
UNITED WE STAND DIVIDED WE FALL
SALUS POPULI SUPREMA LEX ESTO
MDCCCXX.

REPORT

TO HIS EXCELLENCY, THE GOVERNOR.

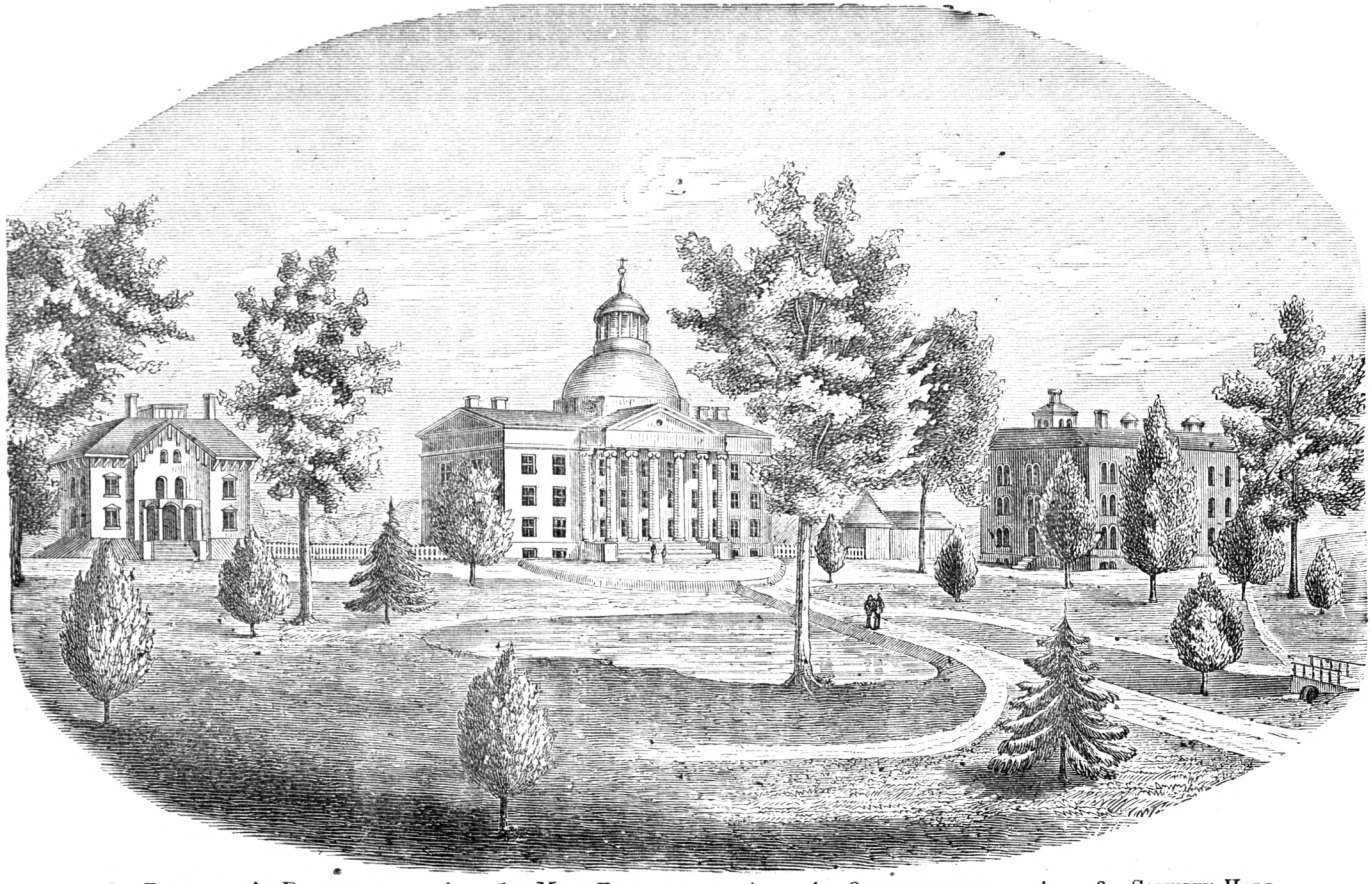
THE FORTIETH

MISSOURI UNIVERSITY CATALOGUE.

1881-1882.

FOUNDED, 1820---ORGANIZED, 1840.

PLATE 1.



2. PRESIDENT'S DWELLING. | 1. MAIN BUILDING. | 4. OBSERVATORY. | 3. SCIENCE HALL.

PLATE I.

1. *The main edifice*, which faces north and is somewhat cruciform; nave E. and W. 157xtransept (extension S. 25x81, and N. colonnade vestibule 20x81, and steps 7x81, making total depth N. and S.) 108x81. This structure is massive and imposing; 3½ lofty stories in height, with a basement cellar and an immense dome rising more than 100 feet in elevation, from which a splendid landscape lies before the eye. It accommodates the Chapel, Library, Law, Medical and Engineering schools, the Literary Societies and several chairs of language. The rotunda is occupied at present by Library matter, and several hundred stands of arms, belonging to the Military Institute; but it is susceptible of being converted into a magnificent art gallery.

2. *The President's dwelling* also fronts N., on a line with 1, and is 46x42, with extension 24x18, garden, lawn, wood-house, stable, ice-house and pasture lot.

3. *Science Hall*, which is L shaped, facing E. 64x53 and N. 109x34, with good basement and 3 full stories. The Sciences of Chemistry, Natural History, with its cabinet, and the Mathematics are accommodated in this building, which is pronounced one of the very best, for its purposes, in the country. The Normal School provisionally occupies the magnificent room over the cabinet with northern, western and southern exposure and skylights. The Commercial Department is in a commodious room in the basement.

4. *The Observatory*—see plate 2—has been moved to the northeastern part of the Campus, and has been remodeled.

PLATE II. THE NEW OBSERVATORY.

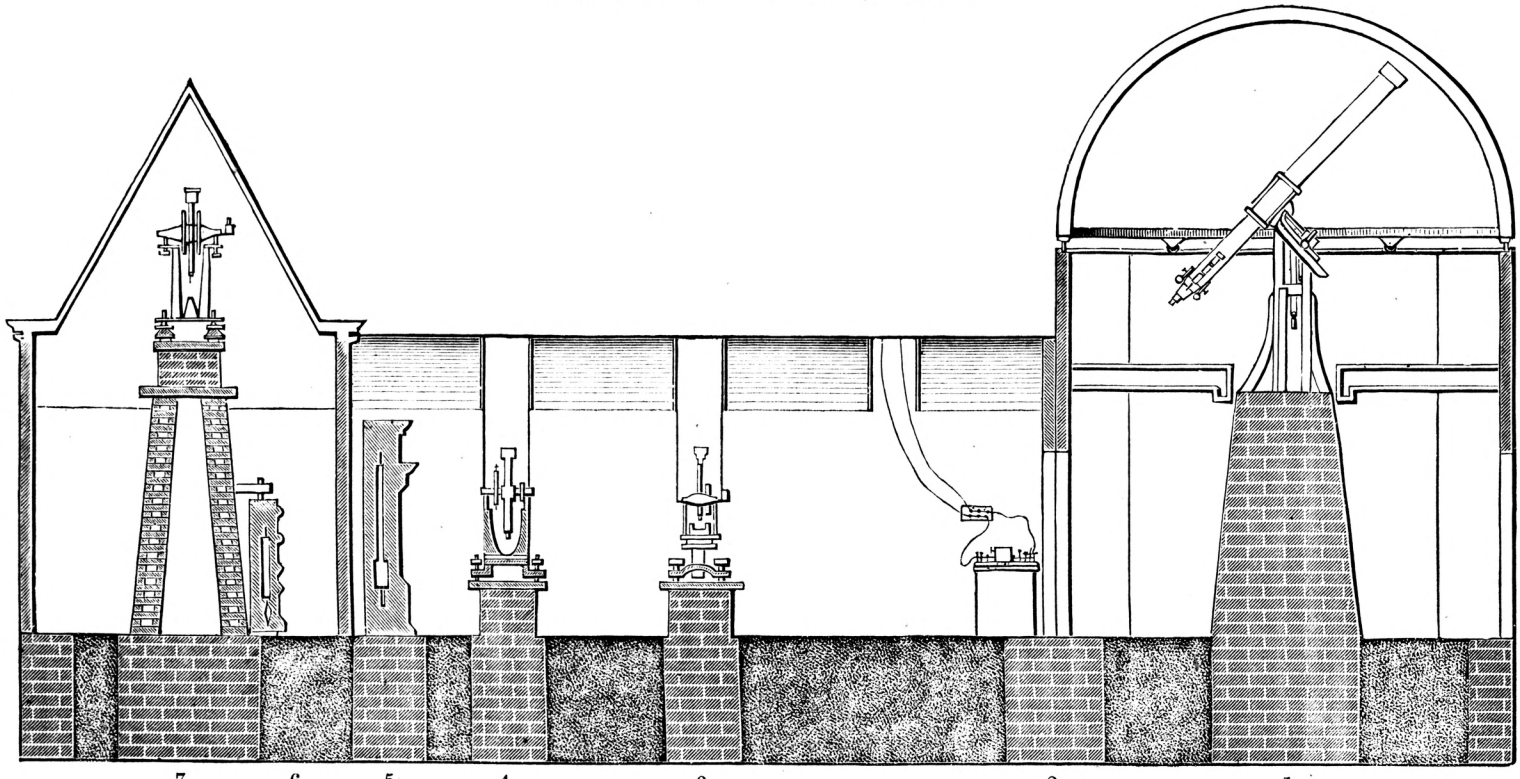
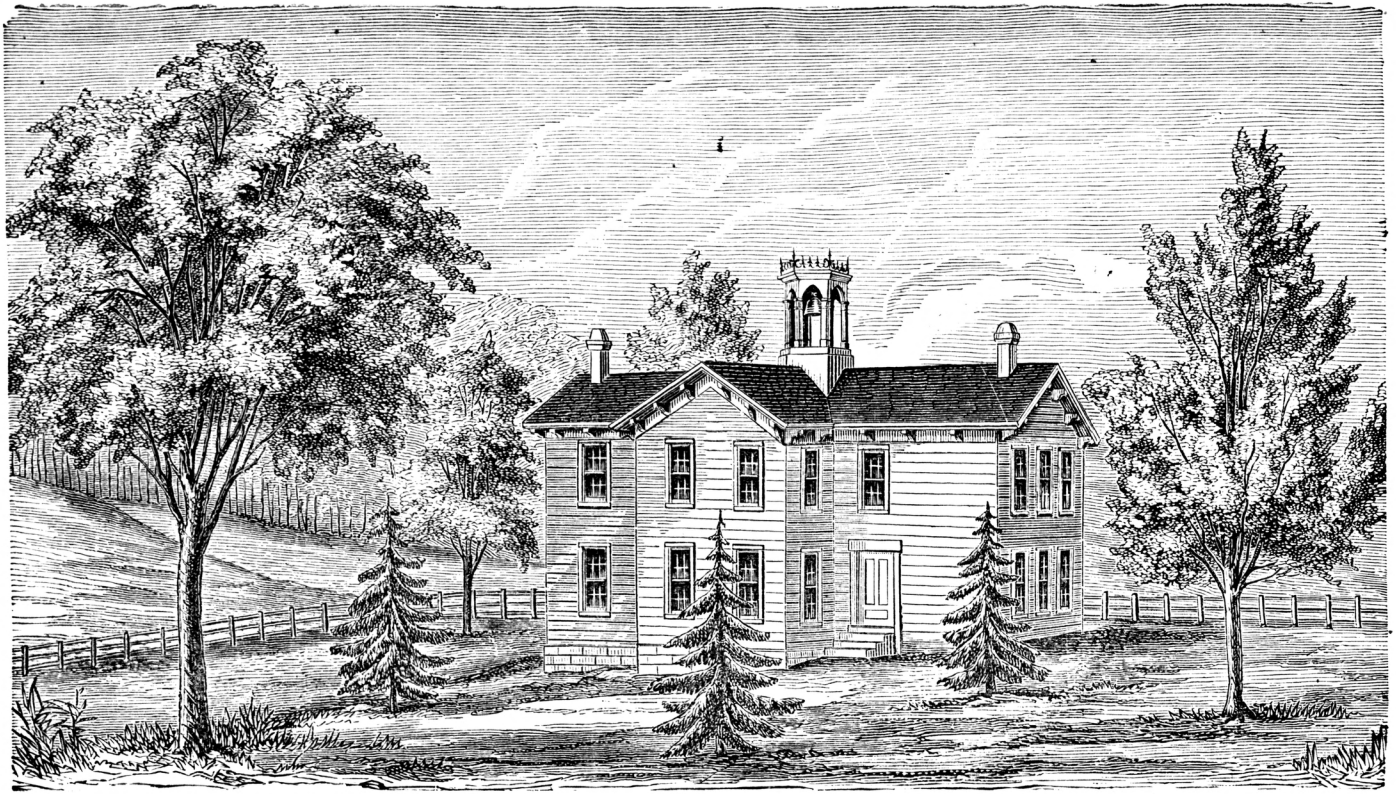


PLATE II.—VERTICAL LONGITUDINAL SECTION.

The Observatory has been moved to the northeastern part of the Campus. It has been rebuilt and greatly enlarged. For description of building and instruments see the New Observatory under the School of Mathematics and Astronomy.

PLATE III.



THE ENGLISH AND ART SCHOOL.

PLATE III.

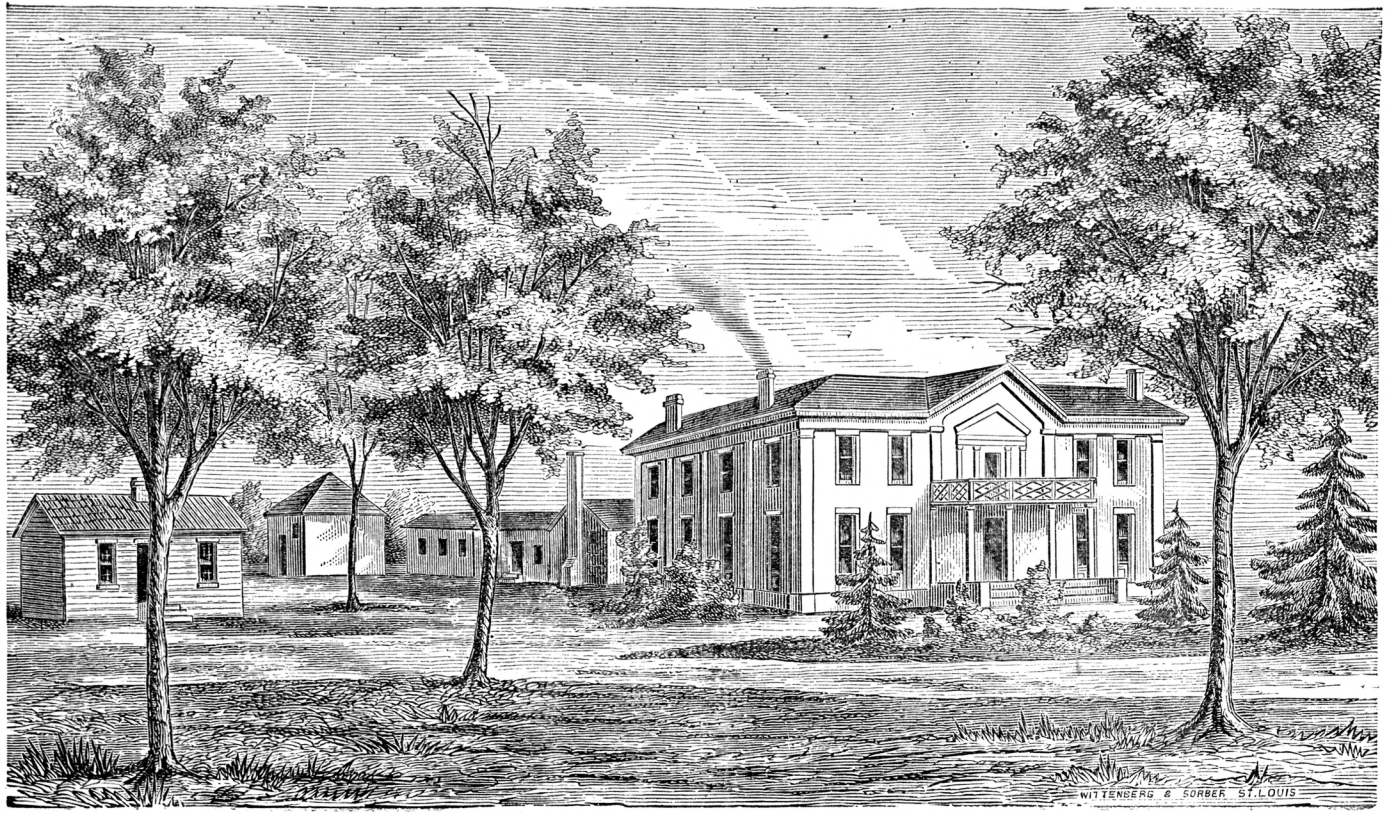
THE ENGLISH AND ART SCHOOL is two stories and cruciform; nave, 73x22; transept, 60x25. It is in the northwest corner of the Campus, and fronts east.

In this building will be found the rooms of—

1. The Professor of English.
2. The Assistant Professor of English.
3. The Art Studio.
4. The Ladies' Literary Society Hall—The Philalethean.

The Normal School room is in Science Hall, over the Cabinet, where there is ample accommodation, and good light for the classes in Drawing. This room has been provided with approved school furniture.

PLATE IV.

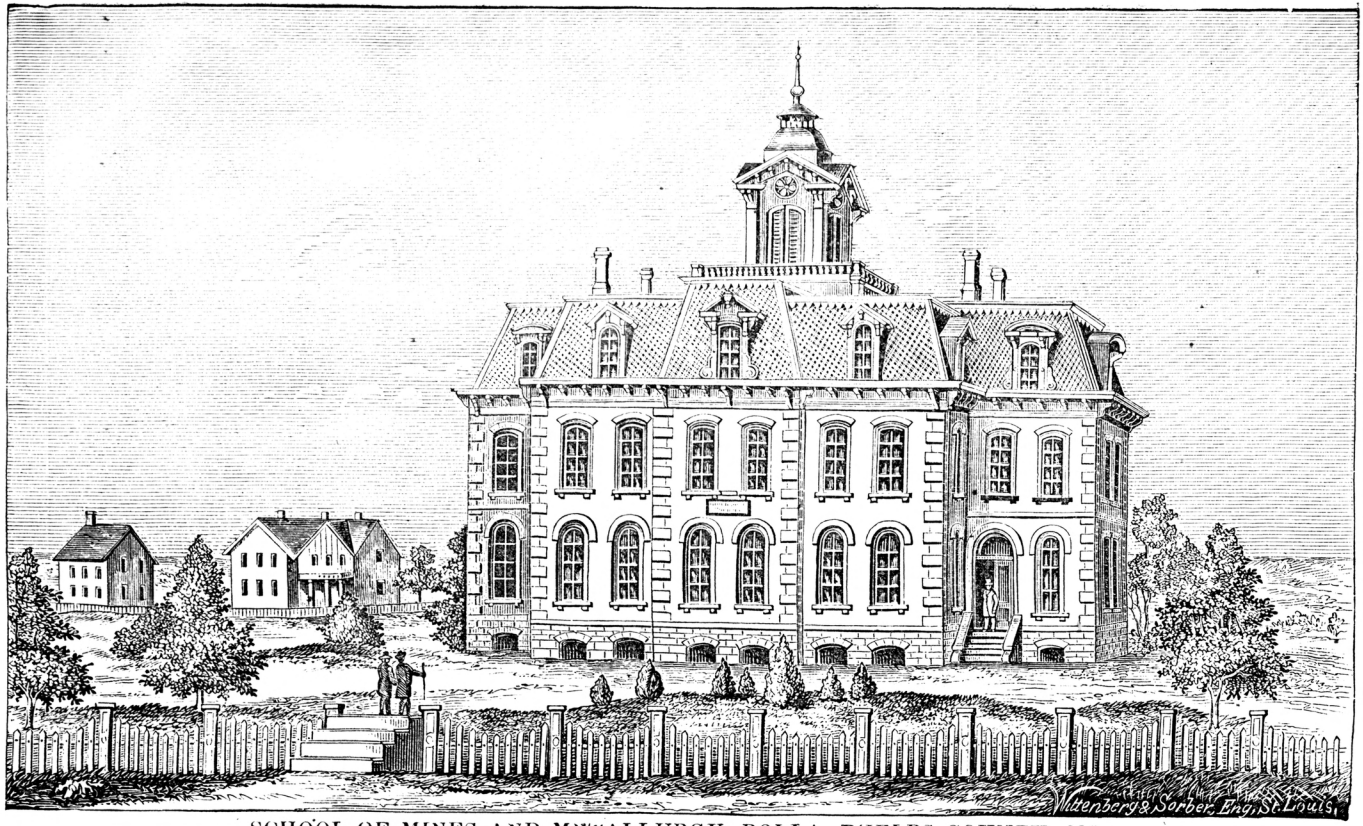


AGRICULTURAL COLLEGE FARM-HOUSE.

PLATE IV.

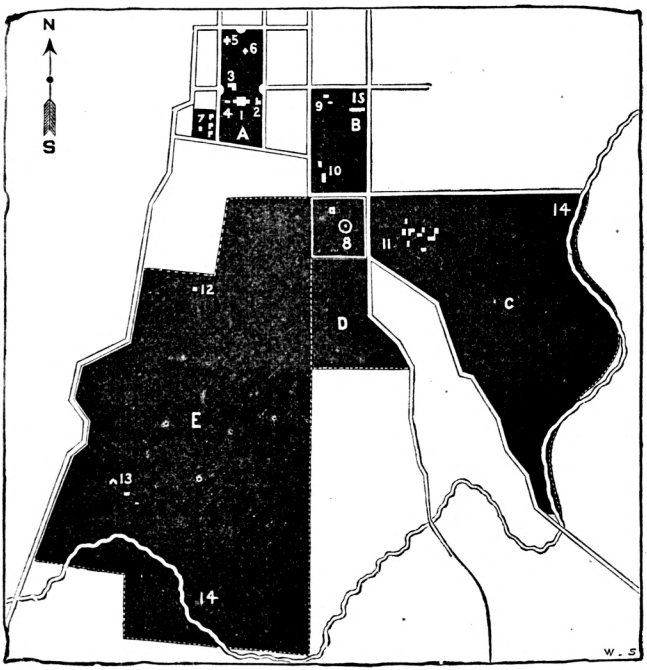
This house fronts west 52x44, with vestibule 18x10, and back extensions 116. There are twenty rooms, besides two cottages, 2 barns with stables, ice-house and other out buildings. It was built by Wm. W. Hudson, formerly President of the University. It is a large and excellent house, and beautifully located 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.

PLATE V.



SCHOOL OF MINES AND METALLURGY, ROLLA, PHELPS COUNTY, MO.

PLATE VI.



GROUND PLAN OF CAMPUS AND FARM.

A. Ground plan of the University Campus, (22 acres, with graded walks, and over 50 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, plate 1.
3. Science Hall, plate 1.
4. Observatory—plate 2—has been moved to northeastern part of Campus.
5. English and Art School, plate 3.
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 4.
12. Farm Cottage, No. 2.
13. Rock Spring.
14. The Hinkson Creek, in a horse-shoe bend of which the town of Columbia and the College Farm are situated.
15. Hot-house.

ANNUAL CATALOGUE

OF THE

MISSOURI UNIVERSITY

AT

COLUMBIA, MISSOURI,

1881–1882.

FOUNDED, 1820—ORGANIZED, 1840.

JEFFERSON CITY:
TRIBUNE PRINTING COMPANY, STATE PRINTERS AND BINDERS.
1882.

Announcement for 1882--1883.

The Academic, Agricultural, Normal and Engineering Schools will open the 2d Monday (11th) of September, 1882. The Law and Medical Schools will also open September 11th.

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.

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 the Medical School, he has access to all the other departments of instruction without any additional expense. Commencement day will be the first Thursday of June, 1883.

Send for Catalogue to Librarian, Missouri State University, Columbia, Missouri.

SAMUEL S. LAWS, PRESIDENT.

REPORT

OF THE

Board of Curators to the Governor.

To His Excellency, GOVERNOR T. T. CRITTENDEN:

SIR:—I have the honor to transmit to you herewith, in accordance with the requirements of law, the report of the Board of Curators of the University of the State of Missouri, for the present collegiate year, ending on the first of June next. Accompanying it you will find the report of the President of the Institution and also the reports from the Professors having charge of the various departments, including the School of Mines and Metallurgy at Rolla.

In these various reports you will find a full statement of the work accomplished, the condition and the wants of the various departments of the Institution. Also a catalogue embracing the names of all those who compose the Faculty, as well as those of others who are officially connected with the University, and the names and residences of the students in attendance during the year.

Despite the loss of crops occasioned by the drouth of last season, the number of students has not been greatly diminished. They have progressed well in their studies, and are entitled to be commended for the good order which has prevailed during the session about to close. Only a few cases of discipline have occurred during the year. Under the efficient management of President Laws, aided by an able Faculty, the different departments of the University have been strengthened, and some of them better provided with facilities to impart instruction to the young men and women who compose the classes than ever before.

The State University, with proper encouragement, is now in a fair way to accomplish the mission for which it was established, and it continues to commend itself to the patronage of all the friends of education and the enlightened citizens of the State, and to command increased confidence.

It cannot be too often repeated, that our public system of education as *incorporated* into the Constitution of the State, is composed of two parts, our system of free Public Schools and the State University. This has been the fact, as recognized by every Constitution under which we have lived, from the organization of the State Government, and the admission of Missouri into the Union in 1820, down to the present time.

The obligation and the pledge to maintain this system has been a continuous one, and may be found to-day in unmistakable language in the present Constitution of the

State. This is the enlightened policy founded in the organic law of Missouri. Our Public School system constitutes, in fact, a part of the very organism of the State itself, as much so as the Legislative, the Executive and the Judicial departments, and the pledge to maintain it is equally binding and obligatory; and it is by fulfilling this pledge to the letter that we may expect to bring Missouri up to the standard of education and intelligence, which forms at last the very basis of our American civilization. This is the greatest need of our State to-day, the better training and the more general diffusion of knowledge among the masses of the people, which can only be obtained by a well regulated system of schools and colleges. There is no other way of reaching and awakening the minds of the rising generation upon whose shoulders the responsibilities of society and of government must soon rest.

In this race for supremacy, let not Missouri lag behind, let her rather, prompted by a just State pride, emulate the noble examples of the sister States around her—of Michigan, of Indiana, of Illinois, of Minnesota, of Wisconsin, of Kansas, of Iowa and of Nebraska, and thus hold that place amongst them all to which our geographical position, our vast resources, our rapidly increasing population justly entitle us.

Without extending these remarks further in this connection, the Board of Curators will take occasion at another time to present through you to the General Assembly of the State at its next meeting, a more detailed statement of the wants of the University and its various departments, with the sincere hope that they will be met with a liberality commensurate with the obligation imposed by the Constitution, and the importance of the objects to be thereby attained.

The Board of Curators most earnestly ask the co-operation of your Excellency to aid them in carrying forward the noble aims implied in the establishment of this Institution of learning, and which were so well expressed in your Inaugural address.

I am, most respectfully, your obedient servant,

JAMES S. ROLLINS,

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

STATE UNIVERSITY, COLUMBIA, MO., April 17, 1882.

CITY OF JEFFERSON, April 19, 1882.

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 in the University, the course of study, etc., and a catalogue of the officers and students, *it is ordered*, that an edition of nine thousand copies be printed, to be distributed according to law.

THOS. T. CRITTENDEN, Governor.

Approved:

JOHN WALKER, State Auditor,
MICH'L K. MCGRATH, Secretary of State,
ROBT. MCCULLOCH, Register of Lands,
} Commissioners of Public Printing.

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, cost 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.*

HISTORIC MEMORANDUM.

The Missouri University was founded by a grant of two townships (46,080 acres) of land to the State for that purpose, when, 1820, it was organized and admitted into the Union. The policy of the General Government to aid the States in the work of education, by land grants, was established 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:

"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 stated, 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 Assembly, 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 obligations 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 agricultural, 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 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 also, and "A UNIVERSITY *for the promotion of literature and the arts and sciences*," was no afterthought. It is incorporated in the Enabling Act of Congress, and in the subsequent ordinance acquiescing therein, prior to the constitutional organization of the State; and the sixth article of the original Constitution is devoted to its elaboration as a part of the organic law of Missouri. (Poore's Federal

and State Constitutions, pp. 1103, 1104, 1117–8, 1112.) This policy of the State, therefore, is not open to question, having been settled from its foundation, nor can the educational policy of the State be questioned, free from the fallacy of mistaking the nature of a free State, nor the joining of the higher with the lower education as a necessity, free from the fallacy of mistaking the nature of education itself.

A sound logic and a sound educational and political philosophy, therefore, fully indicate our historic and constitutional position, and suggest that, as a people, we 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.

THE UNIVERSITY.

[From the Jefferson City Tribune, March 16, 1881.]

In the course of this week the 31st General Assembly will have made up its record, and it is hoped it may be an honorable and liberal one towards this institution. We are chiefly indebted to the United States, that we have in Missouri a State University at all. The enabling act of March 6, 1820, which authorized the inhabitants of the territory to organize themselves into a State, offered every sixteenth section of the public lands for "common schools," of which there was to be one in every township, and at the same time also a large body of the public lands, which amounted to two townships for "a seminary of learning," "a university for the promotion of the arts, sciences and literature." The lower and the higher education of the common school and the University were thus conceived in the same original "enabling act," and came to birth with the birth of the State herself. One university, many common schools, i. e., concentration for the higher education and diffusion for the lower. When the foundation of our common schools and State University were thus laid on the same rock, by the acceptance of this valuable property on the part of the territorial convention, in an ordinance irrevocable, "without the consent of the United States," the educational policy of the organized and subsequently admitted State was forever settled. It was right and proper that the States which took active part in the organization of Missouri out of territory, bought with their own money, and in her admission as an associate on equal footing with themselves in the Union, should provide against that new association disgracing and distracting them by her ignorance with its consequent train of crimes, ruffianism and infamy. The kind of education which the people who organized Missouri engaged to maintain and forever encourage as a condition precedent to admission into the Union, and as securing the culture and intelligence necessary to an honorable association therein, was, therefore, not merely that of the common school, but that of the University, a University in the front rank, "*a University for the promotion of the arts, sciences and literature.*" The word promote means to move forward; hence the only kind of a University which answers to this language of the original bond, is one which stands in the front rank and is taking its part in moving forward the educational work of the age. And why should not the youth of Missouri enjoy educational advantages of the first rank?

When the first Constitution of the State of Missouri was adopted, a solemn engagement founded on the antecedent "enabling act," was incorporated into it; and the common schools and the University have been embodied in every Constitution of the State from that one to the present one; nor is it in the power of the people to take

either the common school or the University out of the Constitution without the consent of the United States.

The educational policy of Missouri, therefore, as embracing the University with the same tenacity as the common school, is no new thing, no after thought, no post-bellum discovery, nor importation from other sections of the country, but a policy conceived and born with the State herself. The obligation of each General Assembly to support this educational work in the two departments indicated is not an open quesion, but a matter settled by those who have gone before us, be it said to their honor, as the founders of the commonwealth of Missouri. The work of the Normal schools is incidental to the common school and wholly sabservient to the raising up of the teachers therefor. That was the legislative purpose of their establishment in Missouri, as it has been of their establishment throughout the land.

Sometimes it becomes very apparent from the course of members on the floor of the General Assembly that they have never given this matter any particular attention for they assume that the whole educational policy of the State is unsettled and that they are called on to deal with it as an open and original question. At almost every meeting of the Legislature, some ignorant buffoon disgraces himself in connection with educational matters; fortunately it can't disgrace the State, as her early record is more honorable and its study is the best corrective of such brawling and rampant ignorance.

It should then be forever understood, as admitting of neither question nor controversy, that Missouri is truly bound to the maintenance of her University and common schools. The only thing left to the discretion of the General Assembly is the measure of support. But if it is a settled matter, as it undoubtedly is, that we are to have a State University, then doubtless all will agree that it should be so liberally and generously supported as to be an honor to the State. This is what the people of Missouri expect.

CHAPEL TALK BY DR. TEFFT.

One morning last week during the sojourn in Columbia of Dr. J. E. Tefft, of Springfield, Mo., he attended a chapel exercise in the State University, and, in response to a call for a speech, delivered a short address remarkable for the clearness and force with which it defined the legal relation sustained by the State to the University, as follows:

When I visited the chapel last week, I was much interested in a proposition brought forward by Dr. Laws, respecting the constitutional position of the State University. Since then, I have thought about the subject, and will now give you the result of my cogitations:

If the proposition be conceded that the allotment of lands by the U. S. to the several States for literary purposes, was not a free gift which the States might use at will, or not use at all, but that the donation was in the nature of a trust for specified purposes, then, from that proposition, certain others depend, which are equally true and equally demonstrable. The United States in admitting a new territory into the Federal Union, and in conferring upon it all the high privileges and prerogatives of the original States, desiring to make it certain that the citizens of the new States shall be moral, intelligent and capable of governing themselves in local affairs, and of participating in the government of the whole, creates a trust to secure these ends.

The new State is the trustee. Funds are supplied by the allotment of lands for the maintenance of a university, and placed in charge of the trustee. Now the legal and moral duties of the trustee have been thoroughly demonstrated by Dr. Laws. But

I propose to introduce a proposition which seems to be fairly a corollary to the main idea.

For whose benefit is this trust created? Who is the *cestuy que trust*? Who are the beneficiaries? The last question is the one to which I particularly ask your attention, and I have formulated the proposition made by your honored president for the sole purpose of arriving at this point. To answer this question, we must keep steadily in view the purpose of the U. S. in creating the trust.

Obviously it was not for the sake of favoring or benefiting any particular persons or class of persons. Nor was it for the advantage of the inhabitants of only the particular State. It was for the purpose of making it sure that the people of the new State should be sufficiently moral, intelligent and capable to be safe, not only to govern themselves, but to assist in governing the whole country. Who, then, is to be benefited by the proper administration of this trust? Not you alone who are here. Not the citizens of this State alone. The benefit is to accrue to the whole people of the United States. Your advantage is quite incidental. You are the recipients of this advantage in order that the State may be benefited through you. The advantage to the State is incidental. It is made a recipient, in order that through the State the whole people of the whole country may be preserved and made secure.

This, then, is the state of the case. The United States creates a trust, the State being trustee for its own benefit.

What relation do you sustain to this great trust?

Just this: The State, in the administration of the trust, has created subordinate ones and you are the trustees of these subordinate trusts.

The subject matter is the moral integrity, mental capacity, mental power, discipline, knowledge, skill and general culture which are to be acquired at this great seat of learning. The creator of these subordinate trusts is the State, and to it you are responsible for their faithful administration. Who is the *cestuy que trust* here? Who are the beneficiaries? Not yourselves, it is the State, the whole people of the State. What duties then are imposed upon you? Several:

1. In the first place it is your duty to accept the trusts, fully, freely and in good faith. That is, you accept the advantages here offered for improvement in morals, learning, arts and culture, to the full extent of your capacities of acquisition and cultivation. With the subject matter of a trust comes the duties and responsibilities which properly attach to it and which are a part of the very idea of trusteeship and must be assumed in good honest purpose and faith and with a full sense of obligation.

2. These acquisitions are to be preserved, nursed and cared for that there be no waste.

3. He who accepts a trust of lands or flocks is responsible for the natural increase. So here, these acquisitions should increase. They must be as good seed which is cast into good ground, which will germinate, increase, grow, and fructify and bring forth fruit, some thirty, some sixty, some one hundred fold.

4. The moral and intellectual culture here acquired is to distinguish you from the rest of mankind (not possessing it) and to mark your consequences among your fellows. It is not to be concealed. It is not to be trodden. It is not to be enjoyed or used in seclusion. The example and influence must not be lost. You should be as a city which is set upon a hill.

5. These capacities are to be actively and affirmatively employed for the common benefit.

All the great questions which agitate and interest society, and upon the solution of which the progress of cultivation and the welfare of the people depend, are to be discussed, considered and finally decided by thinking men and women, by educated

men and women. In a few years you are to control the destinies of this people. One hundred graduates of the University of Missouri will have more influence upon the course of public thought and action and bear a weightier responsibility than ten thousand of the lowest order of intelligences.

6. Finally: These subordinate trusts of yours differ from those which are under the control of our Chancery Courts in this—that you give no bond, and are subject to no legal control. Yet do not over-estimate your freedom. The Almighty God is the Supreme Chancellor who will watch your administration, and if you are active and faithful will award you your just fees and discharge you from responsibility, and if you are not, do not believe that you will escape his process, or his merited disapprobation and condemnation.—[Mo. Statesman, April 22, 1881.]

It was claimed in the debates of Congress in 1821 and 1829, that the grants to the States for educational purposes were "pure donations." This doctrine did not prevail. Mr. Benton, the distinguished senator from Missouri, and others, successfully maintained, "that these grants were not donations, but that they were a part of the compacts by which the new States were received into the Union." Judge Campbell, in his Political History, p. 221, sets forth the same doctrine in the following words: "This early recognition of the necessity of schools and colleges, enforced in the form of a perpetual compact between the government and the people and the States in the Territory has been a source and stimulus of intelligence, the importance of which cannot be estimated. The duty of the State to educate her children generously and thoroughly can never be disregarded without violating the pledge on which the rights of the State and territory were created."

This fundamental doctrine which underlies our organized school work as a State has been too long overlooked.

SELECTING THE SITE FOR THE STATE UNIVERSITY.

By an act of the Legislature of Missouri, approved February 8, 1839, five commissioners were appointed to select a site for the State University. The act provided that the site should contain at least fifty acres of land, in a compact form, within two miles of the county seat of the county of Cole, Cooper, Saline, Howard, Boone or Callaway.

It was made the duty of the commissoners to meet in the City of Jefferson on the first Monday of June, 1839, and thereafter at such times as they might appoint, at the county seat of each county mentioned, to receive conveyances of land and subscriptions of money—to be void if the University was not located at the county seat of the county in which they were made.

After visiting all the county seats, and receiving bids as aforesaid, the commissioners were to return to the seat of government and open the bids, "and the place presenting the most advantages to be derived to said University, keeping in view the amount subscribed, and locality and general advantages, shall be entitled to its location."

On the 24th of June, 1839, the commissioners met in Jefferson City, opened all the bids, and located the University of Missouri at Columbia, Boone county. The following is the language of the award:

"The commissioners, appointed by law to select a site for the State University, have agreed unanimously in the choice of Boone county for its location. Given under our hands at the City of Jefferson, this 24th day of June, in the year 1839.

(Signed,) JOHN GANO BRYAN,
CH. DURKEE,
ARCHIBALD GAMBLE,
JOHN S. PHELPS,
PETER H. BURNETT."

The organization of the State University and the erection of the main edifice (plate 1) followed close upon this act of location. It is still a matter of some importance, to notice that, in pursuance of the purpose of the land grant of 1820, the location of the University was accomplished by the authority of the State, in the most formal, open and public manner, after a free and extensive competition.

The Board of Curators endorses most fully the well expressed views and liberal sentiments of Governor Crittenden, in his recent excellent inaugural address, in which we find the following pointed language:

"The educational interests of the State are fixed upon a firm foundation, and should be sacredly guarded and wisely fostered. Parsimony towards education is liberality towards crime. Let us preserve the University of the State, the Normal Schools, that also of Metallurgy and the common schools,* with vigilance, and if prodigal at all in expenditure of the people's money, let it be in the interest of education. Education is contagious, and every facility should be given for its diffusion. Crime as inevitably gives way before the march of education, as the Indian, the wolf and buffalo do before the tread of civilization. No State is great until its educational facilities are great, and at the door of the poor boy in the cabin, as well as within the reach of the spoiled child of fortune. There is no cheaper defense to a community or a commonwealth than education. It is a stronger and safer bulwark, more unfailing and vigilant than the most powerful armaments of wood, iron and steel, and it makes its recipients the boldest defenders of the right and the most uncompromising enemies of the wrong. I repeat again an earnest recommendation of this subject to this honorable body. Let no efforts be too great, no patience too exhausting, and no means too arduous to extend it to all classes of society. Let us exhibit to the nation the noble spectacle of Missouri educated as she should be, her sons and daughters adding the grace, and powers, and virtues of cultivated minds to their fine natural qualities, and those who have contributed to bring about the results will be entitled to the lasting gratitude of posterity."

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*The common school law provides for the separate education of the colored people, and the provisions of the law are the same for both classes, excepting some clauses favoring the colored people. The higher education is also provided for them by the State. The XXXth General Assembly passed an appropriation bill which not only provided for the current expenses of the Normal Department of the Lincoln Institute, but also for the payment of the debt resting on that institution. However, as up to that time the Lincoln Institute had been a private property, and as our present Constitution forbids appropriations to private enterprises, Governor Phelps very properly withheld his signature from the bill till the Lincoln Institute was conveyed to the State. This was done, and the State now owns and has entire control of this property. The Lincoln Institute, therefore, now stands along side of the State University as an institution of the higher education, crowning the provisions of law in this State for the separate education of the colored people. This completes, in a very satisfactory manner, the solution of this educational question which has vexed so many of the States.

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."

JOHN S. CLARKSON, A. M.	Columbia	Term expires Jan. 1, 1883.
JERRE C. CRAVENS, ESQ.	Springfield	
JUDGE JAMES LINCOLN	Clay Co.	
HON. WILLIAM F. SWITZLER	Columbia	Term expires Jan. 1, 1885.
JAMES R. ESTILL	Howard Co.	
A. M. MILLARD	Rolla	
HON. JAMES S. ROLLINS, LL. D.	Columbia	Term expires Jan. 1, 1887.
CHARLES C. BLAND, ESQ.	Rolla	
WILLIAM H. LACKLAND, ESQ.	St. Louis	

OFFICERS OF THE BOARD.

HON. JAMES S. ROLLINS, LL. D. ..... President.
JERRE C. CRAVENS, ESQ. ..... Vice-President.
ROBERT L. TODD, Secretary.
ROBERT BEVERLY PRICE, Treasurer.

SCHOOL OF MINES.

EXECUTIVE COMMITTEE.

JUDGE CHARLES C. BLAND, Chairman ..... Rolla.
JERRE C. CRAVENS, ESQ. ..... Springfield.
A. M. MILLARD ..... Rolla.
C. H. FROST, Treasurer ..... Office at Rolla.
PROF. R. W. DOUTHAT, 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 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 1st, 1877, and until their successors are appointed and qualified; one class for four years from January 1st, 1877, and until their successors are appointed and qualified, and one class for six years, from January 1st, 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.

BOARD OF VISITORS.

J. V. C. KARNES, A.M.	Kansas City.
HON. CYRUS S. BROWN	Shelby county.
COL. ALEXANDER F. DENNY	Randolph county.
CLARLES E. LEONARD, ESQ.	Cooper county.
HON. E. W. FOX	St. Louis.

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, and upon the certificate of the Secretary of the Board of Curators, the Auditor shall draw his warrant upon the Treasurer of the State, who shall pay the same out of any money in the Treasury not otherwise appropriated.—ACT, February 24, 1870.

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.

(The Professors succeed each other according to seniority 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 of Physics and Dean of the Medical Faculty.

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

GEORGE C. SWALLOW, M. D., LL. D.,
Professor of Agriculture and Natural History and Dean of the Agricultural Faculty.

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

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

HON. BOYLE GORDON,
Professor of Law.

ANDREW MCALESTER, 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.

ROBT. W. DOUTHAT, A. M., PH. D., (M. S.*),
Professor of Languages, Principal of Preparatory Department and Secretary of Faculty.

JUDGE HENRY S KELLEY,
Lecturer on Criminal Jurisprudence.

JUDGE ARNOLD KREKEL,
Lecturer on Federal Jurisprudence.

S. M. TRACY, M. S.,
Professor of Botany and Entomology and Superintendent of the Horticultural Grounds.

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*Mining School.

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

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

DAVID R. MCANALLY, JR., A. M.,
Professor of English.

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

MISS GRACE C. BIBB,
Professor of Pedagogics and Dean of the Normal Faculty.

JOHN H. DUNCAN, A. M., M. D.,
Professor of Physiology, Materia Medica and of the Principles and Practice of Medicine.

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

MISS FLORENCE E. WHITING, (M. S.*),
Assistant Preparatory Department.

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.

CONRAD DIEHL,
Professor of Art.

BENJAMIN FRANKLIN THOMAS, PH. D.,
Professor of Physics.

CHRISOPHER G. TIEDEMAN, LL. B.,
Assistant Professor of Law.

LIEUTENANT JOHN JANUARY HADEN, (Detailed from the Regular Army),
Professor of Military Science and Tactics.

GEORDIE Z. WHITNEY, A. B., LL. B.,
Professor of Mathematics.

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

*Mining School.

INSTRUCTORS.

GUSTAV GEHRING, S. B.,
Chemistry.

WILLOUGHBY CORDELL TINDALL, S. B.,
Mathematics.

JOSIE BACON LATHAM, A. B.,
Latin.

"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 to 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 other municipal corporation, for any religious creed, church or sectarian purpose whatever." CONST. 1875, ART XI, (EDUCATION.) SEC. 11.

STUDENTS.

ABBREVIATIONS.

A.,	Agriculture.	Med.,	Medicine.
Anat.,	Anatomy.	Met.,	Metallurgy.
Bk.,	Book-keeping.	Ms.,	Metaphysics.
C.,	Chemistry.	M. L.,	Modern Languages.
Civ. Eng.,	Civil Engineering.	M. T.,	Military Tactics.
Cl.,	Calisthenics.	Min. Eng.,	Mine Engineering.
D.,	Drawing.	N.,	Normal.
E.,	English.	N. H.,	Natural History.
		Phar.,	Pharmacy.
G.,	Greek.	P. S.,	Political Science.
H.,	History.	Ph.,	Physics.
L.,	Latin.	S.,	Semitic Languages.
	Law.	Sur.,	Surveying.
Ly.,	Laboratory.	Top'l Eng.,	Topographical Engineering.
M.,	Mathematics.		

UNDER-GRADUATES.

Names.	*Residences.*	*Schools Attended.*
Acton, George W.	Cooper county	Law.
Acuff, Alonzo	Polk "	M., L, M. L., H, P. S.
Alexander, James M.	Boone "	E., N. H., L., M., N., Ph.
Alexander, John S.	Lincoln "	E., L., M., M. L., Sur.
Alexander, Paul	Monroe "	L., G., M., E., Ph., C., M. L., P. S.
Alford, Thomas P.	Ralls "	M., M. L., E., Sur., Top'l Eng.
Allbritain, James T.	Livingston "	E., L., M., G., P. S.
Allen, Harriet Elizabeth	Clay "	M. L., M., H., L., D., P. S.
Allen, Louis Nathaniel	Cass "	E., Bk., D, M., N.
Allen, Romaine	" "	E., Bk., M., D., N. H., A.
Allison, William Clark	Cooper "	L., M., E., D., G.
Angell, Mary Etta	Boone "	E., Ph., C., N. H., M. L., Ms., A., M.
Armstrong, Frank Charles	St. Louis City	M., M. L., Ly., Civ., Eng., Ms., Ph.
Arnold, George A.	Boone county	E., M., N. H., Bk., Ph.
Arnold, Mary Elizabeth	" "	D., E., M., L., N. H.
Ashley, Luther J.	Johnson "	E., M., N. H., G., Bk.
Atkins, Calvin	" "	Phar.
Atwood, Annie Eakin	St. Louis "	N. H., D., M., E., Cl.
Bagby, Robert M.	Howard "	Law.
Bailey, Andrew Allen	Linn "	M., L., Ms., M. L., N. H., G.
Banks, Mary Robert	Boone "	L., H., M., M. L., P. S.
Barrett, Lizzie Haze	" "	M., Bk., L., N. H., P. S., E.
Barrett, Mary Thomas	" "	E., M., H., N. H., N., D.
Barrett, Nellie T.	" "	E., M., N., N. H., H., P. S.
Barton, Joseph	Livingston "	E., M., N. H.
Bass, E. Everette	Boone "	L., N. H., Ph., M. L., E., Ph.
Bass, Maggie	" "	M., C., N. H., D.
Batterton, Mary Effie	" "	E., H., N., C., M., D., N. H., Ph.
Bauerlein, Frank	Jackson "	Ms., S., Law, M. L.
Beattie, Thomas Jefferson	Cass "	H., Ph., N. H., E.
Beattie, William Hayes	Boone "	H., M., E., A., P. S.
Beck, Lewis T.	Pettis "	E., Bk., L., D., N. H., M.
Bedford, Arthur C.	Stoddard "	D., M., M. H., M. L., E., P. S.
Bedford, Elizabeth Allen	Boone "	E., M., N. H., N., D., H.
Bedford, William Archie	" "	G., L., M., D., E.
Belken, Joseph	Madison "	M., E., N. H., M., L., P. S.
Bell, Alexis Donaheu	Monroe "	Law.
Bihr, Hattie Lou	Boone "	E., N. H., N., H., M.
Blackburn, Marshall Paxton	Saline "	Law, N. H., Ms.
Blackwell, Egbert Edwin	Callaway "	Med.
Blades, Joseph Horace	Montgomery "	M., E., H., N. H.
Boeger, Ernest Augustus	New Buda, Iowa	C., A., N. H., M., P. S.
Boeger, Robert	" " "	E., H., N., C., M., D., Ph., N. H., Bk.

Names.	*Residences.*	*Schools Attended.*
Bonham, Romeo Vivion	Howard county	Med.
Botts, Lida Jane	Audrain "	E., M., N. H., L., G., M. L., P. S.
Botts, William Warren	" "	H., L., S., Ph., M. L., M.
Boulton, Payne A	Boone "	M., L., D., M. L.
Boulton, Walter E	" "	M., N. H., C., E., D., P. S.
Bowen, John Walter	Knox "	E., L., M., G.
Bradford, George	Boone "	M., E., L., N., D., N. H.
Bradford, William	" "	M., E., L.
Bradley, Seth Briggs	Johnson "	E., L., M. L., M., G., N. H.
Branham, Mattie F	Harrodsburg, Ky	L., H., E., M., Bk., M. L., N. H.
Braun, Charles Frederick	Cooper county	E., N., H., N. H., P. S., Bk.
Bresnehen, Thomas M	Linn "	E., N. H., M., Ms., Ph., D.
Briggs, David Jackson	Howard "	Law.
Briles, Christopher C	Cass "	Med.
Britt, Richard H	" "	E., M., D., Sur., Civ. Eng.
Broadwell, William J	Jackson "	H., M., D., L.
Brooks, Robert R	Callaway "	E., M., N. H., N.
Brown, Joel C	Knox "	E., M., N. H., C.
Brown, William H	Jackson "	L., N. H., G., Ph., M.
Browning, Charles C	Shelby "	Med.
Browning, Mary Lee	Audrain "	M., E., L., C., N. H., P. S.
Bryan, Fenley Cooper	" "	M., Ph., L.
Bryan, George F	Vernon "	L., D., M., H., M. L.
Bryan, William E	" "	M., G., L., C., N. H., D., N., M. L., Ms.
Buck, Robert Lee	Stoddard "	E., N. H., M. L., M., H., P. S.
Burlingame, John F	St. Charles "	E., M., N. H., H., P. S., D., N.
Burrington, Lewis S	Bates "	E., H., M., N. H., N., P. S., Bk.
Burroughs, Annie Laura	Boone "	E., H., N., C., D., N. H., Ph., Bk., Ms.
Bush, Benjamin F	Montgomery "	Ph., Med.
Butler, Granville	Gentry "	Ph., D., Sur., M., Civ. Eng.
Butler, William M	" "	M., E., D., H., P. S.
Byrd, Edward Bailey	Marion "	Law.
Calvert, Ziba Milton	" "	Law.
Campbell, Bird H	Lafayette "	E., M., L., D., G., P. S.
Campbell, Hiram F	" "	M. L., L., M., H., G.
Campbell, John J	Jackson "	Ms., Law, M. L.
Carlisle, Ellena Bruce	Boone "	H., Ly., M., M. L., S., P. S., N. H.
Carter, William	" "	E., M., L., G.
Cave, Willard Percy	Randolph "	Law, Ms., M. L.
Chandler, Charles Q	Jackson "	M., E., C., H., P. S.
Chandler, Sallie B	Boone "	E., H., M., N., N. H., D., Cl.
Cheatham, Benjamin H	Saline "	E., M., N. H., L., P. S.
Chilton, Edgar	Cass "	Med.
Chowning, Charles W	Monroe "	G., L., N. H., M. L., M.
Chowning, John Liter	" "	M. L., Ph., C., N. H., E., P. S.
Chubbuck, Levi	Caldwell "	Bk., A., N. H., Ph., M. L., Sur.
Clark, Robert J	Boone "	Law, Ms.

Names.	*Residences.*	*Schools attended.*
Clayton, Frank F.	Boone county	M., L., G., D.
Cleve, Urban Bernard	Franklin "	M., E, H., A., N. H.
Clifford, Ernest A.	Pike "	H., M., E., A.
Clinkscales, Robert Lee	Boone "	E, D., H., L., N. H., P. S., Bk.
Cochrane, Owen W.	" "	M., N., C., D., L., N. H.
Coleman, William P.	" "	Bk.
Conkling, Matthew R.	" "	L., G., M., P. S., M. L.
Connaway, Philip K.	Cedar "	E., M.
Connor, Charles W.	Alton, Ill.	Sur., D., M., Civ. Eng.
Conrad, George E.	Bollinger county	Ms., S., H., N., M. L.
Cook, Robert M.	Grundy "	P. S., N. H., Ly., Sur., Ms.
Coons, W. Edgar	Marion "	L., G., M.
Cooper, Aubert J.	Opelika, Alabama	M., N. H., H., M. L., P. S.
Cooper, John M.	Saline county	Civ. Eng., Sur., M.
Cottingham, Robert C.	Randolph "	Med.
Cottle, Melville G.	Lincoln "	E., M., H., N. H.
Cox, Henry Jefferson	Lawrence "	G., L., M., A., Sur.
Craine, William G.	Iron "	E., M., D., N. H.
Crane, Darius W.	Boone "	M., E., H., N., D.
Crenshaw, Charles S.	Mississippi "	E., M., L., Bk., G.
Crisp, John Douglas	Exeter, Illinois	Law.
Crittenden, Thomas T., Jr.	Cole county	L., G., M., Ph., M. L., D.
Crockett, William D.	Chariton "	M., L., N. H., E.
Daniels, Samuel	Morgan "	M., Ph., L., M. L., C.
Davis, John Brooks	Ste. Genevieve "	Law.
Davis, John Morgan	Atchison "	M., E., L., C., P. S.
Davis, Samuel Echols	Winfield, Kansas	Law.
Deacon, John	Cass county	E., L., M., D.
Dearmont, Washington S.	Holt "	L., G., M., Ph., D.
DeFoe, Luther M.	Moniteau "	E., M., N. H., P. S., D.
DeFrance, Wesley H.	Adair "	M. L., S., Ms., M., Ph., G., N. H.
Dempsey, Luther N.	Chariton "	N. H., E., H., M., P. S., N.
Devin, Oliver Peyton	Shelby "	E., A., Ph., N. H., M.
DeVorse, John T.	Daviess "	L., E., M., M. L.
Dimmitt, Charles C.	Boone "	M., Ph., A., N. H., E.
Dimmitt, M. Medora	" "	D., N., M., N. H., L., P. S.
Dinwiddie, William S.	" "	E., M., N. H., N., P. S.
Dodge, Clarence P.	" "	E., L., M., G.
Dodge, Ernest Cole	Scott "	L., G. N. H., M.
Dollis, Edward Perry	Clay "	L., Ph., C., D., N. H., Ly., E.
Donlin, William J.	Nodaway "	E., H., N. H.
Douglass, Benjamin Todd	Batchtown, Illinois	L., G., D., H.
Dowden, Maslin Smith	Knox county	E., M., Ph.
Doyle, Joseph F.	Shelby "	E., M., L., D.
Draffen, William Muir	Cooper "	L., D., M., N. H., C., P. S., G., H.
Drain, James W.	Macon "	L., G., Ph., C., N. H., M.
Dunham, George A.	Harrison "	E., Ph., M., G., L., P. S.
Dysart, William C.	Boone "	E., H., M., N., Bk., P. S., N. H
Easley, Achilles Winston	Jackson "	E., D., N. H., H., M., N., P. S.

Names.	*Residences.*	*Schools attended.*
Eddins, Frankie	Henry county	L., E., C., D., N. H.
Edwards, John M	Macon "	Med.
Edwards, Metta W	Boone "	E., H., D., M., N., N. H., Cl., Bk.
Elder, Daniel S	Cass "	E., M., H., N. H., P. S.
Elliott, Minnie T	Monroe "	E., M., L., N. H., M. L.
Ellis, John Lee	Boone "	E., M., Bk., A., Ph., M. L.
Ellis, Overton Gentry	Nodaway "	M., Ph., N. H., L., H., M. L.
Elston, Albert M	Woodland Cala	M., M. L., Ph.
Emmons, Sterling Price	Callaway county	L., M., H., E., P. S.
Essex, Winfield Scott	Atchison "	Law.
Estes, Elisha Tapp	Clay "	N. H., Ph., E., C.
Evans, James Allen	Jasper "	E., D., Bk., M., L., N., Ph., N. H.
Evans, John Morgan	Boone "	L., N. H., C., M.
Evans, Kate Q	Holt "	E., M., N., D., N. H.
Evans, Lutie Lee	Deer Lodge, M. T.	M., N., E., N. H., P. S., M. L.
Evans, Nathaniel P	Pettis county	E., M., P. S., Bk.
Ewens, Samuel Cass	Callaway "	E., M., H., N. H.,
Farrell, William Alexander	Lafayette "	E., L., N. H., M., D., Bk., N.
Faucett, Edwin Luther	Boone "	E., N. H., N., M., P. S., M. L.
Fawver, Christopher C	Barry "	M., M. L., C., Sur., Civ. Eng., D., N. H.
Felker, Ephraim	Audrain "	E., M., L., Bk.
Ferris, Forrest G	Livingston "	Law.
Ficklin, Eleanor	Boone "	H., M., D., M. L., P. S.
Ficklin, John Bowman	" "	E., M.
Ficklin, Octavia	" "	Ly., Ms., S., D., C., N., P. S., Bk.
Field, Sarah Josephine	" "	M. L., N. H., C., P. S.
Fink, Jacob	Helena, Arkansas	M., M. L., C., N. H., S.
Finley, Cyrus P	Clay county	L., Ph., C.
Finley, David C	" "	E., Ph., D., N. H., C.
Fisher, Samuel Blair	Boone "	G., L., M.
Fitch, Norwood	Chicago, Illinois	S., N. H., C., M. L., E., P. S., Ph.
Fountain, Icy	Boone county	M., E., D., N. H., N., Cl.
Fowlston, George	Henry "	N. H., A., M., N., Bk., Sur., Ms.
Frazier, Noah Flood	Boone "	N., M., D., H., E., P. S.
Frisbie, Fred. Atwood	Audrain "	E., N. H., M., H., N.
Frye, Barber Webster	Pike "	L., G., M., N. H., M. L.
Fulton, Charles E	Saline "	M., L., D., N. H.
Gamble, Carrie Coalter	Cole "	H., N. H., Ms., L., Ly., M. L., P. S.
Gamble, Mary Minor	" "	N. H., E., M. L., L., C., P. S.
Garges, Allen Henderson	Schuyler "	E., M. L., M., Bk.
Gaut, James Samuel	Johnson "	Med.
Gentry, Lulu Wyatt	Boone "	L., M., H., N. H.
Gentry, North Todd	" "	H., M., L., Bk.
Gentry, Thomas Jackson	Shelby "	E., H., N., M., D., N. H.
George, John Woolfork	Dallas, Texas	L., D., M. L.
Gerard, Walter Drane	Shelby county	Law, Sur.
Gerig, William	Boone "	M., M. L., N. H., D.
Giedinghagan, Walter	Gasconade "	E., H., M., N. H., P. S., Bk.

Names.	*Residences.*	*Schools Attended.*
Gilbreath, Gilmer	Cooper county	Law, Ms.
Gray, Arby Bell	St. Louis city	E., M., L., D., Bk., P. S.
Gray, George E	Boone county	M., M. L., C.
Gray, Sallie Hamilton	Buchanan "	M., E., N., C., D., N. H., Ph., Bk., Ms.
Gregory, Anella	Montgomery "	D., M. L., L., Bk., M.
Greenlee, William Davis	Johnson "	E., M., H., Bk.
Gremp, Christian C	Freudenstein, Ger.	E., L., G., M., D.
*Gremp, Charles Martin	" "	E., L., G., M.
Gremp, Henry Jackson	" "	H., L., G., M., E.
Gremp, Solomon Alfro	" "	Med.
Grigsby, John Trimble	Monroe county	E., L., N., M., C., Ph., N. H., D., Bk., Ms.
Gromer, Samuel David	Gentry "	E., M., L., M. L.
Guitar, David Gordon	Boone "	M., Ph., M. L., Bk., N. H.
Gungoll, Emil	Osage "	E., M., N., D., E., N. H.
Gwinn, Russel	Saline "	Med.
Hackney, Thomas	Madison county	L., G., M. L., M.
Hale, James Price	Schuyler "	E., M., H., Bk.
Hamilton, William D	Randolph "	E., M., N. H., Ph.
Handy, John Richard	Boone "	M., E., L., G., Bk.
Handley, John L	Shelby "	L., Ph., M., N. H.
Harris, John Woods	Boone "	D., M., H., N. H., P. S., E.
Harris, Thomas Wright	Lincoln "	M., Ph., H., L., P. S.
Hatton, John Harvey	Scotland "	E., N., H., D., M., N. H., Ph.
Hayes, Gretta	Boone "	M., C., M. L., N. H.
Haynes, Thomas Nathan	Cass "	M., D., L., Bk., G., N. H., E.
Hays, William Lyon	Cooper "	L., M. L., H.
Heady, Jefferson Davis	Ghent, Ky.	E., M., D., N. H., P. S.
Henderson, Frank L	St. Louis county	M., M. L., E., P. S.
Henderson, George Royall	" " "	Ms., N., N. H., D., C., Bk.
Henderson, Robert P	Osage "	M. L., C., Bk., D., Top'l. Eng.
Hendrick, James Perry	Lafayette "	M, L., Ph., N. H.
Henricks, Solomon	Caldwell "	M., N. H., D., N., E., Ms.
Henry, Edward Parker	Boone "	E, M. L., C., N. H., P. S.
Hewlett, Eli Judson	Lawrence "	M., E., N., H.
Hewlett, Samuel Riley	" "	M., D., E., L.
Hickman, Cornelia	Bates "	G., L., H., N. H., P. S.
Hickman, Walker	" "	N. H, Ly., Ms., M. L., S., M., E.
Hinkle, James	Franklin "	Sur., M., H., D., E.
Hoffman, Benjamin	Gasconade "	L., M., Ph., M. L., P. S.
Hoffman, Gustav	Osage "	E., H., M., N. H., M. L., P. S.
Holman, Willis C	Chariton "	M., L., N. H., C., Ph., N., E., Ms.
Horine, Anna Morgan	Columbia, Ill.	E., N., M., P. S., Ms.
Hubbard, Edward Sylvester	Harrison county	L., G., M, Ph., N. H.
Hopkins, James M	Atchison "	Law, Ms.

*Deceased.

Names.	*Residences.*	*Schools Attended.*
Hudson, Millard F.	Worth county	Law, Ms.
Hume, Carrie Lee	Boone "	M., E., D., N., N. H., P. S.
Hume, Charles C.	" "	Med.
Hume, Sallie Wood	" "	E., N., H., N. H., M., D., Bk., P. S.
Humphrey, James Harvey	Platte "	E., L., M., D., P. S.
Hunt, Daniel W.	Cooper "	E., L., M., N. H., P. S.
Hunt, Leonard Lee	Boone "	E., M., L., G., Bk.
Hunton, McGehee D.	New Orleans, La.	Ms., C., N. H.
Husmann, Annie	Napa City, Cala.	N. H., N., E., D., L., M. L., M.
Husmann, George C.	" " "	N. H., A., C., Ph., M. L., Bk., Sur.
Husmann, Josie	" " "	N. H., N., E., D., L., M. L., M.
Irvine, F. Forbis	Deer Lodge, M. T.	E., M., P. S., N. H.
Jackson, Clarence Lee	Marion county	E., M., Bk.
Johnson, Robin M	Laclede "	E., L., M. L., N. H., D., M.
Jones, Fayette A.	Jackson "	Ph., Sur., M.
Jones, Harvey C.	Boone "	M., E., N., D., N. H., Ph.
Jones, North East	Callaway "	Law, Bk.
Jurey, John Slaughter	Cooper "	Law.
Keene, Eddie Carter	Boone "	E., M., N.
Kelley, Hiram B.	Winchester, Ill.	Law.
Kelly, John Garnett	Boone county	Bk.
Kemble, William	Marion "	Med.
Kennedy, Lamoureux N.	Warren "	Law.
Kennedy, Virginia J.	" "	N. H., M., E., Cl., Ph.
Kenner, Mamie C.	Boone "	L., E., D., M.
Kennish, John	Holt "	L., Ph., G., M., D.
Kern, Julia E.	Boone "	E., N. H., H., M., N.
Ketelson, George F. F.	Hamburg, Ger.	M. L., M., E.
King, Henry Ephraim	Lafayette county	D., M. L., L., M.
King, Joseph Francis	Camden, Kan.	Law.
Lanier, Albert E.	St. Charles county	E., M., Bk., L.
Lavelock, George W.	Ray "	Law.
Lawhorn, George W.	Audrain "	Med.
Lee, John Alfred	Johnson "	Med.
Leggett, John Cullen	Boone "	M. L., G., L., C., Ms., M.
Leonard, William Hall	" "	M., E., A., H.
Lewright, Estella	Franklin "	L., M., D., M. L., G.
Lewright, James Bruce	" "	M., M. L., E., L., D., G.
Lewright, John Oscar	" "	E., M., L., G.
Lind, John W.	Schuyler "	L., C., M., N. H., M. L.
Loeb, Hanau Wolf	Boone "	E., N. H., C., S., M. L., P. S.
Loeb, Isidore	" "	M. L., E., M., N. H.
Lofton, John Martin	St. Louis city	E., G., M., L.
Logan, James Elmore	Clinton county	Med.
Long, Annie Eliza	Boone "	E., M., N., H., Cl., N. H., Bk.
Lonsdale, Kate Victoria	" "	Ms, M. L., N. H., S., N., M.
Lonsdale, Robert Henry	" "	H., M., L., M. L., P. S., D.
Lott, George Washington	Holt "	E., N. H., C., M.
Lougeay, William Henry	Boone "	Med.

Names	*Residences.*	*Schools Attended.*
Love, John Renick	Boone county	E., M., L., Bk.
Lowrey, John Henry	" "	E., H., M., N. H., P. S., Bk.
Lunceford, Sallie	" "	M., H., N. H., N., D., E., P. S., M. L.
Lyford, Alfred A	Atchison "	E., M., Bk., H.
Lyford, Harry Olin	" "	Law.
McAfee, Lucy Dade	Boone "	Ph., Bk., M., M. L., A., D., N. H.
McBaine, James B	" "	Ph., C., L., E., M., M. L., P. S.
McBroom, Douglas	Moniteau "	E., M., H., N. H., Bk.
McCann, Rosa Lee	Marion "	E., H., M., N. H., D.
McCarty, Alonzo S	" "	E., Bk., M., M. L.
McCollister, William W	Atchison "	L., C., Ms., M. L.
McCord, Samuel S	Buchanan "	G., L., M., D.
McCormick, Mazie	Dover, Va	M., L., H., M. L., P. S., G.
McHarg, Archie	Boone county	L., E., M., D.
McManners, Mary	" "	M., N., N. H., D., E.
McNutt, Fannie	" "	L., G., M., D., E., Bk.
Mabrey, Thomas W	Ripley "	E., M., N. H., P. S., Ph.
Maddex, Ida May	Boone "	M., N. D., H., Cl., E.
Maddex, Sallie	" "	E., N., C., M., D., N. H., Ph.
Magee, Robert Marion	Gentry "	Law, L., Bk., Ms.
Major, Alex. C	Clay "	Med.
Mallory, George W	Audrain "	L., M., D., M. L., N. H.
Manring, Edward D	Gentry "	L., G., E., C., M. L., P. S., M., Ms.
Manwaring, Charles	Boone "	L., G., H., M. L., S., D.
Martin, Clifford W	" "	E., M., N. H., N., D., H., Ph., Bk.
Martin, Gustave C	Pulaski, Ark	L., E., M. L., M.
Martin, Herbert Lee	Boone county	N. H., E., M., D., H., N., Ph., Bk.
Maupin, Annie C	" "	L., M., D., M. L.
Maupin, James Lawrence	" "	E., L., M., G.
May, Harvey George	Cass "	E., L., M., D., P. S.
Means, William F	DeKalb "	E., M., L., M. L., P. S., D.
Meritt, John James	Montgomery "	M., C., E., N. H., D., Ly.
Meyer, George W	Holt "	M., H., M, L., Ph., P. S.
Miles, George W	Madison, N. Mexico	M., Ph., E., M. L.
Miller, James Oliver	Smithton, Ill	Law, Ms.
Miller, John F	Audrain county	E., L., D., M., N. H.
Miller, Pryor C	Daviess "	M., N. H., C., M. L.
Minor, James Alvin	Buchanan "	Med.
Mitchell, Ernest L	Boone "	M., E., L., D., H., G.
Mitchell, Newman T	" "	E., M., H., N. H., N.
Mitchell, Stephen A	Jackson "	M., M. L., C., N. H., D., P. S.
Mitchell, William W	Shelby "	E., M., L., N. H.
Moore, Charles A	Scott "	M., M. L., L., P. S.
Moore, William C	Audrain "	E., L., M., D.
Morris, Truman H	Cooper "	E., L., M., N. H., G.
Morse, John Grant	Jefferson "	E., L., M., G., Bk.
Mosby, William S	Montgomery "	M., P. S., D., M. L.
Mosley, Charles Louis	Gentry "	Ms., M. L., S., C., N. H., Ly., H.

Names.	*Residences.*	*Schools attended.*
Mottin, Ferdinand	St. Louis county	E., Ph., C., M., M. L.
Mulberry, Clara	Boone "	M., N. H., L., E., P. S., N.
Murphy, Annie May	Caldwell "	N., C., D., L., E., M., Cl., N. H., Ph., Bk., Ms.
Murphy, George W	" "	M., L., M. L., G., N. H.
Nifong, George A	Madison "	M., E., N. H., M. L., P. S.
Norris, Wilford A	Boone "	Med.
Nowierski, Bronislaw J	" "	Med.
Ogilvie, John Lee	Mississippi "	L., M., H., G., P. S., N. H., M. L.
O'Mahoney, Daniel	Boone "	M. L., Sur., S., Ms., N. H., M., C., Ly.
O'Mahoney, John S	" "	L., M., E., G.
Orchard, Charles H	Dent "	Law.
Orem, Grant	Caldwell "	Med.
Otto, Leonard H	Boone "	H., Ms., M. L., S., C., M.
Owens, John H	Saline "	
Padget, John W	Dallas "	Med.
Palmer, William	Randolph "	Law, Ms.
Pannell, Alfred K	Boone "	E., M., N. H., M. L., P. S.
Peak, Lee D	Exeter, Illinois	Bk.
Pennington, James M	Lawrence county	M., F., N., C., D., N. H., Bk., Ms.
Pharr, James Ruby	Pike "	M., Sur., Ph., D., M. L., C., Top'l Eng.
Phelps, James Watkins	Chariton "	E., Bk., M. L., M.
Pigott, Frank W	Cooper "	E., L., M., Bk.
Pigott, John C	" "	E., L., M., Bk., M. L.
Pitcher, Henry E	Henry "	Med.
Plattenburg, John R	Lafayette "	L., M., H., M. L., P. S., G.
Plattenburg, Walter L	Boone "	M., E., N. H., L.
Pollard, Enos	Saline "	Civ. Eng., M., C., Sur., P. S.
Porter, David White	Holt "	Law, Ms.
Potter, Charles	Saline "	C., L., H., M., D., N. H.
Potts, Luther E	Boone "	M., C., Ly., D., N.
Powers, Martha F	Franklin "	M., N., C., D., N. H., E., Cl., Ms., L., P. S.
Prewitt, Robert C	Boone "	L., E., M., N. H., M. L., D.
Prigmore, William	Saline "	
Quarles, Lafayette	Boone "	M. L., N. H., Ms., S., Bk.
Randolph, James O.	Montgomery "	G., N. H., Ms., S., E., M., Ph., P. S.
Ransdell, Henry C	Clinton "	P. S., M. L., M.
Redman, Loid Morris	Ralls "	L., Ph., M., M. L.
Redman, Minnie	" "	L., M., H., Ms., M. L., P. S.
Redman, Richard E	" "	M., Ph., E., M. L.
Reed, Lida	Randolph "	C., Ly., M., N. H., Ms., D., H.
Rees, Thomas	Boone "	Bk., H., M., N. H., N., D.
Reynolds, Sterling Price	Callaway "	C., Ly., Civ. Eng., M., D.
Richardson, Samuel P	Daviess "	L., F., M., H., P. S.
Ridge, Thomas Smart	Jackson "	M. L., G., L., P. S.
Riley, Sylvanus A	" "	Ly., E., L., C., M.

Names.	*Residences.*	*Schools attended.*
Ritchey, William W	Clinton county	D., L., Ph., M. L.
Roberts, William P	Lawrence "	L., M., E., H., P. S., M. L.
Robertson, Thomas	Cooper "	
Robinson, Frank	Boone "	M., E., L., N. H.
Robinson, Joseph K	Monroe "	Bk.
Robinson, Mary Willie	Boone "	E., H., N., C., M., D., N. H., Bk., Ph.
Robinson, Robert G	Holton, Kansas	Law, M. L.
Roff, Charles L	Callisburg, Texas	
Rollins, Jarrot L	Boone county	Med.
Rubey, Harry Marsh	Macon "	E., L., M., G.
Rubey, Thomas Lewis	Laclede "	L., M., H., G., D., M. L.
Runyan, Lee J	Boone "	E., M., H., A.
Rupard, John Hood	" "	A., Ph., M.
Rupard, Lida Belle	" "	E., M., H., N. H., N., D., Bk.
Russell, John C	" "	L., Bk., M., N. H., P. S.
Sanders, John Jacob	Scotland "	E., M., Bk., N. H., A.
Sands, Martin L	Henry "	Med.
Sapp, Joseph W	Boone "	N., M., Bk., E.
Saunders, Archie D	Andrew "	L., M. L., E., M.
Schroeder, Charles H	Franklin "	M., E., H., N., C., D., N. H.
Schultz, Rudolph	" "	E., M., A., H., M. L.
Schulze, August C	" "	E., M., H., A.
Schwabe, George W	Boone "	Med.
Seddon, James Alexander	Virginia	Civ. Eng., Ms., C., Ly., M. L., N. H.
Sexton, Lida	Boone county	M., H., N., D., N. H., E., Ph., Bk.
Shackelford, May	Pettis "	N., M., E., M. L., Bk., P. S.
Shamberger, George A	Nodaway "	M. L., S., G.
Shankland, William M	Henry "	G., Ph., M., L.
Sharp, James Robert	Knox "	L., Ph., N. H., M., H., G., P. S.
Shaver, John William	Clinton "	Law, Ms.
Shock, Henry Lee	Audrain "	E., L., D., M., M. L., N. H.
Silvey, James Samuel	Howard "	L., Ph., G., N. H., M. L.
Simcoe, Charles Bailey	Callaway "	L., G., H.
*Simcoe, Robert Elliot	" "	F., L., M., M. L.
Slagle, James A	Bollinger "	Bk., N. H., M. L., M., P. S., D.
Sloan, Robert T	Jackson "	M., G., L., Ph., H., P. S.
Smiley, Frank	Cooper "	L., G., M., Sur., Civ. Eng.
Smith, Elwyn H. C	Caldwell "	E., H., Bk., M., P. S., N. H.
Smith, Ernest Ellsworth	Jackson "	Ph., Sur., M., D., M. L., Ph., P. S., Civ. Eng.
Smith, Henry P	Ray "	E., M., H.
Smith, James Harman	Cass "	L., E., M. L., M., G., N. H.
Smith, James Lee	Boone "	E., M., Bk., H., N. H., N.
Smith, Judson Waller	Vernon "	E., L., M. L., M.
Smith, Robert Lee	Callaway "	E., Bk., M., N. H., N., P. S.
Smith, Thomas W	Boone "	E., M., Bk., H., N. H., P. S.

*Deceased.

Names.	*Residences.*	*Schools Attended.*
Snoddy, James Samuel	Howard county	M., Ph., C., N. H., H., M. L.
Snoddy, John Foster	" "	L., N. H., C., M., Bk., P. S.
Snodgrass, Charles A	Jackson "	E., Ph., C., M., N. H.
Spencer, Richard Lee	Buchanan "	M., L., H., M., P. S., G.
Spillman, William J	Lawrence "	L., E., M. L., M., D., N. H.
Sprinkle, Robert Lee	Monroe "	E., H., M., N. H.
Stephens, Peyton	Boone "	H., D., M., N., N. H., Bk.
Stevens, Beverly C	St. Louis "	M. L., M., E., N. H., P. S.
Stierberger, Charles R	Franklin "	Med.
Stratton, Charles Daniel	Chariton "	Med.
Stratton, Walter Scott	" "	M., L., C., N. H.
Striker, Adolph	Saline "	E., Bk., M., H., D., P. S.
Striker, William M	" "	E., M., Bk.
Strong, Julia Chick	Boone "	E., H., N. H., N., D., M.
Sturtevant, Carlton W	Bates "	M., L., C., Ly.
Sullins, Robert	Franklin "	L., M. L., M., Sur., Civ. Eng.
Sutton, Benjamin M	Harrison "	Med.
Taylor, James Henry	Morgan "	M., Ms., Ly., N. H., Ph., P. S., N.
Taylor, John Martin	Saline "	Civ. Eng., Ms., M., N. H., D., Sur.
Taylor, Lucy Jane	Morgan "	C., M., N., N. H., E., D., Ph., Bk., Ms.
Theilmann, Robert H	Caldwell "	M., Ph., C., M. L., N. H.
Thomas, Annie Gray	Boone "	M., D., N. H., E., Cl.
Thomas, Clark	Knox "	E., M.
Thompson, Clara Field	Boone "	M., E., L., M. L.
Thorpe, Jefferson Lee	Moniteau "	E., L., M., Bk., G.
Tilden, Annie G	Boone "	N., M., H., N. H., D., L., E., P. S.
Tillery, Edward R	" "	E., M., L., G.
Todd, Lettie	" "	E., M., M. L., L.
Todd, Samuel Grant	Miller "	M., N. H., E., G.
Todd, Thomas W	Vernon "	L., G., M., H.
Toll, Philip R	Marion "	G., L., E., M.
Treadway, Ollie Herbert	Pike "	E., L., M., G.
Treiber, Emil Ernest	Cooper "	E., M., H., N. H., P. S., M. L., Bk.
Trout, Noah Cameron	Atchison "	E., M., L., Bk., P. S.
Tucker, John Speed	Colorado Springs, Col	G., M., L., M. L.
Tucker, Oren Timothy	Cooper county	A., N., Bk., M., D., M. L., E.
Turk, John C	Lawrence "	M., D., M. L., N. H.
Tuttle, Sallie Virginia	Boone "	L., H., M., E., N. H.
Venable, Elouise	" "	M., H., N. H., N., D., Cl., E.
Walker, Agnes Elgin	" "	E., D., M., L., N. H., Bk.
Walker, James Henry	Cooper "	L., Ph., H., D., G., M., P. S.
Walker, John Hutchison	" "	Civ. Eng., M. L., Ly., Ph., Ms.
Walker, Mary Belle	" "	L., H., N. H., Ms., P. S., M. L.
Wall, Benjamin F	Johnson "	E., M., L., Bk., P. S.
Wall, Henry James	" "	L., M., M. L., G.
Wallace, Charles H	Jackson "	Med.
Walton, Christopher P	Dent "	E., M., L., N. H., G., Bk.
Warfield, Carlos Morgan	Butte City, M. T.	E., L., D., M., G., Bk.
Watson, Edgar David	Boone county	G., L., H., M., N. H.
Waugh, Robert Ely	Chariton "	Sur., E., D.

Names.	*Residences.*	*Schools Attended.*
Waysman, Samuel D	Topeka, Kan	M., H., E., Bk., N., N. H., P. S.
Webb, Robert Marion	Lafayette county	E., H., M., D., P. S., N. H.
Webb, William Crittenden	" "	E., L., C., D., G., P. S.
Weinrich, John Ludwig	St. Charles "	M., D., Bk., M. L.,
Welden, James H	Daviess "	
Whittle, Fannie Lenoir	Boone "	C., L., H., Ly., Ph., M. L., M., N. H.
Whittle, Thomas W	" "	M., L., H., M. L., N. H.
Whitworth, George Wesley	Lafayette "	L., M., H., M. L.
Wilcox, William Payne	Omaha, Neb	Med.
Williams, Harrison R.	Cape Girardeau Co	L., G., H., D., M., M. L., N. H.
Williams, John F., Jr	St. Louis city	Ms., S., N. H., M. L., S.
Williams, Joseph W	Cape Girardeau Co	L., G., Ph., M., D., P. S.
Williamson, George Lee	Boone county	E., M., L., N.
Williamson, Thomas P	" "	E., M., N., L., P. S.
Williamson, William Silas	Lafayette "	Civ. Eng., M., D., Ly., Ms., N. H., C.
Willis, John Samuel	Boone "	N., M., Bk., P. S.
Willis, Mary Anna	" "	M., E., N., C., D., N. H.
Wilson, Benjamin F	Chariton "	Med.
Windsor, John William	Montgomery "	M., H., N. H., E.
Winn, Albert Clark	Boone "	Med.
Wood, Harry	Jackson "	M. L., Ms., L., C., Ly., N. H.
Work, Thomas Albert	Dallas, Texas	L., G., M., D., N. H., M. L.
Wright, Alexander P	Boone county	L., Bk., H., M.
Wright, George William	Randolph "	Law.
Wright, William Hamilton	St. Louis "	M., E., N. H., H., Bk., G., L.
Youmans, Frank Abijah	Lewisville, Ark	M. L., M., Ph., C., D.
Young, Ada	Boone county	M., N., L., N. H., P. S., E.
Young, Arch Brown	" "	F., H., M., D.
Young, John David	Texas "	Law.
Young, Maude	Boone "	E., M., N., H., N. H.
Young, Oscar David	" "	Med.
Young, Thomas Milton	St. Louis "	E., L., C., M. L., M.

POST-GRADUATES.

Names.	*Residences.*	*Schools Attended.*
Anderson, William B., A. B., Kirksville Normal	Edina, Mo	L., M. L., C., M.
Babb, Eugenia P., Stephens Female College	Boone county	M. L.

Names.	*Residences.*	*Schools Attended.*
Bascom, Walker, S. B., Mo. University.	Lafayette county	Law.
Brooks, James A., B. S. D., Cape Girardeau Normal	Cape Girardeau	L., M. L., C., N. H.
Cowherd, William S., A. B., Mo. University	Jackson county	Law.
Latham, Josie B., A. B., Mo. University	Boone "	M. L.
Sterne, Frank, S. B., Mo. University	" "	Civ. Eng., Sur., D.
Terry, Jean L.	Milwaukee, Wis.	Art.
Wagner, Louis, Ph. B., Mo. University	Cole county	Law.
Waters, Emma M., Stephens Female College	Boone "	G.

STUDENTS OF SCHOOL OF MINES AND METALLURGY.

Names.	*Residences.*	*Course of Study*
Allen, Allice R.	Rolla	Special course
Allen, B. B	"	Com. "
Alexander, Curtis	Maryville	First Year "
Bean, Frank G.	Pleasant Hill	Preparatory course.
Belch, Jas. E.	Jefferson City	Special "
Buskett, Jas. L.	St. Louis	" "
Chamberlin, S. Q.	Rolla	Normal "
Cleino, Emma	"	Special "
Craine, Wm. G.	Pilot Knob	First year "
Claypool, W. M.	Bentonville, Ark.	" "
Coffey, John	Rolla	Preparatory course.
Davey, Paul N.	Carthage	First year "
Dyas, David	Rolla	Preparatory "
Douthat, Claude	"	" "
Durrand, Warren L.	Butler	Second year "
Dennis, Hellen	Licking	Special "
Decker, E. E.	Mound Valley, Kan.	Preparatory "
Dean, Bettie.	Rolla	Special "
Frank, Andrew J.	Taladego	Preparatory "
Fulcher, Jas. E.	High Grove	" "
French, Wm. B.	Rolla	Normal "
Gallaher, Phil. C.	"	Special "
Gardner, Spencer Jas.	Oak Hill	" "
Garvens, Lillie	Rolla	" "

Names.	*Residences.*	*Course of Study.*
Greene, Jas. C	Cuba	Preparatory course.
Guild, Mary	Rolla	Special "
Giesler, M	Vienna	Normal "
Gibb, Frank W	Little Rock, Ark	M. E., C. E. "
Hudgens, Jno. C	Rolla	Preparatory "
Harrison, Nellie	Lebanon	Special "
Hill, E. A	Rolla	" "
Herbert, Hattie	"	" "
Hume, Lizzie	"	" "
Johnson, L	"	" "
Kelsey, Wm. C	New Boston	" "
Kirkpatrick, F. S	Edwardsville, Ill	Com. "
Lancy, Jas. A	Rolla	Special "
Leach, F. A	Kansas City	Assaying "
Love, E	Rolla	Com. "
Matlock, J. H	St. James	Preparatory "
Mantz, Frank	Terra Haute, Ind	" "
Mussey, R. W	St. Louis	Special "
Miller, Andrew Wm	Oak Hill	" "
Millard, Thomas	Rolla	Preparatory "
Mitchell, Nina	"	Special "
Mills, Jos. E	"	Normal "
Neustaedter, A	St. Louis	1st year "
O'Brien, Mary A	Rolla	Special "
Owen, John	"	Preparatory "
Parker, F. B	Springfield	" "
Patterson, Charles L	Maryville	1st year "
Painter, W. R	Carrollton	M. E. "
Peck, Anna	Pacific	Normal "
Peck, James C	"	Preparatory "
Prigmore, Fannie	Sarcoxie	Special "
Pillman, John	Rolla	Com. "
Perry, George H	St. Louis	Special "
Ross, Beauregard	Houston	M. E. "
Rowe, Nannie	Rolla	Special "
Ridenhour, John	"	" "
Richardson, J. P	St Louis	Preparatory "
*Schwartz, H. H	Pacific	C. E., M. E. "
Schrantz, A. B	Mound City	C. E. "
Strain, Maggie	Rolla	Special "
Strine, J. H	"	Normal "
Sherrill, J. S	Licking	Special "
Smith, J. M	Texas Co	Normal "
Smith, M. C	Sherman, Tex	Preparatory "
Smith, J. N	Trap Hill, N. C	Special "
Smith, Sterling	Rolla	" "
Shineman, F. W	"	" "
Tipton, Sam'l	"	Preparatory "

*Deceased. This is the only death from sickness that has occurred since the opening of school in 1871.

Names.	*Residences.*	*Course of Study.*
Titus, Douglas M.	Rolla	Preparatory course.
Titterington, Lee.	Richland	Special "
Tunnell, F. W.	Edwardsville, Ill.	" "
VanDevander, H. N.	Williamsburg, Pa.	C. E. "
Wash, Jas. A.	St. James	" "
Webster, F. D.	Rolla	Preparatory "
Wilson, Carrie	"	Special "
Wilson, Frank	"	Preparatory "
Wishon, Cora	"	Special "
Wheeler, A.	Edwardsville, Ill.	Preparatory "

SUMMARIES.

A. SCHOOLS.

1. Academic Schools.

a. Science.

1.	Physics	109
2.	Chemistry	139
3.	Natural History	224
4.	Mathematics and Astronomy	371
5.	Metaphysics	59

b. Language.

1.	Hebrew and Semitic Literature	26
2.	Greek	77
3.	Latin	224
4.	Modern Continental German, French, Spanish and Italian	225
5.	English	387

2. Professional Schools.

1.	Agriculture	21
2.	Normal	83
3.	Law	38
4.	Medicine	36
5.	Mining School at Rolla	82
6.	Engineering—regular 18, irregular 24	42
7.	Military Science and Tactics	53
8.	Art and Drawing	140
9.	Commercial	105

B. COUNTIES.

Counties.	University.....	Min. School.....	Counties.	University.....	Min. School.....
Adair	1	.....	Lincoln	3	.....
Andrew	1	.....	Linn	2	1
Atchison	7	.....	Livingston	3	.....
Audrain	11	.....	Macon	3	.....
Barry	1	.....	Madison	3	.....
Bates	4	1	Marie	.....	3
Bollinger	2	.....	Marion	8	.....
*Boone	138	.....	Miller	1	.....
Buchanan	4	.....	Mississippi	2	.....
Caldwell	7	.....	Moniteau	3	.....
Callaway	9	.....	Monroe	8	.....
Cape Girardeau	3	.....	Montgomery	7	.....
Carroll	.....	1	Morgan	3	.....
Cass	11	1	Nodaway	3	2
Cedar	1	.....	Osage	3	.....
Chariton	8	.....	Pettis	3	.....
Clay	6	.....	Phelps	.....	39
Clinton	4	.....	Pike	4	.....
Cole	4	1	Platte	1	.....
Cooper	18	.....	Polk	1	.....
Crawford	.....	3	Pulaski	.....	1
Dallas	1	.....	Ralls	4	.....
Daviess	4	.....	Randolph	6	.....
DeKalb	1	.....	Ray	2	.....
Dent	3	2	Ripley	1	.....
Franklin	11	3	Saline	12	.....
Gasconade	2	.....	Schuyler	3	.....
Gentry	6	.....	Scotland	2	.....
Greene	.....	1	Scott	2	.....
Grundy	1	.....	Shelby	7	.....
Harrison	3	.....	St. Charles	3	.....
Henry	5	.....	St. Genevieve	1	.....
Holt	6	1	St. Louis	7	.....
Howard	6	.....	St. Louis city	4	5
Iron	1	1	Stoddard	2	.....
Jackson	16	1	Texas	1	2
Jasper	1	2	Vernon	4	.....
Jefferson	1	.....	Warren	2	.....
Johnson	8	.....	Worth	1	.....
Knox	6	.....			
Laclede	2	1	Total students from Mo....	467	72
Lafayette	11	.....			
Lawrence	7	.....	Total counties	.....	82

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

N. B. Students from other States are admitted on the same terms as those from the State of Missouri. There is no occasion for them to change their places of residence. The change of residence has hitherto occasioned an undue increase of the number hailing from Boone county, Mo. The students, male and female, are welcomed from all parts of the world on equal footing.

C. STATES.

States.	University.....	Min. School.....
Alabama	1	.....
Arkansas	3	2
California	4	.....
Colorado	1	.....
Germany	5	.....
Illinois	8	3
Indiana	.....	1
Iowa	2	.....
Kansas	4	1
Kentucky	2	.....
Louisiana	1	.....
Missouri	467	72
Montana	3	.....
Nebraska	1	.....
North Carolina	.....	1
New Mexico	1	.....
Pennsylvania	.....	1
Texas	3	1
Virginia	2	.....
Wisconsin	1	.....
Total	509	82
Total (20 States)	.....	591

COMPARATIVE VIEWS.—ATTENDANCE.

	1874-5	1875-6	1876-7	1877-8.		1878-9.		1879-80.		1880-1.	1881-2.
				University.	Normal Inst.	University	Normal Inst.	University.	Normal Inst.	University.	University.
At Columbia											
Males....	342	279	350	355	54	371	43	405	41	465	427
Females.	54	42	49	63	38	72	36	79		93	82
	396	321	399							558	509
At Rolla.											
Males....	73	54	48	25		42		49		71	65
Females.	28	16	16	18		29		22		25	17
	101	70	64	418 43 92*		443 71 79‖		484 71 41		96	82
Totals...	497†	391	463	553‡		593§		596		654	591

*18 were afterwards students of the University.

†Subtract 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.

§Subtract 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 1882, inclusive. Also the Students and Graduates of the Medical Department of the University from 1845 to 1856.

Years.	No. of students at Columbia...	Academic Graduates.			Students at Rolla.....
		A. B.	S. B.	Ph. 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	.....	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	.....	70
1877	399	4	7	1	64
1878	418	3	7	1	43
1879	444	6	3	8	71
1880	484	12	1	3	71
1881	558	6	11	2	96
1882	509	†	†	†	82

NOTE.—The following have been the number of graduates with the degree of L. B. in 1876, one; 1877, two, and 1879, one.

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

Number of graduates, A. B., from 1843 to 1860, 157. From 1861 to 1880 graduates, A. B., 80; S. B., 89; from 1872 to 1879 graduates, Ph. B., 17; L. B., 4; N. S., 1.

*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

GRADUATES OF PROFESSIONAL SCHOOLS.

YEARS.	Normal Department.					Agricultural Department.			Law.....	Medicine	Engineer'g		Mines and Metallurgy.		Total Number Graduates each year.....
	4 y'rs	6 years.		2 years.		2 years.		6 y'rs	2 y'rs	2 y'rs	6 years		3 years		
	N. G.	D. B.	Pe. B.	N. D.	Pe. P.	D Ag.	D. H	Ag. B	LL. B	M. D.	C. E.	T. E.	C. E.	M. E.	
1869	4	.....	.....	.....	.....	In 1860 the Faculty granted 15 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	59
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	54
1882	.....	.....	*	.....	*		.....	*	20	*	*	*	.....	.....	.....
	17	14		32			47		146						

*See programme of the commencement exercises.

FORTIETH ANNUAL

COMMENCEMENT,

MISSOURI STATE UNIVERSITY,

Thursday Morning, June 1st, 1882.

HERALD PRINT, COLUMBIA, MO.

PROGRAMME.

—MUSIC—PRAYER—MUSIC.—

Oration.....The Ruins of Time,
ROBERT M. COOK, S. B.

Essay.....The Death of Cromwell,
LEONARD H. OTTO, L. B.

—MUSIC.—

Oration.....Revolutions,
FRANK BAUERLEIN, A. B.

Thesis.....Disinfection,
LIDA REED, S. B.

—MUSIC—

Thesis and Epithesis.....Comets and Meteors,
J. M. TAYLOR, S. B.

Valedictory Address.....ANDREW A. BAILEY, A. B.

—MUSIC.—

DELIVERY OF DIPLOMAS AND PRIZES.

MCANALLY PRIZE IN ENGLISH,.....L. H. OTTO.
STEPHENS PRIZE IN ORATORY,.....R. M. COOK.
THE ASTRONOMICAL MEDAL,.....J. M. TAYLOR.

ACCEPTANCE OF THE ROLLINS BELL,.....HON. R. L. TODD, A. M.

A Salute of Thirty-Eight Guns by the University Cadets.

GRADUATES OF 1882.

ACADEMIC COLLEGE.

Frank Bauerlein, A. B.,.....9 60
Robert M. Cook, S. B.,.....9 53
Lida Reed, S. B.,.....9 48
John M. Taylor, S. B.,.....9 38
Carrie C. Gamble, L. B.,.....9 33
McGehee D. Hunton, L. B.,.....9 31
Andrew A. Bailey, A. B.,.....9 11
Lafayette Quarles, A. B.,.....8 99
W. S. Williamson, S. B.,.....8 92
T. M. Bresnehen, S. B.,..... ....8 85
James H. Taylor S. B.,..... ....8 83
C. L. Mosley, L. B.,.....8 75
John F. Williams, Jr., A. B.,.....8 73
George E. Conrad, A. B., ...8 63
Walker Hickman, A. B.,.....8 57
L. H. Otto, L. B.,.....8 47
D. O'Mahony, A. B.,.....8 38
Kate V. Lonsdale, L. B.....8 30
Octavia Ficklin, A. D. B.,.....8 15

LAW COLLEGE, (Degree of LL. B.)

(Graduated March, 1882.)

George W. Acton,
Robert M. Bagby,
Walker Bascom, S. B. '81,
Alexis D. Bell,
David J. Briggs,
John D. Crisp,
William S. Cowherd, A. B. '81.
John B. Davis,
Samuel E. Davis,
Winfield Scott Essex,
Forrest G. Ferris,
Walter Drane Gerard,
North East Jones,
John S. Jurey,
Joseph T. King,
Lamoureaux N. Kennedy,
George Washington Lavelock,
Harry O. Lyford,
Robert Gamble Robinson,
George Wm. Wright.

ENGINEERING COLLEGE.

James A. Seddon, C. E., Top'l. Eng'r
J. M. Taylor, S. B , C. E. Top'l. Eng'r.
Frank C. Armstrong, C. E., Top'l. Engineer.
W. S. Williamson, S. B., C. E., Top'l. Engineer,
Chas. W. Connor, Surveyor.
Frank Sterne, S. B., Pe. B., C. E., Top'l. Eng'r.
John H. Walker, C. E., Top'l. Eng'r.
Thos. P. Alford, Surveyor.
Granville Butler, Surveyor.
Robert P. Henderson, Top'l. Engr.

SCHOOL OF MINES AND METALLURGY, ROLLA.

Frank W. Gibb, C. E., M. E.
Beauregard Ross, M. E.
William R. Painter, C. E.
Ashuah B. Schrantz, C. E.
Herman N. VanDevander, C. E.
James A. Wash, C. E.

AGRICULTURAL COLLEGE, (Degree of Ag. B.)

Ernest A. Boeger.
Levi Chubbuck
George Fowlston.
George C. Husmann.

CERTIFICATES IN HORTICULTURE.

O. P. Devin.
G. C. Husmann.

NORMAL COLLEGE.

DEGREE OF PE. B. (BACHELOR IN PEDAGOGICS.)

James H. Taylor, S. B.,.....8 85
George E. Conrad, A. B,. 8 65
Kate V. Lonsdale, L. B.,.... .....8 31

DISTRICT SCHOOL DEGREE, PE. B. (PRINCIPAL OF PEDAGOGICS.)

James M. Pennington..... .....8.9
Anne Laura Burroughs.... ..... 8.8
Willis C. Holman.....8.8
George R. Henderson.....8.4
John Trimble Grigsby.....8.3
Anna May Murphy..... .. ..7.8
Sallie Hamilton Gray.....7.7
Lucy J. Taylor.....7.7

HONORARY DEGREE, (LL. D.)

Judge David Wagner.
Judge Arnold Krekel.
Gov. T. T. Crittenden.
Elder Joseph K. Rogers.
Judge Henry S. Kelley.
Hon. Samuel T. Glover.
Judge Wm. B. Napton.
Judge Seymour D. Thompson.
Judge Thomas A. Sherwood.
Hon. John B. Henderson.
Judge John W. Henry.
Judge Elijah H. Norton.
Hon. Willard P. Hall.
Judge Robert D. Ray.
Hon. John F. Williams.

GRADUATES OF THE MEDICAL COLLEGE.

The following is the report of the Board of Examiners:

COLUMBIA, MO., May 24, 1882.

TO THE HONORABLE BOARD OF CURATORS OF THE UNIVERSITY OF THE STATE OF MISSOURI:

We, the undersigned members of the Board of Examiners have this day carefully examined the following candidates for the degree of Doctor of Medicine and do cordially recommend that you confer the said degree upon them, viz:

B. F. WILSON, JR., Salisbury, Mo.,	93	87.7
S. A. GREMP, Columbia, Mo.,	90.7	88.4
WILLIAM KEMBLE, Benbow, Mo.,	87.5	84.3
A. C. WINN, Columbia, Mo.,	85.5	87.3
W. P. WILCOX, Omaha, Neb.,	85	85.7
B. M. SUTTON, Bethany, Mo.,	84.7	86.8
W. H. LOUGEAY, Columbia, Mo.,	83.3	82.8

J. W. PRYOR, M. D., Palmyra, Mo.
W. H. BRYANT, M. D., Savannah, Mo.
JNO. W. TRADER, M. D., Sedalia, Mo.
PINCKNEY FRENCH, M. D., Mexico, Mo.
Board of Examiners.

The above grade, in the 1st column, is that given by the Examining Board, showing the average in the oral examination conducted by them. The grade in the 2nd column is the average grade obtained in written examinations by the members of the Faculty during the course.

Valedictorian, B. F. WILSON, JR.

Closing Exercises.

1882.

THURSDAY EVENING, March 30.—Commencement of Law School. Annual Address before the Law Class, by Hon. David A. DeArmond, of Greenfield, Dade County, Mo.

SATURDAY, May 13. — Annual Examination of all Students on Fundamental Branches.

MONDAY, May 22 to WEDNESDAY, MAY 31. — Closing Examinations of all Classes.

FRIDAY EVENING, May 26.—Commencement of Engineering School. Address by J. Waters Fox, C. E., U. S. Assistant Engineer.

SATURDAY EVENING, May 27.—Commencement of Normal School. Address by Prof. Louis Soldan, Principal of the St. Louis Normal School.

SUNDAY, May 28.—Baccalaureate Discourse by Rev. M. Rhodes, D. D., of St. Louis.

WEDNESDAY EVENING, May 31.—Oration before the Alumni Association, by Hon. G. F. Rothwell, A. M. (Class of '57), of Moberly, Mo.

THURSDAY, June 1 —University Commencement.

The Schools of the University.

I. THE ACADEMIC SCHOOLS.

A. Science.

I—1. Physics.
II—2. Chemistry.
III—3. Natural History—*a*, Mineralogy; *b*, Botany; *c*, Zoölogy; *d*, Geology and Physical Geography.
IV—4. Mathematics—Astronomy.
V—5. Metaphysics.

B. Language.

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

II. THE PROFESSIONAL SCHOOLS.

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

I. SCHOOL OF PHYSICS.

JOS. G. NORWOOD, LL. D., *Emeritus Professor.*

BENJ. F. THOMAS, PH. D., *Professor.*

REPORT.

UNIVERSITY OF THE STATE OF MISSOURI,
April, 1882.

S. S. LAWS, LL.D., *President:*

Dear Sir:—The work of this Department for the current year has been conducted upon the same general plan as last year.

Five classes have been instructed, consisting of (1) Medical students, (2) Agricultural students, (3) Normal students, (4) Academic students, and (5) special students in Physical Laboratory work.

Students in Medical class	29
" Agricultural class	6
" Academic class	54
" Normal class	18
" Physical Laboratory	11
Total	118
Number of individual students	109

The Medical class used Norton's Elements of Physics as text, during a part of the first semester.

The Agricultural students used Avery's Natural Philosophy as text, during a part of the first semester.

The Academic or Sophomore class, grade in Plane Geometry required for entrance, used Atkinson's Ganot's Physics as a basis of class room work, supplemented by lectures, extempore problems and references to books and periodicals.

In connection with the work of this class, a brief course of lectures on the steam engine was delivered, intended as a basis for essays offered for the Dachsel prize. This course was attended by the Senior class in Engineering.

The Normal class, grade in Algebra required for entrance, used Norton's Elements of Physics as text during the second semester.

The class in Physical Laboratory work is a new feature in the work of the University. It was formed of students who had completed the academic course in Physics, or were members of the academic class. The class was organized at the request of the members composing it, and, while we have not the instruments necessary for a course in such work, I did not feel at liberty to refuse to give them such work as our instruments would allow. The following is a part of the work done: Testing divided scales and circles; testing levels and determination of value in arc, of 1 level division; testing telescopes, quality of lenses, magnifying power, etc. Use of the chemical balance in

determinations of weight and density, with the various corrections; use of the microscope; use of the spectroscope in examination, mapping, and comparison of the spectra of artificial lights and sunlight; use of the spectrometer in spectrum work as above, and in measurement of angles and indices of refraction of crystals and prisms, comparison of prismatic and diffraction spectra, and measurements of wave lengths of light; use of electric instruments, including the setting up and management of batteries, methods of connecting batteries and instruments, determinations of E. M. F., R., and C.; of instrumental constants, of efficiency of generators, etc., etc., etc.

In addition to the work outlined above, special lectures and demonstrations have been given in connection with the work of other departments.

The department now has a very fair collection of apparatus, with which a liberal course in Physics may be well illustrated. Many of the pieces are of special excellence, including a rotary air pump, (Ritchie's best), a set of Köenigs tuning forks on their resonant cases, purchased from Professor A. M. Mayer of the Stevens Institute of Technology, a Ritchie-Holtz machine with 27 inch plate, which has been so modified as to work powerfully when the plates are wet, a Ritchie induction coil giving 10-inch spark, a delicate Melloni thermo-multiplier, a full set of the latest telephonic apparatus, a Grove battery of sixty cells, and Bunsen, Daniel, Gravity and LeClauché batteries, with two Clark standard cells, a Shepard screw cutting engine lathe and tools, a pair of Morton oxy-hydrogen lanterns of best construction, with attachments for vertical, microscopic and polarized light projections.

There are available for use with these lanterns in this and other departments over 1,000 slides (belonging in part to individual professors) including a large number of the finest imported. No trouble or expense has been spared to make our facilities for projection equal to the best. In addition to the above we have a Browning 5 prism spectroscope of large size (Gassiot model) with micrometric eyepieces, spark condensers, &c., a Browning lantern for simultaneous projection of spectra and slides, with Browning electric lamp, and two Browning bisulphide prisms, a spectrometer made for and purchased from Professor Mayer, designed by him and Professor O. N. Rood, of Columbia College, New York, circle divided by Brunner, of Paris, and reading to 5 seconds of arc, and a diffraction grating of glass, 8,648 lines per inch, made by Chapman on Mr. Rutherford's ruling engine.

The telescopes of the spectrometer have been fitted with a Rutherford metal grating of 17,296 lines per inch, by means of an extemporized mounting to the equatorial telescope at the Observatory for observations on solar protuberances.

It may not be out of place to note here that the mounting was completed on April 21st, at which time our students obtained their first view of a solar prominence. The largest one seen was 24,700 miles in height. My thanks are due to Professor Ficklin for the use of the equatorial, and for aid in the observations.

Arrangements were made for the purchase of an Edison dynamo-electric machine with 75 lamps in circuit, to be followed by an arc-light machine with 16 lamps, and the machines will probably be in position before the close of 1882.

We are indebted to Jas. W. Queen & Co., for the use of a set of instruments for electric measurment, and to Columbia friends for the use of a set of Crooke's tubes and other apparatus.

It will be seen from the above that our collection is far above average excellence, but there are still some imperative needs which shall be supplied as soon as possible. The rooms at present occupied by the department are inadequate, poorly arranged and poorly lighted, and it is earnestly desired that better accommodations may soon be provided. The time has come when we must meet the just and growing

demand for Physical Laboratory work, and to do so we must provide instruments and rooms for the carrying on of such work. It gives me pleasure to acknowledge the warm interest taken by the authorities of the University in this department, as shown by their disposition to meet its wants as rapidly as the means at their command will allow, and feel sure that we shall soon be able to offer as great inducements and facilities for the study of Physics as can be offered by any institution in this country.

An effort is being made to secure the establishment of a Signal Service station here, and in addition to the Meteorological observations usually carried on at such stations, it is proposed to record electric and magnetic changes, together with solar activity shown in spots and prominences. The weather predictions of the signal service bureau now have a business value to farming communities, and we desire to secure the advantages resulting for our own community, and, in addition, to aid, by the further observations specified, in the advancement of Meteorological Science.

Very respectfully,

BENJ. F. THOMAS.

II. SCHOOL OF CHEMISTRY.

PROFESSOR SCHWEITZER,

GUSTAV GEHRING, S. B., Assistant.

Requirements for Admission: English Grammar, Arithmetic, Geography, U. S. History and the elements of physics.

Instruction in this school is given in the following distinct courses of study:

1. PHENOMENAL CHEMISTRY.

This is an elementary course in chemistry, following some suitable text-book, and consists mainly in recitations, illustrated, as far as practicable, by experiments and diagrams. The writing of reactions, calculating of quantities by weight and volume, determining of changes in the volume of gases through changes in temperature and pressure, and the establishing of formulas upon proper physical facts accompany the work throughout. The course is designed to be complete within itself, and while giving the student the facts and formal principles of the science, to serve, at the same time, as an introduction to the study of rational chemistry, taught later. All students of the University, excepting those in law, must complete this course before they can receive a diploma or certificate, or before they can be admitted to other classes in this department.—First Semester, daily, from 11–12.

2. RATIONAL CHEMISTRY.

The course in rational chemistry is a continuation of the former on a broader basis, and is by lectures and recitations, reviews and discussions; but while that is mainly descriptive of the phenomena presented to our senses, this is inductive, lead-

ing to their explanation through modern philosophical theory and speculation. Toward the middle of the semester select topics from the domain of organic and applied chemistry are discussed, selections being made from the following list:

1. *Food and Drink*—Cereals, starch, bread, meat, sugar, preservation of food, water, milk, tea, coffee, fermentation of wine, beer, spirits, vinegar, tobacco, etc.
2. *Oils, Fats, Soaps, Glycerine.*
3. *Illumination*—Candles, oils and lamps, petroleum, gas and its products.
4. *Fuel* and its application.
5. *Disinfectants and Antiseptics*—Preservation of wood, etc.
6. *Limes, Mortars, Cements, etc.*
7. *Glass, Porcelain, Pottery, etc.*
8. *Chemical Manufactures.*

The collection of specimens to illustrate these lectures is yearly increasing, and embraces a complete set of *Knapp's Technological Diagrams*, which greatly facilitate instruction in this department. All students working for an academic degree, as also those in *Medicine* and *Civil Engineering*, must complete this course.—Second Semester, daily, from 11-12.

3. DOMESTIC CHEMISTRY.

A course of lectures on domestic chemistry is given to students who intend to graduate in the *girl's course in arts*, and has been given for the first time the past year; it is intended to teach the principles of household science, a right understanding of which determines so largely the health, comfort and happiness of the human family, and over which primarily woman is placed to watch and to care. The following topics will present an outline of the work contemplated:

1. AIR: Respiration, vitiated air and ventilation, heating of houses, clothing for protection against cold and against taking cold, infection, contagion, germ theory of disease.

2. WATER: Potable water, hard and soft; impurities in it, such as lead and sewage matters, and their effects upon health and life; mineral waters, pond and sea bathing.

3. FOOD: Composition and general properties, boiling, roasting, baking, pickling, salting, canning, etc., food for infants, invalids and persons in sickness, condiments, cooking vessels and the dangers that may result from their use.

4. COSMETICS: Face powders and washes, enamels, hair dyes and restoratives, pomatums, essences, tooth powders, soaps, etc.—First Semester, daily, from 3-4.

4. AGRICULTURAL CHEMISTRY.

A course of lectures on agricultural chemistry is delivered to students in *Agriculture*. It embraces a scientific exposition of the function of the plant, including the production, conversion, transportation and deposition of organic matter within its body.

The physiological structure of the green cell is elucidated, and its office, as an apparatus capable of doing chemical work depending upon light and heat, is made clear. The nitrogenous constituents of the plants are treated in reference to its organs, to the nitrogenous fertilizers, and to the nitrogen of the air, leading to the consideration of the mineral matter or ash, and to the growth of plants, as depending upon the character of the soil. Osmose and endosmose of gases and fluids are illustrated by experiment, and the influence of climatic conditions explained by reference to statistics.

The chemical and physical properties of the soil are fully treated of, by tracing its production from various geological formations through natural agencies, and by im-

provement through mechanical means and fertilizers of various composition and origin, to its present condition.

The different fertilizers in use, their relative value, and their employment for extensive and intensive cultivation, as a paying investment, are discussed finally.—First Semester, daily, from 10–11.

5. TOXICOLOGY.

A special course of lectures and recitations on toxicology, based on Taylor's work on poisons, and lasting about two months, is given to students in medicine.—Second Semester, daily, from 10–11.

There has been given, the past year, a course of four lectures to the senior law class, which promises to become, in a more extended form, a permanent feature of this work.

6. THE LABORATORY.

The Laboratory, provided for the use of the students, is situated on the first floor of Science Hall, and is furnished in the most approved style, with working tables, reagents, and apparatus generally, affording to the students all the means which science commands for acquiring a thorough knowledge of analytical chemistry, both qualitative and quantitative, and offering facilities for pursuing investigations in chemistry which are not equalled elsewhere in the State. Ample provision is made for ventilation, a very important item in the construction of a laboratory—between the windows and the working tables of the students, evaporating niches are constructed, through which offensive gases and vapors are carried off, facilitating thereby greatly the purification of the air. The working tables are furnished each, with sink and water, and closet room sufficient to pack away all apparatus used during the day.

Qualitative analysis is taught by lectures and blackboard exercises, and the student is required to repeat, at his table in the laborarory, all experiments described in the manual used; after becoming familiar in this way with acids and bases, simple substances (of the composition of which he is ignorant,) is given to him for identification; thus he proceeds from simple to more complex cases, until he is able to determine the composition of the most complicated and difficult mixtures.

When the student, upon written and experimental examination, proves to be sufficiently familiar with qualitative analysis, he passes to the study of quantitative analysis. Lectures and blackboard exercises go here, also, side by side, with laboratory work. The student executes a number of analyses, determining, in the substances handed to him, each constituent by weight; when he has attained the requisite amount of skill to insure accurate results, he is encouraged to execute analyses of a more complex nature, such as of coals, limestones, slags, ores of iron, lead, cobalt, zink, copper, nickel, pig-iron, technical products, etc.

If, after pursuing this course, the student desires to engage in any special investigation, either scientific or practical, every facility of the *University* and the special attention of the professor will be given him.

The full course in qualitative analysis is required of all students who propose to graduate in *science*, *civil engineering* and *medicine*, and in a somewhat modified and abbreviated form, including, however, the recognition of simple substances, of all candidates for other academic degrees. The course in blow-piping is given to students in *civil engineering*, fixing their quota of work and the requirements of other students in quantitative analysis, as follows:

QUANTITATIVE ANALYSES, TO BE EXECUTED BY STUDENTS IN THE COURSE IN SCIENCE, IN CIVIL ENGINEERING AND IN AGRICULTURE:

Analyses 1–10 are to be executed by students taking the course in *Science* and in *Civil Engineering*, and 1–16 by students taking the course in *Agriculture*. On each analysis the student is required to hand in a written report with the detail of his work and figures.

1. Barium Chloride, (Ba, Cl, H_2O).
2. Magnesium Sulphate, (MgO, SO_3, H_2O).
3. Ammonia-iron-alum, ($Fe_2O_3, NH_3, SO_3, H_2O$).
4. Potassium Chloride, (K, Cl).
5. Silver coin, (Au, Ag, Pb, Cu).
6. Dolomite, ($CaO, MgO, CO_2, SiO_2 Fe_2O_3$).
7. Specific gravity of a solid, a liquid and a gas.
8. Water, (CaO, MgO, SO_3, Cl, Organic matter).
9. Building stones, analysis and physical tests.
10. Mortars, analysis and physical tests.
11. Sodium Phosphate, (Na_2O, P_2O_5, H_2O).
12. Coal, (Volatile matter, fixed Carbon, Ash, H_2O, S).
13. Feldspar, ($SiO_2, Al_2O_3, K_2O, Na_2O$).
14. Guano, (P_2O_5, CaO, MgO, NH_3).
15. Superphosphate of Lime, (P_2O_5, soluble and insoluble).
16. Milk, (Water, Butter, Caseine, Sugar, Ash).

RULES FOR THE GUIDANCE OF STUDENTS WORKING IN THE LABORATORY.

1. Each student must make a deposit of $10, 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 per centage 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, when drawing his apparatus for quantitative analysis.

3. No article will be received back, which is not in a sufficiently good condition to be reissued again.

4. Articles may be purchased for cash, at any time.

5. The charge to students for ordinary chemicals has been fixed at the rate of $3 per month.

6. The Laboratory is open to students daily from 9 A. M. to 5 P. M., Mondays excepted; yet to facilitate the work of instruction, which is necessarily personal and not by classes, it is found necessary to give the first semester to students in quantitative analysis, reserving Tuesday from 2–4 for instruction in blow-piping, and to devote the entire second semester to work in qualitative analysis; any deviation from this plan will be made only in exceptional cases.

TEXT-BOOKS USED IN THIS SCHOOL.

1. Text-book on Inorganic Chemistry to be selected at the beginning of Semester.
2. Cooke, Principles of Chemical Philosophy.
3. Fresenius, Manual of Qualitative and Quantitative Analysis.
4. Appleton, a short course in Qualitative Analysis.
5. Elderhorst, Manual of Qualitative Blow-Pipe Analysis.
6. Ricketts, Notes on Assaying.
7. Taylor, on Poisons.

Suitable hand-books for reference are recommended and accessible to all students.

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

102 Students in Phenomenal Chemistry.
69 Students in Rational Chemistry.
2 Students in Domestic Chemistry.
5 Students in Agricultural Chemistry.
32 Students in Toxicology.
62 Students in Laboratory, of whom (*a*) 34 Qualitative Analysis, (Fresenius).
(*b*) 25 Qualitative Analysis, (Appleton).
(*c*) 13 Quantitative Analysis, (Fresenius).

272 Students.
Number of individual students admitted to the school, 139.

III. SCHOOL OF NATURAL HISTORY.

PROFESSOR SWALLOW.
PROFESSOR TRACY.

This school includes *Geography*, *Botany*, Entomology, Anatomy and Physiology, *Zoology* and *Comparative Anatomy*, *Mineralogy*, *Paleontology*, *Geology* and *Physical Geography*.

Geography, Botany and Entomology are taught by Prof. Tracy, and Anatomy and Physiology by Dr. Laws and Dr. Moss.

ZOOLOGY

Is taught so as to include an elementary course in comparative anatomy, with special reference to the domestic animals—instruction by lectures.

MINERALOGY.

The cabinet of minerals is ample to illustrate the most important varieties. Dana's Manual is used for text-book.

PALEONTOLOGY.

The cabinet furnishes fossils to illustrate the most characteristic species of the Geological Periods. The instruction is by lectures.

GEOLOGY.

Geology is taught with special reference to the many useful applications in Agriculture, Mining, Architecture and the early History of the Earth.

PHYSICAL GEOGRAPHY.

Physical Geography is taught at the end of the course, that all the sciences may be more successfully used in explaining the physical condition of the earth. This course also serves as a review of Natural History, by its uses and applications in Physical Geography. In this course is included so much of Anthropology as relates to the Pre-historic man, and the origin of the races and their characteristics and distribution.

DONATIONS TO THE CABINET.

A collection of woods—C. S. Sargent, U. S. Census.
A wolf's skeleton—Lieut. G. N. Chase, U. S. A.
Silver ores and drill cores—Mr. W. G. Crane.
Minerals and rocks—Lewis Slaughter, Esq.

CLASSES:

Zoology (Prof. Swallow)	98	
Anatomy and Physiology (Dr. Moss)	66	Young gentlemen.
Anatomy and Physiology (Dr. Laws)	30	Young ladies.
Mineralogy and Paleontology (Prof. Swallow)	31	
Geology and Physical Geography (Prof. Swallow)	39	

G. C. SWALLOW, Professor.

BOTANY AND ENTOMOLOGY.

PROFESSOR TRACY.

PROFESSOR KERN, ASSISTANT.

Botany.—Instruction in botany is given during two semesters. The first semester is devoted to the study of structural and systematic botany, Gray's "Field, Forest and Garden Botany" being used as a text-book. Less attention, however, is given to the use of the text-book than is required for the study of living plants. Each student is required to observe these for himself; to study their forms, habits and actions and the

arrangement of their parts, and to compare them carefully with each other. The University greenhouse furnishes abundant means of illustration at all seasons of the year.

During the second semester the subject of Economic Botany is taken up and the more important natural orders are studied with reference to their general characters and the important plants of each. The instruction is given by lectures, supplemented by means of living plants from the greenhouses, and an outline is given of the processes of manufacture of vegetable products used for food, clothing, drinks, oils, dyes, etc.

ENTOMOLOGY.

Instruction in Entomology is given almost entirely by means of lectures, for which the large collection of insects in the University Museum affords a valuable means of illustration. By the aid of the microscope, the student is shown the peculiarities of insect anatomy; and he receives instruction in insect transformation and typical forms, classification and geographical distribution. Especial prominence is given to the life history and habits of injurious species, and the methods of checking their ravages.

Students in the course in Agriculture receive instruction in Bee-keeping by a special course of lectures, and are made familiar with the work by practice in the Apiary.

Class Room:

Number of students in	Botany	88
" "	Economic Botany	23
" "	Entomology	23
" "	Landscape Gardening	6

IV. SCHOOL OF MATHEMATICS AND ASTRONOMY.

PROFESSOR FICKLIN.

WM. A. CAUTHORN, ASSISTANT.

W. C. TINDALL, INSTRUCTOR.

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.

Special attention is called to the requirements in the pure mathematics for admission to the Freshman Class. Imperfect preparation in Algebra is so common as to compel the conviction that sufficient attention is not given to this branch of mathematics in many of the preparatory schools of the State. Its importance cannot well be over estimated.

Students in astronomy, after mastering the theory of the subject in the recitation room, are required to go into the Observatory and apply their theories to practice in the determination of latitude, longitude, azimuth, time of day, variation of the magnetic needle, etc.

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

FIRST YEAR.

First Semester.—Arithmetic, beginning at decimal fractions.
Second Semester.—Arithmetic and book-keeping.

SECOND YEAR.

First Semester.—Elementary algebra.
Second Semester.—Elementary algebra and plane geometry.

THIRD YEAR.

First Semester.—Plane trigonometry and geometry of space.
Second Semester.—Spherical trigonometry and spherical astronomy.

FOURTH YEAR.

First Semester.—Higher algebra.
Second Semester.—Analytical geometry.

FIFTH YEAR.

First Semester.—Calculus.

SIXTH YEAR.

First Semester.—Astronomy (completed).

THE LAWS 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, plus 38 deg. 56 min. 51.5 sec.

DESCRIPTION OF THE BUILDING.

During February and March, 1880, the old observatory building, which stood a few feet west of the main University edifice, was moved and enlarged. It now stands on the beautiful eminence in the Campus near the Chalybeate Spring. The meridian line of each pier now passes between the University Building and the President's Mansion. In this position a good horizon is secured. In the old position the horizon was obstructed on the north by the Scientific Building, and on the east by the University Building.

The old dome was found to be too small for the Equatorial recently purchased, and a brick addition was made at the east end for the accommodation of this instrument. 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 18 feet; the ceiling of the lower part is 10 1-5 feet high, and the top of the dome is 14⅔ feet above the second floor.

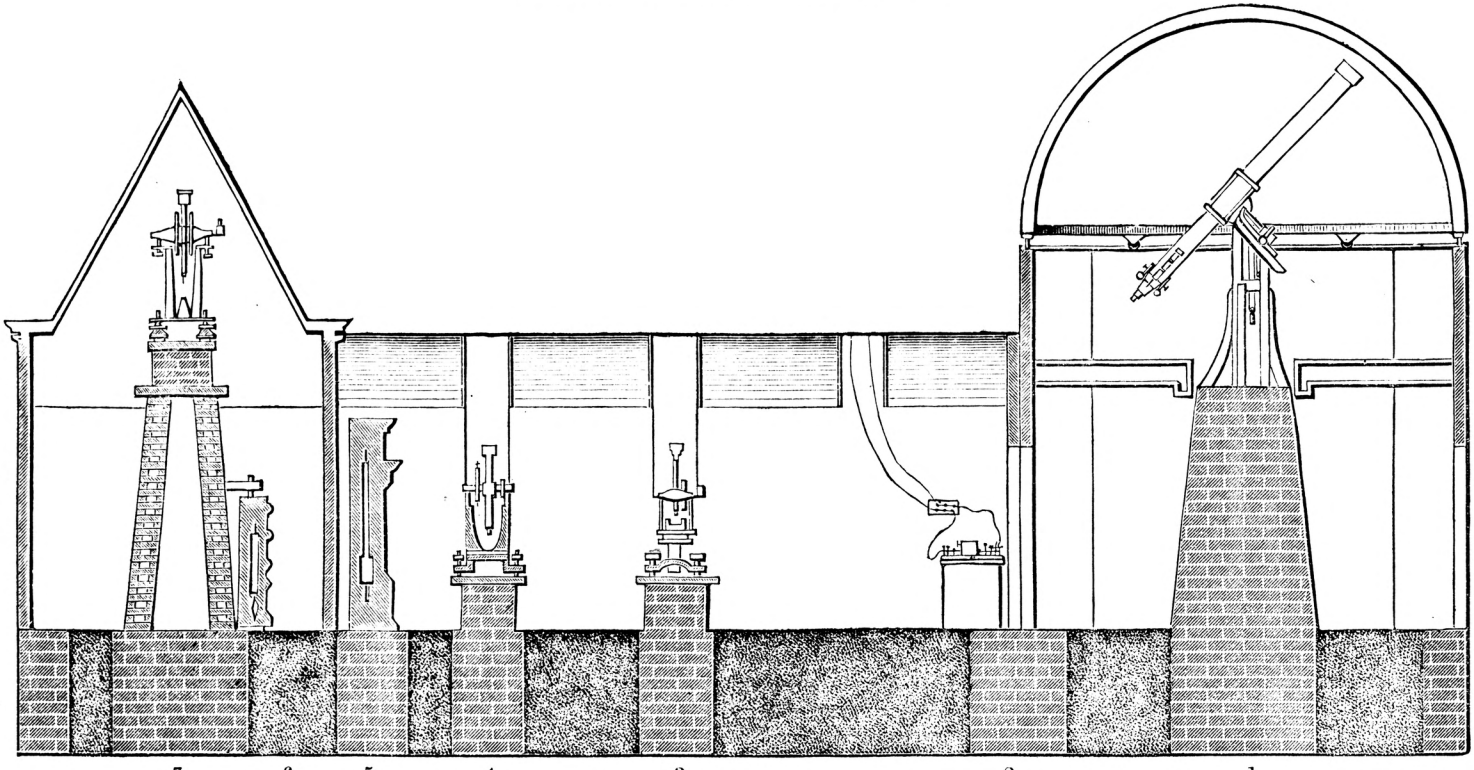
The dome revolves upon six grooved wheels of cast iron, which run on a circular iron rail. Motion is communicated to the dome by a train of wheel work gearing into a rim of cogs attached to the interior face of the base plate of the dome.

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 four 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.

PLATE II. THE NEW OBSERVATORY.



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 1-5 feet wide, and 8 feet high. This room contains three piers, constructed as those already described, for the support of the Transit Instrument, the Transit Theodolite, and the Sidereal Clock. 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.

All these rooms are now lighted by gas.

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*, and a *Twenty-inch Celestial Globe*.

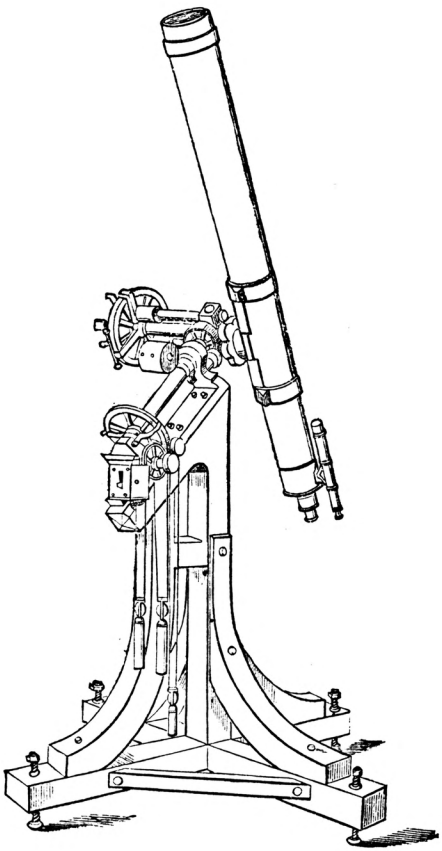
The Telescope (1) is an equatorial refractor of 7½ inches clear aperture and 10 feet 7 inches focal length, made by Merz & Son, of Munich, Germany. The mounting is admirably executed, combining great delicacy with great strength and stability, and differs, in some respects, from that of any other instrument in this country. It is furnished with a filar and an 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, Mass. 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, Mo. The telescope is furnished with adjustable clock-work, 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, Mass., 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:

"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

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.

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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, Mass. It has an aperture of $1\frac{7}{8}$ inches and a focal length of $17\frac{1}{2}$ inches. The reading microscopes were made by R. B. Gans, of Boone county, Mo. The telescope is furnished with adjustable clock-work, by which any heavenly body may be kept apparently at rest in the field of view.

For convenience of observation, an observing chair, with an adjustable seat, is made to run upon an iron track around the Telescope, so that the observer can easily keep his eye at the proper distance from the eye-piece.

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"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 five hundred 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 $2\frac{1}{16}$ inches, and a focal length of 23 inches. The circle is $10\frac{1}{2}$ inches in diameter. It is graduated on silver to five minutes, and reads by two verniers and microscopes to three seconds. This instrument has five vertical wires and one horizontal. This system of wires 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 $2\frac{1}{8}$ inches, and a focal length of 22 inches. The circles are 12 inches in diameter, and graduated to 10 minutes. The horizontal circle has four verniers with microscopes, and the vertical circle two; and each reads to ten seconds. This instrument is furnished with direct and reflecting eye-pieces, a colli-

mating eye-piece and sunshades. The system of wires and the arrangement of the levels are the same as in the transit instrument. 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 $1\frac{3}{5}$ inches, and a focal length of 18 inches. The horizontal circle is $10\frac{1}{2}$ inches in diameter, and reads by a vernier to one-half a minute; the vertical 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 altitude and 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 microscope to ten seconds.

The Sidereal Clock (5), which was made by Gregg & Rupp, of New York, has a mercurial pendulum.

The Solar Clock (6) was made by Riggs, of Philadelphia.

The sidereal clock stands upon an isolated brick pier in the southwest corner of the transit room. The solar clock hangs on the pier which supports the alt-azimuth instrument.

The Observatory is connected by telegraph (2) through the lines of the Western Union Telegraph Company, with nearly every other observatory in the country, thus furnishing the requisite means for illustrating the method of finding 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, has given to the University more than two thousand dollars in order to procure the Telescope and put it in complete working order, and to move and enlarge the Observatory Building.

In view of this liberality on the part of Dr. Laws, the Board of Curators have decided that the Observatory shall hereafter be known as "THE LAWS OBSERVATORY," and the Telescope as "THE LAWS TELESCOPE." They have also established a prize in the form of a gold medal, to be known as "THE S. S. LAWS ASTRONOMICAL MEDAL," to be awarded annually to that student who shall stand highest in Theoretical and Practical Astronomy.

VII. SCHOOL OF ENGLISH.

PROFESSOR MCANALLY.

COURSE OF STUDY.

FIRST YEAR.

First Semester—Language Lessons, Dictations and Composition (Swinton, Harvey).

Second Semester—English Grammar (Harvey), Blackboard Exercises, Dictations, Composition, Word Studies.

SECOND YEAR.

First Semester—Analysis (Green), Rhetoricals, Forms of English Composition, Notes on the Origin of Language, Word Studies from Trench.

Second Semester—Analysis Continued and Rhetoric (Hart), Study of Synonyms (Crabbe), Composition and Themes, Trench's Lectures.

THIRD YEAR.

First Semester—United States History (Swinton.) References: 1. Settlement (Bancroft, Prescott). 2. Revolution (Bancroft, Hildreth). 3. Political Development (Johnstone, Statesman's Manual, Benton's Thirty Years).

Second Semester—Rhetoric concluded, Historical Essays, Elocution, Lectures and Note-taking, History of English. References: "English Past and Present" (Trench), "Select Glossary" (Trench), "Study of Language" (March), "Principles of Rhetoric" (Whately), "Kame's Elements of Criticism," "Blair's Lectures."

FOURTH YEAR.

First Semester.—English History (Smith's Hume). References: Celtic and Roman Periods (Knight's Pictorial History, Hume, Smollett), Anglo-Saxon Period (Turner), Norman Period (Guizot's History of Civilization, Taine's History of English Literature), Constitutional Period (Hallam, Macaulay, Collier, Lodge, Agnes Strickland).

Second Semester.—Political History and Science (Townsend's Analysis of the United States Constitution). References: Johnstone's Manual, Statesman's Manual, Blackstone, Kent.

Fifth Year.

First Semester.—English Literature (Collier). References: Anglo-Saxon (Marsh, March, Corson's Handbook,) Middle English (Hallam, March, Craik), Modern English (Taine, Mill, Craik, Hallam).

General Readings: Hudson's "Classical Reader," "Choice Specimens of English Literature."

Special Studies.—Chaucer's Canterbury Tales—selections with critical remarks. Bacon's Essays. History of Drama (Doran). Shakspeare (Hudson's edition). Hamlet, Richard III, Lear, Romeo and Juliet, read in class with verbal and written criticisms. Milton's Paradise Lost. History of Journalism. Lectures with practical explanations of daily newspaper life. The Spectator, the London Times, the New York Herald. Historical style of Gibbon, Hume, Macaulay. Linguistic criticism and class readings. The modern novel, as illustrating changes in manners and customs. Dickens; influence on English legislation, Bleak House; on education, Nicholas Nickleby; on condition of criminal classes, Oliver Twist; as a caricaturist, Pickwick Papers. The Lake School Poets (Wordsworth), American Literature (Duykinck).

The course in Literature is supplemented by public lectures on the origin and history of English Literature.

Second Semester.—Political Economy (Wayland). References: Adam Smith, Cairnes, George Tucker, Statesman's Year Book.

Sixth Year.

First Semester.—Anglo-Saxon Grammar and Reader (Vernon), Readings from Alfred's Boethius, the Saxon Chronicle, Caedmon's Paraphrase, Beowulf, and the New Testament.

Complete Resume of English course.

Second Semester.—General Reviews and Orations.

NOTICES.

All new students 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.

A record of class standing is kept for each student, and his work is further graded by a regular monthly examination; while examinations, both written and oral, are held at the close of each semester.

On a grade below six the student fails to pass, and though, in exceptional cases, he may sometimes be allowed to go on with an advanced class, he can neither be admitted to an examination nor obtain a class grade until the deficiency is made up.

In order to secure more thorough training in English, all the students in Academic classes are required, at the end of the year and before the regular class examination, to pass an examination in English Grammar, regard being had to its practical use rather than to technical difficulty.

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

Fourth Year.

First Semester—English History (Smith's Hume). References: Celtic and Roman Periods (Knight's Pictorial History, Hume, Smollett), Anglo-Saxon Period (Turner), Norman Period (Guizot's History of Civilization, Taine's History of English Literature), Constitutional Period (Hallam, Macaulay, Collier, Lodge, Agnes Strickland).

Second Semester—Political History and Science (Townsend's Analysis of U. S. Constitution). References: Johnstone's Manual, Statesman's Manual, Blackstone, Kent.

Fifth Year.

First Semester—English Literature (Collier). References: Anglo-Saxon (Marsh, March, Corson's Handbook), Middle English (Hallam, March, Craik), Modern English (Taine, Mill, Craik, Hallam).

General Readings: Hudson's "Classical Reader," "Choice Specimens of English Literature."

Special Studies—Chaucer's Canterbury Tales—selections with critical remarks. Bacon's Essays. History of Drama (Doran). Shakspeare (Hudson's edition). Hamlet, Richard III, Lear, Romeo and Juliet, read in class with verbal and written criticisms. Milton's Paradise Lost—the first two books read and criticised in class. History of Journalism. Lectures with practical explanations of daily newspaper life. The Spectator, the London Times, the New York Herald. Historical style of Gibbon, Hume, Macaulay. Linguistic criticism and class readings. The modern novel, as illustrating changes in manners and customs. Dickens, his influence on English legislation, Bleak House; on education, Nicholas Nickleby; on condition of criminal classes, Oliver Twist; as a caricaturist, Pickwick Papers. The Lake School Poets (Wordsworth), American Literature (Duykinck).

The course in Literature is supplemented by twelve public lectures on the origin and history of English literature.

Second Semester—Political Economy (Wayland). References: Adam Smith, Cairnes, George Tucker, Stateman's Year Book.

Lectures, Note-taking and Essays.

Sixth Year.

First Semester—Anglo-Saxon Grammar and Reader (Vernon), Readings from Alfred's Boethius, the Saxon Chronicle, Caedmon's Paraphrase, Beowulf, and the New Testament.

Complete Resumé of English course.

Second Semester—General Reviews and Orations.

NOTICES.

All new students 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.

A record of class standing is kept for each student, and his work is further graded by a regular monthly examination; while examinations, both written and oral, are held at the close of each semester.

On a grade below six the student fails to pass, and though, in exceptional cases, he may sometimes be allowed to go on with an advanced class, he can neither be admitted to an examination nor obtain a class grade until the deficiency is made up.

In order to secure more thorough training in English, all the students in Academic classes are required, at the end of the year and before the regular class examination, to pass an examination in English Grammar, regard being had to its practical use rather than to technical difficulty.

Prof. W. W. Carnes, a well-known elocutionist, has been engaged to teach two terms of lessons in elocution during the first and second semesters.

REPORT.

DR. S. S. LAWS, *President Missouri State University:*

SIR:—The statistical report of the classes of the English Department during the year 1881–82 is as follows:

CLASSES.	1st Semester.	2d Semester.	Total.
English Grammar (Mrs. Carr)	52		52
English Grammar	86		86
English Analysis (Mrs. Carr)	80		80
United States History	91		91
English History	40		40
English Literature and Anglo-Saxon	53		53
Political Economy		39	39
Political Science		96	96
Analysis and Rhetoric		80	80
Rhetoric (Mrs. Carr)		56	56
Literary Criticism (Mrs. Carr)		1	1
Totals	402	272	674

The system of entrance examinations continues to bring about the most happy results, securing a degree of attention to the ordinary English branches before application for admission, and leaving us the work of supplementing, by advanced instruction, the primary work done elsewhere. The experience of two years has shown that the entrance examinations are well fitted to the condition of our educational work in Missouri and too much importance cannot be attached to them.

I would repeat my request made last year for additional books in English Literature as well as for maps and charts of various kinds for use in the English classes.

Respectfully yours,

D. R. MCANALLY, Jr.,

Prof. English.

VII. SCHOOL OF MODERN LANGUAGES.

PROFESSOR BLACKWELL.

From the Report of the Curators on the organization of the University:

"Not rejecting the culture of the ancient languages, we surely cannot pass by or neglect that of the principal European languages, and especially the German and French. Ample provision is now made for the study of these languages, with the literature belonging to them, in most of the principal schools in the country of every kind. They are made a requirement, not only in the colleges of letters, but equally so in the scientific and technical schools. In the earlier part of the present century, the modern languages were not considered necessary for the professional man, and if any provision whatever was made for them, it was accidental and temporary, and never from the permanent fund of the institution. But the changed relations of the world have produced the change referred to in our various institutions of learning, and Harvard, Cornell, Michigan, etc., now have several permanent teachers of these languages.

"The requirement should be imperative upon graduates of both the Scientific Department and that of Arts, that they should be able to read the German and French; and that in the elective courses to be provided, these languages be made optional for longer courses. The committee so recommended."

The subjects chiefly taught in this Department are German and French. German is commenced at the beginning of the first semester, and French at the beginning of the second.

The object of the Professor in this Department is to give the students a brief history of the countries speaking these languages, and, by a course of lectures, a fair knowledge of their literatures. The prime object is to enable the scientific student, at the end of his course, to read any works in modern German. In addition, the student is drilled, by almost daily conversations, to understand the language when spoken, and encouraged to attempt replies.

GERMAN—FIRST YEAR.

First Semester.—Otto's grammar, exercises, conversations and composition.
Second Semester.—Same continued; reading in prose and poetry.

SECOND YEAR.

First Semester.—Die Jungfrau von Orleans, Maria Stuart, lectures, conversations and translations into German of short stories.
Second Semester.—Nathan der Weise, Egmont, lectures, conversations and translations continued.

FRENCH.

First Semester.—Joynes' Otto's Introductory lessons, Joynes' reader, conversations, lectures and composition.
Second Semester.—Racine's Athalie, Le Cid de Corneille, Le Misanthrope de Molière, conversations, lectures, grammar and composition.

SPANISH—ONE-HALF SEMESTER.

Spanish grammar—Las Lecturas de Knapp.

ITALIAN—ONE-HALF SEMESTER.

Italian grammar—Select readings in Italian Authors.

REPORT.

PRESIDENT S. S. LAWS, LL. D.:

SIR: I respectfully submit to you the following report of the Department of Modern Languages of the University of Missouri, for the scholastic year 1881-82:

No. of students entered in	German	classes	.....	122
"	"	French	"	85
"	"	Spanish	"	26
"	"	Italian	"	22
Total			.....	255

The work has been faithfully performed, the class attendance having been almost unbroken throughout the year. The examinations were, with a few individual exceptions, satisfactorily passed.

Very respectfully, your obedient servant,

J. S. BLACKWELL,
Professor of Modern Languages.

VIII. SCHOOL OF LATIN LANGUAGE AND LITERATURE.

PROFESSOR FISHER.

FIRST YEAR.

Harkness' Introductory Latin book, grammar, reader, Composition through part I.

SUB-FRESHMAN—SECOND YEAR.

First Semester.—Nepos, Harkness' Cæsar, Composition to lesson 51, grammar.

Second Semester.—Virgil's Æneid (Chase and Stuart), Cicero's Orations (Harkness), Composition to lesson 71, prosody and scanning, Classical Geography.

Freshman—Third Year.

First Semester.—Cicero (pro Archia), Lincoln's Livy, Composition to lesson 89, mythology.

Second Semester.—Anthon's Horace (Odes and Epodes), Cicero (De Senectute), Harkness' Composition completed, prosody, Latin at sight, antiquities.

Sophomore—Fourth Year.

First Semester.—Anthon's Horace (Satires and Epistles), Agricola of Tacitus, Arnold's Composition part 2d, Latin at sight, Roman History.

Second Semester.—Cicero's Tusculan Disputations, Latin at sight, original composition in Latin, Roman History.

Junior—Fifth Year.

First Semester.—Plautus, Pliny's Letters, exercises in Latin (oral and written), Latin literature, lectures.

Second Semester.—Frieze's Quintilian, Histories of Tacitus, exercises (oral and written), review of the whole grammar, lectures.

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, Nepos, Cæsar, Cicero (four orations), Virgil's Æneid (including scanning), Classical Geography.

It is suggested to teachers to connect simple exercises in making Latin either oral or written, with all the Latin studies of pupils in their preparatory training.

BOOKS OF REFERENCE.

Harper's Latin Dictionary.
Anthon's Classical Dictionary.
Smith's Dictionary of Roman Antiquities.
Eschenberg's Classical Manual.
Appleton's Classical Atlas.
Munk's Greek and Roman Metres.
Liddell's History of Rome (or Arnold's).
Dunlop's Roman Literature.
Daubeny's Roman Agriculture.
Guhl and Koner's Life of the Greeks and Romans.
Grammars of Gildersleeve, Roby and Madvig.
Fisher's Three Pronunciations of Latin.

The English pronunciation is carefully taught and strictly followed in the classroom. The advanced classes are also taught to use the so-called Roman and so-called Continental methods.

REPORT.

S. S. LAWS, LL. D., *President Missouri State University:*

DEAR SIR: The following is the report of the Latin Department, for the year closing June 1st, 1882:

Junior Class	7
Sophomore Class	15
Freshman Class	22
Sub-Freshman Class	60
First Class	120
Whole number without duplication	224

ADMISSIONS BY SEMESTERS.

First Semester	216
Second Semester	190
Total by Semesters	406

Members of the Junior and Sophomore Classes, who attain the requisite standing, will be permitted to contend for a prize in either or both of the following subjects:

1. A translation into Latin from *Johnson's Rasselas*, beginning with the words: "*Ye who listen with credulity,*" and closing with the words: "*Rejoices to find that his heart was lightened.*"

2. A Latin Ode in one of the Horatian Measures.

The prizes were awarded as follows:

Junior, Frank Bauerlein, Kansas City.

Sophomore, J. C. Leggett, Claysville.

Freshman, R. T. Sloan, Kansas City.

Sub-Freshman, divided between

C. W. Chowning, Paris, and

C. W. Manwaring, Columbia.

First Class,

First prize, Thomas Hackney, Fredericktown.

Second prize, Benj. Hoffmann, Hermann.

During the year, Miss Josie B. Latham has rendered efficient service as assistant in this Department.

Very respectfully,

M. M. FISHER,

Prof. Latin Language and Literature.

IX. SCHOOL OF GREEK AND COMPARATIVE PHILOLOGY.

PROFESSOR FLEET.

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 translations 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 will be 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.—Harkness' First Greek Book, completed; Xenophon's Anabasis, Hadley's 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 (Odyssey), 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.
Kühner's Elementary and Hadley's Grammars.
Jones' Greek Prose Composition.
Boise's Exercises in Greek Syntax.
Baird's Classical Manual.
Goodwin's Moods and Tenses.
Tozer's Classical Geography.
Fyffe's History of Greece.
Mahaffy'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.

REPORT.

S. S. Laws, LL. D., *President Missouri State University:*

SIR:—I beg leave herewith to submit a report of the number of students in the Department of Greek and Comparative Philology during the year 1881–82:

Junior Class	7
Sophomore Class	11
Freshman Class	16
Sub-Freshman Class	26
Preparatory Class	43
Greek Life	1
Total by Classes	104

Very respectfully,
Your obedient servant,
A. F. FLEET,
Prof. Greek and Comparative Philology.

X. SCHOOL OF HEBREW LANGUAGE AND SEMITIC LITERATURE.

PROFESSOR BLACKWELL.

This Department is concerned with the study of the Hebrew Language and Literature, as a means of exploring the origin, and tracing the development of modern civilization, of the sciences of government, law and ethics. The Hebrew, as containing the oldest remains of a literature which is the heritage of humanity, is chiefly considered. The course is arranged as follows:

First Semester.—Hebrew Grammar, including translations from English into Hebrew, and Hebrew into English, both oral and written; Histories of Egypt, Chaldea, Babylonia, and of the Medo-Persian Empire. Text-books: Green's Elementary Grammar, and Rawlinson's Ancient History.

Second Semester.—Reading and Analysis of the Hebrew language, including selections from Genesis, Joshua, Chronicles, the Psalms, Isaiah and Ezekiel; the Hebrew accent and prosody; the growth, limit, style and purpose of Hebrew literature. Text-books: Green's Larger Grammar, or Deutsch's, and Gesenius' Lexicon.

Attention will be given to the later complex development of the Hebrew language, as exemplified in the Talmuds, the Targums, Maimonides, and the Rabbinical texts.

Other Semitic tongues belonging to this Department, in which instruction may be had, are the following:

1. The Syriac language. The course will include the study of Uhlemann's Grammatik und Chrestomathie, the Peshito Version of the New Testament, and the Chronicles of Bar Hebraeus.

2. The Arabic language, in ancient and modern materials. Text-books: Caspari's Grammatica Arabica, Catafago's or Lane's Lexicon, White's Reading Lessons, Selections from the Koran, and Ibn Khaldun.

3. The Chaldee, the Samaritan and the Æthiopic languages will each receive attention; the Chaldee, by reason of its likeness to the Syriac, and its occurrence in detached passages of the Hebrew Bible; the Samaritan, by reason of its version of the Pentateuch, and the Æthiopic (with the Amharic) on account both of its Old Testament version and its peculiar relations to the other members of the Semitic family.

Candidates for admission to this Department must pass a satisfactory examination in English Grammar.

REPORT.

PRESIDENT S. S. LAWS, LL., D.:

SIR:—I have the honor to submit the following report of the Department of Ancient History, Hebrew and Semitic Literature in the University of Missouri, for the scholastic year 1881-82:

The number of students who during the year, entered and continued in this Department, is twenty six, of whom one only failed to pass the final examination. This work has steadily increased its numbers from year to year, and the increasing interest in it as shown by the numbers of those who have voluntarily sought its instruction, proves the wisdom of the establishment and the maintenance of this department.

Very respectfully,

Your obedient servant,

J. S. BLACKWELL,

Prof. of Hebrew and Semitic Literature.

LADIES DEPARTMENT.

REPORT.

S. S. LAWS, LL. D., *President of Missouri State University:*

SIR:—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 1881–82, I rejoice to say that the provisions of this Department of service have been duly appreciated by the young ladies, and that to their increasing confidence and hearty co-operation is largely attributable, whatever success I may have attained in my supervisory work. My association with them this year has been unusually pleasant to me, and, I trust, in some measure, profitable to them. It is highly gratifying to me to be able to state that, as a rule, they have been quiet and lady-like in demeanor, giving evidences 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. Again, it is desirable that the young women identified with the University be distinguished from all others. By the adoption of a uniform this can be readily and effectively accomplished. Therefore, to avoid extravagance 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 alpaca

or cashmere with *trimmings of the same color.* During the first four weeks of the first Semester, and the last four weeks of the second Semester, a white waist or basque may be substituted for the black waist or basque. The style of the fall and winter hat will be announced at the opening of the first Semester of each Collegiate year; the style of the spring and summer hat will be announced the first or second week in April of each year. In order to secure perfect uniformity, the order for all hats required will be given by the Principal, and one order being given for all, the cost of each will be diminished. The hats for the entire Collegiate year will not cost more than $4.00, possibly they will cost less.

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

Calisthenics.

Believing that the physical deformity and degeneracy of the American woman are largely attributable to her inactivity, it is deemed necessary to require all young ladies attending the University to engage in Calisthenic exercises during one semester, unless some reason justifying exemption therefrom be presented. During the year thirty-four young women have engaged in these exhilerating exercises, and thereby nerve and muscle have been strengthened, and the brain rested and energized for its work.

That gymnastic and calisthenic exercises are good only to produce the athlete or acrobat, is a prevalent error, grounded in a misapprehension of the varied character of the exercises. Calisthenic exercises are intended to remove special local distortions. The tendencies of our modern life to the contraction of lung capacity have led to a prevalence of pulmonary weakness. Let Calisthenics in our schools direct its attention to that evil, then will it prove a national blessing in elevating the physical tone of our people.

This year we have been without the delightful stimulus of music in our Calisthenic movements. We trust that our Board will be able to give us a piano next year; for I am convinced by this year's experience that Calisthenics, recognizing as it does the artistic necessity of touching the play impulse, cannot accomplish its legitimate end without that exhilaration and enthusiasm that come through the magnetic influence of music.

Literary Society.

The young women have only one literary society—the Philalethean. There being but one available hall adapted to society purposes, and for other reasons looking to the highest and best interests of those concerned, it was thought best to have but one literary organization for them.

The Philalethean Hall is the most artistic in the University. Through the liberality of Mrs. S. S. Laws its walls are hung with paper of tasteful design, and by an appropriation from the University treasury it has been handsomely furnished, all of which is highly appreciated by the young society.

In this Society is represented almost every class in the University, and in it are afforded opportunities for culture in composition and music. It meets every Saturday at 4 P. M., and the exercises of a regular session continue about two hours.

The Society held its second annual open session March 11th of this year. The exercises were of such a character as to elicit high praise both from the University Faculty and the citizens of Columbia, and to promise a successful career for the young organization.

Music.

To all students who have desired to study music—vocal and instrumental—facilities have been afforded. This feature of our work has not received the attention that its importance demands; nor can it be given the prominence of which it is worthy, until our Legislature adopts means for the erection of a suitable building wherein may be established a regular conservatory of music. In the meantime we will strive to enlarge our present facilities in the study of this art, looking forward to the establishment of a conservatory of music which shall attract the best material and the best talent in the Mississippi Valley.

Instruction in the School of English.

The following is a statistical report of the classes of the English Department that have been under my instruction during the year.

Classes.	1st Semester.	2d Semester.	Total.
English Grammar	52		52
English Analysis	80		80
Rhetoric		56	56
Literary Criticism		1	1
Totals	132	57	189

Each of these, except Literary Criticism, was only one division of a class, the other division being under Prof. McAnally's instruction. These immense divisions constitute a significant fact in the history of our University.

The uniformly polite attention of my classes in the recitation room, and my pleasant association and harmonious working with the courteous Principal of the English Department, I deem worthy of record here.

Girls' Course in Arts.

This course is equivalent to any one of the other academic courses, yet is identical with none. 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 calisthenics, 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 those students who complete successfully 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 degree.

This 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. Of the whole number of girls enrolled this year for the various academic courses, a large per cent were enrolled for the Girls' Course in Arts. Several students have given up during the year other academic courses to take the Girls' Course in Arts, a circumstance indicative of its increasing popularity.

The establishment of a special course for girls has tended to increase their number in the University, and this tendency will necessarily strengthen as the merits of the new course become better known. The number of young ladies attending the University this year is eighty-three.

The special work for girls in our University is in its infancy; yet it promises with proper aid from the State to develop into no mean proportions, and to be strong to help the daughters of our Western land up to a noble purpose, where they shall breathe the freshness of a new life, and be energized to accomplish aright their God-appointed mission. Our State has not been as generous as some others in forwarding the higher education of her daughters; but we believe that the day *must* come, though it may be distant, when she will awaken to a more adequate realization of the influence of cultivated woman as a conservative force in our civilization, and when she will, through a generous legislation, multiply *here* the facilities for the completer education of woman, and thus make Missouri University the dispenser of greater good to the State and to the nation.

Very respectfully yours,

MRS. O. A. CARR,

Principal of Ladies' Department.

II. The Professional Schools

OF THE

MISSOURI UNIVERSITY.

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

The primary aim of the Academic Schools of Science and Language (I—X), is culture; that of the professional Schools (XI—XIX) 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 for the 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 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. The idea that a university is an "institution where any person can find instruction in any study," is visionary. No such institution now exists, ever has existed, nor, from the nature of the case, ever can exist. 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 effected, 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 tabulated and textual 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 that word, and that is, by way of defense. This, however, is not the place for discussion, but only for statement and announcement.

XI. AGRICULTURAL AND MECHANICAL COLLEGE.

FACULTY.

SAMUEL SPAHR LAWS, LL. D., PRESIDENT.

GEORGE C. SWALLOW, LL. D., DEAN,
Professor of Agriculture and Natural History.

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

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

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

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

DAVID R. MCANALLY, JR., A. M.,
Professor of English.

M. G. KERN,
Assistant in Horticulture.

BENJAMIN F. THOMAS, PH. D.,
Professor of Physics.

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

CONRAD DIEHL,
Professor of Art.

ROBERT B. MADDEX,
Farm Superintendent.

JAMES R. ESTILL, JOHN S. CLARKSON, HON. JERRE C. CRAVENS,
Farm Committee.

The Board of Curators announced "a full course of lectures on Scientific Agriculture, by Professor Swallow, in the year 1859, (Cat. 1859, pp. 26-27,) and in 1870, this Department was revived and reorganized, upon the basis of the Congressional land grant of 1862, and has, from its reopening, been in charge of Professor Swallow, who was first entrusted by the Curators with this line of work, twenty years ago.

COURSE OF STUDY.

The course of study is made strictly professional, and is reduced to *Two Years.*

The first year is essentially Horticultural, and the pupil who completes it, will be entitled to *The Certificate in Horticulture.*

The second year is Agricultural, and its studies, together with those of the first year and those required for entering the Senior Year, make the full Agricultural Course, and entitles those who complete it, to the Degree in Agriculture (B. Ag.).

COURSE OF STUDY.

	JUNIOR YEAR—HORTICULTURE.	Hour.
First Semester.	Propagation, Pruning, Training, Soils, Fertilizers, Tillage and Drainage	I.
	Pomology, Nursery Business,* Forestry and Meteorology	II or IV.
	Mechanics and Physics	III.
	Nursery Work at Discretion of Professors	V and VI.
Second Semester.	Gardens and Gardening, ½	II.
	Entomology, ½	IV.
	Orchards, Vineyards, Fruit Gardens, Ornamental Trees and Lanscape Gardening	III.
	Botany	I.
	Work in Gardens and Vineyards at the Discretion of Professors	V and VI.
	SENIOR YEAR—AGRICULTURE.	
First Semester.	Zoology and Veterinary Science	III and VI.
	Farm Crops and Surveying	IV and VI.
	Agricultural Chemistry	I.
	Mineralogy and Mechanical Drawing	II.
	Field Work, or Feeding and Care of Stock	V and VI.
Second Semester.	Farm Buildings, Machinery, Fences and Water Supply	I.
	Domestic Animals and Farm Law, Geology, Roads and Bridges	II.
	Outdoor Work	V and VI.

*In this the pupil is fitted to engage in the profitable business of selling nursery-stock, by which he may, during vacation, pay his collegiate expenses if he be energetic and skillful. Any number can do this.

Requirements.

To enter the Junior Class the student must understand Arithmetic through Fractions.

To enter the Senior Class the student must pass a satisfactory examination in Arithmetic, English Grammar, Geography, first three books in Geometry, and Trigonometry of the Right-Angle Triangle, and before graduation the student must spend two months, June and July, or their equivalents, in the work of the College, for which he will be paid full price for his labor.

The June and July previous to entering the Senior Year is the best time to meet this requirement. The arrangement of the details of this matter is left to the discretion of the Dean of the College.

The daily Field Exercises are designed to give the student a working knowledge of the profession, and will be required no longer on any one subject than is necessary to accomplish this end.

CERTIFICATES AND DEGREES.

Those who complete the Junior Year, the Horticultural Course, will be entitled to *The Certificate in Horticulture*; and those who complete the Senior Year, *The Course in Agriculture*, will be entitled to the Degree in Agriculture (B. Ag.), Certified by a Diploma.

PRIZES.

Prizes to the Junior Class--Horticulture.

1st. The Swallow Prize for the Best Essay on Pruning.
Loudon's Encyclopedia of Gardening.

2d. For Best Specimens of Propagation including Apples, Pears and Grapes, Strawberries and Gooseberries—20 plants each, $10.

3d. For Best Show of Garden Vegetables, including Tomatoes, Cabbages, Onions, Peas and Beets--20 plants each, $10.

Prizes for Senior Class--Agriculture.

4th. For Best Corn Culture, ¼ acre, $10.

5th. For Best Reaping, Binding and Shocking, ¼ acre, $10.

6th. For Best Specimen of Plowing, ¼ acre, $10.

The College will furnish the land and materials, but all the work must be done by those contending for the prizes.

Design of this Industrial College.

It is the design of this school to fit the pupil for the most successful and honorable farm life—to give him the scientific knowledge--that will best enable him to understand his work and the manual skill which will fit him to do it with the greatest ease and accuracy.

To do this, one must have a thorough knowledge of his profession, and be able to do his work with skill and success.

The first and highest employment of man is to cultivate the soil, to feed and clothe the world. To do this well has been the ambition of the great and good of every land. The increase of populations and the multiplied demands for the products of the soil, must render this department of human industry more and more prominent, lucrative and honorable.

It is, therefore, eminently appropriate for this College, located in the midst of the best agricultural regions of the continent, in which the populations of the earth are concentrating with unprecedented rapidity, to invite our youth to such a collegiate course of study and labor as will best fit them to develop the agricultural and mechanical resources of the State, and meet the coming demand upon their capacities. For such an education, a man must learn two things:

1. What to do, and how it should be done.
2. He must acquire the manual skill to do it, and do it well.

To know what and how, is the *Science.*

To have the manual skill, is the *Art.*

To get the *Science,* he must study.

To get the *Art*, he must work.

Our Industrial College, then, must be a school of *labor* as well as of *study.* But how much study and how much labor, are questions not definitely settled, but in general terms it may be stated:

The pupil must study until he knows what should be done, why and how. When this is accomplished, the intellectual division of an industrial education is finished.

The pupil must labor until he can do all farm work with skill; and when this is accomplished, the manual division of an agricultural education is finished.

Whatever is more than this, has no more place in an agricultural school than in any other. It is not the idea of our school to furnish a place for pupils to work,* but a place where they may learn to work as well as to think.

But what shall the pupil do? Everything that is done on the farm, in the garden, orchard and nursery.

Who shall direct the labors of the pupils? He who teaches what is to be done, why it should be done, and how, is the one to see that it is done, and well done. Then the teaching and practice will agree, science and art go hand in hand. This will prevent the introduction of many useless and impracticable theories. When one teaches, merely, he can advance many beautiful theories for others to practice, but when he is expected to carry out his own suggestions, he will be more cautious, take more care that his instructions will bear the test of actual experiment.

CLASSES IN THE AGRICULTURAL COLLEGE.

Seniors	5
Juniors	16
Total	21

G. C. SWALLOW, Dean.

*We furnish work, as far as possible, for those who desire it as a means of support, but this is no part of the plan of instruction.

Department of Horticulture.

PROFESSOR TRACY.

PROFESSOR KERN, ASSISTANT.

PROF. G. C. SWALLOW, *Dean Agricultural College:*

SIR:—The following report of work done in this department during the year 1881–82, is respectfully submitted:

In 1881 the usual routine of work was followed in the vegetable garden, the drouth preventing the accomplishment of any experimental work of value. During the present spring arrangements have been made for more extensive gardens and more complete field trials of crops than have been undertaken in the past. The field trials now in progress include tests of 30 varieties of cabbage, 30 of beans, 21 of beets, 10 of celery, 16 of onions, 40 of peas, 27 of turnips and 105 of potatoes. The greenhouse has been enlarged by the building of an addition 16x80 feet, which gives us about 5,000 feet of glass.

On Sept. 1st, 1881, the Department of Pomology and Forestry, formerly in the hands of Prof. Husmann, was added to my department. Prof. M. G. Kern was appointed assistant and the details of the field work in that department were placed in his hands. The drouth of the past summer had destroyed a large portion of the stock on hand, and we had to commence almost at the beginning. During the winter about 30,000 apple grafts were made and are now growing finely. A proportionate amount of other young stock has also been secured and planted.

By means of an arrangement made with the State Horticultural Society, we have been able to secure a very fine collection of the newer varieties of fruits for testing upon the college grounds, and during the year the collection now on hand will be largely increased, so that by the end of the season we shall undoubtedly have the best collection of fruits to be found in the west.

The losses from drouth have been so severe during the past three seasons that it has been found necessary to dig two wells to furnish water to the gardens. One of the wells has been provided with a windmill and a similar mill will soon be placed over the other.

Class-room work has been as follows:

Fruit Growing	1st	Semester,	(Tracy)	5
Farm Crops	1st	"	(Tracy)	6
Vegetable Gardening	2d	"	(Tracy)	1
Landscape "	2d	"	(Kern)	5
Forestry	2d	"	(Kern)	5

In addition to the above a number of students in the course in Agriculture have been members of the classes in Botany and Entomology.

S. M. TRACY,
Prof. of Horticulture.

S. S. LAWS, *President:*

The present year has brought a few important changes to the Agricultural College.

The change in the course of studies from a course of four years to a course of two years, has been attended with some indications of improvement; but it is too soon to expect full proof of the wisdom of the change.

The number of students who have entered the classes this year, is twenty-two.

The past year has been one of great discouragement for the farm operations; but the Superintendent, by great energy and skill, has produced fair crops, with two exceptions, and kept the stock up to near the normal condition.

A part of our wheat crop was lost by what appeared to be a fortunate contract with the Agricultural Department at Washington, by which we agreed to raise for the Department 50 acres of wheat at $1.25 per. bushel, the Department to furnish the seed. The seed sent was not fit to be sown—the grains not much larger than cheat—but it was too late to make any new arrangements and thirty acres were sown. It came up well, but was so weak it fell an easy prey to the chinch-bug and drought. From the thirty acres we secured by careful gleaning a few pounds, as a specimen of the crop. Our own wheat sown side by side with the Department wheat, and at about the same time and with the same care and culture, produced good crops. By this operation, we lost at least $600. Still no one seems to have been in fault but the Department in not sending good seed. But as the Commissioner of Agriculture has since been changed there is little hope of remuneration.

A part of our corn crop was very much injured by the combined action of the drought and chinch-bug. Notwithstanding the drought, we raised very good corn where it was not injured by the insects.

The fruit trees, shade trees and hedges put out last year, did but little good; nearly all perished, some grew a little.

Mr. R. B. Maddex's report, herewith submitted, will give the condition of the stock tools and farm more in detail.

In the Department of Natural History, we very much need specimen bottles for preserved animals, and paper boxes to put the minerals and fossils in as they are assorted and labelled.

It would enable me to do the work much faster, if I could employ some one to write labels and catalogue the specimens as they are determined and labelled.

We also need many articles of apparatus which experts deem absolutely necessary for teaching Mineralogy, Geology and Zöology.

Our library is wholly inadequate to give the information necessary for the teacher of Natural History. Ten thousand men are now at work in Geology, Zöology and Paleontology, and the results of their labors and their discoveries of new fossils and new animals, and other important facts, are published in more than one hundred periodicals. These results, it is necessary for the teacher of Natural History to know, and for thirty years I have supplied the books and periodicals necessary to keep myself abreast of the age in this department of knowledge. Dr. Norwood's library has also assisted in this work. The University library has usually taken a single periodical with scientific proclivities. I am no longer able to supply the material for teaching Natural History, and I hope the Curators will be able to furnish a few needed books and periodicals on that subject, as well as the apparatus absolutely necessary.

By request of Mr. Maddex, I take the liberty to ask your attention to the consideration of his salary. He says it is not sufficient to enable him to save anything for future contingencies, and that he has had better offers to go elsewhere; but prefers to stay here as long as he can give satisfaction, and earn what would appear reasonable.

His pay is certainly less than others receive, who occupy similar positions.

Very respectfully submitted,

G. C. SWALLOW,
Dean Agricultural College.

UNIVERSITY OF MISSOURI, January 9, 1882.

Farm Department--Report 1881.

PROF. G. C. SWALLOW, *Dean of Agricultural College:*

SIR:—The farm crops grown during the year were as follows: Fifty acres of wheat, twenty of which were of the standard varieties, say Fultz, White Rogers, Russian No. 2, Shumaker, Silver Chaff and Diehl, yielding 350 bushels.

Thirty acres were sown by contract with U. S. Department of Agriculture, but the variety proved unsuited to our climate and suffered so severely from chinch bugs that it was not harvested, thus making a severe loss to our financial report.

Ten varieties of which were sown for experimental purposes, but owing to injury from chinch bugs, no reliable results were obtained.

Seventy acres of corn were planted, of this, twenty-five made a fair crop, but the remainder, forty-five acres, was almost a total failure.

Twenty varieties were planted for experimental purposes, but were nearly destroyed by drouth and bugs.

We raised about 20 tons of good clover hay, 12 or 15 of timothy, and 10 acres of clover cut for seed, yielding (11½) eleven and one-half bushels of seed.

There are now growing on the farm, 55 acres of wheat, of which 12 acres have been dressed with 250 wagon loads of manure; which is looking well.

We have cut the brush and timber from ten acres of land. We have plowed for corn in the spring 15 acres; 125 pannels plank, and 60 rods of post and wire fence have been made, besides the usual amount of rail fence repaired. The farm house yard has been inclosed on the south and west sides with a wire and picket fence. During the year 36 students have worked on the farm, and for which $200.95 were paid them for their labor, making nearly one-fifth of our farm labor.

INVOICE OF TOOLS, FIXTURES, CROPS AND STOCK.

1 Threshing machine.
1 Wheat fan, new.
1 Wheat fan, old.
1 Corn and cob crusher.
1 Combined reaper and mower.
1 Cast iron field roler.
1 Wheat drill, a very poor one.
2 16-inch riding plows.
1 16-inch 3-horse walking plow.
4 2-horse breaking plows, well worn.
3 1-horse turning plows.
3 Double shovel plows.
1 Double cultivator.

1 Spring tooth harrow.
1 Thomas' smoothing harrow.
2 Common drag harrows, well worn.
1 2-horse corn planter.
1 1-horse corn planter.
1 Sulky hay rake.
1 Corn sheller.
1 Cider mill.
1 Cutting box.
1 Fairbanks' warehouse scales.
1 Good 2-horse farm wagon.
2 Old 2-horse farm wagons.
2 Brush scythes.
2 Mowing scythes.
1 Grain cradle.
4 Axes.
1 Grubbing hoe.
3 Shovels.
1 Spade.
3 Hoes.
2 Hatchets.
1 Grind stone.
1 Circular wood saw and frame.
1 Cross cut saw.
2 Hand saws.
1 Jack plane.
1 Fore plane.
1 Smoothing plane.
2 Plow planes.
1 Brace and bits, 6 in number.
1 2-inch auger.
1 1¼-inch auger.
2 Iron wedges.

GRAIN AND FEED ON HAND.

250 Bushels of corn.
15 Tons of hay.
300 Shocks of fodder.
1 Straw rick, made into sheds for stock.
11½ Bushels of clover seed.
4 Bushels timothy seed.

STOCK.

4 Work mules.
2 Work horses.
44 sheep.
50 Hogs.
55 Head of cattle, as follows: 14 grade cows; 3 yearling heifers; 16 yearling steers; 13 grade calves; 3 yearling bulls, short horn; 1 aged bull, short horn; 3 short horn cows; 1 short horn yearling heifer; 1 short horn spring calf.

R. B. MADDEX,
Farm Superintendent.

XII. NORMAL SCHOOL.

FACULTY.

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

MISS GRACE C. BIBB, DEAN,
Professor of Pedagogics.

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

GEORGE C. SWALLOW, LL. D.,
Professor of Natural History.

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.

DAVID R. MCANALLY, JR., A. M.,
Professor of English.

MICHAEL M. FISHER, A. M., D. D.,
Professor of Latin.

A. F. FLEET, A. M.,
Professor of Greek.

JAMES SHANNON BLACKWELL, PH. D.,
Professor of Modern Languages.

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

CONRAD DIEHL,
Professor of Art.

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

BENJAMIN F. THOMAS, PH. D.,
Professor of Physics.

SAMUEL S. LAWS, LL. D., *President University of the State of Missouri:*

SIR:—I have the honor herewith to submit the report of the Normal Department of the University for the session of 1881-2:

Entire number of different students pursuing a professional course..... 83

Enrolled by semesters:

FIRST SEMESTER.

Senior Pedagogics	23
Junior Pedagogics	50
Total	73

SECOND SEMESTER.

Senior Pedagogics	21
Junior Pedagogics	35
Total	56
Total during the year	129

I have also instructed one of the academic classes belonging to the Department of Mathematics, numbering for the two semesters 88 pupils, making the entire number of students receiving from myself class-room instruction during the year, 217.

The candidates for graduation are twelve in number:

With Elementary Degree, (Pe. P)	8
With Academic Degree, (Pe. B.)	4
Total	12

As in former years I desire to commend very heartily the earnestness and courteous demeanor of the students connected with this department, and to express my satisfaction with the general results of their work. I believe, however, that the new system of rigid entrance examinations will add, in every direction, to the efficiency of the Normal College, securing for its students greater maturity of mind and more extended scholarship than can now be hoped for.

Very respectfully,

GRACE C. BIBB,

Professor of Pedagogics and Dean of Normal Faculty.

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 passing grade of 80 on a scale of 100 in the following subjects, viz.: English, [including Grammar, Spelling and Reading,] Arithmetic, Geography and United States History. This passing 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 successfully complete the "Public School" Normal course, which extends over two years, and which is arranged to meet the requirements of the School Law of the State* in the preparation of teachers for the district schools of the State 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.	Algebra, Elementary	I
	Pedagogics and Form Study	II
	Geography, Physical and Political	III
	English Analysis and Rhetoric	V
Second Semester.	Plane Geometry	I
	Pedagogics—School Law	II
	Civil Government and U. S. History	III
	Form Study and Book-keeping	V
	SENIOR YEAR.	
First Semester.	English Literature and History	I
	Elementary Physics	III
	†Pedagogics, Mental and Moral Philosophy	IV or V
	Anatomy and Physiology ($\frac{3}{4}$), Zoölogy ($\frac{1}{4}$)	VI
Second Semester.	Botany, Descriptive and Structural	I
	Elementary Chemistry	III
	†Pedagogics, Science and History of Education	IV
	Form Study, Elocutionary Reading	VI

*"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 stay in Columbia, with the Normal department. The extended course of academic study leading to this degree is shown in the University Table of Synchronistic Curricula.

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

The conditions of entrance to Normal classes, so far as the passing grade of eighty in elementary subjects is concerned, apply to academic graduates equally with other students.

Degree of Master of Pedagogics (Pe. M.)

The third degree granted by the Normal College is that of Master of Pedagogics (Pe. M.), "the highest and most scholarly degree of the University." 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 practical business advantage is afforded to graduates of the Normal Department of the University in their 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 three years.*"

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

Positions for Graduates.

While we are unable to promise positions to our graduates, we make every effort to assist them in establishing themselves in their chosen professions. The reports which we receive of the work of our alumni are most encouraging; they seem to indicate that our students leave the University with a laudable ambition to place themselves, through earnest and well directed effort, in the foremost ranks of the profession.

Fully three-fourths of all graduates of the department, since it has been under my charge, have taught either in this or other States during at least a part of the present year, and at remunerative salaries.

With the purpose of placing Boards of Directors in communication with teachers, we pay special attention to all letters of inquiry from persons desiring to secure the services of competent instructors. Many of our students are teachers of considerable

experience, so that suitable selections may be made from their number for nearly all grades of schools.

Among the Books used in the Department for study or reference are the following:

Pedagogics as a Science, Rosenkranz.
American Journal of Education, Barnard.
Encyclopœdia des Erziehungs- und Unterrichtswesens, K. A. Schmid.
Thoughts on Education, Locke.
Emile où l'Education, Rousseau.
Works of Pestalozzi.
Circulars of Information, National Bureau of Education.
Reports of Commissioner of Education.
Reports of School Systems of particular towns and States, American and Foreign.
Reports of Proceedings, National Educational Association.
Cyclopedia of Education, Kiddle and Schem.
Free School Systems of the U. S., Adams.
Old Greek Education, Mahaffy.
History of Educational Theories, Browning.
Educational Reformers, Quick.
History of Education, Hailman.
School Economy, Wickersham.
School Management, Baldwin.
Methods of Teaching, Swett.
Manual of Object Teaching, Calkins.
School District Counsellor, Stevenson.
Education, Spencer.
Education as a Science, Bain.
Missouri University Lectures.
Middle Ages, Hallam.

Methods of Instruction.

Instruction in the Normal Department is given principally in the form of lectures, upon which are based discussions by the class of the points presented; the comparative maturity of mind shown by our students of advanced standing and their earnestness, render these discussions of the greatest value. They cover the practical as well as the theoretical side of pedagogy. A primary aim of all work in this department is the development of independent thought, and students are encouraged to advance frankly and freely their own opinions, even where differing materially from those ordinarily held. Incorrect views and crude opinions are rectified with comparative ease through such discussions.

Rosenkranz's "Pedagogics as a System," has been used with success as the basis of discussion in scientific pedagogy.

The following is a Synopsis of the work in Pedagogics. It will be observed that the work of the Senior Year is required of all candidates for graduation.

COURSE OF STUDY IN PEDAGOGICS.

First Year.

First Semester.

School Economy—Opening and closing School, Seating Pupils, Signals, Filing, Order during Recitation. General order of School — Whispering, other Communication, Prompting, Absence, Tardiness, Recesses, Supervision of Pupils on the play ground. Care of Pupils in going home and returning to school. Coöperations of Teachers and Parents. Arrangement of Programme. Time given to different classes as dependent on age of pupils, size of classes, nature of the study, etc. Alternation of Study and Recitation. Change of Employment. School Records. Reports to Parents, to School Officers. Prizes and Rewards. Punishment. Incentives to Study, to good conduct. Cultivation of Habits of Promptness, Neatness, Order, Industry, Self-reliance and Self-control, etc., etc.

Abstracts of lectures will be required, also two essays on assigned topics.

Second Semester.

General Principles governing the presentation of Subjects of Instruction. The Recitation, its mechanism, its purpose. The Lecture System of Teaching, the Catechetical Method, the Method by Dialogue. Preparation for Recitation,—that of Teacher, that of Pupil. Supervision of Pupil's Study. Questions and answers—their Form and Contents. Immediate Results to be sought in class work, Mental and Moral habits to be cultivated thereby, attention, clearness of expression, concentration, exactness, Self Reliance, Truthfulness. Assignment of Lessons, Written and Oral Examinations, Home Work.

School Law: Legal Qualifications, Duties and Rights of Teachers, Elections, Compensation and Duties of County Commissioners, Boards of Directors, State Superintendent, etc. Annual Meetings, School Warrants, Care of School Property, Investment of School Moneys, etc., etc.

There will be required monthly essays on assigned topics.

The students will prepare abstracts of all lectures given during the Semester and will submit their note-books for examination and grading.

One Teaching exercise will be required of each student at some time in the course of the Semester.

Second Year.

First Semester.

Review of School Economy, Lectures on the School Law, Methods of Instruction in Special Subjects, Primary Instruction, Teaching the Alphabet, Spelling and Pronunciation. The Word Method, The Phonetic System, Early Instruction in Number, Illustration of Numerical Operations, the Grube Method. Object Lessons, their Value and Method. The Kindergarten, its Theory and Practice. Methods of Teaching to various classes, Arithmetic, Algebra, Geometry, Methods in English Grammar (practical and scientific) and in United States History, Methods in Geography, with Beginners, with advanced students, Map Drawing, Penmanship.

Mental and Moral Philosophy taught in a course of Lectures by the President of the University.

Exhaustive notes will be required on all topics discussed in the presence of the class.

A Thesis on some assigned topic will be prepared by each student, and will be due before the Christmas Holidays.

One Teaching Exercise will be required of each student in the course of the Semester. Students will be ready to give their exercises before the class by the First Tuesday in November.

Second Semester.

*Education as a Science.** Nature of Education, Its Form, Work and Play, Authority and Obedience, Correction of Moral Obliquity, Office of Punishment (in Civil Society, in Education) kinds and degrees, Limits of Education: Subjective, Objective, Absolute. Special Elements of Education: Physical, Intellectual, Practical, etc. Studies and Reading Matter suited to the mind in its various stages of development. Method of Presentation of knowledge as determined by the stages of mental growth: Illustrative Method, Method of Demonstration, etc. Act of Learning: Mechanical Element, Dynamic Element, etc. How Man is Taught: By Experience of Life, Through Printed Page, By School Instruction, Ethical and Social Culture, State Education, Elementary Schools, Secondary Schools, Colleges and Universities, Technical Schools.

History of Education.—Particular Systems and stand points illustrated. Education in China, India, Thibet, Persia, Egypt, Phoenicia, Greece, Rome. Education among Northern Barbarians, among the Jews, Education in Middle Ages as affected by Feudal System, by Chivalry, by the Crusades, by the Free Cities, Modern Ideal in Education.

Individuals who have influenced Educational Thought: Beacon, Comenius Locke, Rousseau, Pestalozzi, Froebel, Dr. Arnold, Horace Mann, etc., etc.

National systems of education (modern) Russia, Germany, England, France, Switzerland, America, etc.

Special study of American system, in its relation to State and Federal Government. Necessity for supervision. Duties and qualifications of supervisors.

Notes will be required on all special topics and discussions, where not treated at length in the text book in use.

One teaching exercise will be required of each student. Students must be ready to give their exercises by the first Tuesday in April.

During this semester the theses required for graduation will be prepared. All such theses will be due on the first Tuesday in May; they must be on some educational topic and of such length as to occupy about fifteen minutes in their public reading.

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*The general arrangement of topics is essentially that of Rosenkranz, whose work is made the basis of instruction.

XIII. LAW SCHOOL.

FACULTY.

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

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

HON. BOYLE GORDON, A. M.,
Resident Professor of Law, and Instructor in the Law of Contracts.

JOSEPH G. NORWOOD, M. D., LL. D.,
Professor of Medical Jurisprudence.

CHRISTOPHER G. TIEDEMAN, LL. B , (Columbia Col. Law School,)
Assistant Professor of Law.

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

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

MEMBERS OF THE LAW SCHOOL.

SENIOR CLASS.

Acton, George William	Boonville	Cooper county, Mo.
Bagby, Robert M	Roanoke	Howard county, Mo.
Bascom, Walker	Alma	Lafayette county, Mo.
Bell, Alexis D	Monroe City	Missouri.

Briggs, David J.	Armstrong	Howard county, Mo.
Byrd, Edward Bailey	Hannibal	Missouri.
Cowherd, William S.	Lees Summit	Jackson county, Mo.
Crisp, John Douglass	Exeter	Scott county, Illinois.
Davis, John Brooks	St. Mary's	St. Genevieve county, Mo.
Davis, Samuel Echols	Winfield	Kansas.
Essex, Winfield Scott	Rockport	Atchison county, Mo.
Gerard, Walter Drane	Shelbina	Shelby county, Mo.
Jones, North East	Auxvasse	Callaway county, Mo.
Jurey, John Slaughter, Jr.	Bell Air	Cooper county, Mo.
King, Joseph Francis	Camden	Kansas.
Kennedy, Lamoureaux N.	Wright City	Warren county, Mo.
Lavelock, George Washington	Moreton	Ray county, Mo.
Lyford, Harry Olin	Rockport	Atchison county, Mo.
Robinson, Robert Gamble	Holton	Jackson county, Kansas.
Wright, George William	Huntsville	Randolph county, Mo.

JUNIOR CLASS.

Bauerlein, Frank	Kansas City	Missouri.
Blackburn, Marshall Paxton	Blackburn	Saline county, Mo.
Calvert, Ziba Milton	Warren	Marion county, Mo.
Campbell, John Joseph	Kansas City	Missouri.
Clark, Robert Joseph	Columbia	Missouri.
Cave, Willard P.	Moberly	Randolph county, Mo.
Gilbraith, Gilmer	Prairie Home	Cooper county, Mo.
Hopkins, James M.	Rockport	Atchison county, Mo.
Hudson, Millard Fillmore	Grant City	Worth county, Mo.
Kelley, Hiram B.	Winchester	Illinois.
Magee, Robert Marion	Albany	Gentry county, Mo.
Miller, James Oliver	Smithton	Illinois.
Orchard, Charles H.	Salem	Dent county, Mo.
Palmer, William	Rolling Home	Randolph county, Mo.
Porter, David White	Mound City	Holt county, Mo.
Shaver, John W.	Plattsburg	Clinton county, Mo.
Wagner, Louis	Jefferson City	Missouri.
Young, John D.	Houston	Texas county, Mo.

At the Law Commencement of March 30, 1882, the following gentlemen received the degree of Bachelor of Laws, to wit:

George W. Acton,
Robert M. Bagby,
Walker Bascom,
Alexis D. Bell,
David J. Briggs,
John D. Crisp,
William S. Cowherd,
John B. Davis,
Samuel E. Davis,
Winfield Scott Essex,
Forrest G. Ferris,
Walter Drane Gerard,
North East Jones,
John S. Jurey,
Joseph T. King,
Lamoureaux N. Kennedy,
George Washington Lavelock,
Harry O. Lyford,
Robert Gamble Robinson,
George Wm. Wright.

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, Prose Composition, and in Book-keeping, will be admitted to the Senior class.

Course of Instruction.

The Law term commences on the second Monday of September and closes the last week in March. The full course is for the term of two years, and embraces the various branches given below. The mode of instruction is by daily examination upon the text-books, by lectures upon special titles, and by the exercises of a moot court. The attention of those who desire to enter hereafter is specially called to our new course of study.

The course of instruction is extended chiefly by adding to the studies of the Junior year, and no one will be admitted to the Senior class, as candidate for a degree unless he shall be able to sustain an examination upon such studies. 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, the law of real property in part, international and constitutional law, logic and ethics. The text books will be Broom & Hadley's Commentaries, Parsons on Contracts, Cooley on Torts and Washburn on Real Property, Vol. 1. The instruction in international and constitutional law, logic and ethics will be principally by lectures, but with reference to, and examinations from, Woolsey's International Law, Creasey's English Constitution, Cooley's Treatise upon the Federal Constitution, Jevons' Lessons in Logic, Wayland's or Haven's Ethics.

The Senior class will study the Law of Evidence, of Pleadings, of Real Property, of Bills and Notes, Equity Jurisprudence, Medical Jurisprudence, and the Elements of the Roman Law. The text-books used will be Greenleaf's Evidence, Vol. 1, Bispham's Equity, Stephen on Pleading, Bliss on Pleading, Washburn on Real Property, Vols. 2 and 3, on Bills and Notes, Taylor's Medical Jurisprudence and Sanders' Justinian with Hammond's Introduction. If the class is found pressed for time, Hadley's Lectures, or some other more elementary work, will be substituted for Justinian. Other small and comprehensive works are used for the purpose of reviewing different branches, as Bishop on Contracts, Pollock on Partnership, &c.

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.

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

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; 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 the lawyer, that its study, here or elsewhere, will be insisted on before graduation. An opportunity is given for its study under Professor Royal, and a certificate from him will be required.

The classes are favored at times with lectures upon special subjects by gentlemen not connected with the school. Such lectures have been delivered the past session by Judge Hinton, Shannon Douglas and J. G. Babb, Esqs., of Columbia, and by Francis P. Blair, Esq., of St. Louis.

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, the language, the spirit of the profession; this is, can only be, the work of years. A writer in the May number of 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 dwarfing their prospects at the very outset."

The Moot Court

Is held every Saturday, and is made to represent some actual court, with its clerk and sheriff; and every matter discussed arises in some supposed cause. Regular pleadings are required—most 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 will be permitted to argue a cause, if in default in any particular. 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.

Degree LL. B. (Legum Baccalaureus).

Those of the Senior class, who, at the close of their term, sustain an examination, will be entitled to the degree of Bachelor of Laws. The examination will be in writ-

ing, and the degree will be given or withheld, according to the proportionate number of failures.

Every candidate for this degree is required to file with the faculty a 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.

Expenses.

Tuition for the Term is $40.00, payable in advance. An extra fee of ten dollars is charged for book-keeping. Boarding is had in clubs at $2.25 per week, and in families from $3.00 to $4.50. No fee for incidentals. The law students have access to any of the other schools, without any additional expense.

General Remarks.

The success of the College of Law has been such, that with continued diligence in following up and perfecting the system adopted, no fears are entertained of its future. The Law Faculty are more and more satisfied that the highest results cannot be reached by lectures alone, however clear and thorough they may be, but that the student 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 system has been combined with the other, and, in subjects, which for want of time and proper books cannot be otherwise taught, it is chiefly relied on. Thus we have, in addition to the daily examinations upon text-books, usually one daily lecture, often two.

For further information address P. BLISS, Dean of Law Faculty, Columbia, Mo.

For catalogue address J. H. Drummond, Librarian of the University.

XIV. MEDICAL SCHOOL.

(Founded 1845.)

FACULTY.

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

JOSEPH G. NORWOOD, M. D., LL. D., Dean,
Professor of Medical Jurisprudence.

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.

JOHN H. DUNCAN, A. B., M. D., Secretary,
Professor of Materia Medica, Physiology and Practice of Medicine.

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

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

B. F. THOMAS, Ph. D.,
Professor of Physics.

J. M. ALLEN, M. D., Liberty, Mo.,
Lecturer on Diseases of the Gastro-Intestinal Canal.

W. P. KING, M. D., Sedalia, Mo.,
Lecturer on Gynecology.

J. E. TEFFT, M. D., Springfield, Mo.,
Lecturer on Genito-Urinary Surgery.

EXAMINERS FOR MEDICAL DEGREES.

J. W. PRYOR, M. D., *Monroe District Medical Society.*
W. H. BRYANT, M. D., *Northwestern District Medical Society.*
J. W. TRADER, M. D., *Central District Medical Society.*
PINKNEY FRENCH, M. D., *Linton District Medical Society.*

MEDICAL CLASS OF 1881-82.

Names.	*Residences.*
Blackwell, Egbert Edwin	Missouri.
Bonham, Romeo Vivian	"
Briles, Christopher Columbus	"
Browning, Charles Clifton	"
Bush, Benjamin Franklin	"
Chilton, Edgar	"
Cottingham, Robert Curtis	"
Edwards, John Michael	"
Gaut, James Samuel	"
Gremp, Solomon Alfro	Germany.
Gwinn, Russel	Missouri.
Hume, Charles Challis	"
Kemble, William	"
Lawhorn, George Washington	"
Lee, John Alfred	"
Logan, James Elmore	"
Lougeay, William Henry	"
Majors, Alex. C	"
Minor, James Alvin	"
Norris, Wilford Alexander	"
Nowierski, Bronislaw Jozef	"
Orem, Grant	"
Padget, John Wesley	"
Pitcher, Henry Eusebius	"
Rollins, Jarrot Laban	"
Sands, Martin Luther	"
Schwabe, George Washington	"
Stierberger, Charles Rudolph	"
Stratton, Charles Daniel	"
Sutton, Benjamin Morton	"
Wallace, Charles Hodge	"
Wilcox, William Payne	"
Wilson, Benjamin Franklin	"
Winn, Albert Clark	"
Young, Oscar David	"

Regular Students, 35.

STUDENTS OF PHARMACY.

Atkins, Calvin ..... Missouri.

GRADUATES OF 1880-81.

Oliver Bagby	New Haven, Mo.
James Gordon	Columbia, "
Joseph E. Harris	Danville, "
Fayette B. Roberts	Rocheport, "
Marshall E. Doolittle	Russell, N. Y.
Valedictorian—M. E. Doolittle	" "

The annual address was delivered by Dr. W. B. Adams, of Danville, Montgomery county, Missouri.

The twentieth course of instruction will begin on the second Monday of September, 1882, and continue until the end of the college year, the first Thursday of June, 1883.

The course is as full and complete as is given in any school in this country. The introduction of the graded course, (Junior and Senior classes), requiring two (2) terms of nine (9) months each, gives the beginner (Junior) ample time for the thorough investigation of the primary branches of Medicine before entering upon the study of the higher; and also gives the Senior student the opportunity of *visiting patients* with the members of the Faculty, and reading other works than text-books. The Juniors are not advised to see patients, simply from the fact that they are not prepared to appreciate them; but the more advanced students, who are now able to discriminate between diseases, enjoy most excellent clinical advantages.

The clinical material is obtained from a population of from 1,000 to 1,500 of the poorer class of people of the city and county, who are willing and anxious to obtain the free advice and treatment of the Medical Faculty and students. The physicians of the city give valuable assistance by turning over their pauper patients to the school. Besides, the County Poor-house, to which the Faculty have free access, contains constantly from 50 to 60 inmates. A student is taken directly to the bedside of a patient and the case is placed under his special care.

Experience has demonstrated the practicability of the above plan for obtaining clinical material, and also that the association and relation of the student with the patient is so intimate, that what is not possible in hospital clinics, he becomes familiar with the peculiarities of family practice, which he is to meet in his professional life. The professor of Surgery requires every Senior student to perform on the cadaver, before the members of the class, all the more common operations; and it is a fact, worthy of notice, that hardly a student has graduated from this school, who did not have under his charge during his senior year, a case of labor.

GENERAL PLAN OF INSTRUCTION.

Instruction in this school is given by lectures, recitations and clinical teaching.

It has been the custom of the Faculty for several years to invite, with the approval of the local Board, gentlemen from a distance other than the *Special Lecturers*, to visit the College and severally give a series of lectures on some medical subject, that each may select. This has proven to be a great assistance to the Faculty, and of marked benefit to the students. In accordance with this custom, Dr. F. J. Lutz, of St. Louis, Mo., gave a very excellent course of lectures on "Abdominal Surgery" during the session of 1881-82; and Dr. J. F. Hurt, Vice President of the "Missouri State Pharmaceutical Association," and member of the State Board of Pharmacy, a course of lectures extending through the entire college term on "Pharmacy."

We are pleased to announce that Dr. F. J. Lutz will visit the school during the coming session, and deliver a course of lectures on "Regional Surgery;" also, that Dr. William Dickinson, of St. Louis, Mo., will lecture upon:

(1). Anatomy of the eye and its appendages.

(2). Diseases of its component parts and treatment.

(3). Anomalies of refraction and accommodation and correction by appropriate glasses.

(4). The Ophthalmoscope and its uses.

For several years an examination in English has been required of students before admission to the *Senior Class;* to this examination have been added *Orthography* and *Geography.* It may be found practicable in the future to increase these literary requirements.

It has occurred within the past year, 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 cramming—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 high standing, throughout the country, of the graduates of the medical department of Virginia University, is sufficient evidence of the value of this method of teaching.

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 farther 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 and Science. Some students pursue this plan every year.

A full course of lectures is given on Medical Jurisprudence, to the combined classes in Law and Medicine. When necessary, for the more complete understanding of the subject, the lectures are illustrated by the use of accurate anatomical models; and anatomical and physiological instruction is given, incidentally, for the special benefit of the law students.

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 vertebrae, 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 vitelline 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 resumè 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 method 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 practice 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 12 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.

It is only at the dissecting table that its anatomy and its physiology can be understood. Hence, students who are applicants for graduation are required to perform all the principal operations on the cadaver, in the presence of the class, and to explain, minutely and accurately, the anatomy of the parts involved, each step of the operation, and the method of dressing.

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 Hirschfeld, Rudinger and others, together with over 400 projections, etc., etc.

Instead of the customary oral examinations for the Degree of Doctor of Medicine, a series of written examinations are held during the course by the different members of the Faculty; and the degree of M. D. is conferred upon such students as prove their fitness to receive it. These examinations are preliminary to the final examination by

The Board of Examiners.

This Board consists of physicians, selected from different Medical Districts, who are eminent in their profession, and possess the confidence of their brethren and of the public, and who have no other relation to the school. Their appointment is for four years, and is made by the Curators of the University. They may be nominated by the different District Medical Societies, and their names sent to the Board of Curators for confirmation.

The duty of this Board consists in examining the candidates for the Degree of Doctor in Medicine, on all the branches embraced in the curriculum of the school. They subject to examination all students whose names are presented by the Medical Faculty, as having attained, during the session, the requisite grade of scholarship. It is by the decision of this Board, only, that the names of students are presented to the general Faculty, and through it to the Board of Curators, as worthy to receive the Doctorate.

Candidates for graduation must have a standing of 85 per cent in Anatomy and Physiology; of 60 in Chemistry, Toxicology and Pharmacy, and of 75 per cent. in all other studies.

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 2d Monday in September, 1882; the Junior course will close the 1st Thursday in May, 1883, and the Senior course the 1st Thursday in June. 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.*

A preliminary examination in English is required of those students who apply for admission to the Senior class. The number of persons who can neither spell correctly nor write the English language grammatically, that are annually graduated from our medical and other schools, is astonishingly large. Such graduates are a disgrace to the profession and to the institutions granting them diplomas. The fault rests originally with the primary schools, but it is, doubtless, a graver fault for those who govern professional schools, to admit such uneducated persons to their classes.

All students, before *entering the Senior* class, must pass a satisfactory examination upon:

(1.) English Grammar (Harvey) and Orthography.

(2.) Rhetoric (Hart).

(3.) History of the United States (Swinton) and its Geography.

(4.) Arithmetic (the four fundamental rules, denominate numbers and common fractions).

The students will be taught, during the session, the metric system of weights and measures, and the elements of Physics.

The metric system is now almost universally used, and it is of the most vital importance that medical men should have a knowledge of it.

Any student who has a good common school education, ought to pass such an examination. As the course of instruction is arranged, all students are urged, *during their Junior year*, to pursue, in the academic department, any of the above branches in which they may be deficient, or, if necessary, all of them, *without extra cost*. Then

after the Junior course has been completed, and they return to enter upon the final, or Senior year, they should, with ease, be able to pass the preliminary examination in English. It will be observed that this examination is not required of the Juniors. A young man has, however, the privilege of having the examination whenever he thinks he is prepared for it, whether it is at the beginning or end of the Junior year, or beginning of the Senior year.

These literary and scientific examinations are conducted by the Professors of the University having these subjects in charge, and the grade attained passes to the credit of the student on the books of the institution.

No student is allowed to attend both courses the same year. Before he is permitted to present himself before the Board of Examiners, he must either have attended two (2) courses of eight or nine months in this institution, or present tickets showing that he has attended *at least one* course in some regular reputable Medical College;-and in any event, must pass a satisfactory examination in the subjects embraced in the Junior course, previous to his entering the Senior class.

The following shows the studies of the two classes for the entire college year:

Junior Class.

Anatomy, Physiology, Chemistry, Materia Medica, Medical Botany, Surgery, Physics, Metric System of Weights and Measures, Laboratory Work, Dissecting and Medical Jurisprudence.

Senior Class.

Anatomy, Toxicology, Surgery, Obstetrics, Practice of Medicine, Lectures by Special Professors, Laboratory Work, (optional), Dissecting and Medical Jurisprudence.

Text-Books, and Books of Reference.

Anatomy—*Gray*, Wilson, Leidy.
Surgery—*Ashurst*, Gross, Erichsen.
Physiology—*Dalton*, Flint, Carpenter.
Principles and Practice of Medicine—*Flint*, Niemeyer, Watson.
Materia Medica—*Bartholow*, Biddle, Farquharson.
Chemistry—*Fownes*.
Obstetrics—*Schroeder*, Playfair.
Diseases of Women and Children—*Thomas*, West, Smith.
Histology—*Frey*, Rindfleish's Pathological Histology.
Pathology—*Virchow*, Paget, Gross.
Toxicology—*Taylor*.
Opthalmology—*Wells*, Williams.
Otology—*Toynbee*, Turnbull.
Medical Jurisprudence—*Taylor*, Wharton and Stillé.
Nervous Diseases—*Hammond*, Reynolds.
Diseases of the Heart and Lungs—*Flint*, Loomis, Walsh.
Clinical Medicine—Trousseau, Graves, Bennett.

Every student should provide himself with a medical dictionary (Dunglison's is suggested). The text-books are designated by *italics*.

Requisites for Graduation.

1. The candidate must have completed and sustained a satisfactory examination upon the course prescribed in this school.

2. He must be twenty-one years of age, and exhibit to the Faculty satisfactory evidence of possessing a good character.

3. His last course of lectures must have been attended in this Institution.

4. He must have been regular in attendance on lectures and recitations.

5. He must have pursued the study of practical anatomy, under the supervision of the Demonstrator, during his course of pupilage in this Institution.

6. He must notify the Dean of the Faculty, privately, on or before the first week of April, of his intention to become a candidate for graduation at the ensuing Commencement.

7. He must write a thesis on some medical subject, of not less than fifteen pages. The thesis may be in English, Latin, German or French. It must be of his own composition, and in his own hand-writing. It must be handed to the Dean before the first of May, accompanied with the Treasurer's receipt for the graduation fee of $5.

8. Every candidate must appear before the members of the Faculty for examination on the various branches of medicine taught in this school, at the time appointed for such examinations, and before the Board of Examiners, at the hours appointed by the Board.

9. Violation 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 and from the anatomical rooms, will prevent a student from obtaining a degree.

10. If a candidate is rejected his thesis and graduation fee will be returned to him.

For flagrant violation of the rules and laws, established for the government of the University, a professional student may be expelled from the Institution. In such a case, the fees on his entrance will not be returned to him.

Valedictory.

The candidates for graduation must select, on or prior to April 8th of each year, one of their number as valedictorian; in the event that they fail to select a representative, the Medical Faculty may appoint as valedictorian, the gentleman having the highest course and examination standing.

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

J. G. NORWOOD, M. D.,
Dean Medical Faculty, Columbia, Mo.

For catalogues, address

J. H. DUNCAN, M. D.,
Secretary Medical Faculty, Columbia, Mo.

Missouri University.

SCHOOL OF MINES AND METALLURGY,

Rolla, Phelps County, Missouri.

ANNOUNCEMENT AND REGISTER,

FOR THE YEAR ENDING JUNE 8th, 1882.

BOARD OF CURATORS.

JOHN S. CLARKSON, A. M.	Columbia	Term expires Jan. 1, 1883.
JERRE C. CRAVENS, ESQ	Springfield	
JUDGE JAMES LINCOLN	Clay County.	
HON. WM. F. SWITZLER	Columbia	Term expires Jan. 1, 1885.
JAMES R. ESTILL	Howard Co.	
A. M. MILLARD	Rolla	
HON. JAMES S. ROLLINS, LL. D	Columbia	Term expires Jan. 1, 1887.
CHARLES C. BLAND, ESQ	Rolla	
WILLIAM H. LACKLAND, ESQ	St. Louis	

OFFICERS OF THE BOARD.

HON. JAMES S. ROLLINS, LL. D. ..... President.
JERRE C. CRAVENS, ESQ ..... Vice-President.
ROBERT L. TODD, Secretary. RICHARD BEVERLY PRICE, Treasurer.

SCHOOL OF MINES.

EXECUTIVE COMMITTEE.

JUDGE CHARLES C. BLAND, Chairman ..... Rolla.
A. M. MILLARD, ESQ ..... Rolla.
JERRE C. CRAVENS, ESQ ..... Springfield.
C. H. FROST, Treasurer ..... Office at Rolla.
PROF. R. W. DOUTHAT, Secretary Executive Committee.

FACULTY.

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

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

MAJ. GEO. D. EMERSON, M. E.,
Professor of Civil and Mine Engineering and Graphics.

ROB'T W. DOUTHAT, A. M., PH. D.,
Professor of Languages, Principal of Preparatory Department and Secretary for Faculty.

GEORDIE Z. WHITNEY, A. B., LL. B. (Univ. Mich.),
Professor of Mathematics.

MISS FLORENCE E. WHITING,
Assistant in Preparatory Department and Recording Secretary.

PROF. GEORDIE Z. WHITNEY,
Librarian.

GRADUATES.

Duncan, Gustavus H., C. E.	1874	Boulder, Col.
Gill, John H, C. E.	1874	U. S. Eng. Dept., Washington, D. C.
Pack, John W., M. E.	1874	Assayer, Helena, Montana.
Deegan, Francis J., C. E.	1875	Surveyor for St. L. & San Francisco R. R.
Hare, Almon W., M. E.	1875	Leadville, Col.
Emerson, Cyrus H., C. E.	1876	Dennison, Texas.
Garvens, Oscar E., M E.	1876	Lead City, Dakota Ter.
Greason, John D., M. E.	1876	Druggist, Ironton, Mo.
McGrath, John E., 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	Butte City, Montana.
Millsaps, Thomas H., C. E.	1877	South America.
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, Rosita, Col.
Bean, William Y., C. E.	1878	Engineer Mo. 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. Dept., City of Mexico.
Carson, Arthur C., M. E.	1880	Butte City, Montana.
Smith, Lorin X., M. E.	1880	Topog. Eng. Kansas City & Memphis R. R.
Smith, Lorin X., C. E.	1881	" " " " " "
Summers, Edward B.	1881	Engineer, Missouri Pacific R. R.
Wishon, Walter W.	1881	Colorado Springs, Col.

LICENTIATES.

Blow, Peter E. (Anal. Ch.)	1875	Supt. Granby M. and S. W'ks, Granby, Mo.
McGuire, John (Chem. and C. E.)	1875	Ast. Eng. Calumet M., Lake Superior, Mich.
Whiting, Florence E. (Math.)	1875	Teacher School of Mines.
Winters, Christian R. (Anal. Ch.)	1875	Assayer, Leadville, Col.
Blanchard, Eliphalet (Anal. Ch.)	1876	Steelville, Mo.
Thiele, Lewis W. (Anal. Ch. and Met.)	1878	Assayer, Salida, Col.
Briegel, Gustavus A. (Land Surv.)	1878	Trenton, Mo.
Owen, John R. D. (Book-keeping)	1878	Student, Rolla, Mo.
Tobien, John H. (Book-keeping)	1878	Clerk, Neosho, Mo.
Wetter, Edward T. T. (Gen'l Chem)	1878	Milwaukee, Wis.
Bishop, Jennie (Book-keeping)	1879	Married, Rolla, Mo.
Bishop, Julia (Book-keeping)	1879	Married, Rolla, Mo.
Hood, Tillie (Book-keeping)	1879	Richland, Mo.
Gallaher, Philip C. (Book-keeping)	1879	Student, Rolla, Mo.
Sally, James B. (Book-keeping)	1879	County Clerk's office, Rolla, Mo.
Wishon, Chas. (Book-keeping)	1879	Rolla, Mo.
Lane, Thos. E. (Teacher's Certificate)	1880	Regular Teacher, Rolla, Mo.
Snelson, W. H. (Teacher's Certificate)	1880	County Surveyor, Rolla, Mo.
Strine, Jno. H. (Teacher's Certificate)	1880	Regular Teacher, Rolla, Mo.
Pack, Annie A. (Book-keeping)	1881	Student, Pacific, Mo.
Strine, David S. (Book-keeping)	1881	Rolla, Mo.
Johnson, Uriah H. (Book-keeping)	1881	Teacher, Fourche a Renault, Mo.
Wilson, Dora E. (Teacher's Certificate)	1881	Teacher, Pacific, Mo.
Wilson, Carrie B. (Teacher's Certificate)	1881	Student, Rolla, Mo.
Stiff, Lelia B. (Teacher's Certificate)	1881	Rolla, Mo

COURSES OF STUDY.

Parents or guardians are requested to designate the course or the studies they wish their sons or wards to pursue.

These courses are all independent of each other, so that the student who wishes an education and not a Diploma or Certificate may pursue parts of all the courses.

TEACHER'S COURSE FOR FIRST CLASS CERTIFICATE.

FIRST YEAR.

First Semester.	Second Semester.
Higher Arithmetic.	Botany, *Gray's.*
General Grammar.	Higher Arithmetic.
Word-Analysis, *Swinton's.*	General Grammar.
Physical Geography, *Guyot's.*	Word-Analysis, *Swinton's.*
English History.	English History.
Anatomy, Physiology and Hygiene, *Cutter's.*	English Literature, *Hart's.*

SECOND YEAR.

First Semester.	Second Semester.
Book-keeping, *Rohrer's.*	Rhetoric, *Hart's.*
Algebra, *Olney's.*	Civil Government, *Townsend's.*
Geometry, *Davies' Legendre.*	Algebra, *Olney's.*
Physics, *Peck's Ganot's.*	Logic, *Coppee's.*
Theory and Practice.	Chemistry, *Norton's.*
Map Drawing.	Physics, *Peck's Ganot's.*
Astronomy, *Loomis'.*	Elocution, *Hamill's.*

PREPARATORY AND SPECIAL—FIRST DIVISION—MISS FLORENCE E. WHITING—FIRST AND SECOND SEMESTER.

Hour.	Study.	Remarks.
9—10	Higher Arithmetic	The entire subject.
10—11	Rhetoric and Comp. (Hart's)	The entire subject.
11—12	Eng. History & Civ. Gov.	The entire subject.
12— 1	Gen'l Gram. & Word Anal.	The entire subject.
2— 3	Algebra (Olney's)	First Term to Part II.; 2d finish.
3— 4	Book-keeping (Rohrer's)	Through Merchant's Acc'ts.

LITERARY AND SPECIAL—SECOND DIVISION—PROF. R. W. DOUTHAT—FIRST AND SECOND SEMESTER.

Hour.	Study.	Remarks.
9—10	German Drama	Written and Oral Translation, 80 Lessons.
10—11	German Reader and Conver	Written and Oral.
11—12	German Exercise Book	Written and Oral Translation.
12— 1	Latin Classics	Written and Oral Translation.
2— 3	Latin Exercises and Reader	Written and Oral Translation.
3— 4	Eng. Lit. and Logic	The subjects entire.
4— 5	Anat., Phys. and Hygiene	Tuesdays and Wednesdays, entire subject.
4— 5	Book-keeping	For Banking, Railroading, Steamboating, and Mining and Manufacturing Companies, on Thursdays, Fridays and Saturdays.

To those who complete the Teacher's Course and pass a creditable examination thereon, certificates of proficiency will be awarded, and we have the assurance of the State Superintendent of Public Schools that his certificate—first class for two years—will be issued to all those who receive the School of Mines' Certificate on this course. Thus double honors attach to the completion of the Teacher's course. Moreover, to those who do not expect to teach, this course furnishes all the studies required for a good English education.

The Book-keeping required in this course is that of Merchants' Accounts for Retail, Wholesale and Commission; but to those who desire the fuller course, full instruction will be given in Banking, Railroading and Steamboating.

Certificates will be issued on a Book-keeper's course to all those who complete the following studies:

Word-Analysis, English Grammar, Higher Arithmetic, and Book-keeping *in all its forms*, for Merchants' Accounts, Banking, Railroading, Steamboating and for Mining and Manufacturing Companies. The necessary Blank-books for this course are a Waste Journal (2 quires, 40c.), a Waste Ledger (2 quires, 50c.), a No. 1 Journal (2 quires, 60c.), and a No. 1 Ledger (2 quires, 75c.). Half these books are sufficient for those who study only Merchant's Accounts.

PREPARATORY DEPARTMENT.

For the benefit of persons who have not enjoyed such facilities elsewhere, a Preparatory Department has been established. The School of Mines does not undertake to do the work which the common schools are able and willing to do, and candidates for admission to this department must, therefore, pass examination in the following branches, viz.: Spelling, English Grammar and Arithmetic.

The Preparatory Course is shown in the following schedule:

First Term.—Algebra, to Part II., *Olney;* Higher Arithmetic; Word Analysis, *Swinton;* Rhetoric, *Hart;* Physical Geography, *Guyot;* Physics, *Peck's Ganot;* and Drawing, Freehand and Ornamental.

Second Term.—Algebra, Elements completed, *Olney;* English Literature, *Hart;* Logic, *Coppee;* Chemistry, *Norton;* Botany, Structural and Systematic, *Gray;* Rhetoric, *Hart;* Drawing, Freehand and Ornamental; and Plane Geometry.

FOR THE DEGREE OF MINING ENGINEER.

First Year.

First Term.—Chemical Philosophy, General Chemistry, Blowpipe Analysis, Field Practice, Drawing, Solid Geometry, and Trigonometry.

Second Term.—General Chemistry, Analytical Chemistry, Determinative Mineralogy, Land Surveying, Physics, Drawing and Descriptive Geometry.

Second Year.

First Term.—Analytical Chemistry, Quantitative Analysis, Mineralogy and Geology, Metallurgy, Higher Surveying, Drawing, General Geometry and Calculus, and Higher Algebra.

Second Term.—Geology; Analytical Chemistry, Quantitative; Assaying, Metallurgy, Mine Engineering, Steam Engine, Drawing, General Geometry and Calculus.

Third Year.

First Term.—Analytical Chemistry, Quantitative; Metallurgy, Mine Engineering, and Mechanics.

Second Term.—Analytical Chemistry, Quantitative; Graduation Thesis.

FOR THE DEGREE OF CIVIL ENGINEER.

First Year.

First Term.—Chemical Philosophy, General Chemistry, Blowpipe Analysis, Field Practice, Drawing, Solid Geometry and Trigonometry.

Second Term.—General Chemistry, Analytical Chemistry, Determinative Mineralogy, Land Surveying, Physics, Drawing, and Descriptive Geometry.

Second Year.

First Term.—Roads and Railroads, Higher Surveying; Drawing, Topographical; General Geometry and Calculus, Analytical Chemistry, Geology, Astronomy, and Higher Algebra.

Second Term.—Mine Surveying, Steam Engine; Drawing, Mechanical; General Geometry and Calculus, Analytical Chemistry, Quantitative (optional); Geology, Civil Engineering.

Third Year.

First Term. — Field Work, Railroad Location, etc., Mechanism, Drawing, Mechanics.

Second Term.—Practical Topography, Drawing, Assaying, Graduation Thesis.

GIRLS' COURSE IN ARTS.

First Year.

First Term, ending February 7th. The studies named in this term require for preparation and recitation full 12 hours.	Higher Arithmetic	*2½
	General Grammar	2
	Word-Analysis	1½
	Physical Geography	1
	United States History	2
	Anatomy, Physiology and Hygiene	2
	Freehand and Ornamental drawing	1
Second Term, ending June 9th. The studies named in this term require for preparation and recitation full 12 hours.	Botany	1
	English History	2
	English Literature	2½
	Rhetoric	2
	Civil Government	1
	Latin or Greek begun	2½
	Freehand and Ornamental Drawing	1

Second Year.

First Term, ending February 7th. The studies named in this term require for preparation and recitation full 12 hours.	Book-keeping through Merchants' Accounts	2½
	Algebra	2½
	Physics	1
	Latin or Greek continued	2½
	German, French or Spanish begun	2½
	Drawing	1
Second Term, ending June 9th. The studies named in this term require for preparation and recitation full 12 hours.	Algebra finished	2½
	Physics	1
	Logic	1½
	Chemistry	1½
	Latin or Greek continued	2½
	German, French or Spanish continued	2½
	Drawing	1

*The figures opposite the studies indicate the time required for preparation an recitation.

THIRD YEAR.

First Term, ending February 7th.	Geometry	2
	Mineralogy	1
	Geology	1
	Astronomy	1
The studies named in this term require for preparation and recitation full 12 hours.	Roman History	2
	Latin or Greek continued	2
	German, French or Spanish	2
	Drawing	1
Second Term, ending June 9th.	Trigonometry	2
	Mensuration	2
	Latin or Greek	2
The studies named in this term require for preparation and recitation full 12 hours.	German, French or Spanish	2
	Geology	1
	Grecian History	2
	Drawing in water colors and oil	1

FOURTH YEAR.

First Term, ending February 7th.	Analytical Geometry	2
	Descriptive Geometry	2
	Latin or Greek	2
The studies named in this term require for preparation and recitation full 12 hours.	German, French or Spanish	2
	Mediæval History	2
	Drawing in water colors and oil	2
Second Term, ending June 9th.	Calculus	2
	Chemistry and Laboratory Work	3
	Psychology	2
The studies named in this term require for preparation and recitation full 12 hours.	Political economy	2
	Drawing in water colors and oil	2
	Preparation of Thesis for Graduation	1

In addition to the studies named above, this course requires alternate weekly reading or recitation and essay writing. These studies are not named in the course, because they simply take the place of other studies on Saturday afternoon, and do not, therefore, increase the amount of labor.

FOR THE DEGREE OF BACHELOR OF PHILOSOPHY.

FIRST YEAR.

First Term.—Chemical Philosophy, General Chemistry, Blowpipe Analysis, Field Practice, Drawing, Solid Geometry and Trigonometry.

Second Term.—General Chemistry, Analytical Chemistry, Determinative Mineralogy, Land Surveying, Physics, Drawing and Descriptive Geometry.

Second Year.

First Term.—Analytical Chemistry, Quantitative Analysis, Mineralogy and Geology, Metallurgy, Higher Surveying, Drawing, General Geometry and Calculus, and Higher Algebra.

Second Term.—Geology, Analytical Chemistry, Quantitative Assaying, Metallurgy, Steam Engine, Drawing, General Geometry and Calculus.

Third Year.

First Term.—Analytical Chemistry, (Quantitative) and Assaying; Metallurgy, Mechanics and Mechanism.

Second Term.—Analytical Chemistry, Quantitative; Graduation Thesis.

OPTIONAL COURSE.

Open to all Students, but Required of None.

Book-keeping, in all its forms, for Merchants' Accounts, Retail, Wholesale and Commission; and for Banking, Railroading and Steamboating.

Latin and Greek, according to the fullest course of first-class Colleges or Universities. The study of these languages may be commenced at the beginning of the first or second semester. The pronunciation given to Latin is either the German or the English, according as the student wishes to continue the study in Germany or the United States.

The principal modern languages, German, French and Spanish, are also taught; and to each the student may devote one, two, three or four years, taking an extended course in reading, writing and conversation. An effort is made to train the *eye*, the *ear*, the *tongue* and the *hand*, so that each student may read at sight any of these languages, understand them when they are spoken, pronounce them properly and fluently, and write them correctly and readily.

In Drawing, those who have a taste for the ornamental can pursue to any length Pen-and-Ink Sketching and Painting in Water Colors and Oil. These branches, although belonging, for the most part, to an æsthetic rather than to a useful education, nevertheless offer to young ladies and to young gentlemen of leisure the means of securing an accomplishment equal in every respect to that of music.

In addition to the course of Ornamental Drawing, those who so desire can obtain instruction in Architectural and Mechanical Drawing.

DEPARTMENTS OF INSTRUCTION.

MATHEMATICS.

PROFESSOR WHITNEY.

Inasmuch as the student of Engineering can scarcely read the primers of his profession without a considerable knowledge of Mathematics, and in recognition of the importance of Mathematical studies from an educational as well as from a professional point of view all the work mentioned below, with the exception of 12, running through the entire course, save the last Semester of the last year are required of all students candidates for a degree.

While special attention is given to the mental discipline of the student in the logical development of the Mathematical processes as *arguments*, the great practical end of preparing him to attack the problems of physical science by the Mathematical method with its enormous advantanges is never for a moment lost sight of.

The attention of those contemplating entering upon the studies of the first year is called to a remark of Prof. Ficklin, found in another part of this report, in which he says: "Imperfect preparation in Algebra is so common as to compel the conviction that sufficient attention is not given to this branch of mathematics in many of the preparatory schools of the State. Its importance can not well be over-estimated.

The course of study is as follows:

PREPARATORY YEAR.

First Semester.

1. Arithmetic, (completed).
2. Algebra to Part II, (Olney), 5 times per week.

Second Semester.

3. Algebra, (elements completed), 4 times per week.
4. Plane Geometry, (Davies' Legendre), 3 times per week.

FIRST YEAR.

First Semester.

5. Solid Geometry, 2 times per week.
6. Trigonometry, (Olney), 3 times per week.

Second Semester.

7. Descriptive Geom., Shades and Shadows, (Church), 4 times per week.

SECOND YEAR.

First Semester.

8. Higher Algebra, (Olney), 2 times per week.
9. General Geometry and Calculus, (Olney), 4 times per week.

Second Semester.

10. General Geometry and Calculus, 4 times per week.

THIRD YEAR.

First Semester.

11. Mechanics, 4 times per week.

Second Semester.

12. Advanced Gen. Geom. and Calculus, 4 times per week.

Studies must be taken in the *order* indicated above, except that course 8 may follow immediately after course 3, and courses 9, 10 and 11 may be taken before course 7. Course 10 is a continuation of course 9. While course 12 is optional, it is thought there will be a sufficient number of students who appreciate the importance of extending their researches to warrant the formation of such a class. Some such treatise as that of Courtenay or Williamson will be made the basis of instruction.

The studies of the first year can not be taken up until a satisfactory examination has been passed in Arithmetic, the Algebra of the preparatory year—comprising the fundamental rules, factoring, fractions, simple equations with one or more unknowns, involutions and evolution, the calculus of radicals, ratio, proportion, the progressions, quadratic equations, equations of higher degrees which may be solved after the manner of quadratics, pairs of simultaneous equations which may be solved by general methods or by easily recognized expedients and the *use* of logarithms—and Plane Geometry.

The Arithmetic and Algebra of the preparatory year are taught by Miss Whiting.

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 semester, and is continued throughout the year. 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 class in general chemistry, and also for entering upon laboratory work, which is commenced the following year.

First Class.

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

The remainder of the year is given to a complete course in theoretical chemistry. A careful study is made of the non-metallic and metallic elements, and important compounds of each. The latter part of the course is devoted to organic chemistry, with special reference to the chemistry of vegetable and animal life.

ANALYTICAL CHEMISTRY.

Professor Wait.

First Year.—Blow-pipe Analysis (Elderhorst's Manual); Qualitative Analysis (Fresenius).

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

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

Instruction in this Department is thoroughly practical, and extends throughout the first, second and third years. There is a commodious laboratory, supplied with necessary apparatus, also balance room and mineral collection. In the basement are furnaces, which are used in the assay of ores.

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 blow-pipe 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 blow-pipe, and enabling him to detect, with almost certainty, 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 given to him, including mixtures of salts, also alloys, ores of lead, copper, zinc, antimony, iron, etc., etc., soils, insoluble silicates and mineral waters.

Determinative mineralogy is also entered upon; the composition of minerals is ascertained by the blow-pipe.

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 work commences with the analysis of substances whose compositions are known; there is thus a check upon the accuracy of the student's work.

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 Amonia;* (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, ultimate 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) Native bismuth; (31) Regulus; (32) Beryl; (33) Zicon; (34) Illmenite; (35) Chromite; (36) Salpetre soil; (37) 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 domestic valuation of the ores and the most prominent metals.

Special students may enter this department at any time, and may pursue, at their discretion, the study and analysis of any class of ores of 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.

METALLURGY.

PROFESSOR WAIT.

The instruction in this department is given by lectures, supplemented by laboratory practice omitting Nos. 14, 15, 16, 32, 33, 36 and 37 of the list given under analytical chemistry, and is illustrated by diagrams, models and specimens. The course is introduced by zinc, and is followed by lead, silver, nickel, mercury, copper, iron and antimony. 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 solutions 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.

PHYSICS.

The apparatus for illustration in this department is already very complete. The instruction, for the present, is divided between Professors Wait, Emerson and Whitney.

GEOLOGY AND MINERALOGY.

In the preparatory year, the students have recitations and lectures and physical geography; in the first year, recitations and lectures in descriptive mineralogy, 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 gangues. These exercises are followed, in the second year, 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 EMERSON.

In this department, practical work in the field forms a prominent, and, as we believe, a somewhat distinctive feature. The use of instruments in the field, by all the students of Civil Engineering, begins with the second semester of the first year, and is continued throughout 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 all its capabilities; the needle compass, the solar compass, the transit instruments, the leveling instrument, the sextant, the barometer, and the various tools used in drawing and plotting. Friday, and sometimes Saturday, of each week, 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, or described in the books. Tracts of land, roads and streams are surveyed and plotted; contours of the adjacent country are made with the leveling instrument, the barometer, etc.; 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 semester of the second year.

Gillespie's treatise upon Roads and Railroads, forms one of the studies of the Engineering course.

GRAPHICS.

PROFESSOR EMERSON.

During the preparatory year, the students are instructed in the elements of drawing, with pen and pencil, according to the principles contained in Chapman's Drawing-book. They are also practiced in freehand drawing. These exercises develop the special tendencies of the student, and enable the Professor to judge in what direction his greatest strength lies, and where his week points most need to be reinforced.

During the first year, the practice is in topographical drawing, with pen and India ink, representing the lines of contour of the earth's surface, showing the bounding curves which would limit the surface in case of a gradual rise of water; taken at every 5, 10 or x feet. The hatching lines of declivity are drawn; also, the various conven-

tional representations of surface. The students are exercised in a carefully organized method of drill in printing, in order to acquire a rapid system of lettering—of essential importance in finishing maps, problems, title pages and mechanical drawings. There is also a careful study of the true standards of the three colors, with their secondary and ternary combinations, simultaneous contrasts, harmonies, unisons, aerial perspective, and the important practical application of laying on flat tints. This is followed by applications to colored topography, etc.

The second year's exercises are in construction of problems in descriptive geometry, and in shades, shadows and perspective. The problems are drawn with pen and India ink on demy drawing paper, and all 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.

In the third year, the subject of stereotomy is taken up, in its applications to the various problems of stone-cutting and the construction of terre-pleins, ramparts, ramps and embrasures of permanent fortifications. There are also required drawings of bridges, furnaces, machines, their shadows and perspective, as they would appear to the eye, at a finite distance from the perspective plane, mathematically constructed and properly colored.

Those who possess the requisite taste for such subjects, may be exercised in pen, India ink and color drawings of landscapes, figures, etc., and be led to apply their acquirements to natural history.

MINE ENGINEERING.

PROFESSOR EMERSON.

This is taught entirely by lectures. The subjects of systems 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, the field and office work of the geological department, and by extended instruction in assaying and analytical chemistry, and in drawing plans and sections of mines, and the result of the 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 all 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 semester, for incidentals and for the use of the library. Special and partial students are subject to the same charges; an exception, however, is made against those devoting their time to analytical chemistry or assaying. Such pay a small additional fee for chemicals consumed. All laboratory students furnish their own blow-pipes, platinum, crucibles and apparatus, silver and gold solutions, alcohol for heating purposes, and pay for apparatus damaged or broken, while in their service. A deposit covering the value of the apparatus issued, is required to be placed in the hands of the treasurer by each laboratory student. This deposit, less the value of the breakage, 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 diploma, and a fee of $1 for the certificate of proficiency.

The courses of study will be rigidly enforced on all students, candidates for the degrees of the institution. The professional degrees awarded are Civil Engineer (C. E.,) Mine Engineer (M. E.,) and Bachelor of Philosphy (Ph. B.). Students, not candidates for degrees, or special students, are admitted at any time, and are allowed the fullest liberty in the selection of their studies, provided always, that such shall have the equivalent of at least sixteen recitations, weekly. To these classes of students, certificates of proficiency are granted, on satisfactory examination being passed. These certificates and the diplomas are issued only at the public commencement.

Admission.

For admission to First Year studies. students must be at least sixteen years of age, and must pass satisfactory examination in Arithmetic, English Grammar, Word Analysis, Preparatory Chemistry, Physical Geography, Rhetoric, Elements of Algebra and Plane Geometry.

Special students, in any department, are admitted without previous examination.

Before matriculation and entrance upon the duties of the school, the treasurer's receipt for entrance fee, and for the incidentals of the semester, must be shown to the Director, and a card, properly endorsed, be procured from him. The Secretary of the Faculty will then place the student's name upon the roll, and furnish him with all necessary information.

The collegiate year begins on the third Monday in September, and an examination for admission to the *regular* course is held on Monday and Tuesday of the same week. There is no suspension of exercises, other than for examination, between the two semesters of the year.

Good boarding, at places approved by the Faculty, can be obtained at from $3.50 to $4.00 per week. A list of such places can be seen on application to the secretary. Expenses for board may be reduced from one-third to one-half, by a judicious system of clubbing in rented rooms. The school has no dormitories under its control.

Patrons will please notice the following estimates :

Tuition in any or all studies, per term of five months	$10.00
Board, fuel, washing, lights, etc	68.62
Books, from $10 to $15	12.50
Contingent expenses for Laboratory students	10.00
Total	$101.12

From this estimate it will be seen that no student needs over $101.12 per term, and most students only $91.12, only those working in the Chemical Laboratory having to pay contingent expenses.

Parents should let their sons and daughters have very little pocket money ; the student does not need much. In fact, pocket money is to the student away from home a positive injury, leading him not only to extravagance, but also into the formation of evil habits. Give him money at any other time, but not when away at school.

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 Atlantic and Pacific Railroad, one hundred and thirteen miles southwesterly from St. Louis. The locality is pre-eminently healthy, is in the midst of an extensive and rapidly developing iron section, with districts abounding in lead and zink deposits, within easy access, and thus affords excellent opportunities for the field study of some of the modes of occurrence 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 eleventh year of the Institution closes with this announcement and catalogue.

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 equipments, 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 well furnished with apparatus, instruments, and other appliances for practical instruction and demonstration. It has a full supply of excellent surveying and engineering instruments, physical apparatus, embodying the newest forms for illustration and research, together with diagrams and models for the illustration of

metallurgy, and for engineering, topographical and ornamental drawing. The geological, mineralogical and technical collections are all rapidly increasing, and are already rich in specimens and products illustrative of the mineral industries of Missouri. The laboratories for analyses and assaying have been increased in working capacity, and are 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 sciences, mathematics and technology. A good selection of technical periodicals is supplied to the reading room, and strong efforts will be made to keep the collection of these and of the books, up to the progress of the several departments. The same may be safely promised for the apparatus, collections, modals and other adjuncts to the proper working of a school of this character.

The class and other rooms of the building are comfortably furnished, well lighted and well ventilated. The first floor is occupied by the analytical laboratory, the chemical lecture room, and the room of the professor of geology. On the second floor are the public hall, the office, library, reading and engineering rooms; and in the third story are the rooms of the professors of mathematics and English, and a large drawing room, with ample accommodations for upwards of eighty students. The basement contains the assay furnaces and other appliances for metallurgical work. The laboratory is supplied with gas for the heat required in chemical analysis.

With regard to the equipment, organization and effective character of the work of the school, the following from the official report of the visit and examination of the Committee on Mines and Mining, of the Twenty-Eighth General Assembly, may be cited:

"We do not intend to eulogize this Institution with high-sounding phrases, nor do we mean to under-rate the difficulty that each undertaking meets with, during its incipient stage; but with pride we acknowledge the unanimous opinion of your Committee, that this school is highly worthy of the people of the great State of Missouri, and in full coincidence with the intent which led to its creation. We may look forward with well-founded hopes that, by the practical working of this school, our dormant mineral wealth will meet the attention of the entire civilized world.

"The force of professors employed to teach the various branches of learning, has been selected with more than usual care, and their ability and devotedness justify the highest expectations.

"Analytical Chemistry, Mineralogy, Geology, Metallurgy, Mathematics, pure and applied; Drawing, artistic and mechanical; Civil and Mine Engineering, Military Tactics, etc., form the main branches of study in this institution.

"The apparatus, mathematical and philosophical instruments, are all of the latest and most approved kind, and their selection shows excellent tact, the laboratory is in good working order, and the library, consisting mainly of technical works, contains a large number of rare volumes.

"The morals of the students are vigilantly looked after, and the remarkable progress made by them is not only noteworthy, but also a source of gratification to your Committee.

"The maps of surveys and mines, the drawings of furnaces and reduction works, prepared by the more advanced students, display art and mastery on the subject of their study and labor.

"A remarkable feature of the school consists in combining theory with practice."

NINTH COMMENCEMENT OF THE SCHOOL OF MINES.

THURSDAY, JUNE 8th, 1882.

PROGRAMME.

PRAYER—MUSIC.

CONFERRING Degrees and Certificates..... President Laws.
ADDRESS on part of Graduates..... Mr. Beauregard Ross.
ANNUAL Oration..... Hon. Thos. P. Bashaw.

MUSIC.

DEGREES CONFERRED.

CIVIL ENGINEERS.

GIBB, FRANK W., Little Rock, Ark.—Subject of Thesis: "*Proposed Bridge over the Gasconade River.*"

SCHRANTZ, ASHUAH B., Mound City, Mo.—Subject of Thesis: "*Tunnels.*"

VANDEVANDER, HERMAN N., Williamsburg, Penn.—Subject of Thesis: "*Turbine Water Wheels.*"

PAINTER, WILLIAM R., Carrollton, Mo.—Subject of Thesis: "*History of American Iron Bridges.*"

WASH, JAMES A., St. James, Mo.—Subject of Thesis: "*Improvement of Rivers.*"

MINING ENGINEERS.

GIBB, FRANK W., Little Rock, Ark.—Subject of Thesis: "*Metallurgy of Lead as Practiced at Joplin, Mo.*"

ROSS, BEAUREGARD, Houston, Mo.—Subject of Thesis: "*Metallurgy of Iron as Practiced in Missouri.*"

Parents and guardians are requested to note carefully the following dates, and to require their sons and wards to conform to the same; to remember how important it is for every student to be in place and ready to enter upon his duties when school opens; to prevent, if possible, absences before and after holidays. Any student who leaves for home before the Christmas Holidays begin, or before commencement exercises are ended, does so without the consent of the Faculty, and will be considered absent from duty.

CALENDAR.

1882.

September 18, Monday, 9 o'clock A. M..... Winter Semester begins.
December 21, Thursday, 12 o'clock M..... Close for Christmas Holidays.

1883.

January 3, Wednesday, 9 o'clock A. M..... Exercises resumed.
January 29, Monday, 9 o'clock A. M..... Half-yearly examination begins.
February 3, Saturday, 12 o'clock M..... Half-yearly examination closes.
February 6, Tuesday, 9 o'clock A. M..... Summer Semester begins.
May 29, Tuesday, 9 o'clock A. M..... Yearly examination begins.
June 7, Thursday, 10½ o'clock A. M..... Annual commencement.

XVI. SCHOOL OF ENGINEERING.

FACULTY.

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

THOMAS J. LOWRY, S. M., C. E., DEAN,
Professor of Civil and Topographical Engineering.

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

GEORGE C. SWALLOW, M. D., LL. D.,
Professor of Geology.

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

LIEUTENANT JOHN J. HADEN,
(Detailed from the Regular Army,)
Professor of Military Science and Tactics.

CONRAD DIEHL,
Professor of Free hand and Topographical Drawing.

P. BLISS, LL. D.,
Professor of Law.

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

VISITING LECTURERS ON ENGINEERING:

JAMES B. EADS, C. E., LL. D.

MAJOR CHARLES R. SUTER, *Corps of Engineers of U. S. A.*

LIEUTENANT SMITH S. LEACH, *Corps of Engineers of U. S. A.*

PROFESSOR GEORGE C. PRATT, *Railroad Commissioner State of Missouri, Visiting Lecturer on Railroad Engineering.*

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.

Besides 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 and trusses, girders and suspension bridges; drawing and constructing the various kinds of arches; the design, application and construction of wind and hydraulic motors, air and steam engines; blow-pipe 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 or action 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 subdivided, by social necessities and common consent. To meet the demands for special engineering studies and training, from the end of the fourth year of the course in science, three 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—Surveying and Astronomy.
IV—Military 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 and auxiliaries of these engineering geodesy and practical astronomy.

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 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 geographical 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

ENGINEERING: TABLE OF SYNCHRONISTIC CURRICULA.

COURSES. Their Degrees.	Course in Civil Engineering. C. E.	Hour....	Course in Topographical Engineering. Top'l Eng'r.	Hour....	Course in Surveying and Astronomy. Surveyor and Astronomer.	Course in Military Engineering. Mil. Eng.	Hour....
SECOND SEMESTER.	Project and Thesis..... Drawing design of structure⅔ Hydraulic Engineering..... Civil Engineering..... Law of Contracts ..... Economic Geology ½		Drawing, Project and Thesis Law Contracts..... Geodesy..... Hydrography and Hydraulic Engineering.....		Chart and Thesis..... Drawing..... Observatory Astronomy..... Geodesy..... Road and R.R. Surveying....	Art of War ½ ..... Project and Thesis ..... Drawing design of structure⅔ Hydraulic Engineering ..... Civil Engineering..... Military Law ½.....	
FIRST SEMESTER. SENIOR YEAR.	Mechanical Drawing ½ ..... Mineralogy and Logic ½ .... Steam Engine ½..... Quantitative Analysis. ..... Civil Engineering ..... Applied Mechanics ½		Colored Topography ½ ..... Mineralogy and Logic ½..... Magnetic and Meteorclogical Surveying ½ ..... Hydraulic Engineering ..... Chart Projections ½ ..... Navigation, Maritime and Coast Surveying.....		River Surveying..... Drawing..... Astronomy, Spherical and Practical..... Method of Least Squares..... Geodesy	Military Engineering ½..... Mechanical Drawing ½ ..... Quantitative Analysis..... Civil Engineering..... Applied Mechanics ½ ..... Ordnance and Gunnery	
SECOND SEMESTER.	Qualitative Analysis and Blow-piping ⅔..... Sextant Astronomy ½..... Descriptive Geometry-Shades Shadows and Perspective. Chemistry..... Theoretical and Applied Mechanics.....		Sextant Astronomy ½..... Elements of Mechanism ½ .. Geological Surveying, Economic Geology and Physical Geography ..... Shades, Shadows and Perspective..... Triangulation, Topography and Topographical Drawing		Geological, Magnetic and Meteorological Surveying. Pen and Colored Topography Sextant Astronomy ½..... Maritime and Coast Surveying....	Qualitative Analysis and Blow-piping ⅔ ..... DescriptiveGeometry-Shades Shadows and Perspective. Chemistry..... Theoretical and Applied Mechanics..... Military Signaling ¼.....	
FIRST SEMESTER. JUNIOR YEAR.	Descriptive Geometry ..... Road, R.R., and Higher Surveying..... Chemistry and Laboratory ... III Calculus and Method of Least Squares II		Free-hand Drawing ¼..... Method of Least Squares ½.. Descriptive Geometry ..... Chemistry and Laboratory .. III Land, Road and R. R. Surveying.....		Triangulation & Topography Free-hand Drawing, Shading and Perspective..... Chart Projection ½..... Topographical Drawing..... Land Surveying	Descriptive Geometry. ..... Road, R.R., and Higher Surveying ..... Chemistry and Laboratory... III Calculus ..... II Tactics ½.....	

are very complete. Students taking the course in topographical engineering will have an opportunity, and be required to perform work as accurate 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 surveying and astronomy is intended to fit students for trigonometrical, topographical, geological and magnetic surveying, practical astronomy on land, nautical astronomy and navigation, maritime surveying, and the surveys of rivers, lakes, bays and coasts—and thereby prepare them to assist in the government surveys of our coasts, lakes and great rivers of the Mississippi basin, and also the geodetic, topographical and geological surveys of our territories, all of which are now under way. It will be observed that this course makes a specialty of the *surveys* of the lands, the waters and the heavens [practical astronomy], and the *location* of positions, on land and water, by observations on either terrestrial or celestial objects—and that the student is not made acquainted with engineering *construction.*

The course in Military Engineering is essentially that of the U. S. Military Academy at West Point.

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 6 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 lecturers.

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 engineering and astronomy, is specially asked to the reports of Professors Schweitzer and Ficklin (in this catalogue).

Our present professional force and facilities for instruction are such that we can offer a complete theoretical and practical treatment of the above great subdivisions of engineering, surveying and astronomy.

REPORT.

To S. S. LAWS, LL. D., *President:*

SIR:—I submit the following report of the Engineering Department for the year ending June 1, 1882:

Senior class	Regulars	8
Junior class	Regulars	4
	Irregulars	6
Sophomore class	Irregulars and Regulars	24
Total		42

In addition to the regular professional work with the above classes, I taught, during the second semester, the class in mechanics, consisting of eight academic and four engineering students.

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 accurate 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, has this year been extended over the agricultural farm; and after this, it is hoped, will be gradually expanded till it eventually covers the entire State of Missouri.

My colleague, Prof. Jno. J. Haden, has instructed the class in descriptive geometry during the entire session, and with great success.

During last vacation, we visited the U. S. Military Academy, the Rensallear Polytechnic Institute, School of Mines, Columbia College, Stevens Institute of Technology, Mass. Institute of Technology, Lawrence Scientific School, West Point, Troy, Sheffield Scientific School, Johns Hopkins University, 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 changes few, and very slight, indeed, in our courses.

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. MacCord on Mechanical Drawing, and Smith on Topographical Drawing are also used as texts. The progress of the class in this subject is highly gratifying.

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 Mississippi and Missouri rivers, on the coast 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 intelligent interest—a healthy enthusiasm—in the cause of engineering education at this University. And the present revival in the industries which demand engineering and chemical skill, has already increased, and promises to further increase the number of students in this department.

Very respectfully and truly yours,

THOMAS J. LOWRY,

Dean of the Faculty.

XVII. SCHOOL OF MILITARY SCIENCE AND TACTICS.

PROFESSOR HADEN.

The conditions attached to entrance in this department, are continuance in the department during the scholastic year, attendance to be regulated as in the other departments, and finally the purchase of a uniform and a copy of Upton's Infantry Tactics. The price paid for uniforms during the past year has been $20.

The course of instruction includes recitation in the school of the soldier in Infantry Tactics, with practical instruction in the schools of the soldier and company, skirmish drill and target practice; artillery drill in the service of foot batteries.

In appointing Cadet officers, other things being equal, preference will be given those who take the course in Military Engineering.

Instruction will also be given by lectures on the Operations of War.

REPORT.

To S. S. LAWS, LL. D., *President:*

SIR: I reported for duty at the University November 16, 1881:

As all students had at that time already undertaken full work in the other departments, the number of cadets has been small, but those taking the course have made satisfactory progress.

It is intended to open to the students of the University next fall, a course of Military Engineering, which is included in the curricula of the School of Engineering.

I am, sir, very respectfully,

Your obedient servant,

JOHN J. HADEN,

Second Lieutenant 8th U. S. Infantry,

Prof. of Military Science and Tactics.

XVIII. SCHOOL OF ART.

PROFESSOR DIEHL.

First Year.

1.—Recognition, naming, and representation of all surface-forms by which regular solids are bounded. 2.—Laying out of 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. 5.—Style in ornament. 6.—Orders of Greek architecture. 7.—Gothic tracery. 8.—Anomalous vagaries harmonized by art. 9.—The line, considered as the only means for the portrayal of motion and emotion. 10.—Pictorial representation of objects at home—*one per 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)	05 cents.
4.	Three cakes of water-colors	60 cents.
5.	One box instruments	50 cents.
6.	Three brushes	15 cents.
7.	Manual, Linear drawing No. II.	75 cents.
	Total	$2 25

The book and paper will, when properly used, last one year; the water-colors from two to three years.

REPORT.

SAMUEL SPAHR LAWS, LL. D., *President of the University of the State of Missouri:*

DEAR SIR:—The written and practical examinations, held at the end of the first semester of the present scholastic year, have resulted in establishing the following facts beyond doubt or controversy:

I. 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—makes a progress in the study of Form and Art, that is fully commensurate with his own individual efforts. Whilst during last year, excellence in the "*Home Work*" of the students, was the exception—comparatively speaking—it has been the rule during the present year; and this is the more gratifying as the home work of the student is *his own* work, as the only assistance given him is tendered in the form of careful criticism after the completion of his task. In the selection of subjects, as well as in the manner of execution, the student is encouraged to use *his own* judgment and taste. Thus, whilst the department furnishes the best available means for directing his observation and manual execution, the student is not alone encouraged, but given all possible aid for fortifying *his own* individuality.

II. The industry, the progress and the standing of each student can be measured by his own records, as these are all tangible: 1. His practical advancement finds expression in the weekly object work. 2. The practical class work is recorded in the drawing-book—the theoretic work entered in a note book. 3. The summary of his attainments appears in the semi-annual examinations.

Respectfully submitted,

CONRAD DIEHL,

Professor of Art.

XIX. COMMERCIAL SCHOOL.

BOOK-KEEPING.

This department has been in successful operation during the past two years in charge of Prof. J. P. Royall, a practical accountant and an experienced teacher of book-keeping. During this period it has steadily increased in efficiency and grown in favor with its patrons.

As the appropriation by the State Legislature is inadequate to meet all the expenses of the University, it is necessary for the student taking this branch, to pay an extra charge for his instruction.

The grade obtained in this department is accepted by the Faculty as part of the students' school work.

The course of instruction embraces single-entry and double-entry book-keeping as applied to wholesale and retail merchandising, jobbing, importing, shipping, commission, manufacturing, farming, company accounts, the opening and closing of books, partnership settlements, and mercantile forms, including drafts, notes, bills of exchange, accounts-current, accounts-sales, etc., together with the most modern and approved forms of books in their adaptation to the various kinds of business.

Oral and individual instruction is given each day. No text-book, from which a student may copy his work, is used, no elaborate treatise to study, but he is given a pamphlet containing the fundamental rules, definitions and principles; and he is furnished a concise history of a series of business transactions, 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 being 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 diligence 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.

PENMANSHIP.

A thoroughly competent and accomplished penman has been engaged to take charge of this part of the course, and will give two terms of twenty lessons each during the early part of the first semester, and one term during the first weeks of the second semester. The course of instruction embraces plain, business and ornamental penmanship; also instruction in commercial forms, business letters, etc. Each pupil will receive special and individual instruction, enabling him to move on to the extent of his ability and disposition to advance independent of his classmates.

Expenses—Payable in Advance.

Tuition in book-keeping, per semester.....	$10
(Students, pursuing a regular academic course in the University, whose curricula include book-keeping, are admitted at half rates.)	
Tuition in Penmanship, one term (20 lessons).....	8
" " two terms (same semester).....	5
Book-keeping, one semester, and penmanship, one term	12
" " " " " two terms.....	14

All stationery needed is furnished by the teacher free of charge.

REPORT.

S. S. LAWS, LL. D. *President State University:*

DEAR SIR:—I have the honor to submit the following report of the department of book-keeping for the year ending June 1, 1882:

Students were enrolled as follows:

First Semester	54
Second Semester	70
Total	124
Less number enrolled a part of both semesters	19
Whole number of separate names enrolled	105
Whole number enrolled last year without duplication	79
Increase	26

Certificates are awarded to those who complete the prescribed course and obtain a grade of eighty-five.

Thirty-one students are pursuing the less elaborate course required in their curricula; twenty-two have received certificates as competent book-keepers, or are entitled to them; of the remainder, twenty-five will probably receive certificates at the close of the year.

The following is a list of those who have earned certificates prior to April 12, 1882:

Allen, Louis
Allen, Romain
Chubbuck, Levi
Dysart, W. C.
Ellis, J. L.
Garges, A. W.
Gray, A. B.
Henderson, R. P.
Kelly, John R.
Lyford, A. A.
Magee, R. M.
Peak, L. D.
Pigott, J. C.
Robinson, Jos. K.
Sanders, J. J.
Smith, E. H. C.
Smith, Rob't L.
Sprinkle, Rob't L.
Trout, N. C.
Weinrich, J. L.
Wright, Geo. W.
Young, J. D.

The following is a list of candidates who will be entitled to certificates at the close of the semester June 1, 1882:

Alford, T. P.
Braun, C. F.
Burrington, L. S.
Coleman, W. P.
Evans, N. P.
Farrell, W. A.
Fisher, Elizabeth L.
Haden, John J.
Henderson, Geo. R.
Husmann, Geo. C.
Jackson, C. L.
Jones, N. E.
Tucker, O. T.
Lonsdale, Frank S.
Love, J. R.
Martin, C. W.
Martin, H. L.
Pennington, J. M.
Quarles, Lafayette
Robinson, Mary W.
Sapp, J. W.
Shock, H. L.
Smith, Jas. L.
Snoddy, J. F.
Stevens, Peyton

Respectfully yours,

J. P. ROYALL.

UNIVERSITY LIBRARY.

S. S. LAWS, LL. D., *President of Missouri State University:*

SIR:—The following is submitted as the sixth annual report of the Librarian of the University:

ACCESSIONS FOR 1881-82.

SOURCE.	B....	P....	SOURCE.	B....	P....
Agricultural Board, Mo	1	.....	St. Louis Fair Association	.....	1
" " Mich	1	.....	" Law School	.....	1
" College, Mich., in ex	.....	1	" Public School Library	.....	2
" " Col., in ex	.....	1	" University	.....	1
Amherst College, in ex	.....	1	St. Xavier College, Ohio, in ex	.....	1
Ayer and Sons	.....	2	Stephens College	.....	1
Bellevue Medical College, in ex	.....	1	Swallow, G. C	1	2
Board of Education, Colorado	.....	1	Syracuse University	.....	1
Bowdoin College, in ex	.....	1	Trinity College	.....	1
Center College, Ky., in ex	.....	1	U. S. Bureau of Education	10	... ..
Chicago Public Library, in ex	.....	1	" " Navigation	2	.....
College of the Holy Cross	.....	1	" " Statistics	.....	1
Columbia College, N. Y	.....	1	" Dep't Engineering	... ..	2
Crittenden, Gov. T. T	.....	2	" " Interior	88	1
Drury College, in ex	.....	1	" " Life Saving Service	1	.....
Hahnemann, Medical College, Pa	.....	1	" " State	6	.....
Harlan, C	1	.....	" " War	2	.....
Harvard College	.....	1	" Military Academy	.....	1
Henderson, J. T	.....	1	" Naval Observatory	.....	3
Historical Society of N. Y	1	.....	" Treasury Department	1	2
" " Wisconsin	.....	1	University of Alabama, in ex	.....	1
Howard University	.....	2	" " California, in ex	.....	1
Husmann, George	4	.....	" " Georgia, in ex	.....	1
Iowa State Librarian	.....	1	" " Indiana, in ex	.....	2
John, A. H	.....	1	" " Kentucky, in ex	.....	1
Johns Hopkins University, in ex	.....	1	" " Louisiana, in ex	.....	1
Laws, S. S	.....	1	" " Michigan, in ex	.....	1
Medical Dept. of Uni. of Mich	.....	1	" " Mississippi, in ex	.....	1
" " Yale College	.....	1	" " Minnesota, in ex	.....	1
Secretary State of Missouri	17	.....	" " New York, in ex	.....	1
Missouri State Normal, Kirksville	.....	1	" " N. Carolina, in ex	.....	1
" " Warrenburgh	.....	1	" " Ohio, in ex	.....	1
New York State Library, in ex	.....	1	" " Pennsylvania, in ex	.....	1
New England Conservatory of Music	.....	1	" " Rochester, in ex	.....	1
Oberlin College, in ex	.....	1	" " the South, in ex	.....	1
Ohio Mechanics Institute	.....	1	" " Vermont, in ex	.....	1
Olivet College, in ex	.....	1	" " Virginia, in ex	.....	1
Penn. State College, in ex	.....	1	" " Wisconsin	.....	1
Purchase, 53 plates	53	.....	Unknown	3	.....
Ritch, W. G	.....	1	Wesleyan University, in ex	.....	1
Rollins, J. S	26	17	Westminster College, in ex	.....	1
Sanborn, J. W	.....	1	White, Andrew D	.....	1
Smithsonian Institute	9	.....	Winchell, N. H., State Geologist of Minn	.....	1
St. Benedicts College, in ex	.....	1	Wisconsin State Normal School	.....	1
St. Charles College, Md., in ex	.....	2	Woman's Med. Col. N. Y., in ex	... ..	1
St. Ignatius College, Ill., in ex	.....	1			
St. Johns College, in ex	.....	1	Total.....plates 53...	227	105

Periodicals for the Current Year.

Albany Law Journal.
American Baptist Flag.
" Journal of Education.
" " " Science.
" Law Register.
" " Review.
" Naturalist.
" Sentry.
" The.
Analytische Chemie.
Annalen, Phys. and Ch.
Atlantic Monthly.
Blackwoods.
Boone County Sentinel.
British Quarterly.
Burlington Hawkeye.
Carrollton Democrat.
Central Baptist.
Century Monthly.
Chemical News.
Christian Statesman.
Coleman's Rural World.
Columbia Herald.
Comptus Rendus.
Congressional Record.
Detroit Free Press.
Edinburgh Review.
Frank Leslie's Illustrated Newspaper.
Fresenius Zeitschrift.
Gems of Poetry.
Germania, (German).
Harper's Bazaar.
" Monthly.
" Weekly.
Independence Sentinel.
Industrial World.
Journal of Anthropological Institute of Great Britain and Ireland.
Journal-Democrat—The.
" of Education.
Journal of Mental Science.
" für Praktische Chemie
" of The Telegraph.
Kansas City Daily Journal.
Kentucky Live Stock Record.
Kirksville Democrat.
Lexington Register.
L'Electricite.
Library Journal.
London Quarterly.
Mexico Intelligencer.
Missouri Republican—The.
" Statesman.
Nature.
New York Times.
" Tribune.
" Weekly Witness.
North American Review.
Our Continent.
People's Tribune—The.
Philosophical Magazine and Journal of Science.
Psychological—Med.
Polytechnisches Journal—Dingler's.
Richmond Conservator.
Sabbath Reading.
Sanitarian.
Sanitary Engineer.
Science Observer.
Spectator—The.
Speculative Philosophy.
St. Louis Globe Democrat.
" Post Dispatch.
Toledo Blade.
Warrenton Volkfreund, (Ger.)
Weekly Herald, N. Y.
Western Agriculturist.
Westminster Review.
Westliche Post.

Library Matter.

	Books.	Pam.
University Library	10,869	13,050
University Library, Accessions, 1881-2	227	105
Athenæan Society Library	351	
Union Literary Society Library	348	
Columbia Library	809	
Total in General Library	12,604	13,155

The accessions for the past year have been small, but of a nature that will add much to the usefulness of the Library. As far as possible all incomplete sets have been filled and brought down to date. This is especially true of the department publications at Washington, the real value of which is fully appreciated by a large number of students. The large accessions in the last named class is evidence that these sets will be as complete as possible within the next year. As will be seen from the list, the Library is perhaps better supplied with the leading periodicals than at any previous period. In this connection it is but proper to state that all available space has been appropriated, and yet more than half the periodicals are consigned to pigeon holes, to be had by students only upon application to the Librarian. The same difficulty, want of room, is experienced in shelving the books. The Library room, if wholly devoted to the purpose, would perhaps be capable of accommodating the entire present collection of books, but owing to the fact that it is used both as a study and a reading room, being often filled with students, no space can be devoted to additional cases. The only remedy is an enlargement of the room.

Since the last report, a large number of volumes have been re-bound, and again placed on the shelves. Many more, doubtless, will be repaired during the coming vacation.

During the year the library has come into possession of fifty-three plates, "Bilder Zur Geschichte," which will be of great service in teaching history in the several departments. Following are the name of a few taken at random, from which some idea may be had of the whole: The Coliseum, Heidelberg Castle, The Acropolis, St. Pauls Before the Wall, Colossal Statue of Memnon, St. Peters in Rome, Lion Gate of Mycenae, Temple at Aegina, The Alhambra (Lion Court), Mosque of Cordova, The Sphinx and Pyramids, and The Louvre.

The following are the rules in regard to the drawing of books:

Members of the faculty, students of the University and members of the Columbia Library Association are allowed to draw books for use in the room from any of the collections.

Members of the faculty alone are allowed to draw books from the University Library collection for use outside of the room.

Members of the Columbia Library Association alone, including those who pay a monthly fee (to students 20c) or an annual fee ($3.00), are allowed to draw books from this collection for use outside of the room.

Only the *active* members of the societies are allowed to draw from their respective collections, for use outside of the room.

Each member is entitled to two volumes at one time and no more.

Books must be returned within two weeks from their withdrawal.

A fine of five cents will be charged on each volume for each day after it is due.

Fines shall be paid to the Librarian before other books can be drawn.

Marking, turning down leaves, tearing, soiling or otherwise injuring any book is in 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 6 P. M. It is not closed during vacations. 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 locking up library matter.

Books and papers are not permitted to be taken from the room, except by members of the faculty—each member being entitled to six books for two weeks.

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 745 vols., forms a part of the General Library, but is in a separate room, adjacent to the Law Lecture room. Members of the Law classes have free access to the books in this library, during library hours.

Circulation of Books.

Drawn by members of Faculty	703	
" " Athenæan Society	112	
" " Union Literary Society	127	
" " Columbia Library	96	
Drawn for use in Reading Room	12,634	
		13,672

Comparative Circulation of Books.

Years	1874-5	1875-6	1876-7	1877-8	1878-9	1879-80	1880-1	1881-2
Summer Vacations	250	281	419	282	442	980	439	386
School Terms	9,780	14,635	14,499	15,887	15,887	13,947	15,409	13,286
Totals	10,030	14,916	14,918	16,169	16,329	14,927	15,848	13,672
Students Enrolled	396	321	399	418	444	484	558	509

In the above comparison it should be borne in mind that the statistics for the present year are made up one month in advance of the usual time.

Everything is in readiness to enter, at the close of the present session, upon the work of a complete catalogue, which, it is hoped, will be printed before the opening of another year. As the printing of the catalogue will exhaust the means at our command for increasing the library, there should be, hereafter, a more liberal appropriation for its support.

Very truly yours,

J. H. DRUMMOND,
Librarian.

Ida Hayes,
Ass't Librarian.

UNIVERSITY ANNOUNCEMENTS.

Synchronistic Table.

(See pages 134-5).

This is a time-table and programme of the class room work for both students and Faculty.

1. 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.

2. It does not embrace the Law, Medical, Agricultural, Normal, Engineering and Art 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.

3. The four Academic courses and degrees are—

PRESCRIBED CURRICULA. THEIR DEGREES.	1. COURSE IN ARTS. *Artium Baccalaurĕus-a.* A. B.	Hour	2. COURSE IN SCIENCE. *Scientiae Baccalaureus-a.* S. B.	Hour
SIXTH YEAR. (*Senior.*) TWELFTH SEMESTER.	Geology and Phys. and Pol. Geography Metaphysics—Ethics & Ontology	II I	Geology and Phys. and Pol. Geography Metaphysics—Ethics&Ontology	II. I.
ELEVENTH SEMESTER.	German & Mod. European Hist. ½ Anglo Saxon, Theory of Rhet. and Resumè ½ Anct. and Oriental Hist. and Semitic Literature Mineralogy and Paleontology Metaphysics—Psychol. & Logic	VI. IV. II I.	Laboratory—Quantitative Anal. Astronomy (completed) Mineralogy and Paleontology Metaphysics—Psychol. & Logic.	V. II. I.
FIFTH YEAR. (*Junior.*) TENTH SEMESTER.	French and Med'l History Latin and Greek Chemistry and Laboratory Political Economy	V IV III. I	Laboratory—Qualitative Anal. Chemistry Mechanics Political Economy Art (Tuesday and Friday)	III. II. I. IV.
NINTH SEMESTER.	Zoölogy, Hu. Anat. & Physiol. Latin and Greek Chemistry and Laboratory English Literature	VI. IV III I.	Zoology, Hu. Anat. & Physiol. Chemistry and Laboratory Calculus Eng. and Amer. Literature	VI. III. II. I.
FOURTH YEAR. (*Sophomore*) EIGHTH SEMESTER.	Latin and Greek Polit. Science Physics Analytical Geometry	IV. III II I.	Entomology & Econ. Botany Polit. Science Physics Analytical Geometry	IV. III. II. I.
SEVENTH SEMESTER.	Latin and Greek English History Physics Algebra (completed) Art (Tuesday and Friday)	IV III. II I V	English History Physics Algebra (completed) Art (Wednesday)	III. II. I. VI.
THIRD YEAR. (*Freshman*) SIXTH SEMESTER.	Spherical Trig. & Sph. Astron. Latin Greek Botany Art (Tuesday and Friday)	IV III II I VI	German Spherical Trig. & Sph Astron. Elocution and Themes Botany Art (Tuesday and Friday)	VI. IV. II. I. V.
FIFTH SEMESTER.	Plane Trigonometry and Solid Geometry Latin U. S. History Greek Art (Tuesday and Friday)	IV. III. II I VI	French Plane Trigonometry and Solid Geometry U. S History German Art (Tuesday and Friday)	V. IV. II. I. VI.
SECOND YEAR. FOURTH SEMESTER.	Latin Analysis and Rhetoric Plane Geometry Greek Art (Tuesday and Friday)	I V IV III. II.	French Plane Geometry German Art (Tuesday and Friday)	V. IV. II. III.
THIRD SEMESTER.	Elementary Algebra Greek Latin Art (Tuesday and Friday)	IV. III. I. II.	German Analysis and Rhetoric Elementary Algebra Polit and Phys. Geography Art (Tuesday and Friday)	VI. V. IV. III. II.
FIRST YEAR. SECOND SEMESTER.	Greek Arithmetic and Book-keeping* Latin	I. III. II.	English Grammar Arithmetic and Book-keeping* Art (Tuesday and Friday)	VI. III. I.
FIRST SEMESTER.	Language Lessons & Exercises Arithmetic Latin	VI. III. II	Language Lessons & Exercises Arithmetic Latin	VI. III. II.

*Book-keeping twice a week.

SYNCHRONISTIC CURRICULA.

3. COURSE IN LETTERS. *Literarum Baccalaureus-a.* L. B.	Hour.	4. GIRLS COURSE IN ARTS. *Artium Domesticarum Baccalaurea.* A. D. B.	Hour.
		Art (Tuesday)	IV.
Geology and Phys. and Pol. Geography	II	Literary Criticism (Tues and Thurs.), Kindergarten Training and Home Education (Sat.)	III.
Metaphysics—Ethics & Ontology	I.	Geology and Physical Geography—General Review of the Natural History Course	II.
		Political Economy	I.
½ Anct. and Oriental Hist. and Semitic Literature	IV.	Art (Wednesday)	VI.
½ Anglo Saxon, Theory of Rhet. and Resumè	IV	Ancient and Oriental History & Semitic Literature ½, Anglo Saxon, Theory of Rhetoric and Resumé of the English Course ½	IV.
Mineralogy and Paleontology	II	Greek Life, Ancient and Modern (Saturday)	II.
Metaphysics—Psychol. & Logic	I.	English Literature	I.
Spanish & Italian (Alternate)	VI.	Domestic Chemistry and Household Economy	
Entomology & Econ. Botany	IV.	Art (Tues. & Fri.,) Italian (Wed., Thurs. & Sat.)	V.
Chemistry and Laboratory	III	Zoology, Ent. and Econ. Botany and Floriculture	IV.
Political Economy	I.	English and U. S. Consts., and Political Science	III.
		Vocal Music	VII.
Zoology, Hu. Anat. & Physiol.	VI.	Art	V.
French	V	Domestic Chemistry & Economy	
Chemistry and Laboratory	III	English History	III.
Eng. and Amer. Literature	I.	Mineralogy ½	II.
		Metaphysics, Psychol. & Logic	I.
French	V.	Music	VII.
Polit. Science, Eng. & U. S. Constitutions	III.	Art (Tuesday and Friday)	VI.
Physics	II.	French	V.
Analytical Geometry	I.	Chemistry and Laboratory work	III.
		Elocution & Themes (Wed. & Thurs)	II.
		Metaphysics, Ethics & Nat. Theology	I.
Semitic Languages ½ (alternate with 11th Semester)	IV.	Vocal Music	VII.
English History	III.	German	IV.
Physics	II.	Chemistry	III.
Algebra (completed)	I.	United States History	II.
Art (Tuesday and Friday)	V.	Art (Tuesday and Friday)	I.
Spherical Trig. & Sph. Astron.	IV.	Latin	I.
Latin	III.	Rhetoric	V.
Elocution and Themes	II	Spherical Trig. and Sph. Astronomy	IV.
Botany	I	Art (Tues. and Fri.), Book-keeping (Wed., Thurs. and Sat.)	I.
Art (Tuesday and Friday)	VI.		
Plane Trigonometry and Solid Geometry	IV.	Vocal Music	VII.
Latin	III.	Art (Tuesday and Friday)	VI.
U. S. History	II.	Plane Trig. and Solid Geometry	IV.
German	I.	Physics	II.
Art (Tuesday and Friday)	VI.	Latin	I.
Latin	I	Vocal Music	VII.
Analysis and Rhetoric (cont'd).	V.	Composition and Elocution	V.
Plane Geometry	IV	Algebra Completed, Plane Geometry	IV.
German	II	Art (Tuesday and Friday)	III.
Art (Tuesday and Friday)	III	Latin	II.
		Botany	I.
		Book-keeping	
German	VI.	Vocal Music	VII.
Analysis and Rhetoric	V.	Anat. Physiol. and Hygiene	VI.
Elementary Algebra	IV.	Elementary Algebra	IV.
Latin	I.	Art (Tuesday and Friday)	III.
Art (Tuesday and Friday)	II.	Latin	II.
		Calisthenics ½ IV &	VII.
English Grammar	VI	Landscape Gardening and Horticulture ½	VII.
Arithmetic and Book-keeping*	III	English Grammar	VI.
Latin	II.	Art (Tuesday and Friday)	III.
		Arithmetic (2nd Division)	I.
		Calisthenics ½ IV &	VII.
Language Lessons & Exercises	VI.	Language Lessons and Exercises	VI.
Arithmetic	III.	Geography	III.
Latin	II.	Art (Tuesday and Friday)	II.
		Arithmetic, (2nd Division)	I.

I. The course in *Arts*; degree A. B., Artium Baccalaureus-a. This is the old fashioned college or classical course, only slightly modified. Latin and Greek complete.

II. The course in *Science;* degree S. B., 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.

III. The course in *Literature;* degree L. B., Literary Bachelor or Bachelor of Literature. 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.

IV. The course in the *Fine and Domestic Arts* for young ladies; degree A. D. B. Artium Domesticarum Baccalaurea. Only young ladies will be graduated with this degree. The course in *form-study* (drawing) is here complete; Anatomy, Physiology and Hygiene, and Music, are more prominent; Italian and Laboratory work with domestic economy are distinctive. Into certain of its classes only young ladies are admitted. This course is intended to avoid the fallacy of counfounding 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 is fully equal to either of the other courses, and the special culture, with reference to the practical aims of a true education of woman, excels them.

4. 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.

5. 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.

6. No student shall 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.

7. 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 two hours to prepare each recitation. Eight hours of preparation, and four hours of recitation, will be twelve 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 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.

8. 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 June, 1879.

9. In the professional schools, it will be noted that the medical course has been graded, and for the Senior class 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.

10. *a.* The synchronistic curricula (pp. 134–5), are the settled Academic courses for recommendation for the Academic degrees.

b. The 990 hours work in English and the 540 hours in Latin, are fixtures in the course in letters, and 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 University Town.

The University is situated near the centre of the State, at Columbia, Boone county, in a beautiful and picturesque limestone region, on the elevated rolling tableland, a few miles back from the north side of the Missouri river. Were the selection of the sight to be made anew (p. 10,) 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 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 cases of continued delinquency 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 specified, 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 matriculation ticket, with the instructions necessary for enabling him to have his name entered on class rolls.

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 can not 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 before having their cards signed by any Professor, and obtain a certificate of competent knowledge of English.

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 minutes 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 for recitation daily, unless otherwise 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 with four hours work a day, except when the prescribed course requires more or less, then any additional studies shall be taken only by approval of the Faculty, on application thereto.

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 youth. 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.

Secret Societies.

Whereas, The interests 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 Faculty; therefore, be it

Resolved, 1. That all our students should be discouraged from joining such secret societies.

2. That as a means of protecting the students against this evil or of relieving them therefrom, the following pledge shall be hereafter taken from each student upon matriculation, to wit: I, the undersigned, do hereby pledge my word and honor that I will not, so long as a student of the University of the State of Missouri, unite with any so called secret society or club; that is to say any society or club not known and approved by the Faculty of said University; or, if already a member of any such society or club, I, the undersigned, do hereby pledge my word and honor that I will withdraw from the same and give no attention thereto whilst a student of the Missouri University, other than may be necessary for winding up and closing out its affairs and terminating its existence, within the said University, within the present collegiate year.

Faculty action, September 11, 1880.

[Signed]..... .....

Witness .....

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 it 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 opprobrium 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 the 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 to 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 University 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 receiving 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.

4. In any way to injure or mar the University buildings or furniture by whitling, 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. Willful damage to property may be subject 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.

☞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.

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 letter 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 renderd 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.

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 to 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.

Absence Marks.

1. There are three kinds of absence marks—those from chapel, from town and from class room.

2. The absences 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 presiding officer 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. The class roll shall be called before entering on any class room exercise.

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 the 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. All students not absent on leave or sick, must account for their absences from chapel every Tuesday morning, and those sick or on leave will be excused only during the continuance of such reason. The reason of absence from chapel must be given in writing, signed by the student's name, and delivered in such manner as the Faculty may designate.

12. In making their reports to the Secretary of the Faculty, the Professors shall use a prescribed blank.

Unexcused absences, once reported, can only be excused by Faculty action.

Every unexcused absence from chapel or from class rooms, counts two demerit marks.

Grading and Class Standing.

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 10 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 within those classes, as other academic students, in grading and marking absences.

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 classes:

1. If the failure arises from the fact that the student has too many studies, let him be excused by the Faculty from some of them.

2. If the student is "doing no good" in any department, and the failure arises from want of application or from bad health, let him be sent home. (See Catalogue, page 141.)

3. If the failure in any class arises for a 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 is none, let him drop him from his department, and report the fact to the Faculty at their next meeting.

Whenever a student is dropped from two departments 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, or from a higher to a lower class in the same 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 semester, in February and 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 specially request it, the standing of any particular student 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 ordinary language they have about the following meaning: 100 is perfect; 90 excellent; 80 very good; 70 good; 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 caused 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 148 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 expenses of several of our most studious members to have been no more than one hundred and fifty dollars 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 are 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 not add to the respectability of any student, and it certainly does imperil his character and scholarship. 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 assigning them to the classes for which they may be qualified.

In order to meet the deficiencies in 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 all the students in the academic classes shall undergo, at the close of each year, an examination on the fundamental branches of English, viz: Practical English grammar, arithmetic and geography; and every student must receive a grade of at least 6, according to general rule, before being admitted to examination for the next higher class or for graduation.

c. That the Secretary of the Faculty be instructed to carry out the provisions of these resolutions, in so far as their practical workings are concerned, by directing the students to report to the Professor of English, before having their cards signed by any Professor.

On the occasion of these 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.

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 exercises, other than for examination between the two semesters of the year, and during the holidays.

3. A general examination of all the classes is held during the ten days preceding commencement, for the purpose of ascertaining the 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, be re-examined on such subject at the time of the regular class examination. *The final grade thus attained 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-examination, except in cases where it is clearly impossible for him to be present. In such cases the Faculty *may* set a time for his examination.

3. The re-examination provided for in the preceding rules shall be limited to subjects pursued by the *student* during the *scholastic year immediately preceding* the proposed examination.

4. All private examinations granted under the rule, *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, 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, 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 for graduation is required to prepare a thesis, oration or essay, which may be delivered or not, at the discretion of the Faculty, and a copy of the same, on thesis paper, must be filed with the University Librarian, to be kept in the archives.

Students in the course in science will hereafter be required to present, instead of an oration, an inaugural thesis or essay upon a scientific topic for graduation.

Cheating.

Whereas, Cheating in recitation or in examination, by using helps of any kind forbidden, 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.

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 Art, 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.

On the subject of students who desire certificates to show their attainments, it has been decided instead of individual members of the Faculty giving testimonials—

1. That a graduate be referred to his diploma.
2. That an under-graduate 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 session, 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 commencement day.

Boarding.

Board in private families, with lodging, washing and fuel, may be obtained 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 garden, will be allowed from ten to fifteen cents per hour, 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 University 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 their 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 Co., 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 $8.50 each			$17 00
Furniture for room:			
Bedstead	$2 25		
Mattress	3 00		
Stand-table	1 75		
Wash-stand	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			$92 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 expenses 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, or those incapable of taking care of themselves, 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 University.

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. Dally, 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 equal 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 among 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 commencement 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 an inclination to preach the gospel.

NOTE THAT—

This fund now amounts to ($27,000) twenty-seven thousand dollars, held by the county court of Boone county, invested in Boone county 8 per cent. bonds. At 8 per cent. the interest will be $2,160.00; and the three-fourths available for aiding students, $1,620.00.

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.

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 about 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, 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 attain his professional education, it would be unnatural to suppose that, by any implication, the "indigent" and worthy professional student would be excluded.

Whether the one-fourth of the interest must annually be added to the principal of this fund, will ultimately become a question of great magnitude, which may 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 11th, 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 is 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 University to Boone county, as set forth on page 10 of this catalogue.

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 studies 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 prescribed by the Executive Committee.

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 and Law, "to receive instruction in the same manner as other students," without the payment of tuition fees.

2. That said resident graduates shall have the privilege of the library, on such terms and under such rules as the executive committee may determine.

3. That, preliminary 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 undergraduates.

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 delivered before them, united, during commencement week, and diplomas are given to such members as belong to the graduating class.

On October 21st, 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 young women also have a literary society. (See Ladies Department, page 64.)

During the past year a volunteer corps of the Faculty has started the *Missouri University Review* in the special interest of education in the State of Missouri, and its outlook is quite encouraging.

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 demerit marks, 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.

VALEDICTORIAN.

The academic class, and each professional class, choose its own valedictorian.

Rule for election of academic valedictorian, and class representation:

1. That the valedictorian shall be elective.

2. That only those shall be eligible as valedictorians who take one or more of the following degrees, viz: A. B., S. B., A. D. B., L. B.

3. That the right to vote for valedictorian be accorded to candidates for graduation with any of the above named degrees.

4. That an essay or thesis be required from 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 the 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—$50 GOLD MEDAL.—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.

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.*

IN THE AGRICULTURAL COLLEGE.—*Harris Medal* to Senior class, for "*Best Essay on Dairy Stock*," or "*Indian Corn.*" *Swallow Prize*, for "*Best Oral Examination on Pruning*," to Junior class.

Subject for "English Medal," 1882, is "The Death of Cromwell."

The heads of the several departments dispense prizes and distinctions in their discretion.

Co-education.

For 14 years girls have been admitted to the classes of the Missouri University. This experience is decidedly 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—14 years of experience here, in the Missouri University, favors 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 64.)

Faculty Meetings.

The Academic Faculty meets regularly every Tuesday, at 4 P. M. The special faculties meet upon the call of the President or of the respective Deans.

Faculty to Present the Claims of the University.

A committee from the Board of Curators called upon the Faculty June 4, 1879, and stated that it is the desire of the Board that the Faculty, during vacation, present to the people of Missouri the claims of the University; and that some systematic plan should be adopted to effect any good, it was then

Resolved by the Faculty, That we have heard with pleasure the remarks of the Committee of the Board of Curators, in reference to making known the claims of the University among the people of the State, and promise hearty co-operation in the common effort to build up and make known the State University—some systematic plan to be decided on before the faculty leave for the summer.

In pursuance of this idea, the congressional districts of the State were, by lot, distributed among the members of the Faculty as follows:

1st, 2d, 3d districts.....Prof. D. R. McAnally.
4th district.....Prof. S. M. Tracy.
5th " .....Prof. J. S. Blackwell.

6th district.....Prof. W. A. Cauthorn.
7th " .....Prof. T. J. Lowry.
8th " .....Prof. M. M. Fisher.
9th " .....Prof. Grace C. Bibb.
10th " .....Prof. Joseph Ficklin.
11th " .....Prof. A. F. Fleet.
12th " .....Prof. G. C. Swallow.
13th " .....Prof. Paul Schweitzer.

Those educators wishing the coöperation of the Faculty, will best accomplish their purpose, by communicating with the individual Professor to whom is allotted their particular district.

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 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.

Information is also asked for, touching all who have held offices in the University, especially those who are deceased. Before the issue of the next triennial, it is hoped information will be collected for a biographical sketch of each of the deceased officers and graduates.

The officers of the Association are: S. C. Douglass, Pres.; J. V. C. Karnes, 1st V. P.; Prosser K. Ray, 2d V. P.; R. W. Gentry, Sec., and J. S. Clarkson, Treas.

CALENDAR.

1882.

September 11, Monday.....All Academic and Prof. Schools open.
November 11, Saturday.....Athenæan Society open session.
November 25, Saturday.. .....Union Literary Society open session.
December 16, Saturday.....Close for Holidays.

1883.

January 2, Tuesday.....Re-open.
January 16, to January 21.....Examination at the close of 1st Semester.
January 23, Tuesday.....Second Semester begins.
February 17, Saturday.....Exhibition of Young Ladies' Society.
February 24, Saturday.....Societies appoint Prize Declaimers.
March 3, Saturday.....Inter-Society Contest.
March 29, Saturday.....Law School closes.
April 21, Saturday.....Prize Declamation Contest.
April 28, Saturday.....Contest for Stephens Medal.
May 5, Saturday.....Exhibition of Athenæan Society.
May 19, Saturday.....Exhibition of Union Literary Society.
June 3, Sunday.....Baccalaureate Discourse.
June 5, Tuesday.....Curators meet.
June 5, Tuesday.....Address before Societies.
June 6, Wednesday.....Oration before Alumni.
June 7, Thursday.....Commencement.

TABLE OF CONTENTS.

APPENDIX.

MEMORIAL TO XXXI GENERAL ASSEMBLY.

COLUMBIA, MO., February 22, 1881.

To the Honorable, the General Assembly of the State of Missouri:

The undersigned members of the Board of Curators of the University of the State of Missouri, now in session at Columbia, beg leave respectfully to state that, without any solicitation on their part, they were appointed to the position they now hold as members of this board. They regarded it as a trust of great responsibility. It is an office of much inconvenience to each one of them, and without any remuneration whatever. They have accepted the position which they hold from a sense of duty, being willing to devote so much of their time and labor in looking after a State institution, in which they have no more interest than any member of the Legislature, or any other citizen of the State. Four out of the nine of their number are graduates of this institution of more than twenty years' standing; they are presumed to know something of the history, the struggle for existence, the growth, the present prospects and the wants of the University. They are willing to co-operate with the authorities of the State, in extending the advantages and usefulness of the institution, but their resignations will be handed in whenever an intimation is made that a different class of men are needed to fill their places. They believe the affairs of the University have been conducted with ability, efficiency, economy and great success during the administration of President S. S. Laws and his corps of able and faithful professors. They see and believe the institution has reached a period in its history, when, with reasonable aid and assistance on the part of the Legislature, its usefulness will be greatly extended, and it will become, in a short period of time, one of the best and most valuable institutions of its kind in our country. Is it desirable to have such an institution at all? If not, the better plan would be to close its doors, wind up its affairs, if it can be legally done, and thus relieve the Legislature, the Curators and the public, of all further concern in regard to it. On the other hand, if the conclusion is arrived at that it is best, in the langauge of the Constitution, for the General Assembly to "*aid and maintain the State University with its present departments*," *this board is unanimously of the opinion that it ought to be done in a* reasonably liberal manner,

comporting in some degree with the character and dignity of the State, in order to meet the wants and aspirations of the sons and daughters of the commonwealth, who are seeking to endow themselves with that better education and intelligence fitting them to discharge aright the duties of citizenship; and all the more regularly *from the fact* that the University of the State is the only institution of the kind recognized in the Constitution, and with a solemn pledge of *sixty years* standing in the same instrument on the part of the people and their representatives, to "support and maintain it." Shortly after the meeting of the present General Assembly, this board, through its president, made a report to your honorable bodies, stating in clear and explicit terms, the present wants of the institution, with some of the reasons why those wants should be supplied. That report is lying upon your desks, and no one has been able to deny or contradict the arguments and considerations therein presented in favor of meeting its recommendations.

If this board, which has the immediate control and government of the institution, does not know what its wants are, then nobody can state them, and the simple question is, whether we shall go forward, or stand still or retrograde. To ignore the board, is in fact to abandon the institution to inexperience and chance. The unanimous sentiment of this board is that these demands should be reasonably met, and that Missouri, in all matters of public education, should march forward to the high destiny which awaits her; and this board presents, in as few words as possible, some considerations why this should be done:

First—This University was located forty-two years ago, and the State of Missouri has done far less for its support and maintenance than any other State in the American Union has done for similar institutions bearing the same relation to such States.

Second—So far as furnishing proper sites for necessary college buildings, and the erection of buildings thereon, the people of the State, with the exception of $10,000 given for the erection of the president's house, which had been destroyed during the war by fire, have never been taxed a dollar, either for the *erection, the repairing or the equipment of such buildings*, which were absolutely required, and without which there could be no institution; this heavy burden the State has imposed upon the people of certain localities, to the extent of hundreds of thousands of dollars, and otherwise relied upon means furnished by the general government; but when these donations have been made and these commodious buildings have been erected at an enormous cost to others, the State has accepted deeds of general warranty to these lands and these buildings, and now holds the titles thereto in fee simple, as her own absolute property.

This board may well ask, is this either right or magnanimous, or just? And especially is it right or magnanimous, or just, when it is remembered that the General Assembly of Missouri, when it accepted the Agricultural College lands under the act of Congress, July 2d, 1862, solemnly pledged itself by a resolution unanimously passed March 17, 1863, that it or the State would *furnish, erect, preserve and keep in repair, any and all building or buildings necessary for the use* of said Agricultural College. The State has never done anything of the sort; it has never furnished even the most insignificant building for this great and important department of the University, although the attention of the General Assembly has regularly been called to this important matter during these last eight or ten years, but there has never been a favorable response to these just and legal demands upon the State. The Agricultural and Mechanical Departments have been crowded into other buildings erected long years ago (but not by the State) for other University purposes; and these, together with the Normal Department, the Department of Natural History, the Department of Civil Engineering, the Art Department, the English Department, the Department of Chemistry, the Depart-

ment of Physics, the Department of Philosophy, the different Departments of Language, Ancient and Modern; the Department of Mathematics and Astronomy, and the Professional Departments at Columbia, are all crowded into a few buildings wholly inadequate to accommodate the professors and five or six hundred students, young men and women, who are now in attendance upon the Institution, and with a prospect, if proper legislative support is extended, of larger and still increasing numbers.

The Curators know of no way of compressing two bushels of corn into a half bushel measure; their only recourse is to appeal to the sense of justice, to the intelligence and liberality of the General Assembly of the State. The people will sustain you; the freemen of Missouri are in favor of maintaining our "*Free Public School System*," and of which the departments above spoken of constitute a most important part. There is the pledge of the whole people, without distinction of party, in their written Constitution. Read Art. 11, State Constitution; subject, "Education." When our State prisons need more room, buildings are at once erected and paid for by the State; when larger accommodations are needed to take care of your deaf and dumb, your blind and insane, palaces are at once erected and paid for by the State, but for these there is no constitutional pledge or guarantee. These institutions are unknown in the Constitution. When your State Capitol needs enlargement or repairs it is at once done. Why, then, should that institution, standing at the head of our public educational system, planted in the Constitution from the very beginning and continued in every Constitution down to the present time, constituting thus a solemn covenant, made by the founders of our State Government with the Fathers of the Republic when Missouri was admitted into the family of States, that the State would "aid and maintain it," and which can only be done by appropriating sufficient means, annually, for its support, and the furnishing of ample buildings necessary for the reasonable accommodation and convenience of such of the youth of Missouri as may seek to obtain a liberal education within the walls of her State University? Why, we ask, should this institution, the oldest, and perhaps, after all, the most important amongst them, continue to be given the go by and utterly neglected? There is nothing so fatal to the success of literary and scientific institutions as to leave them in constant doubt and uncertainty as to whether they will receive the annual appropriations necessary for their support and maintenance. The Board of Curators look to the Constitution, and there, in sections 5 and 6 of Art. 11, the guarantee and the pledge, broadly given, are found that the Legislature will do these things.

In Sec. 6 of Art. 11 of the Constitution of Missouri, after describing what constitutes the "Public School Fund" of the State, it provides: "*The annual income of which fund, together with so much of the ordinary revenue of the State as may, by law, be set apart for that purpose shall be faithfully appropriated for establishing and maintaining the free public schools and the University in this article provided for, and for no other use or purposes whatsoever.*"

Can the English language make anything plainer than this?

The Board of Curators cannot distrust the Legislature; they must repose implicit faith in that body, that its members will meet faithfully the obligations and pledges imposed by the Constitution itself, and with a fair understanding of these matters they have every confidence that the General Assembly will fulfil its duties in this regard in the most liberal and enlightened manner.

This Board states as a fact that, considering the point of usefulness attained by the University of the State of Missouri, after a hard struggle of almost a half a century, it has cost the people of the State far less than any other similar institution has cost the States in which they are located. This Board will go farther still, and make the broad statement that, with the exception of Nevada and Colorado, there is not another

State in the Union, however young or scant of means that has not made larger and better provision in the way of buildings and endowments from their respective treasuries than the great and powerful State of Missouri, now a member of the Union for more than sixty years! If this be true it presents a picture of indifference and neglect not creditable (far from it) to the enlightened conduct of our educational affairs. Is Missouri so feeble, so poverty-stricken, that this state of things must continue? It is for the General Assembly of the State to answer these questions. This Board have no power in the premises, except to coöperate and to recommend as it is their legal duty to do.

It has been charged, by persons ignorant of the facts, that this is an extravagant institution; that it is intended for the rich, and not for the sons and daughters of the middle classes and those in humbler life. Men who say these things speak without knowledge or wisdom. This University is a State institution; it is intended for the whole people without sect or party; it is designed to educate and lift up to a better sphere of life and usefulness the masses of the people. Every son and daughter of the commonwealth, no matter in what obscurity and poverty they may have first seen the light of day; and this board will go farther, and state there is no institution of learning of equal advantages upon the American continent where young men and young women may be well educated for a less sum of money. Running back through a series of many years, the different boards of government of the institution, under the guidance of experience and enlightened educators, have pursued a policy whereby all the advantages of the institution might be fully enjoyed by the young men and young women of the humblest means; a system of boarding in clubs has been in existence for years, so reducing the cost as to exclude no one worthy to receive an education. Tuition fees, by acts of the Legislature, have been reduced in nearly all the departments, whereby students entering the institution are admitted to equal privileges and advantages of use of library, admittance to University lectures, as well as enjoying all the training and instruction of the different recitation rooms. Many of the young men coming from different parts of the State of limited means, and who are preparing themselves for the pursuit of agriculture, and other industrial and mechanic arts, pay their way largely by useful labor and employment upon the *farm;* and yet with these facts so plainly stated, and so easily understood by even "*the wayfaring man,*" we hear it said, and repeated, the University of Missouri is intended for the rich! Can there be any statement more sublimely ridiculous?

We have before us a communication from Prof. Swallow, Dean of the Agricultural College, showing that during the year 1880 there was paid out for labor to students in the Horticultural Department, the Department of Pomology and Forestry, for work in the nursery and vineyard, the sum of $3,450.50, thus enabling 70 or 80 students of limited means to pay their way, and pursue their educational object in the University of the State, and yet we hear it said, and constantly repeated, that the University is intended for the rich alone.

The rich can go where they choose to educate their children, either at home or in foreign lands. It is our duty and our province to provide for the education of all; those who may live in proud palaces, and those who may inhabit the "lowly thatched cottage," for the sons and daughters of those who may be basking in the sunshine of wealth, and at the same time for those equally meritorious sons and daughters of the humblest sunburnt peasant. This is what freedom means; this constitutes the true glory of our free institution; this is genuine democracy; this is true republicanism; this is what education ought to mean in Missouri under our free system of public schools, as provided for in the constitution and laws of the State. As Prof. Huxley

puts it, "The State work of education is like a ladder with the lower end in the gutter and the upper end in the University." Every child of the State possessing energy, talent and ambition, may commence at the lowest and reach the topmost round of this ladder.

Said Madame DeStael to Napoleon: "Pour instruction upon the heads of the French people; you owe them that Baptism." So say we to our common mother, the State, you owe this baptism to every son and daughter of the commonwealth.

Not to weary your honorable bodies further, the Board of Curators close this memorial with the following recommendations as necessary for the further and complete success of the State University.

1st. The passage of Senate bill No. 88, which, if the claim therein referred to is ever realized, will make ample provision to meet the reasonable wants of the different departments of this University. See page 9 of report. And also provide fairly for the wants of those institutions composing a distinct part of our public educational system. This claim, given by the State for educational purposes, would greatly strengthen the prospect of its settlement and collection, and at the smallest possible cost.

2nd. The passage of a bill appropriating $80,000, according to careful plans and estimates made by President Laws and Mr. C. B. Clark, an able architect of St. Louis, for the extension of the main University edifice, which, when completed, will afford ample room to meet present pressing demands for room, and also reasonable accommodations for all the Departments of the University for a series of years to come. In the opinion of this board, in utilizing present improvements here, this would be the cheapest and best investment the State could possibly make, and this board further regards it as absolutely essential to the farther growth and expansion of the institution, now so full of hope and bright promise.

3rd. There are other bills in regard to the attendance of curators, in reference to an annual board of visitors—and in regard to the encouragement of donations to our public school funds which ought to be passed. If the General Assembly distrust the judgment of this board in regard to the recommendations above made by them, they can easily obtain further light through committees of their body, or by the General Assembly coming and seeing for themselves; and with these reasonable recommendations faithfully carried out, this board, representing every part of the State, expresses the opinion that under the direction of the able, efficient, learned and liberal President Dr. Laws, with the aid of his faithful colleagues, we will have in Missouri one of the best *public school systems*, and crowning the whole a State University equal to any in the Mississippi Valley, and of which every intelligent citizen of the State will be justly proud. All of which is respectfully submitted.

JAMES S. ROLLINS, President.
JERRE C. CRAVENS, Vice-President, Springfield.
ALEX. M. DOCKERY, Gallatin.
W. H. LACKLAND, St. Louis.
J. K. ROGERS, Columbia.
JOHN WALKER, Jefferson City.
A. M. MILLARD, Rolla.
CHAS C. BLAND, Rolla.
JNO. S. CLARKSON, Columbia.

Attest: R. L. TODD, Secretary.

A FARMER AND AN ALUMNUS ON THE MISSOURI UNIVERSITY.

NEAR MOBERLY, MISSOURI,
February, 15, 1881.

To the Senate and House of Representatives of the 31st General Assembly of the State of Missouri:

GENTLEMEN:—Your recent indisposition to appropriate the amount of funds asked for the support of the State University, seems to indicate one of two things—either you are displeased with the present administration thereof, or, you do not attach special importance to rearing a great University in the State of Missouri.

With your kind indulgence, we beg leave to say, as to the *former*, let the facts speak for themselves: During the last five years the standards for entrance and graduation have been gradually raised and yet this University (exclusive of the School of Mines, at Rolla.) has grown from 321 to 545 students,—a gradual, a continuous, a healthy increase. A total increase of 70 per cent.—giving an average yearly increase of 11.2 per cent. Now, at this annual rate of increase, within the next six years, the number of students will swell to 1,039. The University Chapel and many of the class-rooms, are now full to over-flowing; and the *number of teachers* is now insufficient.

Now, there are *two things* which *this* increase of students indicates most clearly and unmistakably:

First—That more room and more teachers must be provided or the sons and daughters of Missouri must be turned away from the doors of the University,—and the Institution thus come to a dead stand-still, or retrograde.

Second—That there is, in the public mind, an increased and growing confidence in the work now done at this University. Now, *why* does the University enjoy this increased confidence and patronage of the public? Because the people are finding out, day after day,—*First*, that their sons and daughters seeking a *liberal education*, can find it here. *Second*, that their children can also find here the *professional educations*, to fit them for the practical callings of every-day life.

For further evidence of the confidence of the people of Missouri in their University, look, if you please, at those indices of public opinion: "The Press," "The State Teacher's Association," "The State Medical Association," and "The State Board of Agriculture." They are (*) "most favorably impressed with the advancement made by the University, in pressing forward our educational interests;" and are wide awake to the fact, that "the General Assembly should provide a larger endowment for the University and all its departments, in order that the sons and daughters of Missouri may enjoy advantages of practical education and liberal culture equal to those enjoyed by the youth of any other State in the Union."

During the last five years, the University has, under the management of its present able, eminently practical, and far-seeing President, and its wise and active Board of Curators, experienced a prosperity uninterrupted and unparalleled in the history of the Institution.

(*) See Resolutions of these Associations.

As to *the latter*, we submit the following:

That Agriculture and Mines furnish the raw material for the life-blood of our Nation, which Manufactures digest, and Commerce distributes to every part, are propositions indisputable and self-evident. *Agriculture* and *Mines* are the feeders, *Manufactures* the stomachs, *Commerce* the veins and arteries (and the telegraph wires the nerves) of the American Nation. We can, hence, see that these four grand pillars of our State's prosperity, are so linked in union together that no permanent cause of prosperity or adversity to one of them can operate without extending its influence to the others.

Now that a proper fostering of these industries is essential to the material and social prosperity of our State and Nation, will be granted.

And that our sons must be educated and trained in the Sciences and Arts underlying these industries before they can render intelligent and efficient service in them, is equally evident.

Now, will the State of Missouri furnish the means to provide her sons and daughters with such an education as will enable them to rank with the best minds of other States and to develop successfully her resources, to their own and the State's profit, or will she depend upon her sister States for the *loan* of men of knowledge, ability and skill to lead and direct her great interests? while her own sons and daughters are remanded to drudgery and unskilled manual labor!

The money value of Virginia University to the State of Virginia, was estimated a few years since by Dr. Ruffner, the Superintendent of Schools, to have been $14,000,000.

The two great *aims* of the Missouri University are: *First*, to foster, through her special schools, our four great industries, by turning out active, live men with brains and muscles, capacitated for intelligent productiveness in commerce, agriculture, mining and manufacture. *Second*, to teach of other "subjects, such and only such, as have been deemed most effective in conserving, improving and transmitting the civilization of our age."

Now, in conclusion, gentlemen, we earnestly beg, you will reconsider your votes of $35,000 in the Senate and $40,000 in the House, and give the University the full amount asked for in the Report of the Board of Curators.

AN ALUMNUS AND A FARMER.

P. S.:—By actual count, it has been ascertained that 35 per cent. of the students (young gentlemen) now at the University, have the proud consciousness of spending for their education *their own dollars*, and not "the dollars of their daddies." And about 20 per cent. of the remaining students are the sons and daughters of those of moderate means. Does this look much like "this University is for the rich only?"

There it may be truly said: "The rich and poor meet together and the Lord is the maker of them all." The only distinction there known is one of character and of brains. They aim at having an Institution most worthy of the patronage of both rich and poor.

A large majority of the Alumni of this University who have gone out and achieved the greatest successes in real life were young men of little or no means at the close of their college course.

I have gathered the above information from the University Catalogues and from students now at the University.

ALUMNUS.

An Important Law.

The following admirable bill, carefully drawn and prepared by the President of the Board of Curators of the State University, was passed by the last General Assembly of the State, and is now the law of the land.

It will probably remain upon the Statute Book for a great many years to come. It was a law greatly needed; it invites contributions to the Public School fund of the State by those who have means, and are willing to make such, and under the most favorable conditions.

The great difficulty with persons benevolently inclined to make such donations heretofore, was, that they knew not how to make such investments perfectly safe. This bill remedies this difficulty. It is drawn precisely in accordance with Sec. 6, Art. 11 of the Constitution of the State of Missouri, and any person desiring to make provision for the benefit of any district school connected with the public school system of the State, or to establish scholarships or additional professorships, or departments, or permanent prizes in connection with the State University, to stimulate and encourage ambitious and meritorious youths, male and female, can do so by granting, giving or devising any money or property of whatever kind, which they may desire to dedicate to such objects, by turning over and delivering the same to the Treasurer of the State, to be disposed of by him according to the terms of the law.

Under Sec. 7 of this act the State of Missouri is constituted the custodian and trustee of all such funds, and pledges itself for the safe keeping, investment and due application of the same, with the interest thereon, and the annual income on which funds shall be faithfully appropriated in carrying out the purposes and wishes of such grantor, donor, devisor or testator, according to the instrument of writing making such grant, gift, devise or bequest.

We repeat this is an admirable bill, and we hope that before many years the Public School fund will be largely increased from private sources, and from persons residing in and out of the State of Missouri:

AN ACT to encourage and increase the public school fund of the State by grant, gift or devise, as provided for in section six (6), article eleven (11), of the Constitution of Missouri, and to provide for its safe and permanent investment.

Be it enacted by the General Assembly of the State of Missouri, as follows:

Section 1. It shall hereafter be lawful for any person to grant, give or devise to the Public School Fund of the State, any money, property, real or personal, choses in action of every kind and description, the same to be turned over and delivered to the Treasurer of the State, and to be disposed of by him in the manner hereinafter provided for.

Sec. 2. For any money, property or choses in action delivered to the Treasurer, under this act, he shall give duplicate receipts, one of which shall be filed in the office of the Auditor of State, who shall charge the Treasurer therewith.

Sec. 3. A certified copy of the instrument of writing, evidencing such grant, gift or devise, shall also be delivered to the State Auditor, and duly recorded by him, in his office, in a book to be kept specially for that purpose, and the original shall be recorded in the recorder's office of the county where said grantor, donor or devisor lives or resided at the time of his death.

Sec. 4. Said Treasurer shall, as early as practicable, dispose of the property granted, given or devised, according to the terms specified in the written instrument, granting or giving the same to the Public School Fund, and if the same be in money, or after the property is converted into money, it shall be securely invested and sacredly preserved as a part of the "Public School Fund," as provided for by the Constitution of this State, whether the same be given for the free public schools or for the benefit of the State University, and the annual income of which fund shall be invested,

reinvested, appropriated and disbursed, and paid over according to the terms of the writing making such grant, gift or devise, and for no other uses or purposes whatsoever.

SEC. 5. For all property or money received under this act by the State Treasurer, he and his securities shall be responsible for the safe keeping, investment, reinvestment and disbursement of the same on his official bond.

SEC. 6. In all cases where any such grant, gift, devise or bequest has been made by any person for educational purposes, in aid of or connected with the free public school system, or of the State University, and from any cause the terms of such grant, gift, devise or bequest cannot be executed or carried out according to the terms and conditions of the same, it shall be lawful for the person or persons having the charge thereof, or holding the same in trust, or any person interested therein, to file a petition in the circuit court of the county where such grantor, donor or testator died, setting forth all the facts connected therewith, and in the discretion of the court in which said petition may be filed, an order may be made directing that the amount of such grant, gift, devise or bequest shall be turned over to the Treasurer of the State, as a part of the Public School Fund, according to the terms and conditions of this act, and securely invested, reinvested and sacredly preserved; the annual income on which fund shall be faithfully appropriated, as near as may be, in meeting and carrying out the purposes and wishes of such grantor, donor, devisor or testator, according to the instrument of writing making such grant, gift, devise or bequest.

SEC. 7. The State of Missouri is hereby constituted the custodian and trustee, under this act, of all such funds, and pledges itself for the safe keeping, investment and due application of all funds, with the interest thereon, which may be deposited in the Treasury, in pursuance of this act.

SEC. 8. The Auditor and Treasurer shall, in the reports required by law to be made by them to the General Assembly, from time to time, make a full report of all sums that may be made to the Public School Fund under this act, by whom made, and the precise expenditure of the annual income and growth of said fund.

Approved March 16, 1881.

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