. G. Wilkison, A. M., Ass't Prof. Ancient Lang's, Inst. in Modern Lang's	1861
1860	Benjamin B. Minor, L. B., Prof. Ment., Moral and Political Science; Pres.	1862
1860	Joseph G. Norwood, A. M., M. D., LL. D., Prof. Chem., Mineralogy, Geol., Anat., Physiology, '60-5; Natural Science, Natural Philosophy and Zoology, '65-'73; Librarian, '62-'77; Dean of Med. Fac., '72—; Phys., Gen. Chem., '73-6; Physics, '76—; Inst. of Medicine, Med. Jurisprudence, Law and Med. School, '72—	
1861	W. C. Dawson, Ass't in Primary Department	1862
1863	J. V. C. Karnes, A. B., Tut. Greek and Eng. Lit	1865
1863	H. N. Ess, A. M., Tut. Math., German	1865
1863	Lawson G. Drury, A. M., Tut. Math., Eng. Lit	1865
1865	L. B. Williams, Tut. Greek, Eng. Lit	1866
1865	George M. Catron, A. A., Inst. in Eng. Lit	1866
1865	Joseph Ficklin, A. B., A. M., Ph. D., Prof. Math., Astronomy, Mech. Philosophy, to '77	
1865	John W. Cowgill, A. B., Tut. Latin, Mathematics	1866
1867	*Daniel Read, LL. D., Pres. elect, '66; Prof. Mental, Moral and Political Philosophy. Resigned	1876
1867	Oren Root, Jr., A. M., Prof. Eng. Lit., Inst. in French and German, Sec'y Fac. Resigned	1871
1867	C. H. Crowell, Principal Preparatory Department	1868
1867	D. W. B. Kurtz, A. B., A. M., Tut. in Latin, Math. '67-8; Assit. in Col. of Normal Inst., '68-72. Resigned	1872
1868	Erastus L. Ripley, A. M., Princ. of Col. of Nor. Inst., '68-'76; Prof. of Pedagogy, Drawing; Dean of Nor. Faculty, '76-8. Resigned	1878
1868	Mrs. C. A. Ripley, Preceptress of Col. of Nor. Inst. Resigned	1873
1868	Miss Mary B. Read, Teacher in Model School, '67-70; Ast. in Languages, '70-3, Prof. of German and French. Resigned	1875
1869	John Packer, A. M., Prof. of Ancient Lang's, Literature. Resigned	1872
1869	Major-General R. W. Johnson, U. S. A., Prof. of Civil and Military Engineering and Tactics. Resigned	1870
1868	Charles V. Riley, A. M., Lecturer on Entomology	1875
1768	J. G. Anderson, Student Instructor, Preparatory Department	1870
1868	Eli Penter, Student Instructor Preparatory Department	1870
1869	Capt. R. B. Wade, U. S. A., Prof. Military Science and Tactics	1871
1869	E. H. Haight, A. B., Asst. Prof. Normal Instruction. Resigned	1870

*Deceased.

FACULTY.—CONTINUED.

ENTERED.		RETIRED
1870	George C. Swallow, A. M., M. D., LL. D., Prof. Agriculture; Geology, '70-6; Botany, '71-6; Dean, Agri. Fac., '72-4; Natural History, '76-'82	1882
1871	James W. Abert, A. M., Prof. Eng. Lit.: Instructor in German and French Transferred to Mining School	1872
1871	John H. Overall, A. B., LL. B., Prof. Law (did not serve.) Resigned.	1872
1871	Maj. J. Wilson McMurray, U. S. A., Prof. Military Science and Tactics	1873
1871	Hon. Boyle Gordon, A. M., Prof. of Law	
1871	Hon. Samuel Treat, Lecturer on Law	
1871	Hon. Arnold Krekel, Lecturer on Law	
1872	Paul Schweitzer, A. M., Ph. D., Prof. of Analytical and Applied Chemistry, Toxicology, '72-6; Chemistry, '76——; Sec'y Faculty, '77-8..	
1872	James K. Hosmer, A. M., Prof. of English and History. Resigned	1874
1872	Edward H. Twining, A. M., Prof. of Latin Lang.; Sec'y Fac., '74-7	1877
1872	John M. Leonard, A. M., Ph. D., Prof. of Greek Lang.; Comparative Philology, '73-77	1879
1872	Hon Philemon Bliss, LL. D., Prof of Law; Dean Law Faculty	
1872	*Thomas Allen Arnold, S. M., M. D., Prof. of Anatomy and Practice. Resigned	1878
1872	Andrew W. McAlester, A. M., M. D., Prof. of Surgery, Materia Medica. Diseases of Women and Children, '72-5; Surgery, Diseases of Women and Children, '75——	
1872	Miss S. Anna Ware, S. B., Assistant Instructor in Language and Mathematics	1873
1872	Miss Louisa M. Wylie, S. B., Assistant Instructor in Language and Mathematics	1873
1872	Hon. Henry S. Kelley, Lecturer on Law	
1872	Hon. Oden Guitar, Lecturer on Law	1874
1872	Prof. H. J. Detmers, Lecturer on Veterinary Surgery	1873
1872	Prof. L. J. Smith, Lecturer on Veterinary Surgery	1873
1873	Scott Hayes, M. S., M. Ag., Asst. Prof. Agr., '73-7; Asst. Librarian, '74-7; Librarian, '77——; Asst. Sec'y Faculty, '77-8	1880
1873	William A. Cauthorn, A. M., Asst. Prof. of Mathematics	
1873	*Miss Lulie Gillette, N. G., Inst. in Normal and Preparatory Department. Resigned	1876
1873	William S. Pratt, A. M., Inst. in Normal and Preparatory Department. Resigned	1877
1873	Caleb L Buckmaster, Student Instructor in Preparatory Department.	1877
1874	Samuel S. Hamil, A. M., Prof. Eng. Hist. Elocution. Resigned	1876
1874	John H. Duncan, A. B., M. D., A. M., Inst. in Physiology, Chem. and Demonstrator of Anat., '74-8. Prof. Physiology, Materia Medica, Principles of Practice, '78.——	
1874	Woodson Moss, M. D., Inst. in Anat, and Practice of Medicine; Demonstrator of Anat., '74-8; Prof. of Anatomy and Demonstrator, '78...	
1874	*Robert Fagan, S. B., Asst. Inst. in Law	1873
1875	Benoni S. Newland, A. M., Prof. of German, French	1877

*Deceased.

FACULTY.—CONTINUED.

ENTERED.		RETIRED.
1875	William J. Babb, S. B., Asst. Inst. in Law	1876
1876	Samuel S. Laws, A. M., M. D., LL. D., President; Prof. of Metaphysics.	
1876	William H. Cole, A. M., Prof. of English	1877
1876	Miss Lizzie Bedford, Inst. in Normal and Preparatory Studies	1877
1876	Alexander Meyrowitz, A. M., Ph. D., Prof. of Hebrew and Semitic Lit.; Inst. in German, '77-8. Resigned	1879
1877	Samuel M. Tracy, S. M., Asst. Prof. of Agriculture, '77-9; Prof. of Entomology and Economic Botany, '79	
1877	Michael M. Fisher, A. M., D. D., Prof. of Latin Language and Literature	
1877	Thomas J. Lowry, S. B., N. G., M. S., C. E., Prof. of Civil Eng'g.; Secretary Faculty, '78-'82; Dean Engin. Faculty, '78—	
1877	Gen. George C. Bingham, Prof. of Art. Died	1879
1877	David R. McAnally, Prof. of English	1885
1878	Miss Grace C. Bibb, Prof. of Pedagogy and Dean of the Nor. Faculty.	1883
1878	Mrs. J. P. Fuller, Prof. of German and French. Resigned	1879
1879	A. F. Fleet, A. M., Prof. of Greek	
1879	James Shannon Blackwell, A. M., Ph. D., Prof. of Semitic Languages and Ancient History, and Asst. in Greek and Latin	
1879	George Husmann, Prof. and Supt. of Pomology and Forestry	1883
1879	Lieut. F. P. Blair, U. S. A., Prof. of Military Science and Tactics	1881
1879	Mrs. O. A. Carr, Asst. Prof. of English	
1879	Conrad Diehl, Prof. of Art	1885
1880	B. F. Thomas, Ph. D., Prof. of Physics	1885
1881	C. G. Tiedeman, LL. B., Asst. Prof. of Law	
1881	Gustav Gehring, S. B., Inst. in Chemistry	
188-	Lieut. J. J. Haden, U. S. A., Prof. of Military Science and Tactics	1885
1881	W. C. Tindall, S. B., Inst. in Mathematics; Asst. in Mathematics, '83..	
1881	Miss Josie B. Latham, A. B., Inst. in Latin	1882
1882	J. W. Sanborn, S. B., Prof. of Agriculture; Dean Agr'l Faculty	
1882	J. W. Spencer, Ph. D., Prof. of Geology and Mineralogy	
1882	John C. Jones, A. M., Asst. of Languages; Sec'y Faculty, '83	
1883	J. F. Hanna, A. M., M. D., Prof. of Practice of Medicine, and Thera.	
1883	James Black, A. B., Asst. Prof. of Languages	
1883	W. H. Schuermann, C. E., Asst. in Physics; Asst. Prof. of Physics and Engineering, 1885	
1884	L. A. Taft, B. S., Asst. Prof. of Horticulture	
1885	Paul Paquin, V. S., Prof. of Veterinary Science	
1885	Lieut. E. H. Crowder, U. S. A., Prof. of Military Science and Tactics.	
1885	E. A. Allen, Prof. of English, and Dean of Normal Faculty	
1885	W. B. Smith, Ph. D., Prof. of Physics	
1885	C. L. Speyers, Ph. B., Asst. in Chemistry	
1886	R. E. Call, Asst. Prof. of Natural Sciences	1887
1887	W. W. Clendenin, S. B., Asst. in Zoology and Geology	
1886	G. B. Maughs, M. D., Emer. Prof. Obstet. and Dis. of Women	
1886	W. M. McPheeters, M. E. Emer., Prof. Mat. Med. and Ther.	
1886	P. G. Robinson, M. D., Prof. of Prac. Med. and Clin. Med.	

FACULTY.—CONTINUED.

ENTERED.		RETIRED.
1886	J. K. Baudy, M. D., Prof. Dis. of Nervous System	
1886	C. E. Michel, M. D , Prof. of Ophthalmology	
1886	H. Tuholkske, M. D., Prof. Clin. Sur. and Sur. Pathology	
1886	O. A. Wall, M. D., Ph. G., Prof. of Pharmacy	
1886	C. A. Todd, M. D., Prof. of Ana. and Dis. of Ear and Throat	
1886	J. P. Kingsley, M. D., Sec., Prof. Mat. Med. and Dis. of Child	
1886	T. F. Prewitt, M. D., Dean, Prof. Surg. and Clin. Surg	
1886	C. O. Curtman, M. D., Prof of Chemistry	
1886	G. A. Moses, M. D., Prof. Obstet. and Dis. of Women	
1886	L. Bremer, M. D., Prof. Physiology, Histology and Biology	
1886	C. A. Todd, M. D., Demonstrator of Anatomy	
1886	W. A. Hardaway, M. D., Clinical Prof. Dis. of Skin	

LIST OF OFFICES AND SUBJECTS TAUGHT.

Agriculture—G. C. Swallow, Scott Hayes, S. M. Tracy, J. W. Sanborn.

Anatomy—E. H. Leffingwell, A. Litton, G. C. Swallow, J. Lock, J. G. Norwood, T. A. Arnold, W. Moss.

Ancient Language—G. C. Pratt, G. H. Matthews, J. Packer, A. G. Wilkison. (See Latin and Greek).

Art—Gen. Geo. C. Bingham, Conrad Diehl.

Astronomy—(See Mathematics).

Botany—G. C. Swallow, S. Hayes, S. M. Tracy.

Chairman of Faculty—J. H. Lathrop.

Chemistry—E. H. Leffingwell, A. Litton, G. C. Swallow, John Lock, J. G. Norwood, P. Schweitzer, J. J. Haden, C. L. Speyers.

Deans—Agricultural Faculty, G. C. Swallow, J. W. Sanborn; Engineering Faculty, T. J. Lowry; Law Faculty, P. Bliss; Medical Faculty, J. G. Norwood; Normal Faculty, E. L. Ripley, G. C. Bibb, D. R. McAnally, E. A. Allen.

Demonstrator in Anatomy—J. H. Duncan, W. Moss.

Diseases of Women and Children—A. W. McAlester.

Drawing—W. Alexander, E. L. Ripley, Conrad Diehl.

Elocution—O. Root, J. K. Hosmer, S. S. Hamill, W. H. Cole, D. R. McAnally.

Engineering—W. W. Hudson, R. W. Johnson, J. W. McMurray, T. J. Lowry.

English Literature—R. S. Thomas, S. Price, J. J. Jacobs, J. H. Lathrop, J. V. C. Karnes, L. G. Drury, L. B. Williams, G. M. Catron, O. Root. See English and History).

English and History—J. W. Albert, J. K. Hosmer, S. S. Hamill, W. H. Cole and D. R. McAnally, E. A. Allen.

Entomology—S. M. Tracy.

Geology—(See Mineralogy).

German and French—I. Hainer, A. G. Wilkison, H. N. Ess, O. Root, Miss M. B. Read, J. W. Abert, B. S. Newland, A. Meyrowitz, Mrs. J. P. Fuller, J. S. Blackwell.

LIST OF OFFICERS AND SUBJECTS TAUGHT.—CONTINUED.

Greek—S. Price, L. B. Williams, J. V. C. Karnes, J. M. Leonard, A. F. Fleet.

Hebrew and Semitic Literature—A. Meyrowitz, J. S. Blackwell.

Language—W. C. Shields.

Latin—(See Ancient Language). W. C. Shields, J. W. Cowgill, D. W. B. Kurtz, E. H. Twining, W. L. Pratt, M. M. Fisher, J. C. Jones (Assist).

Law, in Law School—J. H. Overall, B. Gordon, P. Bliss, R. Fagan, W. J. Babb, F. P. Blair, C. G. Tiedemann.

Law, Ethics and Political Economy—J. H. Lathrop, J. Shannon, J. J. Jacobs, B. B. Minor. (See Mental, Moral and Political Philosophy; also Political Economy.)

Lectures—Entomology, C. V. Riley; Law, S. Treat, A. Krekel, H. S. Kelley, O. Guitar, S. D. Thompson; Veterinary Surgery, H. J. Detmers, L. J. Smith; Engineering, G. C. Pratt.

Librarians—R. S. Thomas, B. S. Head, E. T. Fristoe, J. G. Norwood, S. Hayes, J. H. Drummond.

Materia Medica—A. W. McAlester, J. H. Duncan.

Mathematics and Astronomy—W. W. Hudson, E. T. Fristoe, J. Ficklin. (See Mechanical Philosophy).

Mathematics—Assistant R. A. Grant, B. S. Head, H. N. Ess, L. G. Drury, J. W. Cowgill, D. W. B. Kurtz, W. A. Cauthorn, W. C. Tindall.

Medical Jurisprudence—J. G. Norwood.

Mental, Moral and Political Philosophy—D. Read. (See Metaphysics).

Metaphysics—R. S. Thomas, J. J. Jacobs, B. B. Minor, J. H. Lathrop, S. S. Laws.

Military Science and Tactics—Gen. R. W. Johnson, Capt. R. B. Wade, Maj. J. W. McMurray, Lieut. F. P. Blair, Lieut. J. J. Haden, Lieut. E. H. Crowder.

Mineralogy and Geology—E. H. Leffingwell, A. Litton, G. C. Swallow, J. Lock, J. G. Norwood, J. W. Spencer.

Natural Science—G. M. Catron, J. G. Norwood.

Normal—S. Price, E. H. Haight, D. W. B. Kurtz. (See Pedagogy.)

Pedagogy, (See Normal.) E. L. Ripley, G. C. Bibb, D. R. McAnally, E. A. Allen.

Physics—W. H. Hudson, E. T. Fristoe, J. G. Norwood, B. F. Thomas, W. H. Schuermann, W. B. Smith.

Physiology—E. H. Leffingwell, A. Litton, G. C. Swallow, J. Lock, J. G. Norwood, J. H. Duncan, Woodson Moss.

Pomology and Forestry—Geo. Husmann.

Practice of Medicine—T. A. Arnold, J. H. Duncan, J. F. Hanna.

President—J. H. Lathrop, W. W. Hudson, J. Shannon, B. B. Minor, J. H. Lathrop, D. Reed, S. S. Laws.

Primary Instructors—W. H. Buckner, W. A. Thompson, W. C. Dawson, Miss M. B. Read, J. G. Anderson, E. Penter, Miss L. M. Wylie, Miss S. A. Ware, Miss L. Gillette, W. L. Pratt, C. L. Buckmaster, Miss L. Bedford.

Principal Primary Department—J. J. Searcy, C. H. Crowell, Mrs. C. Ripley.

Secretary, since 1867—O. Root, G. C. Swallow, E. H. Twining, Paul Schweitzer, (S. Hayes Assistant), T. J. Lowry, Paul Schweitzer, J. C. Jones, (W. C. Tindall Assistant).

Surgery—A. W. McAlester, J. G. Broome (Lecturer).

MEDICAL FACULTY.

ENTERED.		RETIRED.
	McDowell Medical Department of Missouri University, (opened 1845).	
1845	Richard F. Barret, M. D., Prof. of Physiology and Materia Medica; Medical Jurisprudence, '48-50	(?)
1845	Joseph N. McDowell, M. D, Prof. of Anatomy and Surgery; Principles and Practice of Surgery, and of Clinical Surgery	1850
1845	Jno. S. Moore, M. D, Prof. of Theory and Practice of Medicine, Dean of Medical Faculty	(?)
1845	Jno. B. Johnson, M. D., Prof. of Pathology and Chemical Medicine	(?)
1845	Thomas Barboue, M. D., Prof. of Obstetrics and Diseases of Women and Children	1849
1845	Chas. W. Stevens, M. D., Demonstrator of Anatomy, '45-7; Adjunct Prof. of Anatomy, '47- —	1850
1848	Jas. McDowell, M. D., Adjunct Prof. Surgery	1850
1850	Abner Hopson, M. D., Prof. Chemistry and Medical Jurisprudence.	
1850	S. Gratz Moses, M. D., Prof. Obstetrics and Diseases of Women and Children	(?)
1850	John Hodgen, M. D., Adjunct Prof. of Surgery and Demonstrator of Anatomy	(?)
1850	L. T. Pem, M. D., Adjunct Prof. of Anatomy and Prosector	(?)
1856	Closed. Medical Department of University reopened at Columbia. (See General Faculty)	1873
	Medical Department of University and Missouri Medical College (at St. Louis) united	1886

MEDICAL DEPARTMENT OF MISSOURI UNIVERSITY, SEC. NO. 2.

(MISSOURI MEDICAL COLLEGE AT ST. LOUIS) OPENED 1886.

FACULTY.

SAMUEL S. LAWS, LL.D.,
President of the Faculty.

WM. M. McPHETERS, M. D.,
Emeritus Professor of Materia Medica and Therapeutics.

G. M. B. MAUGHS, M. D.,
Emeritus Professor of Obstetrics and Diseases of Women.

P. GERVAIS ROBINSON, M. D., LL.D.,
Professor of Practice of Medicine, Clinical Medicine and Hygiene, 3411 Washington Av.

J. K. BAUDUY, M. D., LL.D.,
Professor of Sychological Medicine and Diseases of the Nervous System, 2808 Olive St.

CHARLES E. MICHEL, M. D.,
Professor of Ophthalmology, 2925 Washington Avenue.

H. TUHOLSKE, M. D.,
Professor of Clinical Surgery and Surgical Pathology, N. E. Corner Jefferson Avenue and Locust Street.

OTTO A. WALL, M. D., PH. G.,
Professor of Pharmacy, 2111 South Second Street.

C. A. TODD, A. M., M. D.,
Professor of Anatomy and Diseases of the Ear and Throat, 2645 Washington Avenue.

J. P. KINGSLEY, PH. B., M. D., SECRETARY,
Professor of Materia Medica, Therapeutics and Diseases of Children, 2330 Washington Avenue.

T. F. PREWITT, M. D., DEAN,
Professor of Principles and Practice of Surgery and Clinical Surgery, Corner 22d and Olive Streets.

C. O. CURTMAN, M. D.,
Professor of Chemistry and Director of Chemical Laboratory, 3718 N. Ninth St.

G. A. MOSES, M. D.,
Professor of Obstetrics and Diseases of Women, 2901 Washington Avenue.

LUDWIG BREMER, M. D.,
Professor of Physiology, Histology, and Pathological Anatomy ; Director of the Biological Laboratory, 2023 Park Avenue.

W. A. HARDAWAY, A. M., M. D.,
Clinical Professor of Dermatology.

C. A. TODD, A. M., M. D.,
Demonstrator of Anatomy.

A. V. L. BROKAW, M. D.,
C. H. DIXON, M. D.,
Assistant Demonstrators.

ASSISTANTS.

JUSTIN STEER, PH. B., M. D.,
Adjunct to Professor of Practice of Medicine and Lecturer on Clinical Medicine.

F. STUEVER, A. M., M. D.,
Adjunct to Professor of Ophthalmology.

F. D. MOONEY, M. D.,
Clinical Assistant to the Chair of Gynæcology.

A. V. L. BROKAW, M. D.,
Clinical Assistant to the Chair of Surgery.

O. E. FORSTER, M. D.,
Clinical Assistant to the Chair of Otology and Laryngology.

F. R. EVERSOLE, M. D.,
Clinical Assistant to the Chair of Dermatology.

T. A. MARTIN, M. D.,
Clinical Assistant to the Chair of Diseases of Children.

PETER FINING,
Janitor.

SECTION NO. I, LOCATED AT COLUMBIA, MISSOURI.

FACULTY.

SAMUEL S. LAWS, LL. D.,
President of the University.

PAUL SCHWEITZER, PH. D.,
Professor of Chemistry and Toxicology.

ANDREW W. McALESTER, A. M., M. D.,
Professor of Surgery and Obstetrics.

SAMUEL LAWS, M. D., LL. D.,
Professor of History and Philosophy of Medicine.

WOODSON MOSS, M. D.,
Professor of Anatomy and Physiology, and Secretary.

S. M. TRACY, M. S.,
Professor of Medical Botany.

W. B. SMITH, PH. D.,
Professor of Physics.

SCHOOL OF MINES AT ROLLA, MO.

ESTABLISHED 1872.

ENTERED		RETIRED.
1872	Charles P. Williams, A. M., Ph. D., Director; Prof. Gen. Chem. Metallurgy. Resigned	1877
1872	James W. Abert, Prof. Civil Engineering and Drawing	
1872	Nelson W. Allen, A. B., Prof. Pure Mathematics, Secretary Faculty. Resigned	1874
1872	William E. Glenn, M. D., Prof. Anatomy, Physiology and Hygene	1874
1872	William Couch, Instructor in English	1874
1872	John H. Gill, Librarian	1874
1873	Geo. D. Emerson, Prof. Civil and Mining Engineering	1886
1873	Robert W. Douthat, A. M., Ph. D., Prof. Eng., Sec. Faculty	1884
1874	James S. Yantis, Asst. Prof. Mathematics, Librarian	1875
1874	Almond W. Hare, M. E., Asst. in Prep. Dept., and Chem. Lab'y	1875
1875	Van Court Yantis, Prof of Math. and Librarian	1878
1877	Chas. E. Wait, C. E., M. E. Director, Prof. An'ly. Chem	
1878	Edwin J. Jolley, Adjunct Prof. of Mathematics, Librarian	1880
1878	Miss Florence Whiting, Asst. Prep. Dep't	1883
1880	T. C. Thomas, T. E. Adjunct, Prof. of Math	1881
1881	Prof. Z. Whitney, A. M. LL. B., Prof. of Math	1885
1882	J. M. Morris, A. M., Prof. of Physics and Nat. Hist	1883
1883	Victoria G. Conkling, Assist. in Prep. Dep't	
1884	E. D. W. Eaton, B. S., Prof. of Math	
1884	W. G. Clark, B. S., Asst. in Math. and Chem., and Sec. Faculty	
1884	E. A. Drake, A. B., Instructor in Eng. Branches	

ACADEMIC GRADUATES.

Degrees named so far as known.

Abbreviations, see page 165.

1843.

A. B. Robert B. Todd, A. M., l., Judge Sup. Court of La.
Robert L. Todd, A. M., '45, b.

1844.

A. B. Robert A. Grant, t.
James H. Moss, l.
Wm. P. Thomas, M. D., m., d.
John Wilson, l.

1845.

A. B. William P. Clarkson, d.
Thomas J. Hardin, M. D., d.
Wm. W. Todd, M. D., m.

1846.

A. B. William H. Allen, me.
Thompson Burnam, me., d.
John S. Clarkson, b.
Luther T. Collier, l.
Lewis T. Dameron, ag., d.
Oden Guitar, l.
John H. Moore, l.

1847.

A. B. John Arthur, ag.
Alexander F. Denny, l.
Lewis B. Dougherty, b.
Robert W. McDaniel, l., d.
Henry C. Meredith, l.
James H. Parker, b., d.
Thomas B. Reed, l.
Frederick Russell.
Middleton G. Singleton, ag.
James B. Thomas, M. D., m.
Milton G. Young, M. D., d.

1848.

A. B. William Bentley.
James L. Howard, me.
Samuel S. Rice, ag., d.
William C. Shields, A. M., '51, t., d., 65.
James M. Wilcox, ag.
John F. Williams, l.

1849.

A. B. Edward H. Burnam, A. M., '53, div.
James F. Campbell, ag.
Franklin Cave, t.
George F. Daugherty.
John Flournoy, l.
Boyle Gordon, A. M., l., ag.
John M. Gordon, l.
Asa N. Grant, t., d.
Bolivar S. Head, l.
Walter King, l., d.
Walter T. Lenoir, M. D., m.
Robert R. Provines, A. M., l.

1850.

A. B. Charles B. Allen.
Calvin F. Burnes, l.
Lawson G. Drury, me.
James D. Head, l.
William S. Hyde, A. M., '53; LL. B., '53, l., d., '62, C. S. A.
Henry Slack, l., d., Gen. C. S. A.

1851.

A. B. Charles H. Alison, ag.
T. B. Campbell, ag.
Henry Clay Cockerill, b.
James H. Halman, t.
Charles N. Parmer, M. D., m.
Sterling Price, Prof. M. S. U., d.

ACADEMIC GRADUATES.—CONTINUED.

W. L. Shankling, M. D., m.
James H. Walker, ag.

1852.

A. B. Marcellus G. Gorin, A. M., '79, div.
Charles W. Jeffries, M. D., m. d.
Homer J. Luce, b., d.
James H. Reid, M. D., m.
Lanceford B. Wilkes, A. M., '56, div.
Peter S. Wilkes, l.
S. B. R. B. Price, l.

1853.

A. B. Joseph A. Browne, l.
John W. Finley, div.
John L. Hickman, ag.
Joseph L. Hutchinson, l.
Simon Kerl, author, ag., d., '76.
Robert E. Kiernan, m.
Leonidas M. Lawson, A. M., b.
James Love, ag.
George W. Miller, l.
John G. Provines, ed.
Samuel A. Ringo, div.
John DeW. Robinson, l.
Joseph K. Rodgers, t., d., ex-Pres. Chris. Col.
Joseph R. Shields, l.
James R. Shields, l.

1854.

A. B. John B. Bradley, t.
Marcellus Cave, l.
Newton Z. Guice, l., d. '64, C. S. A.
William M. Guice, M. D., '60, A. M., '81, m.
Warwick Hough, l., ex-Judge Sup. Ct., Mo.
William H. Lackland, l., d.
Lafayette McJilton.
Lawrence Moore, d.
William R. Rothwell, A. M., '57, D. D., '74, Prof. W. Jew. Col.
Richard G. Woodson, l.

1855.

A. B. Alex. M. Avera, t., d.
John W. Banks, M. D., m.
Fulton H. Bradford, b., ag.
Edward H. Cordell, me.
Julius C. Ferguson, ag.
Anthony L. Gusman, l.
Alex. Johnson, t.
Jonathan McGuire, div.
Joseph M. McKim, A. M., '75, m.
John C. Risk, A. M., '58, div.
James J. Searcy, t., d.
E. A. Starker, m.
William G. Thomas, l.
William H. Tucker, t.
Squire Turner, A. M., '57, l.
Francis Wilcox, ag.

1856.

A. B. William Barr, d.
William A. Buckner, t.
William P. Ellis, me., d.
Thomas M. Field, me.
John J. Howe, d.
George N. Searcy, t. d.
Alex. P. Spence, M. D., m.
Thomas H. Teagarden, ag.
Cortes Tincher, t., d.
Alexis Walmsley, l., d.
George W. Wright, l., d.
Edwin C. White, A. M., '85, t.
Elisha T. White, ag., d.

1857.

A. B. Thomas F. Bell, l.
Richard C. Booton, ag.
Henry L. Durkee, l.
Adrian C. Ellis, l.
Jesse B. Ellington, l.
Charleton H. Higbee, me.
Newmerries A. Humbee, l.
Henry C. Jones, ag.
Bartley D. Palmer, l.
Gideon F. Rothwell, l.
Thomas P. Rothwell, A. M, 60 M. D., '63, m.
William J. Thompson, A. M., '59, LL. B., '60.

1858.

A. B. George M. Catron, l., t.
John W. Harrison, me.
Anthony Haynes, A. M., t.
Edward L. King, l.
Thomas B. King, t., div.
Emilius P. Lampkin, t.
William G. Provines.
Howard H. Roache.
John W. Sindusky, A. M., '73, t.

ACADEMIC GRADUATES—CONTINUED.

1859.

A. B. Robert N. Bodine, l.
Robert J. Brooks, l.
George W. Hyde, A. M., '67, div.
J. B. Hairston, A. M., '70, p.
James A. McBrayer.
John M. Rucker, ag.
W. W. Stone, me., Treas. of Miss.
Addison A. Walker, A.M., '62, ag.
Anthony W. Walker, A. M., 62, ag. d., '65.

1860.

A. B. William H. Bassett, l.
James J. Bassett, ag.
Thomas B. Catron, l.
Robert C. Carter, A. M., '86, m.
Jerre C. Cravens, l.
Stephen B. Elkins, A. M., l., b.
Charles E. Leonard, ag.
James A. Sullivan.
Andrew J. Thomas, A. M., '77, M. D., Editor.

1861.

A. B. Jesse H. Arnold, ag.
Thomas F. Conway, l.
James J. Hitt, l.
William P. Jackman, ag.
Thomas L. Napton.
William S. Woods, A. M., '64, M. D., b.
James H. Wright, l., Judge Sup. Ct., Arizona.

S. B. James A. Gordon.
William G. Murphy.

1862.

A. B. William H. Burnham, div.
David W. Graves, div.
Joseph V. C. Karnes, A. M., '65, l.
John F. Martin, div.
T. T. Smith, l., d.

1863.

A. B. Henry N. Ess, l.

1864.

A. B. Andrew W. McAlester, M. D., Prof. M. S. U., m.
William S. Pratt, A. M., ag't.

S. B. Andrew M. Conway, M. D., '74, m.

1865.

A. B. John W. Cogwell, l.
H. Clay Daniel, l.
Sid. T. Hughs, ag., d.
John H. Overall, l.
Robert T. Prewitt, d.
L. W. Scott, l.
C. C. Torbitt, ag.

S. B. James S. Preston, S. M., '70, m.
Arthur P. Selby, S. M., '70, Cl'k U. S. C't of Mo.

1866.

A. B. Daniel W. B. Kurtz, A. M., ag.

S. B Thomas P. Basket, me.
William C. Buntin, me.
William A. Horner, me.

1867.

A. B. John T. Aldridge, m.
B. Wood, Bradger, A. M., '70, ma.
W. Lenoir Church, A. M., '70, l.
M. Allen Elston, A. M., '70, div., t.
Gardiner Lathrop, A. M., '70, A.B., '69 and A. M., '72, Yale; LL. B., '73, Harvard, l.
Lewis C. Nelson, A. M., '70, b.
Edwin W. Stephens, A. M., '70, ed.

S. B. Thomas A. Arnold, S. M., '71; M. D., m.; d., '78.
J. Robert Evans, S. M., '78, p.
Luke Evans, ag.
William C. Grainger, S. M., '70, l.

1868.

A. B. Z. T. Arnold, A. M., '84, l.
William A. Lintz, A. M., '71, ag.
William H. Turner, A. M., '71, l.

S. B. Richard Gentry, '71, br.
Jacob S. Hamm, me.
Givens R. Horn, p.
Arch S. Robards, me., d., '79.

1869.

A. B. John W. Prather, m.
Prosser K. Ray, A. M., '72, l.
Bently H. Runyan, A. M., '72; LL. B., '73; l., d., '72.

S. B. John W. Baker.
John G. Wapples, l.

ACADEMIC GRADUATES—CONTINUED.

1870.

A. B. Shannon C. Douglas, A. M., '73, LL. B., '73, l.
S. B. Robert W. Dorsey, ag.
Joseph C. Hearne, M. D., S. M., '81, m.
Oliver Lee Houts, S. M., '80, l.
Thomas J. Lowry, B. S., '70; M. S., '73; C. E., '78; Prof. M. S. U.
Eli Penter, S. M., '80, l.
Joseph F. Robinson, M. D., S. M., '80, m.

1871.

S. B. Cornelius M. Burgess, ag.
James R. Baker, ag.
Clark Craycroft, l.
Allen Glenn, S. M., '75, l.
Thomas E. Holland, M. D., m.
Frank M. Houts, ag.
John E. Johnson, S. M., '75, l.
Jacob L. Ladd, S. M., '75, l, ed.

1872.

A. B. Nelson W. Allen, A. M., '75, div.
James W. Horner, M. D., m.
Thomas A. Johnston, t.
S. B. George F. Barr, M. D., m.
Andrew M. Ellington, l.
Anna S. Ware, S. M., '79.
Ph.B. James N. Baskett, e.
George F. Davis, A. B., '75, ed.
Henry W. Ewing, Ph. M., Cl'k Sup. C't, ed.
G. Bingham Rollins, ag.

1873.

A. B. Joseph G. Anderson, cl., '69; N. G., '69; A. M., '77, l.
James H. Dryden, A. M., '76, l.
Randall Dryden, A. M., '77, l.
S. B. William J. Babb, LL. B., '76, l.
Abraham P. Barton, N. G., '73; S. M., '77, l.
George N. Elliott, S. M., '76, l.
Robert Fagan, N. G., '73; LL. B., '75, l, d, '79.
George E. Flood, Ag. B., '73; Ag. M., '76, S. M., '80, t.
Simon G. Forrester, M. D., m.
Sarah J. Gentry, S. M., '76.
S. B. Scott Hayes, Ag. B., '73, S. M., '76; Ag. M., '76; Lib. M. S. U., br.
Edward P. Horner, me.
Jerrold R. Letcher, LL. B., '75; S. M., '76, l.
Turner McBain, Jr., br.
Jerome Moore, l., d., '75.
Thomas J. Oliver, l.
Stephen C. Rogers, Ag. B., '73; N. G., '73, l.
Lorin A. Staley, l.
Robert F. Walker, S. M., '77, l.
Ph.B. William L. Houston, Ag.

1874.

A. B. Joseph T. Ridgway, D. B., '74, A. M., '80, t.
Julia F. Ripley, D. B., '74.
Curtis B. Rollins, LL. B., '76, A. M., '81, br.
Charles A. Watkins, d, '74.
Richard D. Shannon (cl., '62), A.M., '75; M. D., Ex. Supt. P. Schools, Mo., t.
S. B. George H. Marlow, D. B., '74.
Brutus Riggs, A. B., '75; A. M., '78, t.
Frank Royse, l.
Thomas C. Wilson, D. B., '74, ag.

1875.

A. B. George F. Davis, Ph. B., '72, ed.
Brutus Riggs, S. B., '74; A. M., '78, t.
Elgin L. Runyan, LL. B., '77; A. M., '78, l.
David McC. Wilson, A. M., '78, l.
S. B. James F. Babb, D. B., '75; LL. B., '77; d., '77.
Caleb L. Buckmaster, D. B., '75; S. M., '79, t.
Thomas C. Earley, S. M., '78, ed.
Frederick J. Miller, l.
Winfield S. Timmons, LL. B., '78, l.
Edward L. Welborn, t.
Ph.B. Arthur W. Chamberlain, Ph. M., '78, l.
Nap. B. Laughlin, l.

ACADEMIC GRADUATES—CONTINUED.

1876.

A. B. Richard H. Stevens.
John H. Wilson, A. M.,, l.
S. B. Ida D. Aldrich, D. B., '76, S. M., '80, t.
Henry B. Babb, Pe. B., '77, l.
George W. Burroughs, t.
Mitchell Castilio, t., ag.
Sarah E. Dimit.
Louis Hoffman, l.
Nathaniel W. Halstead.
Robert J. Orr.
Frank F. Rozelle, l.
James S. Sherman, M. D., '78, m.
L. B. Judson Duncan, div.
N. S. William E. Payne, M. D., m.

1877.

A.B. Jeremiah Glenn Babb, l.
John William Beatty, Pe. B., '78; T. E., '79, e.
Alexander Edward Douglass, A.M , '80, t.
Fielding Wilhite Houchins, A. M., '80, div.
S. B. James Johnson Collins, ag , t.
John Hardin Field, S. M., '83, e.
Trew Hayes, ag.
William David Johnston.
Elijah Jones, M. D., '78, m.
Wiley Jones, M. D., '78, m.
Henry Edwin Sherman, ag.
L. B Robert Perrine Boulton, L. M., '80, ed.
Arthur Clay McChesney, LL. B., '78, l.
Ph.B. Edward David Phillips, t.

1878.

A.B. Henry T. Curtright, agt.
Frank B. Rollins, l., d.
Lewis B. Wilkes, LL. B., '79, l., d.
S. B. James P. Bates, C. E., '78, S. M., '81, e.
Frank M. Brown, Pe. B., '78, l.
Johnathan H. Davis, C. E., '78, S. M., '81, e., t.
Lizzie McD. Field, t.
Mary N. Gentry, Pe. B., '78.
Dulaney R. Kemble, Pe. B., '78, t.
Frederick W. Kumpf, l.
Ph.B. William B. Marshall, ed.

1879.

A. B. Walker Cowherd, C. E., '79; T.E., '79, br.
Gordon N. Garnett, Pe. B., '79, l., d.
Reuben B. Garnett, Pe. B., '79, l., br,
Richard W. Gentry, div., ag., A. M., '83, d.
Lee Hayes, T. E., '79, e.
John W. Leonard, Pe. B., '79, A. M.,'85, m.
Mary E. Child, Pe. B., '79, S. M., '84, t.
Ida Hayes, Pe. B.,'79, S. M., '83, t.
Samuel W. Simcoe, Pe. B., '79, t.
Ph.B. James E. Crumbaugh, Ph.M., '83, l.
Fannie P. Field.
Laura A. Johnson, Pe. B., '79, d.
Theo. L. Montgomer, Pe. B., '79, l.
William W. Noffsinger, l,
Joe Tapley, l.
Edward J. Thomas, t., s.
John W. Wade, Pe. B., '79, C.E., e.
L. B. Laura A. Banks.

1880.

Clarence Leslie Diven, A. B., A. M., '83, div.
William Green Lovelace, A. B., l.
Philip Bruton, A. B., div.
William McGuffey Hoge, A. B., A. M., '83, t.
George Washington Johnston, A. B., l.
Edmund Wilkes, A. B., A. M.,'84, t.
Josie Bacon Latham, A. B., A. M., '85, t.
Henry Bernard Hilgeman, Ph. B., Ph. M., '83, t.
William Ferguson Williamson, S. B., t.
William Mosby LaForce, A. B., A. M , '83, l.

ACADEMIC GRADUATES.—CONTINUED.

Joseph Hudson Drummond, A. B., A. M., '83, Proctor and Sec. of B. C., M. S. U.
James Amber Jones, A. B., ed.
Charles Kinchen Sitton, Ph. B., t.
Kate Hayes, A. B., A. M., '85, t.
Charles Emmett Yeater, A. B., A. M., '85, l.
Jacob Adolphus Charles Freund, Ph. B., t.

1881.

James Black, A. B., A. M., '84, Prof. M. S. U.
Joseph Thomas Payne, S. B., S. M., '84, e., ag.
Willoughby Cordell Tyndall, S. B., S. M., '84, Prof. M. S. U.
Walter Edwin Owen, S. B., l.
John Loxley Stubblefield, S. B., e.
Charles Hardin Curtright, A. B., agt.
Mary Ruth Moore, S. B.
William Strother Cowherd, A. B., l., Ass't Pros. Att'y, K. C.
Walker Bascom, S. B., l.
Nettie Ermina De Tray, S. B., t.
Gustav Gehring, S. B., t.
Cassius Westwood Christie, A. B., ed., agt.
Louis Wagner, Ph. B., Ph. M., '85, l.
Charles Parker Mitchell, S. B., e.
Frank Sterne, S. B., S. M., '84, t., e.
Henry Houston Crittenden, A. B., br., Ass't Cl'k Ct. Appeals, K. C.
Frank Stewart Lonsdale, Ph. B., Ph. M., '84, t.
John Swindle, S. B., t, ag.
Jennie Moore Banks, A. B., A. M., '85.

1882.

Frank Bauerlein, A. B., br.
Robert M. Cook, S. B., ag.
Lida Reed, S. B.
John M. Taylor, S. B., e.
Carrie C. Gamble, L. B.
McGehee D. Hunton, L. B., br.
Andrew A. Bailey, A. B., l.
Lafayette Quarels, A. B.
W. S. Williamson, S. B., e., ed.
T. M. Brensnehen, S. B., ag.
James H. Taylor, S. B.
C. L. Mosley, L. B.
John F. Williams, Jr., A. B., me.
George E. Conrad, A. B., l., Co. Att'y.
Walter Hickman, A. B., ag.
L. H. Otto, L. B., div.
D. O'Mahony, A. B., d.
Kate V. Lonsdale, L. B., t.
Octavia Ficklin, A. D. B.

1883.

John C. Leggett, A. B., l.
Robert T. Sloan, A. B., m.
Paul Alexander, A. B., L. B., l.
Mary M. Gamble, L. B., t.
William H. Brown, A. B., br., l.
Overton G. Ellis, L. B., l.
Robert H. Theilman, S. B., ag.
Jacob Fink, L. B., t., l.
William E. Bryan, A. B., t.
Samuel Daniels, S. B., t.
Hanau W. Loeb, A. B., A. M., '86, m.
Christopher C. Fawver, S. B., e.
John J. Merritt, S. B, br.
Edward D. Manring, A. B., t.
E. E. Bass, L. B., t.
John L. Chowning, S. B., t. s.
Stephen A. Mitchell, S. B., e.
James S. Snoddy, L. B., Ass't Lib'n M. S. U.
Maggie E. Bass, L. B.
Sarah J. Field, L. B.
Pryor C. Miller, L. B.
Walter E. Boulton, S. B., l.
Ellena B. Carlisle, L. B.
William S. Mosby, S. B., l., Co. Att'y.
Enos C. Pollard, S. B., e.
Gretta Hayes, A. D. B.
Mary E. Angell, A. D. B., A. D. M., '86.

1884.

Frank Abijah Youmans, L. B., l.
George Washington Miles, S. B.

ACADEMIC GRADUATES.—CONTINUED.

Benjamin Franklin Hoffman, L.B.,t.
Ernest Augustus Boeger, S. B., e.
James Benjamin McBaine, L. B., ag.
Albert Mortimer Elston, S. B., ag.
Geo. Williamson Coffman, L. B., m.
John Kennish, L. B.
Joseph Welling Williams, A. B., me.
Robert Alonzo Sullins, S B., e.
Henry Jefferson Cox, A. B., t.
Fannie Lenoir Whittle, A. D. B.

1885.

Wm. Edgar Coons, A. B., t. M. S. U.
Will Anderson Rothwell, S. B., l.
Robin Marshall Johnson, S. B., b.
Ernest Ellsworth Smith, S. B., br.
Louis Theilmann, S. B., t.
Washington Strother Dearmont, A. B.
Zanny May Denny, S. B., t.
Estelle Virginia Lewright, A. B.
Thomas Lewis Rubey, A. B., clerk.
Wm. Porter Roberts, L. B., t.
William Gerig, S. B., e.
Wm. Foster Means, L.B.,LL.B.,'87,l.
Wm. Warren Botts, L. B.
Payne Augustine Boulton, L. B., ag.
Lucy Wyatt Gentry, A. D. B.
John Crawford Turk, L. B., t.
Eleanor Ficklin, A D. B.
John Sherman Alexander, S. B., e.

1886.

Wm. Jasper Spillman, S. B., t.
Ida May Clendenin, S. B., t.
Wm. Wallace Clendenin, S. B., t. M. S. U.
James Allen Smith, A. B., l.
Firmin Bradley Wright, L. B., S. B., br.
John Adam Jaeger, S. B., e.
Edward Everett Longan, L. B.
Edgar David Watson, A. B., t.
Van Court Yantiss, S. M., l.

PROFESSIONAL GRADUATES.

1846.

M. D. Francis H. Edwards.
Wm. P. Keith.
Andrew J. Griffith.
Matthew H. Burchard.
N. A. Davis.
Wm. West.
Alexander Ross.
Wm. B. Adams.
Robert Kirkpatrick.
J. D. Tyler.
Samuel G. Maus.
Caleb S. Purkitt.
George B. Winston.
A. Haynie.
Truman W. Tyler.
Samuel Buckner.
Jacob W. Rohrer.
David O. Glasscocke.

Hon. Degree.

Dr. Augustus R. Knapp, Jerseyville, Ill.

1847.

M. D. John P. Allen.
J. Mc. Alexander.
Clinton Armstrong.

PROFESSIONAL GRADUATES--CONTINUED.

L. T. Britingham.
Thomas L. Dovery.
Wm. Augustus Elder.
Jas. S. Gamble.
Thomas G. Gillespie.
A. M. Hunt.
John Westley Hemphill.
John S. Hoff.
G. H. Hickman.
G. S. C. Harper.
Daniel D. Hunter.
Wm. M. Lawrence.
Milton H. Muldrow.
Samuel T. Meng.
Hiram Nance.
Lewis T. Pim.
R C. Prunty.
James Phillips.
T. D. Porter.
Wm. E. Smith.
Chas. S. Strother.
James M. Shannon.
Francis Spaulding.
Wm. J. Tuckett.
Jesse C. Wear.
S. T. Watts.

Ad Eundem.

Dr Alfred Heacock.

Hon. Degree.

Dr. Wm. Henley Duncan.
Dr. Drane, of Bowling Green.

1848.

M. D. John Nessamuk Arent.
Augustus F. Barnes.
W. W. Cottle.
T. E. Staples.
H. F. Steinhauer.
Jacob Tipton.
Burnell Thompson.
Littleton Tull.
F. N. Wells.
T. M. P. Whiklock.
George W. Williams.
Sparrell Woody.

Ad Eundem.

Dr. Wm. Bolton.
Dr. Washington Reynolds.

Hon. Degree.

Dr. Benj. Irish.
Dr. Zebena Conkey.
Dr. M. M. Maughs, d.
Dr. J. L. Holliday.
Dr. A. T. Crow.
Dr. John Rogers.
Dr. Theo. Shriner.
Dr. W. W. Bland.
Dr. J. B. McDowell.
Dr. W. S. Pearce.
Dr. E. S. Frazer.
John T. Fort.
G. E. Frazer.
Wm. H. Greene.
Barton W. Hall.
John L. Hallam.
Glen Owen Hardeman.
John T. Hodgen.
Winthrop H. Hopson.
Peter K. Howe.
T. J. Irish.
B. H. Johnson.
Lewis Leach.
John Lightcap.
H. B. Logan.
George M. B. Maughs.
E. G. B. McNutt.
Charles H. Morton.
S. L. Platt.
Samuel Rixey.
Dryden Rogers.
Samuel L. Carter.
Edw. Rackliff.
Benj. H. Pierson.
John T. Hughes.
Charles A. Knapp.
Hugh Ronalds.
Albert Holmes.
Alexander P. Dorriss.
Wm. C. Warriner.
John L. Arnold.
Lewis H. Callaway.
C. F. Clayton.
John L. Davis.
John S. Dewey.
Marion Edmonson.

PROFESSIONAL GRADUATES—CONTINUED.

Joseph S. Evans.
L. T. Ferris.
Dr. Henry Schoeneich.

1849.

M. D. John M. Angell.
M. Franklin Brown.
Joseph Addison Barrett.
Richard F. Cunningham.
Ira Blackman Curtis.
Joseph N. Castlio.
Don Carlos Case.
David V. Gole.
Phil. B. Chiles.
Phil. T. Dimmitt.
Lavinus Dunham.
Jonathan Dearborn, Jr.
John C. Fitz.
George W. Fitch.
Alexander A. Groves.
Hugh J. Glen.
Silas B. Giddings.
Chas. B. Gratiot.
Wm. J. Howell.
Charles A. Holliday.
William Jayne.
Absolom Herns.
Achilles Lamme.
Russell B. Lewis.
Robert Ralston Lynch.
James T. Matson.
T. P. Montgomery.
Charles E. Nash.
W. H. Nance.
Thomas O'Donnell.
Sherwood A. Owens.
Oliver B. Payne.
James Rainey.
Silas Richardson.
Elias C. Redman.
John G. Stewart.
E. Marcellus Seely.
Wm. W. Todd.

Ad Eundem.

William H. Burns, M. D.
S. S. Ransom, "
John L. Taylor, "
Freeman Knowles, "
R. B. Brown, M. D.

Hon. Degree.

Henry C. Wright.
J. W. Hollowbush.
G. Jayne.
W. Bliss Maxon.
Herod W. Hudnell.
George B. Rogers.

1850.

M. D. Charles C. Allen.
Thomas Brooks.
Francis Carr.
John A. Davis.
Reese Davis.
Richard H. Duncan.
Chas. W. Dunning.
James Elliot.
John C. Farmer.
Granville H. Forkner.
William C. Gantt.
Matthew W. Garthright.
Daniel D. C. Greenleaf.
Joseph O. Hamilton.
Samuel J. Harrison.
William S. D. Johnson.
James H. Kerr.
Thomas B. Lester.
Edw. B. Marshall.
Alanson Mosher.
Horace Newell.
Benjamin F. M. Packard.
Hail W. Pitman.
Thomas J. Primm.
M. Montague Randolph.
John B. Relph.
Kendall E. Rich.
Samuel Riddill.
James A. Roman.
Chas H. Rossiter.
James M. Thompson.
L. Willis Upton.
E. Worth.

Ad Eundem.

J. M. Baker, M. D.
J. J. R. Turney, M. D.
Benjamin F. Edwards, M. D.

PROFESSIONAL GRADUATES—CONTINUED.

Hon. Degree.

Adams Nichols, A. M.

1851.

M. D. Le Grand Atwood.
Thos. L. Barnes.
E. Y. Barret.
John Brookie.
Louis Bosse.
Noah P. Butler.
Theo. Case.
Julius R. L. Clarkson.
Geo. W. Connell.
David L. Croysdale.
Wm. T. Cox.
James M. Davis.
Wm. D. Dement.
Jas. A. Gaines.
Wm. W. Griswold.
Jas. Goodyear.
Francis B. Haller.
Benj. A. Kellogg.
Franklin F. King.
Archibald I. Lacy.
Timothy Leeds.
John L. Million.
Caleb W. Phare.
Jno. W. Ringo.
Jas. R. Sands.
Geo. H. Sherwood.
Nelson R. Small.
Wesley H. Sparks.
Jesse R. Turley.
Walter Witty.
Fred A. Wilmans.
Ed. F. Wood.

Ad Eundem.

Louis A. Xaupi.
J. W. Chenoweth.
R. P. Timmerman.
J. F. Atkinson.
E. S. Look.
N. Manning

Hon. Deg.

Clark Winston.
Cyrus A. Davis.

1852

M. D. Joseph Smith Atkisson.
Richard Henderson Boatman.
Ed. H. Bryan.
Geo. Washington Campbell.
Jno. Winthrop Farley.
Jno. Thornton Gilmer, Jr.
William Goff.
Daniel Boone Jones.
Robt. G. Killebrew.
Arthur Jenkins Lett.
Nicholas Greene Leake.
Nicholas Berry Martin.
David Mock.
Erasmus Darwin Morrison.
James Jackson Norton.
Wm. Calvin Riley.
Wm. Gray Sale.
Payton Spence.
Richard Henry Jones Talbott.
Joseph Ford Thomas.
James Brown Walker.
Lewis Kinney Wilcox.

Ad Euendem.

A. B. Barbee.
Greensburg H. Crockett.
Jno. W. Chenoweth.
Benj. T. Cavenaugh.

Hon. Deg.

Jas. M. Clarkson.
Jason Duncan.

1853.

M.D. Albert Atherton.
Beverly A. Barrett.
Alfred S. Clinton.
Geo. D. Elgen.
Alfred L. English.
Joel Dewitt.
O. L. Johnson.
James W. Johnson.
W. S. Johnson.
Jas. P. Harrison.
Benj. D. Hocker.
Robert Hummel.
Jno. W. Keithly.
W. F. Lamkin.
Morris M. McCluer.
Isaac D. McDowell.
Wm. A. Rawlings.
Thomas Ruby.
David Skilling.

PROFESSIONAL GRADUATES—CONTINUED.

Archibald B. Sims.
Otto Von Schrader.
Jno. F. Snyder.
N. B. Tucker.
Wm. O. Torrey.
Philander M. Parker.
George Whiteside.
Ad Eundem.
Sam'l P. Cutler.
1854.
M.D. Isham R. Asbury.
E. B. Bateman.
R. A. Barrett.
J. W. Bell.
Sam'l Bender.
Geo. M. Boal.
R. L. Bullock.
J. G. Blanks.
J. G. Bryan.
J. T. Brown.
J. J. Crawford.
Geo. H. Dewey.
Jno. T. Dobyns.
Washington Dorrell.
J. R. M. Gaskill.
Chas. M. Gilkey.
Wm. E. Henry.
Grief. P. Herndon.
Benj. F. Hughes.
T. J. Jones.
S. P. Jones.
Thos. H. Kavanaugh.
Benj. F. Kirby.
Jas. A. Lindsey.
Dudley H. Overton.
James L. Perryman.
Jno. J. Rawling.
Jas. T. Scott.
C. P. Slater.
Eben R. Stoner.
Carolus F. Turner.
Lewis Wills.
Simeon A. Yeager.
Charles L. Young
Ad Eundem.
Charles L. Anderson.
Hugh R. Baker.
Andrew J. Batson.
Wm. W. Mayo.
Chester Hard.
Hon. Deg.
John Watkins.
1855.
M. D. Alfred C. Baker.
Algernon Sidney Barnes.
Benj. N. Bond.
Lemuel M. Cheek.
Jas. Robinson Douglas
Wm. P. Davis.
Jesse R. Evans.
Wm. B. Glover.
Frank Hunter.
Cuthbert T. Jones.
Perez. L. Jennings.
Wm. Lemmon.
Geo. H. Long.
John L. Matthews.
Wm. B. Maupin.
John I. McDowell.
Henry C. McPherson.
Wm. M. Pettit.
James G. Phillips.
Peter A. Salling.
Lyman B. Slater.
I. W. H. Spann.
I. L. Thomas.
Alonzo V. Thorpe, d.
James Thompkins.
Wm. Winfrey.
David C. Wallace.
Wm. Wickman.
Ad Eundem.
Dr. M. G. Bryan, Sr.
Dr. A. Parkhurst.
Dr. I. W. Farmer.
Dr. Jesse W. York.
1856.
M. D. James T. Allen.
Lucien L. Bedell.
Jno. H. Davis.
Leonard A. Engle.
Lewis Fay.
John Fetzer.
May B. Gorham.
J. P. H. Gray.
Moses Hubbard.

PROFESSIONAL GRADUATES—CONTINUED.

James T. Means.
John S. Murphy.
Charles D. Nuckols.
Ephraim M. Poage.
Charles H. Pringle.
James H. Rooney.
Lucien M. Rhodes.
G. Granville Samuel.
Richard L. Sullivan.
L. A. Scott.
Joseph T. Scott.
Thos. Shastid.
Robert Stewart.
Henry Strafford.
Joel G. Williams.
Armand L. Wynn.
Calvin A. Wicks.
Elisha E. Waggoner.

Ad Eundem.

Dr. Jesse Y. Higbee.
Dr. O. F. Potter.

Hon. Degree.

W. W. Barret.
Robert Croughton Chenoweth.
Milton M. Latta.

1860.

*D.Ag. Jesse H. Arnold, A. B., '61.
Amos B. Cawbitt, d.
Joseph B. Davis.
Thomas H. Ferguson.
John C. Head.
John T. Heard, A. B., '61, l., (M. C.)
Andrew W. McAlester, A. B., A. M., M. D., m., Prof. M. S. U.
W. M. G. Murphy.
Amos R. Phillips.
James D. Pulliam.
James H. Shannon.
Horace Walker.
James S. Walker.
Eugene B. Wells.
Arthur O. Slaughter.

1869.

N. G. J. G. Anderson, l.
James M. Conway. †
George W. J. Crowe.
Eli Penter, l.

1870.

N. G. T. J. Lowry, t.
J. F. Robinson, m.
Lulie Gillette, d., '77.

1871.

N. G. Clark Craycroft, l.
Eliza Gentry.
J. R. Huffaker, m.
Leland P. Shidy, U. S. C. S.

1872.

N. G. Sue Callison.
A. T. Harrison.
Helen A. Packer.
Gertie C. Seward.
Samuel T. Swinford.
William H. B. Trantham, ed.

1873.

D. B. Abraham P. Barton, t., l.
James H. Dryden, l.
Robert Fagan, l., d.
Stephen C. Rogers, t., l.
Ag.B. George E. Flood, t., s.
Wm. F. Forsha, d.
Scott Hayes, s., br.
Kossuth Morton Lear, ag.
Stephen Cawood Rogers, t., l.
LL.B. Shannon C. Douglass, l.
Charles H. Montgomery.
Robert G. Ranney.
Bentley Runyan, l., d.
Lewis M. Switzler, l.
Berry G. Thurman.

1874.

D. B. William J. Babb, l.
George H. Marlow.
Joseph T. Ridgway, t.
Julia F. Ripley, t.
Thomas C. Wilson.
N. D. George W. Allison.
John G. Barkley.
John B. Cole.
George M. Deatherage.
Adelia A. Farwell, d.
Nathan F. Livingston.
Sarah M. Young.
D. H. Ida C. Alexander.

*Conferred by the Faculty.

PROFESSIONAL GRADUATES.—CONTITUED.

Wm. M. Alexander.
Sallie A. Burroughs.
Adolphus T Carson.
Henry S. Clagett.
George W. Coffman.
Sallie N. Conrad.
Ella Cromwell.
Mary R. Cromwell.
Josiah L. Cummings.
George W. Dimmitt.
Mollie Docherty.
Mattie M. Edwards.
Adelia A. Farwell.
Trew Hayes, ag.
Laura A. Johnson, d.
Sue M. Matheny.
Joseph H. Maupin.
Edmund S. Menard.
Eugene D. Ming.
Edward D. Philips, t.
Julia F. Ruenzi.
Daniel J. Smith.
Charles L. V. Sweet.
Wm. R. Wilkinson.
Sallie M. Young.

LL. B. Wm. Bell Bayley.
Simpson Cash Dyer.
David H. Eby.
Wm. H. Frisbie.
John H. Fristoe.
Thomas B. Gentry, br.
Carey H. Gordon, l.
Irving Gordon, l.
George W. Hilburn.
Ara A. Keithley.
Jas. W. Silsby.
Thomas F. Spencer.
Lysander A. Thompson.

M. D. Andrew M. Conway, B. S.
John Harris Duncan, A. B., m.
Woodson Moss.
Wilson L. Ragan.
W. V. Smith.

Mining School.

C. E. Gustavus A. Duncan.
John Holt Gill.

M. E. John W. Pack.

1875.

D. B. James F. Babb, d.
Caleb L. Buckmaster, t.
Thomas C. Early.
Frederick J. Miller.

N. D. Frank F. Austin.
George W. Barlow.
John W. Beatty, e.
John S. Bradley.
Philip Brutton, div.
Nellie E. Gould.
Ella H. Houchens.
John Wm. Huffaker, m.
Theron M. Humphrey.
Newton H. Lincoln.
William F. McQuitty.
Arthur Martin.
Robert N. Merrill.
Lloyd D. Mudd.
John J. Riley.
William E. Turner.
Luther M. Vallandingham.
John W. Wade, e.

D. H. Andrew B. Booth.
Auguste Hertich.
Ralph T. Graves.
Hugh I. Graves.
Thomas C. Lapsley.
Adolphus G. Scott.
Frederick Smith.
John C. Williams.

LL. B. Francis K. Armstrong.
August H. Bolte.
Milton Burris.
Robert Fagan, B. S., l. d.
Jerrold R. Letcher, B. S., M. S., l.
Edmund Pendleton.
Henry J. Schoeneich.
Daniel Sullivan.
James A. Yantis.

M. D. William W. Ashley.
William M. Daugherty.
Philip L. Hyer. d. '75.
Harold Jerard.
Malcom D. Lewis.
David Strock.

PROFESSIONAL GRADUATES—CONTINUED.

Mining School.

C. E. Francis J.Dugan.
M. E. Almon W. Hare.

1876.

D. B. Ida D. Aldrich, t.
N. D. Sarah M. Gibbons.
Zellie C Gillette.
Mary S. Hayden.
Kate Jackson.
Mary V. M. Lougeay.
Arthur B. Remley.
Worley L. Whitton.
D. H. Arthur B. Remley.
DP. C. Edward B. Hayes.
LL. B. William J. Babb, l.
Royal J. Burge.
Virgil M. Hines.
Curtis B. Rollins, br.
T. S. Rookwood.
William E. Sherwood, l.
C. B. Sebastian, l.
Walter Sydnor.
Thomas B. Wheeler.
M. D. Oscar W. Avery.
W. Wirt Douglass, .d
Edwin F. Evans.
Lyson D. Evans.
James F. Feaster.
A. W. Graham.
James W. Hagan.
Wm. E. Jones.
Walter T. Lemon, m.
Harvey Walley.
Joseph W. Pryor.
William R. Tipton, M.
Charles T. Varmon.

Mining School.

C. E. Cyrus H. Emerson.
John E. McGrath
M. E. Oscar E. Graven.
John D. Greason.
William C. Minger.

1877.

Pe. B. Henry B. Babb, B. S., '76, l.
Pe. P. Irvin Maupin.
James Morris Potter.
James Allen Rathbun.
Frank Ottis Shepard, ag.
Frank Henry Taylor.
George Washington Wren.
D. H. George William Clawson.
Canby Hawkins.
Joseph Thomas Payne, e., ag.
James Allen Rathbun.
Gerard Robinson Walker.
John Finis Young.
John Breckenridge Rea.
LL. B. George W. Allison.
Omer H. Avery.
James F. Babb, d. '77.
William L. Beacock.
Pleasant D. Hastain.
James B. Harrison.
William M. L. Irvin.
Louis L. Kirk.
Robert B. Oliver.
John W. Peebles.
John W. Quisenbury.
John DeW. Robinson, l.
Elgin L. Runyan, l.
Warren Switzler, l.
M. D John Thomas Butler.
George Isaac Cason.
M. F. Moore.
William R. Smith.
E. P. Tally.

Mining School.

C. E. Thomas E. Milsaps.
M. E. A. H. Ohmann-Dumesnil.
James A. Pack.

1878.

Pe. B. John W. Beatty, e.
Frank M. Brown, l, Rep. Mo. Sup. Ct.
Dulaney R. Kemble.
Mary N. Gentry, t.
Pe. P. William M. Britt.
Jacob A. C. Freund, t.
George E. Gray.
George W. Gillum.
Henry B. Hilgeman, t.
Charles E. Jones.
John J. Kearney.
John T. Lawless, d.
Charles D. Rogers.
Asa L. Ross.

PROFESSIONAL GRADUATES.—CONTINUED.

Orlando V. Slaughter.
Louis Q. Starke.
John N. Short.
William A. Steere.
John R. Vandiver.

LL.B. Calvin V. Buckley.
Landon W. Campbell.
Richard P. Craven.
James B. Forrester.
Samuel T. Harrison.
Rob't A. Hicklin, l., 34th G. A. Mo.
Albert H. Jamieson, A. B.
Collin B. Kemble.
Thomas N. Lavelock, l.
Joseph H. Maupin.
Arthur C. McChesney, S. B., l.
Evans P. McDonald.
Chilion Riley.
William J. Roberts.
John A. Russel, d. May, 1878.
Robert Shackelford.
W. Scott Timmons, S.B., l., Co. Atty.
John Q. White, A. B.
William B. Wilson.
George W. Wren.

M. D. Henry Green Caples.
Franklin Cauthorn, m.
William Henry Douglass, m.
Jerome Dillard Fotts.
Elijah Jones, S. B., m.
Wiley Jones, S. C., m.
William Bowers Lucas.
James Silas Sherman, S. B., m.

Mining School.

C. E. Lindsey Coppedge, Jr.
W. Y. Bean.

M. E. Lee R. Graybill.
Wilton R. Brown.

C. E. James Parker Bates, B. S., '68, e.
Jonathan H. Davis, B. S., '78, e., t.

1879.

Pe. B. Mary Ella Child, S. B., '79, t.
Gordon N. Garnett, A. L., '79, l., d.
Reuben B. Garnett, A. B., '79, l., br.
Ida Hayes, S. B., '79, t.
Laura A. Johnson, Ph. B., '79, d.
John W. Leonard, A. B., '79, m.
Theo. L. Montgomery, Ph. B., 79, l.
Samuel W. Simco, S. B., '79, t.
John W. Wade, Ph. B., '79, e.

Pe. P. John T. Bottom, l.
Thomas Foley.
Fannie Garth.
Kate Mahan.
Joseph Thomas Payne, e., ag.
Minnie Lenoir Russell, elocutionist.
Austin Hamilton Shepard, ag.
Nettie Summers, t.
William F. Williamson, t.

D. H. Charles Burrell Lawless, d.
Walter Thomas Russell, ag.
Austin H. Shepard.
John Loxley Stubblefield.
John Franklin Wilhite.

LL.B. Frank Austin Boehmer.
George William Clawson, ed.
Fletcher Cowherd, br.
William Henry Davis.
John A. Gilbreath.
Theron Martin Humphrey.
William Henry Miller.
John Breckenridge Rea, l.
Edward Robb, l., 34th G. A. Mo.
Albert Edgar Ross.
William Edwin Turner.
Edward Gibson Taylor, l.
Lewis Bryan Wilkes, l., d.

M. D. John Able Lowry, m.
Warren Robinson LaForce, m.
Walter Lee Guerrant.
Charles Thomas McLean.
William Fielding McQuitty, m.
John S. Miller.

Mining School.

C. E. S. C. Hoyer.

M. E. Chas. F. Winters.

C. E. George F. Bird, U. S. C. S.
Walker Cowherd, e., br.
Henry Bascom Davis, e.
Frank Henry Hoffstrom, e., Co. Sur

T. E. John W. Beatty, e.
George F. Bird, U. S. C. S.
Walker Cowherd, e., br.
Henry Bascom Davis, e.

PROFESSIONAL GRADUATES—CONTINUED.

Charles Lewis Harrison, e., me.
Lee Hayes, e.
Frank Henry Hoffstrom, e., Co. Sur.
Winfield Scott McKinney.

LAW COLLEGE.

1880.

LL. B. William T. Pigott.
Joseph James Russell, l., Speaker pro tem. Mo. G. A. 34.
Jesse C. Sheppard.
Robert P. Wilson.
John Gagnon.
Francis M. Smith.
LL. B. Francis P. Blair.
Frederick Henry Austin.
Walter D. Penney.
William A. Bowser.
James L. Sheetz, l.
Uriah G. Phetzing.
Thomas T. Loy.

ENGINEERING COLLEGE.

Even Deaver Green, C. E., e.
Charles Lewis Harrison, T. E., C. E., e., me.,
Hiram Phillips, T. E., e., me.
Joseph Leslie Phillips, T. E., e.
Thomas Clinton Thomas, T. E., e.
Lee Hayes, T. E., '79, C. E., e.

SCHOOL OF MINES AND METALLURGY, ROLLA.

L. X. Smith, M. E.
A. C. Carson, M. E.

NORMAL COLLEGE.

Pe. B. Henry B. Hilgeman, Ph. B., '80.
William A. LaForce, A. B., '80.
Wm. F. Williamson, S. B., '80.
Pe. B. Charles K. Sitton, Ph. B., '80.
James A. Jones, A. B., '80.
Kate Hayes, A. B., '80.

DISTRICT SCHOOL DEGREE.

Pe. P. Rufus Gillaspy, m.
William Albert Taylor.
David Calbreath.
Jennie Cleland Nattrass.
Pe. P. Andrew Reason Lyon, l.
Noland Taylor.
George Henry Nichols.
Lewis P. Starke, (Class of 1878.)

MEDICAL COLLEGE.

M. D. Justus Ohage..... St. Charles county, Mo.
Henry Douglas Grady..... Miami, Mo.
Millard Payne Sexton, m..... New Bloomfield, Mo.
Clinton Henry Lubbock..... San Jose, Cal.
George Elias Muns..... Montgomery county, Mo.
William Maurice Moore..... Paris, Texas.
Bennett Hillsman Clark, Jr..... Hallsville, Mo.
Benjamin Franklin Carr..... Mirabile, Mo.
Charles William Chastain..... Marshall, Mo.

PROFESSIONAL GRADUATES.—CONTINUED.

LAW COLLEGE.

1881.

LL. B. David S. Alkire.
Henry T. Alkire, B. S. D.
Henry B. Babb, S. B., l.
Seremiah G. Babb, A. B., '77, l.
Robert H. Beazley.
John T. Bottom, l.
Al. Chapman.
John B. Cole.
James E. Crumbaugh, Ph. B., '79, l.
James R. Davis.
Joseph S. Denny, br.
Thomas R. R. Ely, l., 34th Gen. A. Mo.
Henry S. Evans.
LL. B. William S. Herndon.
Leigh Irvine, ed.
John F. McGaughy.
Frank P. McGhee.
Edwin H. Peery, A. B.
Thomas A. Pharis.
Joseph H. Rodes.
Andrew J. Smith.
Horace A. Smith.
Edwin D. Shackleford.
Walter S. Shackleford.
Joe Tapley, Ph. B., '79, l.
Dewit C. Taylor.
Robert H. Taylor.
James Wingfield.

MEDICAL COLLEGE.

M. D. Oliver Bagby..... New Haven, Mo.
James Gordon, m..... Columbia, Mo.
J. E. Harris..... Danville, Mo.
F. R. Roberts..... Rocheport, Mo.
M. E. Doolittle..... Russell, N. Y.

ENGINEERING COLLEGE.

Franklin E. Guild, S. B., T. E., e.
Charles P. Mitchell, S. B. '81, T. E., C. E., e.
Joseph T. Payne, S. B. '81, C. E., T. E., e., ag.
William L. Seddon, T. E., e.
John L. Stubblefield, S. B., '81, C. E., T. E., e.
George E. Flood, Ag. B., '73, Ag. M., Surveyor, t., s.

SCHOOL OE MINES AND METALLURGY, ROLLA.

Lorix X. Smith, C. E.
Edward B. Summers, C. E.
Walter W. Wishon, M. E.

AGRICULTURAL COLLEGE.

Ag. B. John Loxley Stubblefield, S. B., e.

NORMAL COLLEGE.

Pe. B. Frank Sterne, S. B.
Frank Stewart Lonsdale, Ph. B.
Pe. B. John Swindle, S. B., t., ag.

PROFESSIONAL GRADUATES.—CONTINUED.

DISTRICT SCHOOL DEGREE.

Pe. P. J. B. Gauldin.
Samuel Daniels, l.
S. T. Cross.
M. C. Lucky.
J. W. Heskett, l.

Pe. P. Fannie C. Davis.
A. W. Lyon, l.
W. R. Silvey.
Kate Quayle.
C. D. Walker.

LAW COLLEGE.

1882.

LL. B. George W. Acton.
Robert M. Bagby.
Walker Bascomb, S. B., '81, l.
Alex D. Bell.
David J. Briggs.
John D. Crisp, ed.
William S. Cowherd, A.B., '81, l.
John B. Davis.
Samuel E. Davis.
Winfield Scott Essex, l.

LL. B. Forrest G. Ferris, l.
Walter Drane Gerard.
North East Jones, l.
John S. Surey.
Joseph F. King, l.
Lamoureaux N. Kennedy.
George Washington Lavelock, l.
Harry O. Lyford.
Robert Gamble Robinson.
George William Wright, l.

ENGINEERING COLLEGE.

James A. Seddon, C. E., T. E., e.
J. M. Taylor, S. B., C. E., T. E., e.
Frank C. Armstrong, C. E., T. E., e.
W. S. Williamson, S. B., C. E., T. E., e.
Chas. W. Connor, Surveyor, s.
Frank Sterne, S. B., Pe. B., C. E., T. E., t. e.

John H. Walker, C. E., T. E., ag., e.
Thos. P. Alford, Surveyor, e.
Granville Butler, Surveyor, Co. Sur.
Robert P. Henderson, T. E., e., Co. Tr.

SCHOOL OF MINES AND METALLURGY, ROLLA.

Frank W. Gibb, C. E., M. E.
Beauregard Ross, M. E.
William R. Painter, C. E., Co. Sur.

Ashuah B. Schrantz, C. E., e.
Herman N. VanDevander, C. E.
James A. Wash, C. E.

AGRICULTURAL COLLEGE.

Ag. B. Ernest A. Boeger, e.
Levi Chubbuck, M. Ag. S., '85, ed.

Ag. B. George Fowlston, d.
G. C. Husmann, M. Ag. S., '85, ag.

NORMAL SCHOOL.

Pe. B. James H. Taylor, S. B.
George E. Conrad, A. B.

Pe. B. Kate V. Lonsdale, L. B.

PROFESSIONAL GRADUATES.—CONTINUED.

DISTRICT SCHOOL DEGREE.

Pe. B. James M. Pennington.
Anne Laura Burroughs, t.
Willis C. Holman.
George R. Henderson, l.
Pe. B. Johh Trimble Grigsby, t. s.
Anna May Murphy, t.
Sallie Hamilton Gray.
Lucy J. Taylor.

MEDICAL COLLEGE.

M. D. B. F. Wilson, m..... West Plains, Mo.
S. A. Gremp..... Columbia, Mo.
William Kemble..... Benbow, Mo.
A. C. Winn..... Columbia, Mo.
W. P. Wilcox..... Omaha, Neb.
B. M. Sutton..... Bethany, Mo.
W. H. Lougeay, m..... Columbia, Mo.

1883.

LAW COLLEGE.

LL. B. Milton C. Birney, l.
Marshall P. Blackburn, l.
John J. Campbell, d.
Willard P. Cave, l.
George E. Conrad, l.
Millard F. Hudson, (clerk).
LL. B. James O. Miller.
Frederick Moesser.
William Palmer, l.
David W. Porter.
*Fox Spragins, d.
Clifton R. Thompson, l.
Hiram B. Kelley, b.

ENGINEERING COLLEGE.

Sterling P. Reynolds, C. E., e.
Stephen A. Mitchell, C. E., i.
Enos C. Pollard, C. E., e.
Christopher C. Fawver, C. E., e.
John L. Chowning, C. E., t., s.
Bathurst Smith, C. E., e.
J. M. Cooper, C. E., e.
Thos. P. Alford, Top'l Eng'r, e.
James B. Gass, Surveyor, s.
Marcellus D. Harrison, Sur , e.
William W. Penny, Surveyor, e.
Carleton W. Sturtevant, Sur., e.
Zachary Taylor, Surveyor, s., e.
Oliver P. Devin, Sur., st., m.s. u.

SCHOOL OF MINES AND METTALLURGY, ROLLA.

Floyd Davis, C. E., M. E., Ph. D., Ithaca, N. Y.

NORMAL COLLEGE.

Pe. B. William E. Bryan, A. B.
Samuel Daniels, S. B , t.
Hanau W. Loeb, A. B., m.
John L. Chowning, S. B.
Pe. B. James S. Snoddy, L. B.
Pryor C. Miller, L. B.
Ellena B. Carlisle, L. B.
William S. Mosby, S. B.

PROFESSIONAN GRADUTELS.

John J. Meritt, S. B.
Edward D. Manring, A. B.
Pe. P. Benjamin Hoffman.
Samuel D. Gromer.
James H. Hatton.
Mary E. Angell, A. D. B.
Pe. P. William M. Butler.
Jefferson D. Heady.

MEDICAL COLLEGE.

M. D.	C. R. Stierberger	Union, Mo.
	J. L. Rollins	Columbia, Mo.
	C. C. Browning	Shelbyville, Mo.
	R. C. Cottingham	Renick, Mo.
	G. W. Lawhorn	Columbia, Mo.
	W. A. Norris	Woodlandville, Mo.
	J. M. Edwards	Bevier, Mo.
	B. F. Bush	Americus, Mo.
	C. J. Blackburn	Blackburn, Mo.

1884.

LAW COLLEGE.

LL. B. Henry Spurgeon Booth, l.
John Charles Bowman, l.
George Wolcott Chapman. l.
Joseph Wilson Caldwell, l.
Charles M. Curran.
Levi Engle, l.
Thomas Turner Hinde, l.
LL. B. Pope Higgins, l.
Charles Madison Holt.
Wm. Henry McCague, l.
Fred. Quickenstedt, l.
Alfred Bennett Wheeler, l.
John Braden Yakey, l.
John David Young, l.

ENGINEERING COLLEGE.

Ernest Augustus Boeger, S. B., C. E., e.
Edward Everett Wall, C. E., e.
Ernest Ellsworth Smith, C. E., br.
Robert Alonzo Sullins, C. E., e.
Robert Franklin Grady, C. E., e.
Henry Harris Pendleton, Surveyor, s.
Charles Jaeger, Surveyor, st., m.
Julius Henry Stowe, Surveyor, e.
Tyra Clifton Hughes, C. E., e.
John Jacob Sanders, Top'l Eng'r, e.
Edward Campbell Auderson, Surveyor.
Vard Houghton Hulen, Surveyor.
George Condit Haydon, Top'l Eng'r, e.
John Wesley Morris, Top'l Eng'r, e.
Thomas Clinton Thomas, Top'l Eng'r. '80, C. E., e.
William L. Seddon, Top'l Eng. '81, C. E., e.
James W. Malone, C. E., t., s.
Carleton William Sturtevant, Military Eng'r, C. E., e.

MEDICAL COLLEGE.

M. D. Christopher Columbus Morris.
Bronislaw Jozef Nowierski.
M. D. Sylvester Ragan.
Charles Wm. Reagan.

PROFESSIONAL GRADUATES—CONTINUED.

AGRICULTURAL COLLEGE.

B.A.S. Henry Jefferson Cox, A. B.
Dennis Harper Connaway.
Howard Dorsett, me.

B.A.S. Beverly Thos. Galloway, st., m. s. u.
North Todd Gentry, l.

NORMAL COLLEGE.

Pe. B. Benj. Franklin Hoffmann, L. B.
Ernest Augustus Boeger, S.B., C. E.
Geo. Williamson Coffman, L. B.

Pe. P. William Mastin Godwin, ed.
Mary Elizabeth Ammerman.

Pe. B. John Kennish, L. B.
Joseph Welling Williams, A. B.
Robert Alonzo Sullins, S. B.
Henry Jefferson Cox, A. B.

Pe. B. Earl Worden Chapman.

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LAW COLLEGE.

LL, B. Alonzo Daniel Burnes, d.
Joseph Mann Clary.
Sterling Price Dorman, st., m.s u.
John Charles Ewing, l.
Thomas Nathan Haynes, l.
George Lunceford Horine, l.
Albert Wm. Lyon, l.
Joe McGregor.
Thomas Jefferson McMillan, l.
James Tilford Neville, l.
Samuel Albert Payne.
Henry Parker Wood, t.

LL. B. Robert C. Prewitt, l.
Thomas C. Reed, l.
William Robb.
Robert Lincoln Rowden, l.
Robert Shelby Rutlege, l.
Samuel S. Shull, l.
Cornelius Hite Skinker, l.
John Aaron Snider, l.
Wm. Price Taylor.
James McPherson Thomas.
James Wm. Tincher, l., co. att'y.

ENGINEERING COLLEGE.

Walter Scott Williams, C. E., e.
Julius Henry Stowe, C. E., e.
Richard Harvey Phillips, Top'l Eng'r, e.
John Trimble Grisby, C. E., t., s.
Marcellus Davis Harrison, C. E., e.

John Sherman Alexander, S. B., C. E., e.
John Wm., Wade, Ph. B. '79, C. E., e.
Lulius Robert Lewis, Surveyor, t., s.
Byron Buckingham Berry, Surveyor, e. st.

MEDICAL COLLEGE.

M. D. Zach Brainerd.
John Morgan Davis.

M. D. Lorenzo Dow Hartley.
William Henry Miller.

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NORMAL COLLEGE.

Pe. B. Ernest Ellsworth Smith, S. B., br.
Washingon Strother Dearmont, A. B.
Zannie May Denny, S. B., t.
Wm. Porter Roberts, L. B.

Pe. P. Fredus Nelson Peters, st.
Solomon Henricks, t.
Carl Augustus Hansman.
Hattie Sue Bumbarger.
Charles Clifford Dimmitt.
Richard Huff Emberson, t.
James Marion Rouse.

Pe. B. Wm. Foster Means, L. B., st., l.
Payne Aug. Boulton, L. B., ag.
Lucy Wyatt Gentry, A. D. B.
John Crawford Turk, L. B.
Gretta Hayes, A. D. B., '83, t.
Joseph Tatumn White.
Jos. Frazier, Cadet U. S Mil. Acad.
Benjamin Franklin Sincoe.
Daniel Kauffman.
William Francis Pigg.
George Washington Murphy, st. M. S. U.
Edward Everett Smith.

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LAW SCHOOL.

LL. B. Joseph Barton.
James Lewallen Bishop, l.
Columbus Pinkney Caldwell, l.
Louis Vaughn Clark, l.
Edwin Jerry Deal, l.
Henry Mortimer Houston.
Frank Russell Jesse, l.
Jason Neely McElvain, l.
Merit May Sheets.
Robert Walker, l., Co. Att'y.
Lafayette Green Wilson, l.

LL. B. Wm. Archie Bedford, l., br.
Stephen Smith Bishop.
Theophilus Lilly Carns.
E. H. Crowder, Prof. M. S. U.
Nelson Campbell Gallemore.
Thomas Franklin Hurd, l.
Wm. Birts Linney, l.
John C. McKinley, l., Co. Att'y.
Charles Franklin Strop, l., st.
James Henry Whitecotton, l., Ass't. Co. Att'y.

MEDICAL SCHOOL.

M. D. Wm. Hubbard Mason.
James Marion Alexander.

M. D. David Wenrick Bosserman, st.

AGRICULTURAL SCHOOL.

B. A. S. Henry Jackson Waters, d.,ag.

NORMAL SCHOOL.

Pe. B. Firmin Bradley Wright, S. B., B., br.

Pe. P. Luther Marion Defoe, t.

Pe. B. Edward Everett LL., B.

Pe. P. John Wofford Boulton, div., t.

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Pe. P. Charles Dickson Hurxhal.
David Hickman Harris, l.
Robert Morris.
William Thomas Johnston, t.
James Scott Stubblefield.
Henry Walter Elliott, st. M. S.U.
Agnes Stewart Ranking.
Emil Theilmann, st. M. S. U.
James Thaddeus Dick.

Pe. P. Robert Everard Downing, st., M. S. U.
John Wm. Froley, ag.
Edward Boyd Wiggington, st., M. S. U.
Wm. Joseph Tom.
Rufus Spencer Kathan.
Robert Jewell Hodge, t.
Kate Sterne, t.
May Hurt Lonsdale.
Nancy Belle Moore.

ENGINEERING SCHOOL.

John Adam Jaeger, S. B., C. E., e.
James Edwin Garrett, C. E., e.
Benjamin Buscher, Surveyor, st., e.
Lee Price Roberts, Surveyor, s.
Wm. Gerig, S. B., '85, C. E, e.
Wm. Preston Hardestry, C.E., e.
David Nowlin, Surveyor, s.
North Todd Gentry, Surveyor., l., st.

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A

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Anderson, J. C., Texas.
Adkins, A. E., Illinois.

B

Bryan, J. H., Missouri.
Brown, A. N., Texas.
Bankhead, J. E., Missouri.
Blaise, T. T., Iowa.
Bishop, A. B., Arkansas.
Burch, E. J., Kansas.
Brewster, J. H., Arkansas.
Benepe, J. L., Illinois.
Bullard, J. W., Nebraska.
Briscoe, J. O., Texas.

C

Craig, C. H., Missouri.
Craig, W. M., Illinois.
Cotton, L. W., Missouri.
Chambers, E. J., Arkansas.
Chandler, H. S., Missouri.
Carson, J. M., Arkansas.

D

Davis, E. A., Illinois.
Dysart, W. P., Missouri.
Delabar, C. A., Missouri.
Dodge, R. K., Missouri.

E

Erwin, O. P., Illinois.

F

Fleming, A. W., Missouri.
Fowler, T. R., Texas.
Fitzgerald, W. P., Missouri.
Foulon, C. S , Illinois.
Foulon, J. J., Illinois.
Fink, M., Arkansas.
Fowler, W. C., Illinois.

G

Gourley, W. F., Tennessee.
Grubbs, J. O., Missouri.
Grimes, R. H., Missouri.
Gant, S. G., Missouri.
Gremp, Von H., Missouri.

H

Herren, D. V., Iowa.
Hudgings, M. H., Missouri.
Hauser, R., Missouri.
Hopper, R. L., Missouri.
Harvey, H. G., Missouri.
Holcomb, T. J., Arkansas.
Highfill, M., Missouri.

K

Kern, W. B., Indiana.
Kilpatrick, R. H., Missouri.
Kessenger, J. C., Missouri.
Kretschmar, Missouri.
Kimmins, R. L., Arkansas.
Kennel, A. C., Missouri.
Kenner, E. B., Missouri.

L

Lovelady, J. M., Iowa.
Lewright, J. O., Texas.

M

McCune, T. E., Missouri.
McCully, T. M., Missouri.
Meyer, E. Y., Missouri.
Moeller, C. L., Missouri.
Meyer, F. J., Illinois.
Mobley, W. C., Arkansas.

P

Paquin, Paul, Missouri.
Pearson, R. J., Jr., Mississippi.
Parsons, J. W., Missouri.
Purcell, E. C., Missouri.
Palmer, W. B., Arkansas.
Peak, P. A., Texas.

R

Roesel, E., Minnesota.
Rape, W. A., Texas.
Rucker, G. R., Indian Territory.
Robinson, W. P., Arkansas.
Rohlfing, L. C., Missouri.
Riecke, J. W., Missouri.

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Stewart, E. R., Missouri.
Stoker, G. P., Texas.
Sullivan, J. M., Missouri.
Sullivan, J. E., Missouri.
Story, R. T., Missouri.
Smith, J. H., Missouri.
Smith, R. J., Missouri.
Smith, D., Kansas.
Stiffler. G. W., Missouri.
Stark, A. J., Missouri.
Stephenson, G. W., Missouri.
Stouffer, J. M., Missouri.
Simpson, J. H., Illinois.
Smith, J. D., Missouri.
Swearingen, P. B., Arkansas.
Smith, G. B., Missouri.
Smith, H. R., Arkansas.

U

Uhls, C. C., Illinois.

W

Williamson, G. B., Missouri.
Wright, W. K., Illinois.
Williams, F. G., Pennsylvania.
Worley, L. F., Missouri.

GRADUATES LL. B.—1877.

T. E. Allison, Perry, Mo.
C. H. Baker, Edina, Mo.
James Booth, Union, Mo.
A. W. Brewster, Whitehall, Ill.
J. S. Brierly, Strasburgh, Mo.
B. F. Cox, Joplin, Mo.
J. S. Davis, Washburn, Mo.
R. H. Davis, Claysville, Mo.
F. R. Dearing, Blackwell, Mo.
F. H. Dexter, Kansas City, Mo.
G. F. Estes, Longmont, Col.
J. M. Evans, Deer Lodge, Mon.
Norwood Fitch, Columbia, Mo.
G. W. Goad, Appleton, City, Mo.
J. C. Growney, Conception, Mo.
D. H. Harris, McCredie, Mo.
L. B. Hart, Brownsville, Mo.
J. J. Hendrick, Higginsville, Mo.
William Mack, Lamar, Mo.
W. F. Means, Clarksdale, Mo.
J. F. Murry, Columbia, Mo.
Will Parmerlee, Sedalia, Mo.
H. M. Stephens, Lamar, Mo.
J. L. Stephens, Centralia, Mo.
C. B. Robinson, Louisville, Mo.
O. H. Robinson, Louisville, Mo.
J. A. Smith, Kansas City, Mo.
W. H. Truitt, Millersburg, Mo.
N. B. Welch, Keytesville, Mo.
E. U. Western, Kansas City, Mo.
J. F. Wharton, Nashville, Mo.
W. N. Wharton, Lamar, Mo.
T. L. Wills, Lamar, Mo.

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