

MEETING OF MARCH 8, 1898.

The Board of Trustees of the University of Illinois met in the Trustees' Room, Library Hall, in Urbana, Illinois, at 9 o'clock a. m., Tuesday, March 8, 1898.

The members present were Messrs. Armstrong, Inglis, McKay, Morrison, Smith, and Raymond; those absent were Governor Tanner and Messrs. Bullard, McLean, and Pearce, and Mrs. Carriel and Mrs. Flower.

After some time spent in the discussion of University affairs, there being no quorum present, the board adjourned to meet at 1:30 p. m.

When the Board met pursuant to adjournment there were present the same members as in the morning, and in addition Messrs. Bullard and McLean, and Mrs. Carriel.

The minutes of the meeting of December 14, 1897, were approved as printed and presented by the Secretary.

The Board then proceeded to the election of officers.

On motion of Mr. Smith, Mr. McKay was elected President.

On motion of Mr. McLean, Mr. W. L. Pillsbury was elected Secretary.

Messrs. Smith and Bullard were elected to constitute, with the President of the Board as chairman, the Executive Committee.

Messrs. A. D. Barber, of Hamilton, E. A. Riehl, of Alton, and H. B. Gurler, of DeKalb, who had been recommended by the Illinois State Board of Agriculture, the Illinois State Horticultural Society, and the Illinois State Dairymen's Association, respectively, were appointed to represent them on the Advisory Board of the Agricultural Experiment Station. Messrs. Raymond and Morrison, together with Professors Burrill, Forbes, and Davenport, were also appointed members of the Advisory Board.

Professor Burrill was appointed Chairman of the Advisory Board.

Mr. Smith moved that there be added to the standing committees of the Board, a Committee on the School of Medicine, the School of Law, and the Library School.

The motion did not prevail.

COMMUNICATIONS FROM PRESIDENT DRAPER.

On recommendation of President Draper \$500.00 was appropriated for commencement exercises; also \$100.00 for incidental expenses in the Library.

The appointment of W. H. Simmerman as engineer in the heating department, at a salary of \$60,000 a month, was recommended and the appointment was made.

The matter of the superintendency of buildings and grounds was referred to the Committee on Buildings and Grounds with power to act.

A request from Professor T. A. Clark for leave of absence, without pay, during the next University year, was presented and approved.

It was ordered that the President's house be painted at an expense not exceed \$200.00, and the work was put in charge of the Committee on Buildings and Grounds.

A communication with regard to a small animal house was referred to President Draper with power to act.

The following rule with regard to the purchase of uniforms, prepared by the Committee of the Faculty on military affairs, was approved.

PURCHASING UNIFORMS.

In order that all uniforms worn at this University may be, in quality, make and finish in strict accordance with the qualifications adopted by the Board of Trustees, all students enrolled in the military department will be required to obtain them from that firm only that may, from time to time, be under agreement and bond with the Trustees to furnish said uniforms at a stated price and of standard quality.

Appropriations were made of \$30.00 for the purchase of equipment needed in the military department, and of \$75.00 for the purchase of a State flag.

The report of Professor Davenport, the Director of the Agricultural Experiment Station and Dean of the College of Agriculture, was presented, with the recommendation that the requests made therein be granted.

Authority was given to conduct experiments as proposed, and appropriations of Station and of the University funds were made as asked for in the report.

REPORT OF THE DIRECTOR OF THE AGRICULTURAL EXPERIMENT STATION.

UNIVERSITY OF ILLINOIS, March 3, 1898.

A. S. Draper, LL.D., President of the University of Illinois,

DEAR SIR:—The following is a report of the work of the various departments of the Agricultural Experiment Station, together with recommendations and estimates for the ensuing quarter.

The Chemist of the Station is away on leave, to return in June. The small amount of chemical work that is imperative in the way of analyses of fertilizers, is done by Mr. Smith, a graduate from last year's class.

Mr. Clinton, Assistant Botanist of the Station, reports an addition to the herbarium amounting to about 1,300 specimens, some 400 of which were purchased. He is making a collection of Ustilagineae as a volume of Seymour and Earl's Economic Fungi. Much work was done during the past year with oat smut, and about 100 fields were visited in different parts of the State. The loss from this cause alone is often as high as 20 per cent., and is especially heavy in white clay soils of southern Illinois. The treatment by hot water is now well established, and Mr. Clinton proposes to visit certain sections to give practical demonstration of this method of prevention. He has made extensive experiments upon the germinating power of oats when subject to different degrees of heat and for different periods of time and proposes to extend his investigations the coming season before publishing. A good amount of information was secured last year upon the smut of broom corn, Indian corn, and sorghum, particularly the latter. Mr. Clinton has attended two institutes this winter, and has taught one class in the Winter School.

Mr. Blair, Assistant Horticulturist, has visited within the year 180 fruit plantations in 47 counties of the State for the purpose of studying the horticultural conditions of Illinois. All these visits were without expense to the Station, except the trip to Johnson county at the time of the meeting of the Southern Horticultural Society, which, it will be remembered, he visited for the purpose of making a practical demonstration of the methods of spraying. He reports that the exhibition created great interest and elicited many questions. Requests have come in for its repetition, but I have been obliged to decline, because of the expense. Mr. Blair is desirous of starting a small plum orchard, and in this is supported by Dr. Burrill.

A circular upon the use of the common insecticides is about ready for the press and it is proposed to institute somewhat extensive trials of different fungicides during the coming year preparatory to the more formal publication of a bulletin. One of the subjects that occupied a large degree of attention last summer was orchard cultivation and the results of the season's experience are preparing for a bulletin, which will be ready for the printer within the month. Mr. Blair has now made a fairly complete study of the horticultural resources and possibilities of the State and has spent much time in becoming familiar with what the Station has done heretofore, all of which is of material advantage to his further work. During the term he has taught the largest class in horticulture ever in the University, namely, fourteen University students, besides those of the Winter School. This department's need for laboratory facilities, both for instruction and for experimentation, is most marked and entirely similar to that of the department of agricultural physics. I recently spent a day at Madison, Wisconsin, which confirmed my previous conviction that these two departments should be supplied with suitable buildings and apparatus at the earliest possible date.

This remark leads naturally to the work with nitragin performed by Professor Holden last year. At considerable expense we secured from Germany a dozen samples of the new product for soil inoculation and ours is one of two Stations in America to test the new discovery. The work was greatly hampered by the absence of glass or other protection, and during the fire last June at the Natural History building a good portion of the work was ruined. We have seriously debated the advisability of repeating the attempt to carry on so laborious and costly an experiment with our meager facilities and the chances of loss; but the importance of the subject and the fact that we are pioneers on this side of the water make it seem advisable to do something, or at least to make an attempt. Here lies a fertile field for inquiry, and we should like much to hold good ground until perchance we may be better equipped.

The corn breeding experiment has assumed gigantic proportions and Professor Holden has a mass of valuable data that will prove, I am sure, a contribution to our knowledge of corn. Publication on this subject should be made after another season's work, particularly if last year's promises of results should be fulfilled. The effects of inbreeding appear both pronounced and disastrous, the second generation from inbred seed being less than two-thirds normal size and nearly barren. Remarkable variations have been brought to light in all portions of the plant, which seems peculiarly variable,

and yet there is a pronounced tendency to respond to selection. The first year after all imperfect stalks and all extremely large, early, or late ones had been removed not one-fourth of the crop was left, but the second planting from this seed when closely selected after the same plan left almost a full stand, which shows that corn may be brought much nearer a constant type than has ever yet been done.

The permanent plats have now raised three consecutive crops of corn, and the individual differences or "personal equations" of each are fairly well established. On a few of these tested plats it is proposed to begin permanent experiments to test the behavior of leguminous crops grown continuously upon prairie soil, both alone and in company with other crops.

As was arranged at the last meeting of the Board, Professor Holden visited Grand Island and Norfolk, Nebraska, and made a close study of the sugar beet industry as regards both the producer of the beets and the manufacturer of sugar. He soon observed that peculiar relations obtain between these two interests and that the knowledge of practical details and a common understanding as between grower and manufacturer are absolute conditions of success. After considerable exertion he succeeded in securing some inside information and returned with a new conception of the magnitude of the business, its suitability for Illinois, and withal the danger that threatens a hasty attempt to establish factories without an assured supply of beets grown after economic methods. His investigations entirely changed the plan of our proposed bulletin. The first numbers of the bulletin are out, and I have no hesitation in saying that it is by far the best bulletin ever issued on this subject in the country, not excepting anything emanating from the Agricultural Department at Washington, and excepting only the work of Nicholson, of Nebraska.

We became so impressed with the possible benefits of saving a \$12,000,000 sugar bill to the State and of establishing on a safe basis the fifty factories that would be needed to make the sugar of Illinois, and we saw so many chances of disastrous failure from ill-advised haste, that a thing was done the like of which was never before attempted by any Experiment Station or College of Agriculture and that was to call a Sugar Beet Convention, and to employ and bring from Nebraska the man who is perhaps better qualified than any other in America to teach the culture of the sugar beet and to advise our people as to safe procedure. Mr. Theodore Hapke is a graduate of a German university and has been for years a practical beet raiser. He superintended last year the beet fields of the railroad and irrigation companies in Colorado, and has just now consented to continue with them next year. We were fortunate in having had so capable a man to start our people.

The Convention opened with 150 in attendance. In the afternoon fifty-six registered, representing seventeen counties of the state, and their first action after the meeting was turned over to them by the Experiment Station was formally to thank the University for the interest taken and the help offered in this matter. A Sugar Beet Growers' Association was formed, with Professor Holden as Corresponding Secretary, and visitors said that this Convention would save the state more money than the University had ever cost.

It would seem wise policy to recognize this State Association, which has taken for its work the business of arousing and regulating local markets, this year in growing beets and afterward in establishing factories. I propose that we deal as largely as may be with and through this organization without either sacrificing the work in localities not represented in the Association, or turning the work from our hands into those of the State Association. We must adhere to our resolve not to deal with individuals, except in rare cases and for reason; but must, I take it, pursue a policy that will tend to localize interest and to combine effort about centers where factories may be established later. With such localities we should co-operate in every possible way. We should furnish them bulletins and circulars of information and should arrange to analyze such samples as may be grown according to our direction and forwarded to us transportation prepaid. The people are grateful to the Station for its help and will be yet more grateful when they fully realize its nature. Professor Holden has spoken in many Farmers' Institutes of the

state this winter upon the subject of sugar beets and has been obliged to decline many more invitations. The chief aim has been to steady and shape popular enthusiasm and to induce the right sort of study and procedure. A letter from a Chicago agricultural editor says that we are coming to be considered authority on the sugar beet, and I feel that Professor Holden deserves credit for quickly and accurately estimating the conditions involved.

It would seem well to raise at the Station the coming season three or four acres of beets of different varieties and at different distances apart. We should in this way become familiar with their handling, a thing that is desirable because we are likely to be called upon for information for some time to come. It is recommended also that experiments be conducted in growing beet seed. Seed is not now produced in this country, not because we are unable to produce a satisfactory quality, but because when seed growing has been tried in Nebraska the yield has been insufficient. It is certainly worth while to test this matter, for our soil ought to be productive of large crops.

We have no results from last year's work tending to show whether or not beets can be grown in the white clay lands of southern Illinois, and it is proposed to test this matter on our own rented lands at Edgewood and Odin.

In southern Illinois an important work is only partly done. We have demonstrated not only the possibility of tile drainage, but something at least of its beneficial effect in improving the texture of the soil and increasing the corn crop from 15 to 25 per cent. We have shown that the cow pea is an exceedingly valuable crop, but I question if the general public will not forestall us and adopt the crop before we can fully prove its benefits by actual demonstration. I sincerely trust that it will do so. We must learn further concerning sub-soiling those lands; irrigation, whenever a favorable season occurs; the effect of barnyard manure and of lime; the benefit of winter protection; the introduction of clover; and the use and abuse of meadows. The experiments at Edgewood should be continued as heretofore and at Odin with certain additions as suggested above.

Since April last Mr. Fraser has been studying the natural variations in milk with four cows and has collected good material, which he is getting into shape for a bulletin this spring. He found it necessary to make some experiments on more accurate methods of determining solids not fat, and we have united a dairy and feeding experiment with three cows that are fed a known ration, first of the same composition for all and in amounts entirely safe. This will be afterward varied in amount and composition to note effect both of kind and amount of food as well as of the behavior of each separate animal. A good experiment of this kind has never yet been performed and Mr. Fraser and myself are looking for some important results now that we have an experienced herdsman and a skilled feeder.

The dairy department has done a large amount of work in attempting to discover the real source of impure milk by means of bacteriological and other tests. Mr. Fraser has made some study of city milk supplies, especially of Chicago, and now proposes that experiments be authorized looking to methods of obtaining and delivering pure milk. I believe that the Station can do an excellent work by attacking strongly the problem of city milk supply and would recommend that this line of work be authorized. In November, Mr. Fraser spent three weeks among the dairies of northern Illinois and during the winter he has spoken at five Farmers' Institutes besides the State Dairy-men's Association.

Because of additional purchases we have been able to dispose of some of our inferior specimens of cattle and I consider that the herd is assuming a creditable showing. We are fortunate in having Mr. Dalziel with us as herdsman. He has fed hundreds of cattle and thousands of sheep in Scotland, and comes to us not merely for employment, but for the opportunity to do experimental feeding and in the hope of building up a good herd.

I would recommend that our herd be subjected to the tuberculine test, not that there is reason to suspect disease, but as a precautionary measure. Public herds often suffer because the management lacks the necessary courage to take radical steps; but there is no valid reason why they should not be treated in all respects with the same precautions as private herds.

The four teams and two colts owned by the University are in excellent condition and are doing us credit. Late in the fall I traded one of our old teams which had never been entirely sound for \$75.00 worth of feed. They would have brought more in the spring, but we got all they were worth and saved the cost of wintering.

Whether the institute work done by the members of the Station staff should be considered college or station work is perhaps a question. In any event the call for attendance upon institutes is something enormous and it is certainly growing. I have attended ten such meetings besides our own state institute and the state institute of Indiana, at Huntington. The sort of work is valuable to our staff, because it keeps the individual in touch with the people and their needs. It is valuable to the institution because it serves to carry our work to those engaged in actual business and it commends our efforts to them and builds up in them a belief in the University; but it is a serious invasion of time and simply reduces the winter season to a state of affairs in which we can but keep afloat with daily duties without doing much good work. Those of us who teach, and most of the staff are so engaged a part of the time, find great difficulty in securing time for even the least amount of careful study of literature or for original investigation. The State Farmers' Institute Association is getting into much better working order, and it is to be hoped that dates may be so arranged another winter that less time will be wasted in travel.

The State Institute just closed was in every way profitable to the Station, as it was to all interests of the University, and resolutions were adopted asking for an agricultural equipment commensurate with the needs of the subject and with the standing of Illinois among the great agricultural states.

The ravages of fire have cost the Station not far from \$3,000.00 within the space of a year. The labor of restoring the chemical laboratory has been an arduous one so far as funds are concerned, and has compelled a degree of reduction of estimates that is to be regretted. By oversight no request has been made for a restoration of the loss at the hands of the Legislature. This should be done at the next session. Again, Illinois should undertake to print the results of Experiment Station work, as is done in so many other states, not by the State printer, but by augmenting our printing fund. If this were done, it would not only allow of doing more work here, but would put into circulation much material that is tied up for want of publication funds. Thirteen states make annual appropriations to the experiment stations in amounts varying from \$2,500.00 to over \$96,000.00.

At the time of reorganization of the Station the office of Secretary was abolished. By common consent Mr. Pillsbury was to continue to edit the bulletins as heretofore, both in the interest of uniformity, and because he is peculiarly fitted for this important work. One has only to notice the grave errors and inconsistencies that creep into the bulletins of many states, or to be acquainted with the services of Mr. Pillsbury as a "layman" editor of technical literature to appreciate the value of this work; and because of this fact, and because he is already rendering us this service, I would propose that his name be added to the staff as "editor of station literature."

Summary of leading work for the year and of recommendations:

Botany.—Smoot of oats and fungus diseases of the apple.

Horticulture.—Fungicides, orchard cultivation, and a new plum orchard.

Agricultural Physics.—Nitragin experiments, corn breeding, leguminous crops on permanent plats, sugar beets, and continuation of experiments in southern Illinois.

Dairy.—Variations in milk; obtaining and delivering pure milk.

Live Stock.—Tuberculin test and a careful feeding experiment with three cows.

Printing aided by State; Editor of Station Literature.

Upon recommendation of the Advisory Board, I also recommended experiments with the sunflower and the artichoke.

I transmit without recommendation, except as to the interest and value of the subject, the report of Dr. McIntosh giving results of work upon tetanus.

Professor Davenport, Dean of College of Agriculture,

SIR:—I submit to you the following report of the work done in the experiments on guinea pigs, rabbits, and horses. Dr. Burrill very kindly supplied me with *bacillus tetani*.

December 20th I inoculated two guinea pigs, which died in sixty hours, after the operation without showing any of the signs of lock jaw. On the 26th of December I inoculated a horse with the *bacillus tetani* and at the end of the second week the muscles of the hind parts became stiff and tetanized. The following day the jaws were locked. He could drink but could not eat any food. By the end of the third day all the muscles of the body were tetanized, showing all the symptoms of lock jaw with the exception that touching him would not produce any extra spasms and that the membrane of the eye was not protruded over it, which is always the case in tetanus brought on by injuries. The horse got only one dose of the bromide of potassium as he would not drink although he could swallow. I tried injections of the medicine per rectum but he would not retain them. The horse continued in a tetanic condition for a week, and as I could not get him to take the medicine I considered it advisable to destroy him.

In the rabbits so far I have not been able to produce tetanus; but Dr. Burrill is preparing some fresh material and when it is ready I shall try again.

The *bacillus tetani* killed the guinea pig so quickly that we had not time to try the bromide of potassium.

The horse is our best subject, but I have found great difficulty in getting horses at a price I could afford to pay for them and am waiting an opportunity to get some more. I have had two cases of tetanus in the country caused by injuries; one of them got completely well in four days by the bromide treatment; the other one is somewhat better and I think will recover.

The object of the experiment is to find out for a fact if the *bacillus tetani* obtained from the earth is the cause of tetanus and, if so, whether or not the bromide of potassium will cure it. From what I have done I am convinced that the bromide of potassium, if a sufficient quantity can be taken by the horse, will cure nearly every case, and if so that it should be used for the cure of tetanus in the human being.

I have thirty-five dollars of the money allowed me still on hand, but as we would require, say ten or fifteen horses, to make our experiment of importance, I shall need some more money. I consider this a very valuable experiment, since nothing of the kind has as yet been undertaken.

Respectfully submitted,

D. MCINTOSH.

The following estimates are to cover the work as outlined for the coming quarter and it is asked that appropriations of Station funds be made to meet them.

APPROPRIATIONS FOR QUARTER ENDING JUNE 30, 1898.

<i>General Fund.</i>	
Salaries.....	\$1,590 00
Labor.....	910 00
Publications.....	475 00
Postage and stationery.....	35 00
Freight and express.....	20 00
Heat, light, and water.....	30 00
Feeding stuffs.....	200 00
Library.....	15 00
Tools, implements and machinery.....	265 00
Scientific apparatus.....	55 00
Traveling expenses.....	45 00
Buildings and repairs.....	50 00
Contingent.....	60 00
Total.....	\$3,750 00
<i>From Farm Fund.</i>	
Labor.....	\$520 00
Seeds, plants, and sundry supplies.....	230 00
Total.....	\$750 00

In this connection I present some matters as Dean of the College of Agriculture and ask for appropriations of University funds to meet bills and to make repairs on the porch at the farm house.

The following bills are at hand and awaiting payment:

Membership fee University of Illinois in Association of American Agricultural Colleges and Experiment Stations.....	\$10 00
Rent of experiment fields at Odin, Illinois.....	25 00
Rent of experiment fields at Edgewood.....	10 00

It will be remembered that it was held that the funds of the Experiment Station should not be used for rent and that last year a University appropriation was made for that purpose.

The porch at the farm house greatly needs renewing. I have waited from quarter to quarter disliking to ask for a semi-personal matter when we have needed so many things for work. The board roof leaks, the columns are loose, and, while I have endeavored to keep the porch together, the days of its respectability are quite gone.

In order to secure a trustworthy and definite estimate I have asked Mr. Sedgwick to submit one on a plan that will fit the angle between the upright and the wing, with an octagonal projection of some three feet, giving a pleasing effect to the corner. His bid on the job finished is \$156.00.

If this amount can be appropriated it will greatly add to the appearance of the house and the comfort of the occupants, and I should esteem it a personal favor as well as a needed bit of repair.

Last fall a fire that escaped from Professor Palmer's lot destroyed about fifty rods of fencing between our farm and land belonging to Mr. McClain. I have been unable to learn definitely as to the title to the fence that was destroyed, but understand that Mr. McClain is willing to replace half of the fence. I have taken it for granted that the whole matter lies within the province of the Committee on Buildings and Grounds and allude to it here only to call attention to the matter. Professor Holden estimates the cost of restoration at not less than 60 cents per rod.

Respectfully submitted,

E. DAVENPORT, Director.

EMPLOYMENT OF STUDENT LABOR AT THE UNIVERSITY.

To the Board of Trustees.

At the regular meeting of the Board in September last a resolution was adopted to the effect that student labor should be employed as far as practicable, and the President was directed to prepare a scheme for carrying out the proposition and present the same to the Board. Replying thereto I have to say that a considerable part of the incidental work, both clerical and manual in character, is performed by students. I think this is done to as great a degree as is consistent with the interests of the University, and of needy students as well. It is the common experience of the University that student labor is unprofitable; but, as stated, a considerable amount of work is given students to do as a means of helping the needy. It, of course, is not desirable to make work as a means of helping them. Moreover, it is surprising how rapidly students come to depend upon the University for support, in one way or another, when it is afforded. In my judgment it is decidedly against University policy to permit this number to be enlarged beyond bounds which are avoidable. The true course, it seems to me, is not to give persons who have not become students reason to believe that they can come here and depend upon the University for support, but to encourage mutual confidence between the officers and instructors of the University and the students who are already here, and to afford the needy ones relief through work so far as it is feasible for the University to do it. Even this should be done in a quiet way and not made very prominent. I am inclined to think that this is now done much more than the members of the Board suppose. I have never known a case, and since the matter was brought up in the Board I have made inquiry among the members of the Faculty and administrative officers, and am confident that no worthy and deserving student has been turned away from the University because of inability to meet at once any University charges.

We are continually needing more assistants in our laboratories. I think we have been accustomed to pay more for this class of labor than is customary in other universities. It seems to me altogether wise to provide leading professors with such assistance, and I think it practicable to do it more fully through the aid of the most meritorious students. They should be paid small fees, according to the length of time needed, and their employment should be put upon the merit basis. Those should be employed who are doing their work with the greatest regularity and competency and who show that they may be counted upon. Students who are not in need of this compensation will not desire such work. If the Board would open the way for a little more liberty of action in the selection of such assistance, I am confident that it would not involve much if any greater expenditure of money; that it would procure more assistance when most needed; and that it would be a safe and defensible policy in aiding worthy and deserving students without extending the natural tendency to depend upon the assistance of the University when such assistance is afforded. I therefore, for the sake of putting the matter in form for the action of the Board, recommend the following resolution:

Resolved, That so far as practicable the incidental work in the offices and laboratories, and manual work about the University, be given to students who are earning their way through the University, giving preference to those who are most worthy and competent.

A. S. DRAPER, *President*.

The resolution offered was adopted.

President Draper announced to the Board that he had been officially advised that on the preceding day, March 7th, in spite of his repeated and positive refusals to permit the use of his name, he had been elected Superintendent of Schools of the City of New York by the Board of Education of that city, and that he was continually in receipt of telegrams from gentlemen of the highest standing in the

public affairs of the city and state of New York urging his acceptance; a committee from the Board of Education had been appointed to visit him and had telegraphed asking him to name the time when he would receive them; he had all along intended to remain with the University but felt bound to present the facts to the Board as it was in session.

On motion of Mr. Morrison, it was voted to appoint a committee, with Mr. Inglis, State Superintendent of Public Instruction, as chairman and Mr. McKay, President of the Board, as one of the members, to prepare and present to the Board a resolution with regard thereto. Messrs. Morrison and Smith were appointed as the other members of this committee.

The following communication from Professor Breckenridge with regard to the work of the mechanical engineering laboratory was presented and it was ordered printed.

MECHANICAL ENGINEERING DEPARTMENT.

N. C. Ricker, Dean of College of Engineering,

URBANA, March 5, 1898.

DEAR SIR:—There are several matters of importance to the mechanical engineering department that I wish to present to the Board of Trustees at its March meeting, and I submit them to you, hoping that they may have your approval and commendation. They are as follows:

Moving and Setting up the Engines and Equipment of the Department in the new Steam Engineering Laboratory.

This will cost from \$200.00 to \$250.00. I request that this amount be allowed for this purpose.

Current Expenses for Experimental Laboratory Work.

This department offers three full courses and three half courses in "Experimental Work in Steam Engineering." These include all the students in the departments of sanitary, electrical, and mechanical engineering. The field covered by the experiments undertaken is a very large one and the nature of the work during the past may be indicated by a partial list of some of the more important tests made:

1. One hundred and twenty-six tests of the evaporative efficiency of many grades of Illinois coal. (These experiments have saved the University \$1,500.00 in coal bills during the last three years.)

2. Tests on the flow of steam through pipes.

3. Tests of three types of house heating boilers.

4. Tests of different types of radiators as to their heating capacity.

5. Tests of the Champaign Cold Storage plant.

6. Tests of Electric Street R. R. plant, boilers, engines, generators, and cars.

7. Duty trial of water works plant at Urbana.

8. Tests of different types of injectors.

9. Tests on the value of exhaust steam for heating purposes.

10. Tests on the power required to drive shafting, fans, and machine tools.

11. Tests on the relative strength of drop forgings and hand forgings.

12. Tests of strength of wire cables.

13. Twenty-two locomotive road tests on Illinois Central R. R., on three types of locomotives in actual service.

14. Tests on the regulation of engine speed by shaft governors.

15. Tests on the steam consumption of different types of engines.

The above list of experiments suffices to show the range of work done, under many difficulties, for want of a well equipped laboratory. This represents, I believe, good engineering investigation, which is possible only after a careful training in the use and manipulation of a large variety of instruments especially designed for such work.

It has cost at least \$900.00 to make the tests enumerated in the above list. Of this amount not over \$250.00 has been borne by the University, the remaining \$650.00 having been paid for by the parties with whom the department has coöperated in this work. In other words, outside parties have furnished the equipment and borne a large share of the expenses of the laboratory work in steam engineering.

The results of this kind of work can not fail to be of lasting benefit to our engineering interests. It has opened up friendly relations with many manufacturing concerns and large corporations; it has placed our graduates in good positions and in some cases has afforded a chance for vacation work to our undergraduates; it places the department in communication with state engineering interests, and helps to demonstrate, in some small degree at least, that professors of engineering are engineers.

The future of our steam engineering laboratory work is exceedingly bright, for we now have a Steam Engineering Laboratory. The generous appropriations made by the Board for increasing our equipment will enable us to add to it very materially.

Our relations to engineering interests about the state have been multiplied and the department now has arrangements for several important tests, enumerated as follows:

1. A series of tests to determine the effect on the fuel consumption of locomotives, caused by scale incrustation on the tubes.

The Illinois Central R. R. will furnish us with a new and clean tube locomotive for our first tests and allow us to test same locomotive at the end of four, eight, and twelve months under same conditions. These tests will show at what thickness of scale it will pay to put in new tubes, as well as many other disputed points in this connection.

2. A duty trial of a 6,000,000 gallon high duty pumping engine for the city of Aurora, Illinois.

This is a triple expansion Nordberg Corliss engine and has a guaranteed duty of 130,000,000 ft. lbs.

3. A duty trial of an Allis Corliss pumping engine recently enlarged for the city of Decatur, Illinois.

4. Test of electric light plant for Bement, Illinois.

5. Tests of "Serve tubes" compared with plain tubes, as to relative conductivity and steaming capacity. (The "Serve tube" is a form of tube used in all kinds of steam boilers. It is made at Sheffield, England. The company manufacturing this tube has sent this department four tubes and the "Big Four" R. R. will give us the four plain tubes for these experiments.)

6. "Locomotive Road Tests" on the "Big Four" R. R.

After several conferences with Mr. J. A. Barnard, general manager of the Peoria and Eastern division of the "Big Four," I think I have paved the way for a most advantageous opportunity for "locomotive testing," superior in fact to any offered by any technical school in the United States. Mr. Barnard offers to coöperate with us in this matter and will go into it for a long period, say five or six years. He will fit up a special car to be used for this work only. They will furnish locomotives for testing from time to time as either they or the University wish to determine various points. They will fit up these locomotives, furnishing material and labor for such attachments as are useful only for this work.

The University will have to furnish and mount such of its apparatus as pertains to the tests and that can be used in any regular experimental work.

The value of this work cannot be estimated in any direct way. The "Big Four" R. R. is erecting large and modern shops at Urbana. To be associated with these people will be of much direct value to all our engineering students. The opening up of broader fields for our graduates and many students remaining with us only two or three years is not to be overlooked.

If we can accomplish what seems profitable in this work it will be one of the finest advertising schemes imaginable. It is something that will grow from year to year, giving our students advantages not to be obtained at present at any other institution. It practically presents the University with an equipment for locomotive testing, maintained without expense to us, compared to which no institution could ever hope for its equal.

The test car which they will provide is No. 909, recently used for combination mail and baggage car. This they will fit up as per drawings furnished them, and thus afford us a safer means of observation. There will be plenty of room not only for our apparatus, but for our tools, clothes and material. Arrangements can be made for sleeping in this car at end of run, reducing individual expenses. I shall propose an appropriate painting of this car, so that the University of Illinois may obtain its share in whatever credit there may be in its get up and suitably advertise our engineering interest.

I have gone over this subject at length, which you will pardon, I hope. You have seldom seen any of this work going on; with our new Laboratory you will see much more of it.

The present appropriations made for the department of mechanical engineering do not allow for any current expenses for experimental work. The department has always had these expenses and they have been provided for by certain appropriations made from time to time by the Board. These expenses consist of such items as follow: Printing laboratory blanks; type-writing of reports to parties concerned; blue printing; photographs of some tests; express charges; cartage; pipe and fittings; oil and waste; indicator cards; indicator cord; batteries; glycerine; paint; hardware; repairs to instruments; gaskets and packing; material and temporary fixtures; setting up special apparatus.

I feel sure that all of these expenses are necessary and that you will agree with me as to their worth. Such expenses will increase with added equipment and increase of students.

In conclusion I respectfully request that the Board appropriate \$150.00 for current expenses of the steam engineering laboratory work for the spring term, 1898; that the same amount, \$150.00, be appropriated for each term of the next college year.

Hoping that the foregoing statements may have been clearly presented and that you may add to these your approval as Dean of the College of Engineering, I remain,

Respectfully yours,

L. P. BRECKENRIDGE,

Professor of Mechanical Engineering.

Approved, and transmitted to the President.

N. C. RICKER, *Dean.*

Concerning this communication the following resolution was adopted:

Resolved, That the Board commend the energy of Professor Breckenridge in securing opportunities for steam engineering tests upon the plants of different cities, railroads, and other corporations and make an appropriation of \$150.00 for office expenses in such work. But the financial circumstances of the University make it necessary that, as heretofore, the expenses of tests at a distance from the University be borne by the parties directly benefited thereby.

The following resolution offered by Mr. Morrison was adopted:

Resolved, That the chemistry and mechanical engineering departments be, and hereby are, requested to make an exhaustive analysis of Illinois coals, so as to ascertain the chemical and power producing qualities thereof, and that \$150.00 be appropriated for such investigation.

GAS CONTRACT.

The Finance Committee presented the following memorandum of an agreement with the Champaign & Urbana Railway, Gas and Electric Company for gas:

Memorandum of an agreement between the University of Illinois by the Finance Committee, acting in pursuance to the authority of the Board of Trustees and the Urbana & Champaign Railway, Gas and Electric Company, touching the use of gas.

It is agreed that the gas, which shall be of good quality, consumed by the University of Illinois in its buildings for any or all purposes, including gas used since the termination of the last contract, shall be charged and paid for at the rate of \$1.40 per thousand feet, payments to be made at the end of every three months.

This contract shall continue in force for two years from the 17th day of December, 1897.

January 17, 1898.

UNIVERSITY OF ILLINOIS,

By Thomas J. Smith, Chairman of Finance Committee.
URBANA & CHAMPAIGN RAILWAY, GAS & ELECTRIC CO.,
By N. M. Harris, Secretary.

The action of the Committee was confirmed.

WATER SUPPLY.

Mr. Smith also stated the terms on which the Union Manufacturing Company would furnish the University with water. Thereupon the following resolutions offered by Mr. Armstrong were adopted:

Resolved, That the Committee on Buildings and Grounds be directed to investigate various methods for the manufacture of gas and to recommend to the Board at its meeting next September a scheme for the erection of a gas plant adequate to all the needs of the University.

Resolved, That the Committee on Buildings and Grounds be directed to present to the Board at its meeting next June a scheme for the consideration of a water plant of sufficient capacity to meet the needs of the University.

It was voted to appropriate \$1,000.00, or so much thereof as might be needed for the protection of the University buildings from lightning by putting up lightning rods.

The question of conferring honorary degrees, together with a letter from Hon. Hugh Crea, of Decatur, was referred to the Committee on Instruction for investigation and report.

The special committee appointed at the last meeting of the Board to consider the subject of a summer school, made an informal report of progress and asked for time until the June meeting of the Board to consider a further report.

Mr. Armstrong was added to the committee.

It was voted that special meetings of the Board be held at the dates of the commencements of the School of Pharmacy and of the School of Medicine.

ATHLETICS AT THE SCHOOL OF MEDICINE.

The following resolution was adopted:

Resolved, That the amount of the indebtedness of the Athletic Association at the School of Medicine, not exceeding the sum of \$800.00, be paid from any surplus funds of said School. The Business Manager shall audit bills.

Hereafter the officers of the School of Medicine are requested to see that students shall conduct their athletic matters wholly upon their own financial responsibility, and that the same shall be carried on with the approval of the Athletic Committee of the General Faculty and the Athletic Advisory Board, the same as other University athletic.

The bill of Cunningham & Boggs, for \$10 45, costs in the Supreme Court in the Bruner case, was ordered paid.

It was also ordered that a writ of error be prosecuted in the Bruner case in order that the case may be heard on its merits before the Supreme Court.

The committee appointed to present a resolution concerning the election of President Draper to the superintendency of the City Schools of New York, and his declination thereof, made the following report:

WHEREAS, The Board of Education of the City of New York has made flattering offers to Dr. A. S. Draper, President of the University of Illinois, respecting the position of superintendent of the schools of that great metropolis; and

WHEREAS, His election to the high and responsible position referred to is only a just recognition of his commanding abilities as an educator; and

WHEREAS, He has declined the position tendered him by the said Board of Education of the City of New York, with its central position and its largely increased salary; therefore, be it

Resolved, That we, the Trustees of the University of Illinois, fully appreciate the decision of the President of the University to remain with us and lead to still higher ground and a more triumphant future the grand advance which has already been made under his wise and efficient leadership.

SAMUEL M. INGLIS,
F. M. MCKAY,
THOMAS J. SMITH,
N. B. MORRISON,
Committee.

On motion of Mr. Smith, the Director of the Agricultural Experiment Station was requested to make a test of the peachblow potato the coming season, and Station funds to the amount of \$25.00 were appropriated for the purpose.

On recommendation of President Draper, and a motion of Mr. Armstrong, it was voted to approve the holding of a summer school at the Biological Experiment Station, at Havana, and \$300.00 was appropriated as a guarantee fund for the expense thereof.

BUSINESS MANAGER'S REPORT.

The Business Manager made the following report :

UNIVERSITY OF ILLINOIS, March 7, 1898.

F. M. McKay, Esq., President Board of Trustees, University of Illinois,

Sir:—I have the honor to hand you herewith my report as Business Manager, for three months ending December 31, 1897:

Paper A is a statement of the current appropriations, December 31, 1897.

Paper B is a statement of the State appropriations December 31, 1897.

Paper C is a statement of the U. S. fund December 31, 1897.

Paper D is a statement of the Laboratory of Natural History fund December 31, 1897.

Paper E is a statement of the Agricultural Experiment Station fund December 31, 1897.

Paper F is a statement of the School of Pharmacy appropriations December 31, 1897.

Paper G is a statement of the School of Medicine appropriations December 31, 1897.

Paper H is an estimate of receipts and expenses for the six months ending June 30, 1898.

Paper I is a list of appropriations the Board is requested to make for the three months ending June 30, 1898.

Paper L is a statement of receipts by the Business Manager for the three months ending December 31, 1897.

PAPER A—CURRENT APPROPRIATIONS.

<i>December 31, 1897.</i>	Appropriated.	Expended.	Balance.
Board expenses.....	\$1,592 26	\$1,390 15	\$202 11
Salaries for instruction { Current.....	52,221 96	{ 6,050 16 }	393 35
and for President { U. S. Fund.....		{ 20,650 55 }	
{ State.....		{ 25,127 90 }	
Salaries for services { Current.....	8,337 84	{ 6,634 56 }	55 12
{ State.....		{ 1,648 16 }	
Buildings and grounds.....	2,000 00	1,774 22	225 78
Fuel and lights.....	8,199 67	3,784 45	4,415 22
Stationery and printing.....	2,609 11	1,069 30	1,539 81
Preparatory School.....	2,075 21	2,072 03	3 18
Repair shop.....	2,506 56	2,087 82	418 74
Mechanical department.....	1,720 75	1,177 79	542 96
Departments.....	1,520 75	270 84	1,249 91
Laboratories.....	3,937 63	2,495 04	1,442 59
Library and apparatus.....	203 18	37 05	166 13
Incidental expenses.....	2,522 77	990 71	1,532 06
<i>Sundries.</i>			
Closed out.....	3,082 05	3,082 05	.....
Furniture and fixtures.....	406 98	277 62	129 36
Heating apparatus.....	1,190 55	225 45	965 10
Water supply.....	375 00	375 00	.....
Minnesota lands.....	222 72	143 76	78 96
Greenhouse.....	300 25	21 26	278 99
Commencement.....	387 50	288 42	99 08
Stone posts.....	160 00	.....	160 00
Tenant farming, etc., in Illinois.....	4 60	.....	4 60
South farm.....	227 15	99 27	127 88
State Fair exhibit.....	500 00	357 17	142 83
Catalogue.....	991 59	778 60	212 99
Publication of essay.....	75 00	.....	75 00

Paper A—Current Appropriations—Concluded.

<i>December 31, 1897.</i>	Appropriated.	Expended.	Balance.
Remodeling men's gymnasium.....	1,000 00	.....	1,000 00
Bridge.....	429 00	1 30	427 70
Winter School of Agriculture.....	100 00	.....	100 00
Moving to Library Hall.....	500 00	192 63	307 37
President's expenses.....	72 56	72 56	.....
Library School.....	200 00	152 45	47 55
Blue print room.....	150 00	.....	150 00
	\$99,822 64	\$83,328 27	\$16,494 37

PAPER B—STATE APPROPRIATIONS.

<i>1895-1897.</i>	Received.	Expended.	Balance.	Assigned.
<i>Salaries, etc.—</i>				
Closed out.....	\$167,430 24	\$167,430 24	.....	\$19 91
Toilet rooms.....	375 00	335 09	\$19 91	5 48
Art and design.....	250 00	244 52	5 48	57 22
Physical training.....	1,220 00	1,162 78	57 22	199 69
Lectures.....	199 69	.....	199 69	56 25
Preparatory School.....	190 00	133 75	56 25	50 45
Advertising.....	3,900 00	3,849 55	50 45	25 49
College of Literature and Arts, books.....	200 00	174 51	25 49	4 26
Accredited schools.....	500 00	495 74	4 26	17 08
Signal bells.....	100 00	82 92	17 08	36 49
Botany (herbarium, etc.).....	150 00	113 51	36 49	96 32
Mechanical Engineering Laboratory.....	695 00	598 68	96 32	167 68
Chemical Laboratory (repairs).....	9,180 00	9,012 32	167 68	18 82
Furniture and fixtures.....	400 00	318 18	18 82	.....
Furnishing Astronomical Observatory.....	555 00	555 00	.....	74 15
Zoological department.....	95 00	20 85	74 15	3 50
Bronze tablet.....	175 00	171 50	3 50	17 35
Physics.....	600 00	582 65	17 35	644 12
Law School.....	3,500 00	2,855 88	644 12	.....
	\$189,714 93	\$188,220 67	\$1,494 26	\$1,494 26
<i>Apparatus and materials—</i>				
Closed out.....	\$2,400 00	\$2,400 00	.....	\$26 38
Applied chemistry.....	100 00	73 62	\$26 38	.....
Psychology.....	300 00	300 00	.....	110 55
Zoology.....	800 00	800 00	.....	9 86
Physiology and hygiene.....	800 00	689 45	110 55	70 99
Botany and horticulture.....	680 00	670 14	9 86	.....
Geology.....	400 00	329 01	70 99	.....
Astronomy.....	520 00	520 00	.....	.....
	\$6,000 00	\$5,782 22	\$217 78	\$217 78
<i>Operating Biological Experiment Station.....</i>	\$3,000 00	\$3,000 00	.....	.....
<i>Laboratory of Vegetable Physiology.....</i>	\$2,000 00	\$1,975 30	\$24 70	\$24 70
<i>Library Hall.....</i>	\$150,000 00	\$150,000 00	.....	.....
<i>Fire protection.....</i>	\$2,000 00	\$2,000 00	.....	.....
<i>Vaccine Laboratory.....</i>	\$3,000 00	\$2,713 21	\$286 79	\$286 79
<i>Cabinets—</i>				
Geology.....	\$666 67	\$650 86	\$15 81	\$15 81
Botany.....	666 66	31 40	635 26	599 07
Zoology.....	666 67	67 60	599 07	.....
	\$2,000 00	\$749 86	\$1,250 14	\$1,250 14

Paper B—State Appropriations—Continued.

1995-1897.	Received.	Expended	Balance.	Assigned.
<i>College of Engineering—</i>				
Closed out.....	\$21,965 31	\$21,965 31	.....	.....
Electrical engineering and physics.....	3,829 85	3,809 05	\$20 80	\$20 80
Laboratory of applied mechanics and municipal and sanitary engineering.....	1,852 42	1,838 13	14 29	14 29
Architecture.....	1,752 42	1,747 62	4 80	4 80
College, library, parlor, etc.....	600 00	420 40	179 60	179 60
	\$30,000 00	\$29,780 51	\$219 49	\$219 49
<i>Furnishing and fitting Engineering Hall—</i>				
Electric wiring.....	\$1,191 77	\$1,191 77	.....	.....
Civil engineering.....	478 43	478 43	.....	.....
Architecture.....	770 38	769 80	\$0 58	\$0 58
Municipal and sanitary engineering.....	401 30	388 90	12 40	12 40
Mechanical department.....	563 78	541 23	22 55	22 55
Electrical engineering and physics.....	1,193 39	1,112 27	81 12	81 12
College, library, parlor, etc.....	400 95	364 53	36 42	36 42
	\$5,000 00	\$4,846 93	\$153 07	\$153 07
1897-1899.				
<i>Salaries, etc.—</i>				
Salaries for instruction.....	\$25,127 90	\$25,127 90	.....	\$25,127 90
Salaries for services.....	1,648 16	1,648 16	.....	1,648 16
Agricultural department.....	2,300 00	1,601 27	\$698 73	2,300 00
Administrative offices.....	300 00	.....	300 00	300 00
Advertising.....	1,000 00	.....	1,000 00	1,000 00
Art and design.....	300 00	7 66	292 34	300 00
Accredited schools.....	500 00	.....	500 00	500 00
Buildings and grounds.....	3,596 59	3,596 59	.....	3,596 59
College of Literature and Arts.....	250 00	.....	250 00	250 00
Conservatory.....	5,526 92	2,473 19	3,053 73	5,526 92
Decorating Library Hall.....	3,500 00	2,500 00	1,000 00	3,500 00
Heating apparatus.....	1,000 00	676 46	323 54	1,000 00
Furniture and fixtures.....	700 00	520 46	179 54	700 00
<i>Illinois Agriculturist</i>	100 00	50 00	50 00	100 00
<i>Illini</i>	500 00	250 00	250 00	500 00
<i>Illio</i>	100 00	.....	100 00	100 00
Library supplies.....	350 00	325 26	24 74	350 00
Lockers.....	600 00	600 00	.....	600 00
Lockjaw experiment.....	50 00	.....	50 00	50 00
Natural History Hall fire.....	3,700 00	3,696 67	3 33	3,700 00
Oratorical contest.....	200 00	.....	200 00	200 00
Physical training.....	500 00	.....	500 00	500 00
Preparatory School.....	250 00	.....	250 00	250 00
School of Music.....	500 00	192 69	307 31	500 00
<i>Technograph</i>	100 00	.....	100 00	100 00
Typewriting bureau.....	250 00	193 23	56 77	250 00
Woman's department.....	300 00	.....	300 00	300 00
Mechanical engineering shops.....	60 00	37 50	22 50	60 00
Unassigned.....	56,690 43	.....	56,690 43	.....
	\$110,300 00	\$43,497 04	\$66,502 96	\$53,309 57
<i>Engineering equipment—</i>				
Architecture.....	\$500 00	\$173 87	\$326 13	\$500 00
Civil engineering.....	500 00	63 80	436 20	500 00
Mechanical engineering.....	3,750 00	1,191 55	2,558 45	3,750 00
Physics and electrical engineering.....	3,750 00	750 34	2,999 66	3,750 00
Theoretical and applied mechanics and municipal and sanitary engineering.....	1,000 00	275 00	725 00	1,000 00
College (in general).....	500 00	15 55	484 45	500 00
	\$10,000 00	\$2,470 11	\$7,529 89	\$10,000 00
<i>Apparatus and materials—</i>				
Astronomical Observatory.....	\$450 00	\$123 38	\$326 62	\$450 00
Botany and horticulture.....	300 00	279 70	20 30	300 00
Zoölogy.....	200 00	21 96	178 04	200 00
Geology.....	200 00	.....	200 00	200 00
Applied chemistry.....	175 00	.....	175 00	175 00
Psychology.....	50 00	.....	50 00	50 00
Physiology.....	500 00	.....	500 00	500 00
Chemistry.....	500 00	.....	500 00	500 00
Unassigned.....	625 00	.....	625 00	.....
	\$3,000 00	\$425 04	\$2,574 96	\$2,375 00

Paper B—State Appropriations—Concluded.

	Received.	Expended	Balance.	Assigned.
<i>Completing Library Hall.....</i>	\$5,000 00	\$5,000 00	.....	\$5,000 00
<i>Furnishing Library Hall.....</i>	\$5,000 00	\$4,797 94	\$202 06	\$5,000 00
<i>Cabinets.....</i>	\$1,000 00	.....	\$1,000 00	\$1,000 00
<i>Fire protection.....</i>	\$1,000 00	\$188 48	\$811 52	\$1,000 00
<i>Vaccine Laboratory.....</i>	\$1,200 00	.....	\$1,200 00	\$1,200 00
<i>Equipment of men's gymnasium.....</i>	\$3,000 00	\$1,350 37	\$1,649 63	\$3,000 00
<i>Taxes on Minnesota lands.....</i>	\$1,800 00	\$1,738 81	\$61 19	\$1,800 00
<i>Water survey.....</i>	\$3,000 00	\$981 61	\$2,018 39	\$3,000 00
<i>Chemical equipment.....</i>	\$5,000 00	\$1,469 26	\$3,530 74	\$5,000 00
<i>Library.....</i>	\$5,000 00	\$1,304 53	\$3,695 47	\$5,000 00
<i>Pavement and walks.....</i>	\$3,000 00	\$2,728 17	\$271 83	\$3,000 00
<i>Shop practice.....</i>	\$1,500 00	\$478 95	\$1,021 05	\$1,500 00
<i>Central heating plant.....</i>	\$40,000 00	\$34,830 92	\$5,169 08	\$40,000 0
<i>Bridge.....</i>	\$500 00	\$500 00	.....	\$500 00

PAPER C—UNITED STATES FUND.

<i>Year ending June 30, 1898.</i>	Received.	Expended.	Balance.	Assigned.
<i>Salaries for instruction.....</i>	\$23,000 00	\$20,650 55	\$2,349 45	\$2,349 45

PAPER D—LABORATORY OF NATURAL HISTORY.

<i>1895-1897.</i>	Received.	Expended.	Balance.	Assigned.
<i>General balance July 1, 1896.....</i>	\$253 68	.....	\$253 68	\$253 68
<i>Closed out.....</i>	8,150 00	8,150 00	.....	.....
<i>Report of Entomologist.....</i>	250 00	156 44	93 56	93 56
<i>Diseases of insects.....</i>	1,500 00	968 68	531 32	531 32
	\$10,153 68	\$9,275 12	\$878 56	\$878 56
<i>1897-1898.</i>				
<i>Salaries and assistants.....</i>	\$4,000 00	\$1,893 95	\$2,106 05	\$4,000 00
<i>Field, office, etc.....</i>	1,500 00	360 44	1,139 56	1,500 00
<i>Library.....</i>	1,500 00	454 98	1,045 02	1,500 00
<i>Bulletins.....</i>	750 00	377 89	372 11	750 00
<i>Report of Entomologist.....</i>	250 00	.....	250 00	250 00
<i>Biological Experiment Station.....</i>	3,000 00	1,983 73	1,016 27	3,000 00
	\$11,000 00	\$5,070 99	\$5,929 01	\$11,000 00

PAPER E—AGRICULTURAL EXPERIMENT STATION.

1897-1898.	Appropriated.	Expended.	Balance.
<i>General Fund.</i>			
Salaries	\$3,779 93	\$3,779 93	.....
Labor	1,726 59	1,726 59	.....
Publications	200 00	44 00	\$156 00
Postage and stationery	50 00	40 74	9 26
Freight and express	72 00	69 54	2 46
Heat, light and water	143 90	120 00	23 90
Chemical supplies	25 00	7 45	17 55
Seeds, plants and sundries	160 07	106 23	53 84
Feeding stuffs	144 00	54 18	89 82
Library	24 16	19 14	5 02
Tools, implements and machinery	247 64	244 59	3 05
Scientific apparatus	464 67	244 59	248 08
Live stock	50 00	40 00	10 00
Traveling expenses	200 00	52 98	147 02
Contingent expenses	108 33	108 33	.....
Buildings and repairs	103 71	103 71	.....
	\$7,500 00	\$6,734 00	\$766 00
<i>Farm Fund.</i>			
Labor	\$933 00	\$655 19	\$267 81
Seeds, etc	414 00	323 65	90 35
	\$1,347 00	\$988 84	\$358 16

PAPER F—SCHOOL OF PHARMACY.

1897-1898.	Appropriated.	Expended.	Balance.
Salaries for instruction	\$2,115 58	\$2,115 58	.....
Salaries for services	1,000 00	1,000 00	.....
Buildings and grounds	2,134 33	2,134 33	.....
Fuel and lights	402 65	402 65	.....
Stationery and printing	147 57	147 57	.....
Laboratories	1,065 30	1,065 30	.....
Libraries	3 00	3 00	.....
Incidentals	342 47	342 47	.....
Sundries	199 69	199 69	.....
Advertising	797 07	797 07	.....
Furniture and fixtures	98 36	98 36	.....
Museum	22 50	29 50	.....
Unassigned	209 87	.....	\$209 87
	\$8,588 39	\$8,328 52	\$209 87

PAPER G—SCHOOL OF MEDICINE.

1897-1898.	Appropriated.	Expended.	Balance.
Salaries for instruction	\$1,550 00	\$1,550 00	.....
Salaries for services	2,541 63	2,541 63	.....
Buildings and grounds	8,263 99	8,263 99	.....
Fuel and lights	415 83	415 83	.....
Stationery and printing	190 11	190 11	.....
Laboratories	1,291 10	1,291 10	.....
Books and publications	25 00	25 00	.....
Apparatus and materials	924 11	924 11	.....
Incidentals	293 61	293 61	.....
Advertising	1,297 46	1,297 46	.....
Furniture and fixtures	240 86	240 86	.....
Unassigned	966 30	.....	\$966 30
	\$18,006 00	\$17,033 70	\$966 30

PAPER L—RECEIPTS BY THE BUSINESS MANAGER FOR THE THREE MONTHS ENDING
DECEMBER 31, 1897.

Interest on land contracts	\$970 71	
University fees	5,579 26	
Preparatory School fees	1,001 31	
Music fees	500 00	
Salary for services, Ricker and White	40 00	
Minnesota lands, rents	126 93	
Buildings and grounds, rents	15 00	
Heating apparatus	2 00	
Greenhouse	19 24	
Fuel and lights, coal	19 99	
Botanical laboratory	6 44	
Chemical laboratory	22 81	
Laboratory of applied mechanics	5 00	
Mechanical department	232 52	
Agricultural Experiment Station	637 24	
School of Pharmacy	7,188 50	
School of Medicine	19,865 00	\$36,231 95
Principal of land contracts		1,968 34
Total collections		\$38,200 29

Paper M is a list of the general University vouchers presented for audit, being 651 to 1,325, inclusive.

Paper N is a list of the Laboratory of Natural History vouchers presented for audit, being 101 to 176, inclusive.

Paper O is a list of the Agricultural Experiment Station vouchers presented for audit, being 101 to 188, inclusive.

Paper P is a list of the School of Pharmacy vouchers presented for audit, being 26 to 119, inclusive.

Paper Q is a list of the School of Medicine vouchers presented for audit, being 51 to 206, inclusive.

Paper R is a request for a school house site.

Paper S is a number of bills presented by Messrs. Wilson, Moore & McIlvaine.

Respectfully submitted,

S. W. SHATTUCK,

Business Manager.

It was voted that the Board donate an acre of land in the southwest corner of the S. W.; S. E., 31-124-26, Pope county, Minn., to School District No. 84 of said Pope county for a school house site, the same to revert to the University of Illinois when no longer used as a school site; and the President and Secretary of the Board were directed to make a deed for the same to said School District No. 84.

It was ordered that a requisition for \$923.08 be made on the Auditor in favor of the commissioners appointed by the Legislature in the Spalding matter, same to be used in the payment of Wilson, Moore & McIlvaine's bill of January 5, 1898, for said amount.

It was also ordered that a like requisition for \$155.85 be drawn, said sum to be used in payment of the bill rendered by Wylls W. Baird to Wilson, Moore & McIlvaine December 4, 1897, for the sum of \$150 00; and the bill of Hewitt, Hollway & Co., for \$5.85, also rendered Wilson, Moore & McIlvaine February 16, 1898. Said requisition to be drawn when said bills should be approved by the Attorney General, and filed with the Secretary of this Board.

Appropriations were made as follows in accordance with the recommendation of the Business Manager's report:

APPROPRIATIONS.

Board expenses	\$500 00	
Salaries for instruction and President	29,000 00	
Salaries for services	4,000 00	
Buildings and grounds	1,500 00	
Fuel and lights and electric power	2,000 00	
Stationery, printing, and postage	500 00	
Advertising and catalogue	2,000 00	
Repair shop	1,000 00	
Mechanical department	200 00	
Departments	100 00	
Laboratories	200 00	
Library and apparatus	50 00	
Incidentals	500 00	
Furniture and fixtures	300 00	
Heating apparatus	300 00	
Greenhouse	100 00	
Water supply	500 00	
Library School	300 00	
Minnesota lands	100 00	
Commencement	300 00	
School of Pharmacy	\$2,000 00	\$43,450 00
School of Medicine	12,000 00	
Agricultural Experiment Station	4,500 00	
		18,500 00
		<u>\$61,950 00</u>

TREASURER'S REPORT.

The Treasurer's report was submitted by the Secretary and this together with the vouchers presented by the Business Manager, was referred to the Committee on Finance.

E. G. KEITH, TREASURER, IN ACCOUNT WITH THE UNIVERSITY OF ILLINOIS
DECEMBER 31, 1897.

	<i>Dr.</i>	
1897.		
September 30	Balance	\$112,696 06
October 7	Received from U. S. Treasurer, on account of Agricultural Experiment Station	\$3,750 00
" 19	Received from S. W. Shattuck, on account of School of Medicine	10,000 00
" 30	Received from S. W. Shattuck, on account of general fund	3,892 11
" 30	Received from S. W. Shattuck, paid warrants on account of Agricultural Experiment Station fund	421 66
" 30	Received from S. W. Shattuck, on account of School of Pharmacy	3,000 00
November 29	Received from S. W. Shattuck, paid warrants on account of general fund	4,380 72
" 29	Received from S. W. Shattuck, on account of credit of general fund	123 59
" 29	Received from S. W. Shattuck, paid warrants on account of Agricultural Experiment Station fund	544 28
" 29	Received from S. W. Shattuck, on account of School of Medicine	5,000 00
" 29	Received from S. W. Shattuck, on account of School of Pharmacy	2,000 00
December 31	Received from S. W. Shattuck, paid warrants on account of general fund	3,295 73
" 31	Received from S. W. Shattuck, on account of School of Pharmacy	2,000 00
" 31	Received from S. W. Shattuck, on account of School of Medicine	5,000 00
		<u>\$43,408 09</u>
		<u>\$156,104 15</u>

Treasurer's Report—Concluded.

		<i>Cr.</i>		
1897.				
December	31	By amount paid out of general fund.....	\$102,159 77	
..	31	By amount paid out of Agricultural Experiment Station fund.....	4,731 04	
..	31	By amount paid out of Laboratory of Natural History fund.....	2,723 84	
..	31	By amount paid out of School of Pharmacy fund.....	5,902 37	
..	31	By amount paid out of School of Medicine fund.....	14,683 79	
		<i>Balances—</i>		\$130,200 81
		General fund.....	\$11,859 55	
		Experiment Station fund.....	2,097 81	
		School of Medicine fund.....	10,307 84	
		Laboratory of Natural History fund.....	1,860 05	
			\$26,125 25	
		School of Pharmacy fund, overdraft.....	221 91	
				25,903 34
				\$156,104 15

E. G. KEITH,

Treasurer.

The Board then adjourned to meet at 7:30 p. m., at the Beardsley, in Champaign.

EVENING SESSION, TUESDAY, MARCH 8, 1898.

The Board met pursuant to adjournment, the same members being present as in the afternoon.

On motion of Mr. Armstrong, it was voted that the members of the Board only be appointed on standing committees.

Mr. Bullard, from the Committee on Buildings and Grounds, made an informal report stating that the Committee expected to accept the Central Heating Plant the next day.

Mr. McKay read a letter which he had obtained from the Attorney General with regard to scholarships in the University, and after some discussion, a motion was made by Mr. Smith to reconsider the action of the Board taken at its last meeting with reference to scholarships.

On motion of Mr. McLean further consideration of the subject was postponed until the next meeting of the Board.

The Finance Committee was given leave to file its report with the Secretary.

STANDING COMMITTEES.

The President announced the standing committees of the Board as follows:

Agriculture—Raymond, Morrison, Pearce, McLean.

Buildings and Grounds—Bullard, Smith, Armstrong, Flower.

Finance—McLean, Raymond, Smith.

Instruction—Armstrong, Bullard, Smith, Inglis.

Publication—Smith, Raymond, Carriel.

Library—Flower, Carriel, Armstrong, McLean, Bullard.

Students' Welfare—Carriel, Morrison, Inglis.

School of Pharmacy—McLean, Armstrong, Flower, Carriel, Morrison.

School of Medicine—Armstrong, Flower, Carriel, Morrison, Raymond.

REPORT OF FINANCE COMMITTEE.

URBANA, ILLINOIS, March 9, 1898.

To the Board of Trustees of the University of Illinois.

GENTLEMEN:—Your Finance Committee begs leave to report that it has examined the vouchers submitted by the Business Manager on which University warrants have been issued as follows: University vouchers, 651 to 1,325, inclusive; Agricultural Experiment Station vouchers, 101 to 108, inclusive; State Laboratory of Natural History vouchers, 101 to 176, inclusive; School of Pharmacy vouchers, 26 to 119, inclusive; School of Medicine vouchers, 51 to 206, inclusive, and has found the same correct and duly receipted.

Your Committee has also examined the report of Elbridge G. Keith, Treasurer of the University, for the quarter ending December 31, 1897, and found that the receipts for the quarter, together with the balances on hand September 30, 1897, amounted to \$156,104.15; that the amount paid out on warrants drawn during the quarter was \$130,200.81, and that the balances on hand December 31, 1897, were \$25,903.04.

Respectfully submitted,

ALEX. McLEAN,
I. S. RAYMOND,
T. J. SMITH,

Committee on Finance.

The Board adjourned.

W. L. PILLSBURY,

Secretary.

F. M. McKAY,

President.