

MEETING OF FEBRUARY 8, 1916.

A special meeting of the Board of Trustees of the University of Illinois was held at the Blackstone Hotel, in the city of Chicago, at 12 o'clock noon, on Tuesday, February 8, 1916, pursuant to the following notice which was sent out by the Secretary on January 31, 1916:

On the call of the President, Mr. W. L. Abbott, there will be a special meeting of the Board of Trustees of the University of Illinois at the Blackstone Hotel in Chicago, on Tuesday, February 8, 1916, at 12 o'clock noon, to consider such matters as the committees of the board and the President of the University may submit, and such other matters as may be duly presented.

When the board convened, the following members were present: President Abbott, Mr. Carr, Mrs. Evans, Mrs. Henrotin, Mr. Hoit, Mr. Small, Miss Watson.

President James was present; also Prof. J. M. White, Supervising Architect, and, during a part of the afternoon, Dr. T. W. Brophy, Dean of the Chicago College of Dental Surgery.

MINUTES APPROVED.

The Secretary presented the minutes of the meetings of the Executive Committee held on October 30, 1915, and January 11, 1916, and of the meetings of the board held on December 14, 1915, and January 11, 1916. On motion of Mrs. Henrotin, the minutes were approved and received for record as printed on pages 858 to 882, inclusive.

MATTERS SUBMITTED BY THE PRESIDENT OF THE UNIVERSITY.

The board proceeded to the consideration of the following matters submitted by President James:

CHICAGO COLLEGE OF DENTAL SURGERY.

(1) A request from the Dean of the Chicago College of Dental Surgery for information concerning the terms on which a union of this college with the University might be effected.

Dr. Brophy, the Dean of the College, who was present, made a statement concerning the College and retired.

On motion of Mrs. Henrotin, this matter was referred to the President of the board, the President of the University, and the Committee on the College of Medicine for investigation and report.

MILITARY TRAINING IN LAND GRANT COLLEGES.

(2) A draft of a proposed address before the Committee on Military Affairs of the House of Representatives of the United States, concerning the development of military training at the land-grant colleges.

On motion of Mr. Small, the President of the University was authorized to present this address in the name of the board.

LEAVE OF ABSENCE FOR PROF. S. P. SHERMAN.

(3) A request from Prof. S. P. Sherman, of the Department of English, approved by Dean K. C. Babcock, for leave of absence on half pay for the academic year 1916-17, for the purpose of continuing his studies and completing certain literary work.

On motion of Miss Watson, the President of the University was authorized to grant this request, provided satisfactory arrangements are made for Prof. Sherman's work during his absence.

LEAVE OF ABSENCE FOR PROF. A. S. PEASE.

(4) A request from Prof. A. S. Pease, of the Department of the Classics, approved by Dean K. C. Babcock, for leave of absence on half pay for the academic year 1916-17, for the purpose of continuing his studies and completing certain literary work.

On motion of Mrs. Henrotin, the President of the University was authorized to grant this request, provided satisfactory arrangements are made for Prof. Pease's work during his absence.

READJUSTMENT OF PROF. BAGLEY'S WORK.

(5) A request from Prof. W. C. Bagley, Director of the School of Education, for a readjustment of his work and salary during the second semester of the present academic year, similar to the arrangement which was made last year, whereby he may be released from the undergraduate work and some of the routine details of the office, but may continue as head of the Department of Education, directing its policy and carrying on his regular work with graduate students; and in view of this readjustment relinquish half of his salary for the second semester of the present academic year, amounting to \$1,375.

On motion of Mr. Carr, authority was given to the President of the University to make such a readjustment.

TESTS OF CAR WHEELS.

(6) A letter from Dean W. F. M. Goss, enclosing a proposal from the Association of Manufacturers of Chilled Car Wheels to cooperate with the Engineering Experiment Station in the study of the proper design of such wheels; and also a letter from George W. Lyndon, President of the Association, approving the plan:

January 22, 1916.

President Edmund J. James, University of Illinois.

MY DEAR PRESIDENT JAMES: Progress in the art of railroading is continually developing new questions affecting the weight and the contour of chilled iron car wheels. Changing methods in manufacture also operate to affect the strength of such wheels. The importance of securing proper design and proper methods of manufacture for such wheels may be judged by the fact that there are now in operation in this country approximately twenty million freight-car wheels, and that the demand for renewals alone involves the manufacture of not less than two and one-half million wheels a year.

With these facts in mind, the Association of Manufacturers of Chilled Car Wheels, as represented by Mr. George W. Lyndon, President and Treasurer, has agreed to cooperate with the Engineering Experiment Station in a study of questions fundamental to the proper design of such wheels. To this end the association has set apart a considerable sum of money for the use of the Engineering Experiment Station under the following conditions:

1. That the Engineering Experiment Station will undertake an investigation concerning the stresses and behavior of chilled iron car wheels under prescribed conditions, the details of the work to be determined by the Station in conference with the Association's Consulting Engineer, Mr. F. K. Vial.

That all results secured from such an investigation shall be the property of the Experiment Station. They may be published as Station bulletins or otherwise, as from time to time may be determined by the Director. Prior to any publication, however, the intention of the Director shall be formally communicated to the Association of Manufacturers of Chilled Car Wheels in order that said association may at all times be informed as to the purpose of the Station. The results also shall at all times be open to the inspection of the representatives of the Association of Manufacturers of Chilled Car Wheels, who may be assumed to act in an advisory capacity to the Station.

3. That the funds of the Association of Manufacturers of Chilled Car Wheels are to be drawn on for all costs of labor and supplies arising from the proposed investigation. If equipment is required in excess of that already available to the Station, it will be provided at the expense of the association. The Station will supply the time of members of its staff for the direction of the work, and the use of such facilities as it may already possess.

4. That on the approval of these proposals the Association of Manufacturers of Chilled Car Wheels will at once transmit to the business office of the University the sum of \$500 as an initial deposit, and each month thereafter will transmit such sum or sums as may be called for by estimate of the costs of the investigation for the month next succeeding. Funds thus supplied are to constitute a credit on which the Director of the Engineering Experiment Station may from time to time draw to cover the costs of the proposed work. It will be the purpose to maintain, during the lifetime of this agreement, a balance in this account entirely sufficient to meet all charges that will need to be made against it.

5. That this arrangement will continue in effect until cancelled through the definite action of one or both of the parties in interest.

The Association of Manufacturers of Chilled Car Wheels has been influenced in making its proposal through its appreciation of the contributions already made by the Engineering Experiment Station in the field of railway equipment. Work already done by our Department of Railway Engineering and by our Department of Theoretical and Applied Mechanics constitutes the foundation for that which is now proposed. Prof. Talbot and Prof. Schmidt are already in touch with the problem, and its fuller development will be under their general direction. The cooperation proposed guarantees to the Station the strongest possible assistance in the development of an investigation of great importance to the public weal.

This statement as formulated has been accepted by Mr. George W. Lyndon, President of the Association of Manufacturers of Chilled Car Wheels, as certified to by his letter to me submitted herewith.

I hope that you also will approve the arrangement.

I have the honor to be

Very truly yours,

W. F. M. Goss.

January 26, 1916.

Dean W. F. M. Goss, University of Illinois.

MY DEAR DEAN GOSS: I have received and have very carefully studied the draft of your letter to your President, Mr. Edmund Janes James, under date of January 22, and am pleased to advise that the arrangement as contained therein is entirely satisfactory.

Permit me to assure you of our hearty cooperation, and in passing may I say that I am strongly of the belief that the results will justify the work involved and prove of mutual benefit to your University, our association, and the public at large.

I am very glad indeed to enclose you herewith the check of the association for \$500 for the purpose of preliminary expenses, in compliance with paragraph four of the agreement referred to.

Very sincerely yours,

GEO. W. LYNDON, *President.*

On motion of Mr. Carr, this plan of cooperation was approved and the President of the University was authorized to make such provisions as may be necessary to carry it out.

REMOVAL OF FRAME HOUSES ON PHARMACY LOT.

(7) A request for permission to make certain repairs on the building belonging to the University at 713 South Wood Street in Chicago.

On motion of Mrs. Henrotin, in view of the fact that the three small houses on the lots recently purchased for the School of Pharmacy are in bad state to repair and it would cost more to repair them than it would be worth, the Supervising Architect was instructed to remove the buildings from the lots either by selling the houses as they are, for purposes of removal, or by wrecking them, as may seem best, as soon as present leases permit.

TESTS OF ILLINOIS COALS.

(8) A letter from the Dean of the College of Engineering concerning a proposed arrangement for cooperation between Mr. A. T. Hert of Louisville, Ky., as represented by Mr. E. B. Fulks of Chicago, and the Engineering Experiment Station, for the purpose of investigating the behavior of Illinois coal under certain predetermined conditions.

January 18, 1916.

President Edmund J. James, University of Illinois.

MY DEAR PRESIDENT JAMES: Under date of October 13, 1915, I submitted a progress report concerning a proposed cooperative arrangement which was then under consideration by the Engineering Experiment Station and certain outside interests. (See Minutes of the Board of Trustees for October 14, 1915, page 854.) I am now able to present a full statement to the proposal, which is as follows:

For several years the Engineering Experiment Station, through the activities of Prof. S. W. Parr, has concerned itself with the behavior of Illinois coal under predetermined conditions. The coking of coal at low temperatures and the properties of the by-products resulting from coking are matters which have been subjects of extensive experimental study. These investigations have been in the nature of pioneer work, and the results have attracted wide attention among coal operators and the representatives of by-product industries.

Prof. Parr's experiments thus far have dealt with comparatively small quantities of materials, and accepting the limitations which have thus been imposed, his work has reached a conclusion. He has, however, been anxious to continue his investigations by the use of apparatus sufficiently extensive to permit determinations on a commercial basis, but it has not seemed practicable for the Engineering Experiment Station to supply the funds necessary for such a process.

In view of these facts, it is with the greatest satisfaction I announce the completion of a cooperative arrangement, whereby the funds necessary for a continuance of Prof. Parr's work are to be supplied.

Mr. A. T. Hert of Louisville, as represented by Mr. E. B. Fulks of Chicago, has agreed to act as the cooperating agency. The purpose is to install at the University a plant of sufficient size to permit the attainment of desired results, and to operate the plant thus installed in a series of experiments, the extent of which cannot now be determined. This work is to proceed under the following conditions:

1. That the Engineering Experiment Station will undertake to provide a site for the installation of the plant, and will direct in all matters concerning its installation and the subsequent experiments which are to be conducted in connection therewith, acting at all times in conference with representatives of Mr. A. T. Hert, who thus far have been designated as Mr. E. B. Fulks, Mr. A. L. Kuehn, and Mr. F. Puening, who are Mr. Hert's advisers on all technical matters.

2. That all results secured from such an investigation shall be the property of the Engineering Experiment Station. They may be published as Station bulletins or otherwise, as from time to time may be determined by the Director. The results also shall at all times be open to the inspection and use of the representatives of Mr. Hert, who may be assumed to act in an advisory capacity to the Station.

3. That the funds to be supplied by Mr. Hert are to be drawn on for all costs of labor and supplies arising from the proposed investigation. Such equipment as may be required in excess of that now available to the Station is to be provided at Mr. Hert's expense. The Station will supply the time of members of its staff for the direction of the work, and the use of such facilities as it may already possess.

4. That Mr. Hert will at once cause to be transmitted to the business office of the University the sum of \$500 as an initial deposit, and each month thereafter

will cause to be transmitted such sum or sums as may be called for by estimates of the cost of the investigation for the month next succeeding. Funds thus supplied are to constitute a credit on which the Director of the Engineering Experiment Station may from time to time draw to cover the costs of the proposed work. It will be the purpose to maintain during the lifetime of this agreement a balance in this account of approximately \$500. Reports of expenditures and of the condition of the account will be made to Mr. Hert from time to time.

5. That this agreement is to continue in effect until cancelled through the definite action of one or both of the parties in interest.

This statement as formulated has the approval of Prof. Parr and has been accepted by Mr. E. B. Fulks, acting for Mr. A. T. Hert, as will appear from the accompanying letter.

I hope that you also will approve the arrangement.

I have the honor to be,

Very truly yours,

W. F. M. Goss.

January 21, 1916.

Professor W. F. M. Goss, Dean of the College of Engineering.

MY DEAR PROFESSOR GOSS: I am in receipt of your letter of January 18 enclosing a copy of a draft of a letter which you propose sending to President James, outlining the plan of our proposed experimental work.

This outline meets entirely with my approval, since it describes exactly what we agreed on during our recent visit with you.

I am advised that already a check for \$500 as first payment has been sent to the University through Prof. Parr.

Very truly yours,

E. B. FULKS, *Vice President.*

On motion of Mr. Carr, this plan of cooperation was approved and the President of the University was authorized to make such arrangements as may be necessary to carry out the plan.

CIVIL SERVICE EXAMINATIONS.

(9) A letter from the Dean of the College of Agriculture protesting against the extent to which the State Civil Service Commission is calling on members of the Agricultural College staff to prepare papers for civil service examinations and to correct the papers of candidates written in answer to those questions.

No action was taken in this matter.

FIELD EXPENSES IN AGRONOMY.

(10) A letter from the Dean of the College of Agriculture transmitting one from Dr. Cyril G. Hopkins describing the method of determining the personal expenses of field parties engaged in the soil survey.

January 13, 1916.

President E. J. James, University of Illinois.

MY DEAR MR. PRESIDENT: I am sending for information and record in the President's office the enclosed communication from Dr. Hopkins, head of the Agronomy Department. He states briefly the outcome of a general conference held in my office on the subject of personal expenses of field parties, and while it was the general opinion of the conference that no change in practise should be recommended, yet it seemed to me extremely important that a record should be made of the fact that the whole matter has been seriously canvassed and of the reasons for continuing the present practise. From what I know of the matter I am convinced that this present practise is, all things considered, the cheapest and the best, though I feel it is important that there should be on record in our administrative offices sufficient statements to show that the matter has been seriously considered and that we have not drifted into loose methods of doing business.

We maintain the general principle that every man employed by the University must have a headquarters somewhere, and kept up at his own expense. In the case of men who are continuously in the field, they maintain such headquarters at outside points such as Carbondale, Dixon, etc. Men on the soil survey represent a peculiar class, being a part of the time at the University and a part of the time away. You will see by Dr. Hopkins' statement that in practise they find it necessary to maintain some kind of headquarters here continuously, and while they doubtless profit financially by having their expenses paid while in the field, it is also true that these expenses are very moderate, can easily be checked up between parties, and if we should require them to pay these expenses themselves as if they were here we should then create an injustice unless we correspondingly raised their salary. All things considered, therefore, it seems best to continue the present practise, which is both economical, comfortable, and safe, being careful to place upon our records from time to time the reasons for so doing. It is with this thought in mind that this letter is forwarded to your office.

Very truly yours,

E. DAVENPORT.

January 10, 1916.

Doctor Eugene Davenport, Director Agricultural Experiment Station.

DEAR DEAN DAVENPORT: In accordance with our recent conversation, following a conference attended by most of the men holding the more responsible positions in the Agronomy Department, at which you were able to be present only part of the time, I am writing you in order to furnish you more complete information in regard to the expenses of our field men, especially in connection with the soil survey.

As is the general custom of the University, the traveling and living expenses of our soil survey men have been paid, except when they are located at the University during the winter season. The fact that the soil survey men have been obliged to move frequently, holding their headquarters, as a rule, at one place only from a few days to perhaps two or three weeks, has rendered any other procedure apparently out of consideration. Even when they have maintained headquarters at one place for three or four weeks or possibly longer, they have often found it necessary to stay over night occasionally at other points in order to avoid driving too great distances.

Two conditions have arisen which I think should be called to your attention, although I doubt if they should modify our practise, unless there should seem to be some administrative reason for so doing.

First, we have found that it is more economical and entirely feasible to substitute automobiles almost entirely for horse livery. This is in part owing to the increasing cost and difficulty of securing horse livery, in part to the decreasing efficiency of the horse liveries which we are able to secure, and, in part, to the reduced cost for the purchase and maintenance of automobiles. In many places the taxi or automobile livery has almost entirely replaced the horse liveries not only in the larger cities but even in the country towns. For the field season of 1914 we made considerable use of automobile liveries, which were hired in place of horse liveries, and, in the beginning of our field work in 1915, we purchased two Ford touring cars, the final net cost of which was \$460 each. These proved so satisfactory that later in the season we purchased three additional cars at the same price so that all of our five soil survey parties have been provided with Ford cars. Even if we allow \$200 depreciation on each machine during the season, the expense of livery was reduced from about \$2,550 to \$1,585, thus making a saving of nearly a thousand dollars. Probably the expense for operation, repairs, etc., will be greater the second season than the first, but it seems also probable that \$200 is more than we shall need to allow for depreciation. In addition to this direct saving, we also save on the time of the men in the field, because they can travel to and from their work so much more quickly in the automobiles than with horse livery, even tho they are able to work a larger area without moving headquarters. Even the frequent moving of headquarters from one place to another involves considerable loss of time.

With the use of automobiles we now maintain headquarters at one point sometimes for three months or more, and this might suggest that we should modify our practise and expect the men to pay their own living expenses while so long located at one point. I find, however, that it is a regular custom for all of our more responsible soil survey men to maintain a home in Champaign or Urbana. Even the unmarried men find it necessary to rent a room thruout the year in order to have place to leave their personal effects which they cannot take with them on the soil survey, and a place to live not only during the winter season but sometimes when they are called in or kept at the University for teaching or other purposes more or less at different times during the summer season. Thus, some of our soil survey men work in the field only during the three summer months, while others may work from April 1 to September, others from June to December 1, and still others during the entire field season. I should like to emphasize the fact that our field parties seem to strive conscientiously to keep their living expenses at the minimum, consistent with living in decent and cleanly places, having wholesome food, which is necessary not only to enable them to do the work but also to preserve good health. As a general average, the living expenses amount to \$9 a week per man. This includes lodging and board, but it does not include laundry, an item which we have never included in such expenses. I find that the corresponding living expenses for single men employed at the University is about \$7 a week, so that, counting the average full field season, the annual financial saving to the men in the field is about \$150 in comparison with those employed continuously at the University. In other words, on this basis, the field men should be able to save \$150 more during the year than laboratory men receiving the same salary. However, there are other considerations, which in the judgment of Prof. Mosier, myself, and others most familiar with the work, probably fully counterbalance this apparent advantage. Thus, the men at the University normally work eight hours a day with four hours on Saturday, while the soil survey men normally work ten hours a day, including Saturday, and, as an average, they also work at least an hour each evening in copying field notes, transferring soil maps, making reports, etc. The field men are much exposed and I am convinced that they endeavor conscientiously to use their time to the best advantage for the sake of the work. As a rule they work in parties of four. Although more or less scattered during the day, they will meet at least by twos at lunch time, and the four will regularly be together at night, in order to compare and check up the work accomplished. I also find that men who have had experience in our soil survey work but who are now employed continuously at the University prefer to remain at the University rather than to go back into the field work, even with the possibility of saving \$150 more from the year's employment. I do not mean that the soil survey men are dissatisfied with their work, but I believe that the present remuneration is about as satisfactorily balanced as it could well be.

The second point grows out of the fact that some of our soil survey men have married, and in some cases they find it possible and most satisfactory to arrange to do light housekeeping at the headquarters of the party, even though they remain there only a few months. I feel that such arrangements are by no means objectionable but rather to be encouraged, for it permits some sort of approach to home life. However, it complicates somewhat the financial accounts, in that in such instances the man boards with his wife and the only method we have found of handling the matter is to ask him to take a receipt from his wife and turn it in as a subvoucher exactly the same as though he were boarding at a hotel. It may even

be arranged that the entire party of four men boards with the wife of one of them, and this may be altogether the most satisfactory arrangement which it is possible to make and highly approved by every man in the party. Under such conditions they can arrange to have their breakfasts as early as they desire in the morning, and, if they return later than usual after the day's work, they still find supper waiting for them, which is not always the case at public eating houses in small towns. It may be kept in mind that we have four or five soil survey parties that work in different parts of the State, and of course comparisons are always possible in regard to the expenses of these different parties. It is safe to say that such arrangements for light housekeeping by the young married men tend to increase efficiency with no increase in expense.

We have considered a number of other possible methods of handling the finances in connection with the expenses of the soil survey men, but we are convinced that no other method would prove so satisfactory or so economical. In all cases, the head man of the soil survey party is made responsible for all expenses incurred, which we believe tends towards both efficiency and harmony because it concentrates authority and responsibility upon the most experienced and mature men of the party.

Unless there is some administrative objection, we shall continue to follow the general plan as outlined above.

Very truly yours,

CYRIL G. HOPKINS.

This report was received for record.

FEEES FOR GRADUATE WORK IN MEDICINE.

(11) A statement that unless the board should direct otherwise, the fees for the graduate work in medicine in Chicago during the summer session should be fixed at the same rate as in other departments of the Graduate School.

No action was taken in this matter.

TESTS OF RAILWAY FUELS.

(12) A letter from the Dean of the College of Engineering concerning a proposed cooperation between the Engineering Experiment Station and the International Railway Fuel Association:

February 1, 1916.

President Edmund J. James, University of Illinois.

MY DEAR PRESIDENT JAMES: The Department of Railway Engineering under the direction of Prof. E. C. Schmidt has proposed to utilize its Locomotive Laboratory in a research to determine the relative values of different grades of Illinois coal when used in locomotive service. I believe that the proposed research is an important one, and I have already approved the proposal as an activity which may properly be undertaken under the auspices of the Engineering Experiment Station.

The International Railway Fuel Association as represented by its Executive Committee and by its Secretary, Mr. C. G. Hall, in conference with Prof. Schmidt, has agreed to cooperate with him in the work which he has proposed. A formal statement of their proposal is set forth in a letter transmitted to Prof. Schmidt by the secretary of the association, Mr. C. G. Hall, under date of January 19, 1916, which is as follows:

"Referring to your letter January 14,

"At a meeting of our Executive Committee at Hotel Sherman, Monday, January 17, a resolution was passed instructing the Secretary to write you to the effect that the International Railway Fuel Association wishes to cooperate with the Engineering Experiment Station of the University of Illinois in carrying out an investigation of the relative value of various grades of coal from the same mine for locomotive service.

"It was further resolved that in expectation that the University of Illinois shall make this part of its research work, same to be extensive and thoro, the International Railway Fuel Association will continue in the future to cooperate with the University so far as it may be possible in carrying on this work.

"That it is the intention of the International Railway Fuel Association at this time to contribute or provide

(a) \$1,450 already subscribed;

(b) A locomotive;

(c) Such additional funds as may be procured or appropriated by the association;

(d) As many observers up to the number of seven as may be procured from various railways in order that the program already laid down by our committee in charge of fuel tests may be proceeded with immediately.

"Our executive committee has authorized the secretary to say that the coal for the immediate tests will be drawn from one of the coal districts of the State of Illinois.

"We trust that the University will consider this proposition favorably and I will be pleased to have you write me outlining the manner in which the University will cooperate with us in this work."

You will note that this proposal on the part of the International Railway Fuel Association is to aid the University in pushing more rapidly than it could otherwise do, an investigation, the general character of which has already been deemed suitable as an Engineering Experiment Station activity, and to place the investigation on a higher plane than the University unaided could do, by supplying a locomotive especially suited to the purposes of the research.

The Engineering Experiment Station reserves all its rights. The results obtained will be the property of the Station and will be available for publication as Station bulletins or otherwise, as may from time to time be determined. The

Engineering Experiment Station will, however, aid the association in the preparation for its proceedings of such a report of the cooperative work as may be mutually agreed to by Prof. Schmidt and Secretary Hall.

On the receipt of assurances that these several proposals are satisfactory, the International Railway Fuel Association will make available for the purpose of the proposed work such funds as it now has in hand and such other funds as it may hereafter collect for this purpose. These funds will be handled through the business office of the University, subject to the usual procedure of that office.

The delegation of observers from several railways in Chicago to aid in this work in the Locomotive Laboratory is a matter that will be arranged directly by Prof. Schmidt in conference with the secretary of the association.

I recommend that this cooperative arrangement be approved.

I have the honor to be,

Very truly yours,

W. F. M. Goss.

On motion of Mr. Hoit, this plan was approved.

RESIGNATION OF PROF. L. A. HARDING.

(13) A statement that the resignation of Prof. L. A. Harding, Professor of Experimental Mechanical Engineering, had been accepted, to be effective February 7, 1916. Prof. Harding found that certain outside interests demanded his attention to such an extent that he felt it would be unfair to attempt to carry on his University work and give them attention also.

This statement was received for record.

SMITH MUSIC BUILDING.

(14) A letter from Capt. Thomas J. Smith concerning the erection of the building for the School of Music, and requesting an opportunity to meet with the board on the occasion of their next meeting in Urbana.

It was voted that Capt. Smith be invited to meet with the board at the annual meeting in Urbana (March 14, 1916).

POWER TO SELL OR MORTGAGE SMITH LANDS.

(15) An opinion by the Legal Counsel of the University as to the power of the University to sell or mortgage the land given by Capt. Thomas J. Smith for the purpose of securing the erection of a building to house the musical interests of the University:

January 29, 1916.

President Edmund J. James, University of Illinois.

DEAR PRESIDENT JAMES: In reply to your request concerning the disposition of the lands conveyed by Capt. Smith to the Board of Trustees, I am pleased to report as follows:

POWER TO SELL.

There is no doubt about the power of the Board of Trustees to sell this land and devote the proceeds to the purposes contemplated by the grant of Capt. Smith. It would have no power to sell the land and divert the proceeds to some other purpose without first having used an appropriation from money obtained from some other sources for the erection of a Music Building. The power to convey the land now and use the proceeds for that purpose, or to use the money from some other fund in the erection of a Music Building and then sell the lands for the purpose of reimbursing that fund may be exercised without first obtaining authority from the Legislature.

POWER TO MORTGAGE.

The clause contained in the first section of the organic act, that "The Board of Trustees of the Illinois Industrial University shall be a body corporate and politic, and by that name and style shall have perpetual succession, have power to contract and be contracted with, to sue and be sued, to plead and be impleaded, to acquire, hold, and convey real and personal property" is sufficiently broad in my opinion to authorize the Trustees to mortgage the lands obtained from Capt. Smith, provided the purpose of making the mortgage is to raise funds out of which to erect the Music Building. The resolution authorizing the mortgage to be made should specifically declare that the purpose is to use the money borrowed toward the erection of the Music Building, and to avoid any danger of future complications, I should advise that the fund, when obtained, be kept distinct from other funds, and checked out only as the building is being constructed. I think, too, it would be wise to have the resolution prefaced by a "Whereas," reciting the fact that Capt. Smith has made conveyance as a gift, etc.

Respectfully submitted,

O. A. HARKER, *Legal Counsel.*

This statement was received for record.

LEAVE OF ABSENCE FOR MR. J. S. TOMLINSON.

(16) A request from Mr. J. S. Tomlinson, Cashier in the College of Medicine, for leave of absence for one year, without salary. Mr. Tomlinson has found it necessary to go south for his health. The Civil Service Commission has agreed to permit the Trustees to grant this leave of absence.

On motion of Miss Watson, this leave of absence was granted.

COLLEGE PLACE LOTS.

(17) A letter from Miss Fanny B. Sherfy, of Champaign, asking for information concerning the possible purchase of lots in College Place by the University.

This land is bounded on the west by First Street, on the north by Armory Avenue, and on the east by Fourth Street. Miss Sherfy states that various rumors about the possible utilization of these lots by the University make it difficult to sell the lots.

No action was taken in this matter.

ORDERS FOR BOOKS FOR THE LIBRARY.

(18) A request from Mr. P. L. Windsor, Director of the University Library, for authority to place orders immediately for the purchase of books for the University Library to be delivered after July 1, 1916, at a cost of not more than sixteen thousand dollars, the amount to be charged against the book appropriation for the fiscal year 1916-17, and that similar authority be given for the purchase of books for the Library of the College of Medicine at a cost of not more than one thousand dollars, this amount to be charged against the medical appropriation for the fiscal year 1916-17. This is a request similar to one approved by the board during 1914 and also in 1915. It is necessary to give these orders now if we hope to have the books on hand for use next year.

On motion of Mrs. Evans, this request was granted. The vote was as follows: Ayes, Mr. Abbott, Mr. Carr, Mrs. Evans, Mrs. Henrotin, Mr. Hoit, Mr. Small, Miss Watson; noes, none; absent, Mr. Blair, Mrs. Busey, Mr. Dunne, Mr. Trevett, Mr. Ward.

BUILDING PROGRAM AND POLICY.

(19) A statement calling attention to the fact that if the proposed changes in the building for the School of Education should be carried out, it would mean that the board would spend much more in the construction of this building than it had been planning to do, and that inasmuch as our funds are strictly limited this would mean that certain very necessary additional building schemes would have to be postponed. It is very desirable, indeed necessary, that the Natural History Building be completed at the earliest possible date so as to provide proper accommodations for the Department of Botany and the other departments in the building which are steadily increasing. It is also necessary to make certain important changes in the engineering plant amounting altogether to upwards of one hundred thousand dollars, and it is difficult to see where these funds are coming from if we undertake to expend such a large additional sum on the School of Education during the present biennium or the next biennium.

The pressing items in the College of Engineering Building budget are:

(a) Reconstruction and rearrangement of the equipment of the Mechanical Engineering Laboratory at an estimated cost of \$30,000.

(b) A temporary building for an Industrial Museum. We are likely to get some very important gifts for our Industrial Museum during the present year and the coming year in addition to those we have already received and for which we must provide some housing. It will cost \$10,000 or more to meet this need.

(c) The completion of the Transportation Building at an estimated cost of \$33,000.

(d) An extension of the Mining Engineering Laboratory by the construction of an additional wing at an estimated cost of \$15,000.

The pressure for additional space in our Department of Architecture is very great and this can only be satisfied by making the additions suggested above so as to take care of the Mechanical Engineering and other departments by certain comprehensive readjustments of space.

No action was taken in this matter.

REPAIRS ON PHARMACY BUILDINGS.

(20) A recommendation that the sum of fifteen thousand dollars be appropriated for the necessary repairs to the buildings recently purchased at the corner of South Wood and Flournoy Streets in Chicago, to make them available for use by the School of Pharmacy.

On motion of Mrs. Evans, this appropriation was made. The vote was as follows: Ayes, Mr. Abbott, Mr. Carr, Mrs. Evans, Mrs. Henrotin, Mr. Hoit, Mr. Small, Miss Watson; noes, none; absent, Mr. Blair, Mrs. Busey, Mr. Dunne, Mr. Trevett, Mr. Ward.

DOCUMENTS PERTAINING TO THE PHARMACY LOTS.

(21) A list of documents filed with the Secretary of the board pertaining to the lots recently purchased in Chicago at the corner of South Wood and Flournoy Streets:

"List of Documents pertaining to Lots in Chicago Purchased for School of Pharmacy, University of Illinois, December, 1915.

P 1—DEED: Adam Prehler to the Board of Trustees of the University of Illinois, for lots 9, 10, and 11 in Carpenter's resubdivision of the west half of block 5 in Haddock's subdivision into blocks 4, 5, and 17 of that part of the east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian set off to said Haddock in partition of said tract by order of Superior Court of Chicago, July 7, 1859, in Cook County, Illinois.—Dated December 27, 1915. No. 5778849; book 13716; page 169.

P 2—WARRANTY DEED: Chicago Title and Trust Company, as receiver of Chicago Hoemopathic Hospital, to the Board of Trustees of the University of Illinois, for lots 12, 13, and the south one and three-twelfths feet of lot 14 in the resubdi-

vision of the west half of block 5, in the assessor's division of the east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian, in Cook County, Illinois.—Dated December 30, 1915. No. 5781561; book 13671; page 323.

P 3—SPECIAL WARRANTY DEED: William O. and Josephine Green to the Board of Trustees of the University of Illinois, for lots 14, 15, and 16, in Carpenter's resubdivision of the west half of block 5 in assessor's division of the east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian.—Dated December 30, 1915. No. 5781703; book 13671; page 328.

P 3a—MASTER'S DEED: Wirt E. Humphrey, Master in Chancery of the Superior Court of Cook County, to William O. Green, for lots numbered 14, 15, and 16 in Carpenter's resubdivision of the west half of block number 5 in assessor's division of the east half of the southeast quarter of section No. 18, township No. 39 north, range 14 east of the Third Principal Meridian, together with the rents, issues, and profits thereof, and all buildings and improvements on said premises or on any part thereof.—Dated December 24, 1915. No. 5781702; book 13569; page 357.

P 4—TITLE GUARANTEE POLICY No. 348470. From the Chicago Title and Trust Company to the Board of Trustees of the University of Illinois, for lots 9 to 16 inclusive in Carpenter's resubdivision of the west half of block 5 in Hadduck's subdivision into blocks 4, 5, and 17 of that part of the east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian, set off to said Hadduck in partition of said tract by order of Superior Court of Chicago, July 7, 1859, in Cook County, Illinois.—Dated January 5, 1916, —amount \$35,000.

P 5—ABSTRACT OF TITLE to lots 14, 15, and 16 in Carpenter's resubdivision of the west half of block 5 in the assessor's division in section 18/39/14, Cook County, Illinois.—Dated (last entry) September 13, 1913.

P 6—WARRANTY DEED: Albert D. and May B. Gibbs to Adam Prehler, for lots 9 and 10 in the resubdivision of the west half of block 5 of the assessor's division of the east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian.—Dated March 11, 1905.

P 7—WARRANTY DEED: Melanie Nifnecker and Emil Nifnecker to Adam Prehler, for lot 11 in Carpenter's resubdivision of the west half of block 5 in Hadduck's subdivision into blocks 4, 5, and 17 of that part of east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian, set off to said Hadduck in partition of said tract by order of Superior Court of Chicago, July 7, 1859, in Cook County, Illinois.—Dated November 24, 1905.

P 8—DEED OF TRUST: Chicago Homeopathic Hospital to Samuel J. Lombard. Lots numbered 12 and 13 and the south 1 3/12 feet of lot 14 in Carpenter's resubdivision of the west half of the block 5 in the assessor's division of the east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian, situated in the county of Cook, in the State of Illinois.—Amount of encumbrance named, \$6,500; accompanied by four notes for \$500 each and one note for \$4,500.—Dated March 26, 1908; released by deed, December 30, 1915.

P 8a 1, 2, 3, 4—THREE NOTES, each for \$500, and one note for \$4,500, Chicago Homeopathic Hospital to its own order at the office of Samuel J. Lombard. Dated March 26, 1908. Terms 2, 3, and 4 years respectively for the \$500 notes, and 5 years for the \$4,500 note. Interest at 6 per cent. Each note cancelled and marked "Paid, December 30, 1915."

P 9—DEED OF TRUST: Chicago Homeopathic Hospital to Jeanette Lacy. Lots 12 and 13 and the south 1 3/12 feet of lot 14 in Carpenter's resubdivision of the west half of block 5 in the assessor's division of the east half of the southeast quarter of section 18, township 39 north, range 14 east of the Third Principal Meridian, subject, however, to a trust deed dated March 26, 1908, and recorded March 30, 1908, as document no. 4879468 to Samuel J. Lombard to secure an indebtedness of \$6,500.—Dated April 13, 1911; amount \$6,500; accompanied by thirteen promissory notes each for \$500 and one note for \$100, all enumerated in the deed; term, 7 years, with interest at 3 per cent payable annually and 3 per cent after maturity. Perforated "Canceled."

P 9a 1-14 (incl.)—THIRTEEN NOTES each for \$500 and one for \$100 as enumerated in Document P 9 above. Each perforated "Canceled."

P 10 a, b, c—RECEIPTS, water supply, lots 713, 717, 719 South Wood Street, semi-annual period May 1, 1915, to November 1, 1915; net amounts \$2.63, \$3.94, and \$5.63 (less .37) each perforated "Paid."

P 11 a, b, c—BILLS from McKey & Poague for purchase of 701-705, 709-711, and 713-717-719 South Wood Street respectively, being the properties deeded in Documents P 1, P 2, and P 3. Dated January 11, 1916; amounts \$16,280, \$9,251.25, and \$10,407.66 respectively.

P 12 a, b, c—LETTERS from McKey & Poague and copy of affidavits of President Abbott concerning the exemption of above properties from taxation. Affidavits endorsed with receipt, January 17, 1916, by M. K. Sheridan, Secretary."

SUMMER SESSION SALARY BUDGET.

(22) The salary budget for the Summer Session of 1916, carrying with it an assignment of twenty-three thousand two hundred and twenty-five dollars:

Department and name.

Agriculture.	
Nolan, Aretas W., Assistant Professor.....	\$300 00
Burlison, William L., Associate Professor.....	200 00
Ekblaw, Karl J. T., Associate.....	225 00
Colby, Arthur S., Assistant.....	200 00
Bull, Sleeter, Associate.....	125 00

Department and name.	
Gusler, Gilbert, Associate	\$125 00
Roberts, Elmer, Instructor	75 00
Total	\$1,250 00
Art and Design.	
Lake, Edward J., Assistant Professor.....	300 00
Total	\$300 00
Botany.	
Stevens, Frank L., Professor.....	500 00
Beach, Walter S., Assistant.....	150 00
Total	\$650 00
Chemistry.	
Balke, Clarence W., Professor.....	500 00
Derick, Clarence G., Assistant Professor.....	350 00
Beal, George D., Associate.....	250 00
Hopkins, B. S., Associate.....	250 00
Lewis, Howard B., Associate.....	250 00
Sears, George W., Instructor.....	225 00
Hecker, Charles H., Instructor.....	225 00
Johnson, Laurence C., Instructor.....	225 00
Engle, E. W., Instructor.....	200 00
Rowland, Floyd E., Assistant.....	100 00
Total	\$2,575 00
Classics.	
Oldfather, William A., Professor.....	400 00
Canter, Howard V., Assistant Professor.....	300 00
Total	\$700 00
Economics.	
Litman, Simon, Assistant Professor.....	300 00
Thompson, Charles M., Associate.....	300 00
Scovill, Hiram T., Instructor.....	225 00
Stewart, Charles L., Instructor.....	225 00
Total	\$1,050 00
Education.	
Johnston, Charles H., Professor.....	500 00
Whipple, Guy M., Professor.....	500 00
.....	500 00
Hoke, Kremer J.....	400 00
Miller, Wilford S., Assistant.....	225 00
Rhoton, A. L.....	100 00
.....	275 00
Total	\$2,500 00
English.	
Upham, Alfred H., Professor.....	500 00
Paul, Harry G., Assistant Professor.....	300 00
Jones, Harry S. V., Assistant Professor.....	300 00
Woolbert, Charles H., Associate.....	250 00
Boyer, Clarence V., Associate.....	250 00
Hillebrand, Harold N., Instructor.....	225 00
Tieje, Ralph E., Instructor.....	112 50
Sutcliffe, Emerson G., Assistant.....	112 50
Total	\$2,050 00
Entomology.	
.....	450 00
Total	\$450 00
French.	
Carnahan, David H., Associate Professor.....	100 00
Moore, Olin H., Associate.....	250 00
Carry, Charles S., Assistant.....	150 00
Total	\$500 00
German.	
Bloomfield, Leonard, Assistant Professor.....	300 00
Gillet, Joseph E., Associate.....	250 00
Green, Alexander, Instructor.....	225 00
Puckett, Hugh W., Instructor.....	225 00
Kline, Earl K., Instructor.....	225 00
Total	\$1,225 00

Department and name.

History.

Anderson, Frank M., Professor (see Political Science).....	\$300 00
Laprade, William T., Professor.....	350 00
Cole, Arthur C., Associate.....	250 00
Total	\$900 00

Household Science.

MacKinnon, Jean	250 00
Hope, Leona	225 00
Fleming, Georgia	225 00
Total	\$700 00

Manual Training.

Park, Joseph C., Director Industrial Education, Oswego State Normal School, Oswego, N. Y.....	400 00
Griffin, Fred	250 00
Duncan, James M., Assistant.....	150 00
Total	\$800 00

Mathematics.

Townsend, Edgar J., Professor.....	500 00
Crathorne, Arthur R., Associate.....	250 00
Chittenden, Edward W., Instructor.....	225 00
Frery, Hobart D., Assistant.....	150 00
Total	\$1,125 00

Mechanics, Theoretical and Applied.

Ensign, Newton E., Associate.....	250 00
Seely, Fred B., Associate.....	250 00
Vallance, Alex, Instructor.....	225 00
Total	\$725 00

Music.

Erb, John L., Director, School of Music.....	500 00
.....	150 00
Total	\$650 00

Physical Training (Men—for six weeks service).

Huff, George A.....	375 00
Gill, Harry L.....	300 00
Jones, Ralph R.....	300 00
Zuppke, Robert C.....	300 00
Mauthe, O. C., Director of Physical Education, Stout Institute, Menomonie, Wis.....	300 00
Fargo, Roy N., Director Men's Gymnasium.....	225 00
Glimstedt, Olaf H., Assistant.....	150 00
Traveling expenses for Mr. Mauthe.....	50 00
Total	\$2,000 00

Physical Training (Women).

Brooks, Verna, Instructor.....	225 00
Total	\$225 00

Physics.

Knipp, Charles T., Assistant Professor.....	400 00
Williams, Elmer H., Associate.....	250 00
Warner, Earl H., Assistant.....	200 00
Bayley, Paul L., Assistant.....	150 00
Frazel, Charles S., Assistant.....	100 00
Booth, H. T.....	100 00
Total	\$1,200 00

Political Science.

Mathews, John M., Assistant Professor.....	300 00
Anderson, Frank M., Professor (see History).....	200 00
Total	\$500 00

Sociology.

Lichtenberger, James P., Professor.....	500 00
Total	\$500 00

Spanish.

Laguardia, Cincinnati J. B., Assistant.....	200 00
Total	\$200 00

Zoology.

Shelford, Victor E., Assistant Professor.....	300 00
Instructor or 2 Assistants at \$75 each.....	150 00
Total	\$450 00

Total \$23,225 00

On motion of Mrs. Henrotin, this budget was approved.

At this point, President Abbott, being called from the room, requested Mrs. Evans to preside over the meeting.

POLICY OF DISPENSING WITH GENERAL CONTRACTORS.

(23) A letter from the Supervising Architect enclosing a report prepared by Mr. L. J. Towne arguing in favor of dispensing with general contractors on our building work.

February 5, 1916.

President E. J. James, University of Illinois.

DEAR SIR: I am enclosing a report prepared by Mr. Towne which is his argument for our dispensing with general contractors on our building work. It seems to me that this matter is of enough importance to present to the Board of Trustees for their opinion.

Yours truly,

JAMES M. WHITE, Supervising Architect.

January 31, 1916.

Prof. J. M. White, Supervising Architect.

DEAR SIR: I am of the opinion that the time has come for the University to take over the work of the general contractor in the construction of University buildings, and I wish to present a few facts in support of this position.

As you are aware, there is a definite movement in this direction among architects in this country, for reasons which I will attempt to present below. You are also aware that there has been a tendency on our part during the last three years to take over more and more of the responsibility for the building construction until we now have on the Chemistry Building six, and on the Ceramics Building seven contractors in addition to the general contractor.

Table I, attached, shows the proportion of the total cost of the last four buildings constructed on the Campus executed by the general contractor's own forces, first, including material furnished by him, and second, exclusive of such material. You will note that only 40 per cent of the total cost of the buildings in general is borne by the general contractor himself, including material furnished by him, and only 16½ per cent exclusive of such material. This is presented simply to indicate that the change proposed would not affect a very large proportion of the total cost of the building.

The following are in brief the main arguments for the elimination of the general contractor:

1. The general contract method of construction is undoubtedly a survival of former conditions not now obtaining, when it was customary for one contractor to execute almost all of the work in connection with the building with his own forces. At the present time, due to the high degree of specialization which exists in various building trades, there have arisen many capable contractors dealing only with certain branches of building work, until even the general contractors have come to realize in a great many cases that they can sublet work at a profit to subcontractors. This has resulted in their gradually dropping off various parts of the work until at the present time only the masonry and carpentry work is commonly executed by the general contractor's own forces.

2. The elimination of the general contractor gives the architect a greater flexibility in the development of his plans and specifications for the building. The awarding of a general contract makes it necessary to plan in advance to the minutest detail work which will not be executed for months after the awarding of the contract, which often does not allow sufficient time for the proper study of the design. Then after a change is proposed after awarding the contract, it is usually impossible to get an adjustment of the cost favorable to the owner. It is also necessary to attempt to determine in advance, by securing advice from the contractors or otherwise, the relative cost of alternate methods of construction. This we sometimes attempt to obviate by the taking of alternate bids, but I think we are all agreed that such alternate bids are very difficult to secure in such a way that they can be used advantageously. Where the architects can let subcontracts for the various branches of the work bids can be taken directly on different types of construction and contracts can be let as the work proceeds, allowing additional time for the study of details of finish which will not be required during the first months of construction.

3. The plan proposed will give a better and much more direct control of various trades working in a building than where such control has to be obtained through the general contractor. In talking with subcontractors, it is their universal statement to me that they would much prefer to deal directly with the architect than with the general contractor. In fact, even at present, a great deal of the work of our superintendent on a building is done directly with the subcontractors. Some time ago, I determined that owing to the fact that the responsibility was entirely with the general contractor we ought not to do this, but ought to take up all matters directly through him. We started out on this policy but I find that we are gradually working back to the other method because of its manifestly greater efficiency. At the same time it often causes difficulty in adjusting matters with the general contractor.

4. The University is much better able to finance a piece of construction work than the average contractor. Payments to subcontractors can be made frequently and promptly, thereby relieving them from interests charges which are often a very heavy item to a small contractor. Material bills can be discounted promptly.

5. There are certain financial savings inherent in this matter of executing work, as follows:

- (1) By splitting the work up among the larger number of contractors, the necessity for a bond from any one contractor is considerably reduced and dis-

cretion can be used in requiring or not requiring same, at a considerable saving, amounting at a maximum to 1 per cent of the general contract.

(2) The general contractor's overhead expense amounting to 3 per cent to 5 per cent is eliminated as well as profit amounting to 5 per cent to 10 per cent.

This saving is partly offset by whatever increase in the architect's overhead expense is made necessary to handle the larger number of contractors. In the case of our organization I do not believe such an increase would exceed 2 per cent of the cost of the building.

The following are the main arguments against the elimination of the general contractor:

1. Such a method makes the total cost of a building a little more uncertain at the outset than under the present method, because of the fact that it is undesirable to take bids on all branches of the work at the same time, or to hold up the earlier parts of construction work until plans and specifications can be prepared for all details of finish.

Referring again to Table I, it is evident that the total of the variable item, namely, the general contractor's labor cost, is only about 16½ per cent of the total cost of the building, assuming that we can estimate the cost of materials as accurately as he can. It is therefore evident that so far as the total cost of the building is concerned, the variable items can be estimated with sufficient accuracy, although this may involve the addition of an experienced estimator to our force at certain times in the year.

2. There is a possibility of our having difficulty in finding responsible subcontractors for masonry and carpentry work. So far as I know, there is only one local mason contractor, and one local carpenter contractor, with whom we would care to deal on University work. However, there are in Indianapolis, Danville, Decatur, Peoria, etc., firms which would be glad of any opportunity to figure on these independent branches with the further possibility that the local general contractors might be willing to take one or more branches at the exclusion of the remainder.

3. The execution of construction work by the method outlined undoubtedly requires a higher grade of superintendence than where the responsibility is fixed on one general contractor. It would be necessary to strengthen our organization on this respect, at, of course, an increased overhead cost referred to above. Aside from the additional cost, there can be no argument on this point.

In conclusion, the whole matter, to my mind, reduces itself to this. Where the architect's organization is capable of handling the work in the manner outlined and where capable subcontractors can be secured, the general contractor has no logical place in a building project.

Yours truly,

L. J. TOWNE, *Superintendent of Construction.*

TABLE I.

PROPORTION OF TOTAL COST OF UNIVERSITY BUILDINGS ACTUALLY BORNE BY GENERAL CONTRACTOR.

	Adminis- tration.	Chemistry.	Vivarium.	Ceramics.	Average.
Total cost, including equipment.....	\$160,000	\$350,000	\$70,000	\$128,000	.....
Total cost building.....	140,000	260,000	50,000	118,000	.....
General contract.....	106,000	189,000	29,000	82,000	.....
Labor and material executed by general contractor's own forces, excluding subcontractors.....	76,000	133,000	19,000	37,000	.....
Labor and material, per cent of general contract.....	72%	51%	65%	70%	65%
Labor and material, per cent of total cost.....	48%	38%	27%	45%	40%
Labor executed by general contractor's own forces, excluding subcontractors and material orders.....	21,000	51,000	8,000	21,000	.....
Labor by general contractor, per cent of general contract.....	20%	27%	28%	26%	25%
Labor by general contractor, per cent of total cost.....	12½%	14½%	11½%	16½%	14%
General contractor's bond and insurance.....	1,500	4,026	860	1,375	.....

No action was taken in this matter.

At this point, President Abbott returned and resumed the chair.

TRANSFER OF FORESTRY PLANTATION.

(24) A recommendation that the President of the University be authorized to transfer the care and control of the Forestry Plantation, lying west of Lincoln Avenue, from the Department of Horticulture to the Department of Buildings and Grounds, and that this plantation be merged into a park; with the understanding that any changes made in the forestry at present, such as cutting down or remov-

ing trees, be done only after consultation with and approval of the Department of Horticulture. This recommendation is based on the following communication from Dr. T. J. Burrill to Prof. J. C. Blair, after conference with him and the Department of Buildings and Grounds.

February 3, 1916.

Prof. J. C. Blair, Urbana, Illinois.

MY DEAR SIR: In view of the sleet injury to the trees in the University forest plantation, you ask in yours of the 2d instant for my opinion as to what should be done, having prominently in mind the future policy to be pursued in regard to the plantation.

In the first place, it may be well to recall the original purpose of this experiment with such facts in its history as seem to bear upon the present inquiry. It should be remembered that fifty years ago this was a new country, largely prairie, with multitudes of untried problems facing the early land owners and managers. The importation of wood of any kind had scarcely begun and the facilities existing gave small promise of what has since taken place. The supplies of coal were little known and its use little appreciated. The railroad engines commonly burned wood. By far the larger proportion of household heat especially in the kitchens (and often there was none other) came from the same fuel. Kitchen stoves especially adapted for coal were hardly known until at least a decade later. Good building timber was scarce and the home supply was rapidly disappearing with every prospect of an increase in price. On the other hand the country was speedily settling up. Increasing calls were made for construction timber as well as for wood for many purposes now supplied by iron, brick, cement, etc. It did not require any great vision to impress the necessity of making provision for future needs. And then good land was cheap. The usual returns from agricultural crops were poor. Corn rarely sold for more than twenty-five cents a bushel and had been so low with such poor market that it was burned instead of wood in the cook stoves. If timber was to be needed anywhere and could be grown to profit anywhere it would seem to thoughtful people of the time to be in Illinois.

This is, in brief, the general condition of things when the first steps were taken by the University authorities in regard to this plantation experiment. In support of these statements I wish to refer to the first report of the Board of Trustees issued in 1868, pp. 276-278. Here Mr. D. C. Scofield of Freeport, Ill., estimates the value of an acre planted to larch and pine after 75 or 80 years to be no less than \$10,000, while it would more than pay its way from near the beginning. Or better, see in the second Report, 1869, pp. 352-358, the lecture given by Mr. O. B. Galusha, one of the first Board of Trustees and a member of the committee on whose report the forest plantation was originated. The address was one of the first series of agricultural lectures given at the University by leading experts and authorities in January, 1869. Its character may be surmised by the concluding paragraph which should be read with the understanding that the planting of trees is the deciding influence. It reads: "Here, then, brother farmers and farmer students in this University, we have two pictures presented to us. In one we look into the future and see wide-spread desolation—an extended treeless country, visited by destructive storms, by severe droughts, with its streams dried up, and food for man and beast in such scarcity that the poor can scarcely obtain a supply. In the other we see a charming landscape, a rich, fertile country, a population enjoying all the blessings which flow from peace and unity. Which will you choose? Will we take warning in time and arouse ourselves to action in an enterprise which promises such rich results?"

To get at still more directly the purpose in the minds of those chiefly responsible for the experiment, it would be well to read the report of the Committee on Horticulture found in the volume last cited, pp. 46-52. In this, forest planting takes the first and most emphasized place with those for fruits, shelter, and ornament following. A paragraph such as the following indicates why: "Timber for railroad ties, culverts, cars, roadways and buildings, fencing, vineyard stakes, hop poles, stanchions for coal banks, soft wood, like white willow and the poplars for berry boxes, crates and staves, hoop poles, wagon and carriage material, agricultural implements, and the uniform wants of the age, make up a demand of most surprising magnitude, that will add to our rural industry an importance that the most sanguine have not hitherto dreamed of."

The recommendations of this report were adopted and an appropriation from the State Legislature was later secured (March, 1869) to carry them into execution, thus indicating that others besides the members of this committee considered the project a greatly important one.

No time was lost in making a beginning. Many thousand forest tree seedlings small in size were purchased that spring and put into a nursery from which the first were transferred to the permanent grounds two years later (1871). Others from the same source or grown in the meantime from seed followed year by year for about three years and then at longer intervals. Hence the main parts of the plantation are 42 to 45 years old. There is about twenty acres of it. From the beginning the trees have had much better care than such tree plantations commonly receive, at greatly more cost than was originally estimated. Plainly, we see things now, mistakes of several kinds have been made, but they have been brought out in the experiment rather than due to faulty planning or execution. With the information and skill existent forty-five years ago and later for the new problems as they arose, it can hardly be said anything better in the way of results can now be figured out. As a rule the trees have lived and prospered except as conditions, most of which could not have been foreseen, proved unfavorable.

But the showing today is a far cry from the early anticipations as somewhat sketched above. Taken as a whole and basing estimates solely on timber values, I do not believe the area is worth much more today than is an adjoining equal

area of open land. That is, the receipts from harvested wood would probably not be more than the expense of clearing and putting into shape for other crops. For certain blocks this would not be true, notably that containing the European larch, and, if we were near a natural market, for that of the green ash. There are lessons to be learned now of abundant value and doubtless more if extension of time is permitted, but in my mind the experiment has gone fully far enough now to make it indisputably plain that forest trees cannot be grown for ordinary timber to a comparative profit on Illinois farm land suitable for agricultural purposes. If conditions and outlook for use had continued as counted forty to fifty years ago, the anticipations were entirely too rosy. This with the changes in requirements for fuel and construction timber make things widely different now.

It is true that time sufficient for usual forest harvests has not elapsed; the trees are not much more than half the age usually specified for a crop, but with the light we now have there can never be anything like financial results equal to those from proper farm management of the land—the whole area considered.

We may as well accept this lesson now. The test of varieties for such soil and conditions to date ought also to be considered well made, as ought also the distances for planting and the general management of an artificial forest. The time from the beginning so nearly reaches fifty years that under ordinary circumstances it would probably be advisable to let the more general period round out before drawing conclusions and more especially before terminating the experiment. But a crisis has come in the serious damage from sleet and the formidable expenditure required to reshape the trees for further timber growth. It would therefore seem to be good policy to decide now rather than a half dozen years later what the future of the plantation is to be and to be guided in the repair proceedings by this decision.

Now the forest has served a very useful purpose aside from the timber experiment, a purpose not originally contemplated at all; namely, a unique, phenomenally interesting, instructive, and enjoyable recreation equipment on the Campus. It would never have been so planned or so located for this purpose, but it happens that in both respects it is very fortunately adapted for an increasingly important service of this kind. The area in its present condition is certainly worth more for its direct interest and benefit than it would possibly have yielded in commercial timber. Its use, heretofore, as an educative and pleasure park is a good basis for prophecy if from now on that is made the main feature and purpose of the twenty acres. There would necessarily be some change in management but even so the original interest need not wholly be lost. The trees would go on in development and things can be shaped so that the timber experiment may be in part continued the altogether secondary to the other use.

I believe the time has come to make this change in policy and purpose and submit the foregoing reasons without trying now to answer further your specific questions. I sincerely trust, however, that this main problem will have careful and wise consideration. A mistake may easily be made but perhaps never rectified. Anybody could destroy in a few hours the earnest painstaking work of forty years. Better let things be as they are a year or more, notwithstanding the eye-sore condition, than to adopt too hastily an incorrect decision. Even if the change of policy is made, the change of treatment should be slow in practical execution in order to secure the best final results.

Hoping that this may at least do no harm to a vital interest, one of far-reaching, century-long, influence and importance, I am

Very truly yours,

T. J. BURRILL.

On motion of Mr. Small this authority was given.

APPARATUS FOR MOVING TREES.

(25) A request from Prof. James M. White, Supervising Architect, for an appropriation of five hundred dollars for the purchase of a tree-moving equipment.

On motion of Mr. Small, this appropriation was made. The vote was as follows: Ayes, Mr. Abbott, Mr. Carr, Mrs. Evans, Mrs. Henrotin, Mr. Hoit, Mr. Small, Miss Watson; noes, none; absent, Mr. Blair, Mrs. Busey, Mr. Dunne, Mr. Trevett, Mr. Ward.

COST OF EXTRAS ON NEW BUILDINGS.

(26) A report from the Supervising Architect giving an analysis of extra charges for work on the construction of the Administration, Chemistry, Vivarium, and Ceramics Buildings.

"The attached table was prepared in order to indicate the general causes for the increase in the cost of most of our buildings on the Campus over the contract prices, by from 1 per cent to 3 per cent. Any attempt to classify such extras is certain to be more or less arbitrary, and the various groups grade into one another without any hard and fast lines of separation. After some study, I adopted the following analysis as representing a fair distribution of the various items:

(1) *Errors in Plan:* Under this heading are included all extras which are caused by actual mistakes in drafting or specification work, the rectification of which involved the changing of construction but which would not have added anything to the cost of the building had same been discovered before the preparation of bids. In other words, this represents an actual waste of funds caused by some inaccuracy in drafting or insufficient study of the problem, so that the contractor was inevitably led into wrong constructions.

(2) *Omissions in Plan*: In this class are placed those errors in plan and specification which, while they involved extra work to rectify, cannot properly be considered as waste, because of the fact that extra work or material not shown on the plan, and which the contractor had not, presumably, figured in his bid, had to be furnished. In other words, while the extra work was caused by mistakes in the plan, the University received full value for the expenditure.

(3) *Unforeseen Conditions*: In this class are placed such extras as extra foundation work caused by conditions which could not be determined until the excavation had been made.

(4) *Changes by the Supervising Architect*: In this class are placed those extras which resulted from the continued study which the plans received during construction, and all of which represent an actual betterment in, or addition to, the building.

The distinction between classes 2 and 4 is simply that items in class 2 were in the mind of the designer but were not provided in the plan; while items in class 4 resulted as stated, from more extensive study of the plan as the work progressed.

(5) *Changes by Occupants*: In this class are placed extras caused by requests for changes in plan by the persons who are to occupy the building.

(6) *Errors of Superintendence*: In this class are placed extras which might have been obviated by a more careful control of the work by the University Superintendent on the building.

A study of this table will undoubtedly reveal, first, the importance of the utmost care in the preparation and checking of drawings and specifications, but it will also reveal as indicated by the proportion of orders falling into classes 3, 4 and 5, the fact that it is impossible to avoid a considerable amount of extra work and that same should be provided for by an allowance of a sum not less than 2 per cent of the total amount of contracts in making the estimate for the proposed building."

This report was received for record.

ANALYSIS OF EXTRA WORK AUTHORIZED ON ADMINISTRATION, CHEMISTRY, VIVARIUM AND CERAMICS BUILDINGS.

Building.	Con- tract cost in- cluding extras.	1		2		3		4		5		6		Per cent total extras. Per cent total extras less column 3.	
		Errors in plan.		Omis- sions in plan.		Unforeseen conditions.		Changes by architect.		Changes by occupants.		Errors of superin- tendent.			
		Cost.	Per cent.	Cost.	Per cent.	Cost.	Per cent.	Cost.	Per cent.	Cost.	Per cent.	Cost.	Per cent.		
Adminis- tration..	\$131,000	318 32	.24	515 53	.40	544 94	.42	2,006 50	1.53	636 12	.49	110 50	.08	3.16	2.74
Chemistry.	240,000	776 32	.32	637 14	.26	621 09	.26	682 78	.28	1,108 90	.46	185 00	.07	1.65	1.39
Vivarium..	42,500	36 58	.08	93 22	.22	237 14	.56	420 69	.99	30 98	.07	29 00	.07	1.99	1.43
Ceramics..	112,000	132 51	.08	449 25	.40	1,623 00	1.45	426 79	.38	307 94	.27	41 00	.04	2.62	1.17

NOTES—The figures for the Administration and Vivarium Buildings are complete. Final settlement has not been made on the Chemistry and Ceramics Buildings but the figures given will not be materially altered.

Percentages are based on total contract cost of building and include all branches.

ROOMS IN WOMEN'S DORMITORY.

(27) A letter from Prof. J. M. White, Supervising Architect, calling attention to the fact that if the University is to fix a reasonable price for board and lodging in the new Residence Hall for Women it will be necessary to make some readjustments in the rooms so that a larger number of young women can be accommodated in the building, or else the building will probably be operated at a loss, compelling the use of money from the general fund to pay the expenses of operation.

This matter was discussed at some length. The evident feeling of the board was that some of the single rooms should be replaced by double rooms so as to provide for at least one hundred girls in the building. The matter was referred to a committee consisting of Mrs. Evans and Miss Watson, it being understood that if, in conference with the Supervising Architect, they should find it feasible to modify the design for this purpose without re-designing the whole building, they should instruct the Supervising Architect to make the necessary changes.

BUILDING PLANS.

Prof. J. M. White, Supervising Architect, presented plans and sketches of new buildings as follows:

EDUCATION BUILDING.

A revised sketch of the exterior of the new building for the School of Education.

LIBRARY.

A preliminary sketch of the new Library to be located just south of the terminus of Wright Street, with its north and south axis on the center line of Wright Street prolonged and its east and west axis on the prolongation of the east and west axis of the Armory, as approved by the board on March 10, 1914 [Report, 1914, page 725].

MUSIC BUILDING.

A sketch of the proposed Smith Memorial Building for the School of Music.

GREGORY MEMORIAL BUILDING.

A sketch of the Gregory Memorial Building, showing its relation to the possible architectural scheme of development of the University.

All these plans and sketches were discussed fully, but no action was taken.

AUDIT REPORT.

Mr. Hoit presented for the Finance Committee the report of the United States Audit Company for the quarter ending December 31, 1915.

This report was received for record.

Hon. Otis W. Hoit, Chairman, Finance Committee.

DEAR SIR: Following instructions, we have audited the books and accounts of the University of Illinois at Urbana, Ill., for the second quarter of the fiscal year, ended December 31, 1915.

We are sending you herewith a copy of the report prepared by the Comptroller of the University, Mr. W. B. Castenholz, covering the first two quarters of the fiscal year.

We have verified the cash receipts, disbursements and balances shown in the report, with the exception of the petty cash funds of the College of Medicine and the School of Pharmacy, amounting respectively, to \$300 and \$250. Subject to the foregoing remarks,

WE HEREBY CERTIFY That the various schedules as contained in the report of the Comptroller correctly set forth the transactions of the quarter ended December 31, 1915, and that they are in accordance with the books.

Yours very truly,

UNITED STATES AUDIT CO.,
WHITNEY B. FLERSHEM,
Certified Public Accountant.

SALE OF SMITH FARMS.

Mr. Hoit reported that the Finance Committee had voted to place the Smith farms in the hands of Mr. Bruce Henderson for sale at a price not less than Capt. Smith's valuation, according to the action taken December 14, 1915 [pages 863-864], whereby this matter was referred to the committee with power to act.

COMPTROLLER'S REPORT.

The Secretary presented for record the report of Mr. W. B. Castenholz, Comptroller, for the six months ending December 31, 1915.

January 12, 1916.

Mr. W. L. Abbott, President, Board of Trustees.

DEAR SIR: I have the honor to submit herewith the quarterly statement covering the financial operations of the University of Illinois for the six months ended December 31, 1915.

Yours very truly,

W. B. CASTENHOLZ, *Comptroller.*

SCHEDULE 1.

SUMMARY OF RECEIPTS AND DISBURSEMENTS AS AT DEC. 31, 1915.

	Balance July 1, 1915.	Receipts Schedule 2.	State revenue.	Total.
University Treasurer—				
General.....	\$*94,122 41	\$383,853 77	.....	\$477,976 18
United States Agricultural Experiment Station.....	647 09	15,257 49	.....	15,904 58
United States Smith-Lever.....	.....	18,141 10	.....	18,141 10
Trusts.....	7,938 43	11,015 24	.....	18,953 67
Petty cash—				
Cashier.....	5,000 00	.....	.....	5,000 00
Secretary, Colleges of Medicine and Den- tistry.....	300 00	.....	.....	300 00
Actuary, School of Pharmacy.....	250 00	.....	.....	250 00
State Auditor—				
Buildings, land and equipment.....	.....	.....	\$436,500 00	436,500 00
Administrative office.....	.....	.....	76,145 00	76,145 00
General departments.....	.....	.....	111,550 00	111,550 00
Instruction.....	.....	.....	1,243,055 00	1,243,055 00
Research.....	.....	.....	97,000 00	97,000 00
Physical plant.....	.....	.....	218,250 00	218,250 00
Contingent expense.....	.....	.....	242,370 95	242,370 95
Water survey and Investigation.....	727 88	.....	28,500 00	29,227 88
Miners, and Mechanics' Institutes.....	1,353 77	.....	.....	1,353 77
Total.....	\$110,339 58	\$428,267 60	\$2,453,370 95	\$2,691,978 13

* Including transfer from petty cash, \$600.

SCHEDULE 1—Concluded.

	Disburse- ments Schedule 6.	Balances.	
		Items.	Totals.
University Treasurer—			
General.....	\$250,737 07	\$227,239 11	.....
United States Agricultural Experiment Station.....	13,768 57	2,136 01	.....
United States Smith-Lever.....	16,400 41	1,740 69	.....
Trusts.....	11,577 71	7,375 96	.....
			\$238,491 77
Petty cash—			
Cashier.....	.....	\$5,000 00	.....
Secretary, Colleges of Medicine and Dentistry.....	.....	300 00	.....
Actuary, School of Pharmacy.....	.....	250 00	.....
			5,550 00
State Auditor—			
Buildings, land and equipment.....	264,016 86	\$172,483 14	.....
Administrative office.....	37,405 59	38,739 41	.....
General departments.....	61,098 16	50,451 84	.....
Instruction.....	768,444 12	474,610 88	.....
Research.....	34,602 43	62,397 57	.....
Physical plant.....	83,478 14	134,771 86	.....
Contingent expense.....	11,181 65	231,189 30	.....
Water survey and investigation.....	7,929 69	21,298 19	.....
Miners' and Mechanics Institutes.....	1,353 77	.....	.....
			1,185,942 19
Total.....	\$1,561,994 17	.....	\$1,429,983 96

SCHEDULE 2.

STATEMENT OF CASH RECEIPTS FOR THE SIX MONTHS ENDED DEC. 31, 1915.

General fund—		
Schedule 21.....		\$383,853 77
United States Agricultural Experiment Station Fund—		
Adams Fund.....	\$7,500 00	
Adams Fund—receipts.....	257 49	
Hatch Fund.....	7,500 00	
		15,257 49
United States Smith-Lever Fund.....		18,141 10
Trusts fund—Schedule 301.....		11,015 24
Total.....		\$428,267 60

SCHEDULE 21.

CASH RECEIPTS ON ACCOUNT OF GENERAL FUND FOR THE SIX MONTHS ENDED
DEC. 31, 1915.

Agricultural College and Experiment Station—		
Agricultural College administration.....	\$	4 50
Agricultural extension		2 50
Agricultural College press service.....		46 00
Agronomy College—		
Farm mechanics	\$154	72
Soil fertility	266	77
Soil physics	37	35
		458 84
Agronomy Experiment Station—		
Crop Production Station.....	\$	676 72
Agronomy experiment fields.....		804 08
Station soils—general		2,420 81
		3,901 61
Animal Husbandry College—		
Animal Husbandry administration.....	\$	8 91
Beef cattle	3,079	05
Animal Husbandry education.....		18 25
General and farming.....		61 51
Horses	1,320	93
Horses—specimens	50	00
Poultry	498	73
Sheep	676	89
Sheep—specimens	100	00
Swine	1,211	44
Swine—specimens	100	00
		7,125 70
Animal Husbandry Experiment Station—		
Administration	\$	237 45
Beef cattle		276 14
Bulletins and publications.....		10 81
General and farming.....		1 76
Horses		32 80
Meat		18 86
Sheep		399 60
Swine		1,250 91
		2,228 33
Dairy Husbandry College—		
Administration	\$	1,294 85
Creamery	26,901	49
Bacteriology		946 89
Pure bred herd		2,732 46
		31,875 69
Dairy Experiment Station—		
Economics	\$	23 00
Experiment herd		1,786 52
Dairy Farm		5,248 26
Official testing		2,402 70
Testing Association		387 04
		9,847 52
Horticulture College—		
Administration	\$	3 26
Floriculture		371 01
General and farming		284 07
Landscape extension		111 69
Landscape gardening		25
Olericulture		806 10
Olney Farm		1,011 54
Pomology		124 58
Urbana Farm		1,791 86
		4,504 36
Horticulture Experiment Station—		
Olericulture	\$31	42
Pomology		8 50
Plant breeding		18 60
		58 52
Household Science—		
Cafeteria	\$5,905	61
Household Science		80 75
		5,986 36
		\$66,039 93
College of Engineering—		
Ceramics		10 70
Civil Engineering		57 00
Electrical Engineering		1 05
Engineering Experiment Station.....		186 45
Mechanical Engineering		38 21
Theoretical and Applied Mechanics.....		42 50
		\$335 91

SCHEDULE 21—Concluded.

College of Liberal Arts and Sciences—		
Botany		\$ 26 00
Chemistry		420 00
Classical Museum		3 58
Museum of European Culture		94 40
Salaries		15 00
Sociology		3 75
		<hr/>
		\$ 562 73
Student fees—		
General and Laboratory—		
Summer Session 1915	\$ 754 25	
First Semester 1914-15	10 00	
Second Semester 1914-15	333 50	
First Semester 1915-16	100,590 86	
Second Semester 1913-14	22 89	
	<hr/>	101,711 50
Lockers—		
Men's Gymnasium	\$1,782 50	
Women's Gymnasium	373 50	
Shop and Laboratory	127 50	
	<hr/>	2,283 50
		<hr/>
		\$103,995 00
Miscellaneous—		
Accountancy		68 05
<i>Alumni Record</i>		58 75
Board of Trustees		1 75
Business office		23 00
Directory of Matriculants		7 50
Emergency Hospital		28 00
Graduate School		4 60
Information office		4 82
Interest		1 71
Interest on daily balances		14,406 44
Interest on endowment fund		16,223 30
<i>Journal of English and Germanic Philology</i>		344 30
Lectures		207 60
Library		171 85
Library salaries		75 00
Military Department		2 87
Miners' and Mechanics' Institutes		29 00
Morrill Fund		25,000 00
School of Music		169 25
Nelson Fund		25,000 00
Orchestra concerts		3,389 75
Smith farms		5,304 84
Student organizations		1 50
Summer Session salaries		400 00
Summer Library School salaries		15 00
Summer Session 1915		2 12
<i>University Studies</i>		157 56
Water survey		1,907 25
<i>Weekly Calendar</i>		4 50
		<hr/>
		\$93,010 31
Physical plant—		
Administration Building		13 50
Buildings		420 84
General—heating and lighting		917 94
Rentals—		
Armory		3 50
Auditorium		135 00
Gymnasium Annex		70 00
Ground		2 66
Houses		962 50
Morrow Hall		15 00
		<hr/>
		\$ 2,540 94
Stores—		
Blueprinting and photography		2,012 15
Labor		42,921 70
Office supplies		1,979 71
Physical plant		18,282 05
Postage		4,553 51
Printograph		123 03
		<hr/>
		\$69,872 15
College of Dentistry		12,891 75
College of Medicine		20,882 55
School of Pharmacy		13,722 50
		<hr/>
		\$47,496 80
		<hr/>
Total, Schedule 2		\$383,853 77

SCHEDULE 3.

SUMMARY OF APPROPRIATIONS AS AT DEC. 31, 1915.

	Appropriations and credits.	Disbursements.	Encumbrances.	Balances.
Land, buildings and equipment (Schedule 31).....	\$511,865 56	\$298,467 79	\$218,142 89	\$ *4,745 42
Physical plant (Schedule 32).....	244,972 15	82,376 07	45,578 78	117,017 30
Administration and general expense (Schedule 33).....	362,028 05	133,284 79	115,348 81	113,394 45
Liberal Arts and Sciences (Schedule 34) ..	491,623 08	228,532 37	237,427 93	25,662 78
Agriculture (Schedule 35).....	663,788 96	321,558 48	195,736 86	146,493 62
Engineering (Schedule 36).....	341,890 22	144,528 10	142,750 69	54,611 43
Graduate School (Schedule 37).....	54,700 00	17,571 00	20,320 10	16,808 90
Medicine and Dentistry (Schedule 38)	200,000 00	92,645 54	58,101 36	49,253 10
Other school and departments (Schedule 39).....	221,940 51	94,522 82	68,888 19	58,529 50
Total.....	\$3,092,808 53	\$1,413,486 96	\$1,102,295 61	\$577,025 96

* Overdraft.

SCHEDULE 31.

STATEMENT OF APPROPRIATIONS FOR LAND, BUILDINGS AND EQUIPMENT AS AT DEC. 31, 1915.

	Appropriations and credits.	Disbursements.	Encumbrances.	Balances.
Land.....	\$ 95,737 00	\$95,706 88	.....	\$ 30 12
Buildings—				
Administration Building.....	16,513 50	15,970 60	\$ 2,193 53	*1,650 63
Ceramics Building.....	128,000 00	51,451 81	63,097 50	13,450 69
Chemistry Building.....	208,000 00	86,775 26	144,094 79	*22,870 05
Education Building.....	.....	1,638 08	.....	*1,638 08
Vivarium.....	50,000 00	39,420 71	8,071 01	2,508 28
Commerce Building 1912-13.....	615 06	562 45	21 75	30 86
Music Hall.....	.....	158 50	.....	*158 50
Women's Residence Hall.....	.....	1,643 16	.....	*1,643 16
Natural History addition.....	.....	215 02	.....	*215 02
General equipment—				
Furniture and fixtures.....	7,000 00	4,925 32	664 31	1,410 37
Practice organ.....	1,000 00	.....	.....	1,000 00
Entomology cases.....	5,000 00	.....	.....	5,000 00
Total, Schedule 3.....	\$511,865 56	\$298,467 79	\$218,142 89	*\$4,745 12

* Overdraft.

SCHEDULE 32.

STATEMENT OF THE ACCOUNTS FOR PHYSICAL PLANT AS AT DEC. 31, 1915.

	Appropriations and credits.	Disbursements.	Encumbrances.	Balances.
Extension—				
Heating and lighting plant.....	\$1,090 06	\$ 150 00	.....
Heating extension.....	729 29	3,800 00	.....
Lighting extension.....	134 26	400 00	.....
Tunnel extension.....	31 25	.....	.....
Water extension.....	25 00	5,881 98	.....
Pavements and walks.....	1,976 96	2,690 00	.....
Building heating extension.....	113 55	4,585 00	.....
Feed water treating plant.....	127 82	400 00	.....
Total, extension.....	\$30,000 00	\$4,228 19	\$17,906 98	\$7,864 83

SCHEDULE 32—Concluded.

	Appropriations and credits.	Disbursements.	Encumbrances.	Balances.
Operation and maintenance—				
Salaries.....	\$10,428 40	\$ 5,471 79	\$ 4,956 61	.....
Extra assistance.....	6,000 00	1,863 85		\$ 4,136 15
Office expense.....	2,000 00	962 16	42 30	995 54
Heating and lighting.....	76,043 75	25,680 55	14,546 89	35,816 31
Building operation.....	56,000 00	18,531 45		37,468 55
Building maintenance.....	28,000 00	11,117 82	7,397 50	9,484 68
Grounds.....	13,000 00	5,096 51	28 50	7,874 99
Fire protection.....	3,800 00	1,148 77		2,651 23
Telephone exchange.....	3,000 00	1,938 49		1,061 51
Water Station.....	2,000 00	350 71	150 00	1,499 29
General operation.....	14,209 00	5,985 78	550 00	7,664 22
Acoustics investigation.....	500 00			500 00
Total, Schedule 3.....	\$244,972 15	\$82,376 07	\$45,578 78	\$117,017 30

SCHEDULE 33.

STATEMENT OF THE ACCOUNTS FOR ADMINISTRATION AND GENERAL EXPENSE
AS AT DEC. 31, 1915.

	Appropriations and credits.	Disbursements.	Encumbrances.	Balances.
Administrative offices—				
Salaries.....	\$50,584 86	\$25,183 33	\$25,401 53	.....
Board of Trustees.....	7,601 75	3,198 46	9 50	\$ 4,393 79
President's office.....	5,000 00	2,443 14	31 75	2,525 11
Vice-President's office.....	500 00	22 58		477 42
Business office.....	5,823 00	2,519 17	481 35	2,822 48
Registrar's office.....	6,800 00	4,327 94	155 30	2,316 76
Legal Counsel.....	400 00	29 55		370 45
Council of Administration.....	500 00	325 36	6 00	168 64
University Senate.....	100 00			100 00
Adviser to Foreign Students.....	100 00	52 79	2 90	44 31
General departments—				
Salaries.....	95,695 85	44,663 35	51,032 50	.....
Library.....	12,177 00	5,782 35	924 00	5,470 65
Library additions.....	50,000 00	10,923 46	23,815 85	15,260 69
Dean of Men.....	4,625 00	2,006 83	147 56	2,470 61
Dean of Women.....	600 00	193 32	16 25	390 43
Physical Training—Men.....	4,800 00	1,976 81	845 35	1,977 84
Physical Training—Women.....	500 00	238 62	67 30	194 08
Military.....	3,849 62	1,938 31	384 15	1,527 16
High School Visitor.....	3,700 00	1,498 33		2,201 67
High School Oratorical Contest.....	360 00	54 25		305 75
Educational Photography.....	4,000 00	1,526 54	1,531 15	942 31
Publications—				
General.....	12,000 00	3,652 73	4,196 98	4,150 29
<i>Directory of Matriculants</i>	5,000 00	2,186 50		2,813 50
<i>Alumni Quarterly</i>	1,000 00	500 00		500 00
<i>Press Bulletin</i>	1,000 00	179 14	194 20	626 66
<i>Students' Handbook</i>	300 00	300 00		.....
General expense—				
Lectures.....	3,000 00	318 00		2,682 00
Concerts.....	5,000 00	1,116 31	3,868 65	15 04
Convocations.....	1,000 00	193 76		806 24
Receptions and social functions.....	1,000 00	420 49		579 51
Towel system.....	1,250 00	764 20		485 80
Medical examiner.....	300 00	125 00	175 00	.....
Information office.....	5,001 07	1,474 69	1,557 98	1,968 40
Rebates.....	10,000 00	4,885 00		5,115 00
Smith Farms.....	5,159 90	3,333 25	25 21	1,801 44
Incidentals.....	53,300 00	4,931 23	478 35	47,890 42
Total, Schedule 3.....	\$362,028 05	\$133,284 79	\$115,348 81	\$113,394 45

SCHEDULE 34.

STATEMENT OF THE ACCOUNTS FOR THE COLLEGE OF LIBERAL ARTS AND SCIENCES
AS AT DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
Salaries	\$402,251 35	\$185,449 65	\$216,801 70	.....
Administration	2,600 00	620 43	5 50	\$1,974 07
Art and Design	800 00	321 57	160 55	317 88
Astronomy	800 00	97 24	13 45	689 31
Bacteriology	2,900 00	1,264 12	1,321 97	313 91
Botany	6,800 00	3,589 05	2,748 88	462 07
Chemistry	36,420 00	25,880 18	12,196 68	†*1,656 86
Classics	550 00	75 58	119 10	355 32
Education	2,500 00	1,231 99	39 05	1,228 96
English	1,800 00	736 84	3 00	1,060 16
Entomology	1,600 00	482 69	190 65	926 66
Geology	1,600 00	455 33	224 05	920 62
German	200 00	95 62	2 00	102 38
History	300 00	188 35	5 00	106 65
Journalism	2,500 00	2,427 12	105 50	*32 62
Mathematics	700 00	271 42	128 65	299 93
Philosophy	100 00	48 49	3 00	49 51
Physiology	3,375 00	647 82	705 05	2,022 13
Political Science	125 00	26 64	.....	98 36
Psychology	1,100 00	179 92	65 27	854 81
Romance Language	250 00	72 06	105 95	71 99
Sociology	303 75	266 68	2 25	33 82
Zoology	6,950 00	1,673 36	955 20	4,321 44
Museums—				
Classical	5,003 58	613 07	760 00	3,630 51
European Culture	5,094 40	1,357 45	232 20	3,504 75
Natural History	5,000 00	459 70	533 28	4,007 02
Total, Schedule 3	\$491,623 08	\$228,532 37	\$237,427 93	\$25,662 78

* Overdraft.

†* On account of import orders held up.

SCHEDULE 35.

STATEMENT OF THE ACCOUNTS FOR THE AGRICULTURAL COLLEGE AND EXPERIMENT
STATION AS AT DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
Buildings—				
General	\$15,819 97	\$ 218 33	\$14,550 00	\$ 1,051 64
Clinic Building 1912-13	4,925 72	.....	.....	4,925 72
Cold Storage 1912-13	9,000 00	.....	.....	9,000 00
College—				
Administration	15,912 62	7,517 33	3,084 00	5,311 29
Agricultural extension	20,793 33	10,590 55	7,032 20	3,170 58
Agronomy (Schedule 351)	55,631 76	25,723 75	17,184 07	12,723 94
Animal Husbandry (Schedule 352)	72,397 45	32,973 16	21,997 92	17,426 37
Dairy Husbandry (Schedule 353)	70,162 79	44,996 25	13,228 00	11,938 54
Horticulture (Schedule 354)	57,892 47	29,680 49	18,876 53	9,335 45
Household Science	29,091 75	13,069 64	12,082 26	3,939 85
Household Science—cafeteria	10,813 10	6,368 83	1,925 13	2,519 14
Veterinary Science	3,290 81	562 53	.....	2,728 28
Animal Husbandry—specimens (Schedule 352)	2,456 11	299 59	.....	2,156 52
Station—				
Agronomy—crops (Schedule 351)	20,707 05	12,620 63	8,111 18	*24 76
Agronomy—soils (Schedule 351)	100,724 17	47,630 58	32,343 90	20,749 69
Animal Husbandry (Schedule 352)	44,851 08	27,951 99	8,218 54	8,680 55
Dairy Husbandry (Schedule 353)	31,615 57	17,441 98	5,338 61	8,834 98
Horticulture (Schedule 354)	29,400 22	13,364 56	12,708 81	3,326 85
United States Experiment Station—				
Adams Fund—				
Administration	2,000 00	600 00	1,300 00	100 00
Animal Husbandry (Schedule 352)	8,500 00	3,338 80	2,247 34	2,913 86
Horticulture (Schedule 354)	4,500 00	3,553 44	901 66	44 90
Receipts (Animal Husbandry)	904 58	79 84	.....	824 73

SCHEDULE 35—Concluded.

	Appropriations-	Disbursements.	Encumbrances.	Balances.
United States Experiment Station—Concluded—				
Hatch Fund—				
Administration	\$ 4,000 00	\$1,338 23	\$2,350 00	\$ 311 77
Agronomy (Schedule 351)	2,500 00	1,392 81	900 00	207 19
Botany	2,509 00	753 11	600 00	1,146 89
Dairy Husbandry (Schedule 353)	6,000 00	2,712 33	2,983 11	304 56
United States Smith-Lever—				
Administration	5,482 00	538 93	65 50	4,877 57
Home Economics	8,000 00	5,702 93	2,622 81	*325 74
County Agents	13,200 00	6,564 96	772 48	5,862 56
Agronomy	2,000 00	1,100 00	900 00	.....
Animal Husbandry	2,000 00	17 29	1,466 64	516 07
Dairy Husbandry	2,000 00	849 98	699 99	450 03
Horticulture	2,000 09	1,199 97	399 99	400 04
Farm management	1,600 00	426 35	240 00	935 65
Soil maps—				
Horticulture	1,116 41	379 31	606 19	130 91
Total, Schedule 3	\$663,788 96	\$321,558 48	\$195,736 86	\$146,493 62

* Overdrafts.

SCHEDULE 351.

STATEMENT OF THE ACCOUNTS FOR THE DEPARTMENT OF AGRONOMY AS AT DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
College—				
Crop production		\$3,094 00	\$1,331 80	.....
Farm mechanics		8,424 32	5,557 22	.....
Plant breeding		2,492 20	1,188 64	.....
Soil fertility		7,265 06	4,933 96	.....
Soil physics		4,450 17	4,172 45	.....
Total, Schedule 35	\$55,631 76	\$25,723 75	\$17,184 07	\$12,723 94
Station—crops—				
Crop production		\$8,878 43	\$4,483 98	.....
Plant breeding		3,742 20	3,627 20	.....
Total, Schedule 35	\$20,707 05	\$12,620 63	\$8,111 18	*\$24 76
Station—soils—				
Soils—general		\$ 4,659 07	\$ 5,585 20	.....
Experiment fields		21,100 93	12,694 44	.....
Soil analysis		6,818 54	5,628 69	.....
Soil biology		2,017 62	1,818 00	.....
Soil extension		50 98	.....	.....
Soil survey		12,983 44	6,617 57	.....
Total, Schedule 35	\$100,724 07	\$47,630 58	\$32,343 90	\$20,749 69
United States Experiment Station—				
Hatch—Soil fertility	\$2,500 00	\$1,392 81	\$900 00	\$207 19
United States Smith-Lever—				
Agronomy	2,000 00	1,100 00	900 00	.....
Total	\$181,562 98	\$88,467 77	\$59,439 15	\$33,656 00

* Overdraft.

SCHEDULE 352.

STATEMENT OF THE ACCOUNTS FOR THE DEPARTMENT OF ANIMAL HUSBANDRY AS AT
DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
College—				
Administration		\$9,830 27	\$15,735 01	.....
Animal Nutrition		2,382 82	4,641 56	.....
Beef cattle		8,040 03	177 00	.....
Education		463 59	58 85	.....
General and farming		2,958 40	683 76	.....
Genetics		600 83	160 00	.....
Horses		3,236 58	357 87	.....
Poultry		1,422 26	29 02	.....
Sheep		1,113 09	31 40	.....
Swine		2,925 29	135 45	.....
Total, Schedule 35	\$72,397 45	\$32,973 16	\$21,997 92	\$17,426 37
Station—				
Administration		\$7,988 01	\$2,108 62	.....
Animal Nutrition		5,977 29	1,445 14	.....
Beef cattle		2,715 43	1,499 00	.....
Bulletins and publications		915 49	.....	.....
General and farming		2,327 37	.....	.....
Horses		1,955 04	267 00	.....
Live stock systems		2,027 57	50 95	.....
Meat		1,072 19	499 98	.....
Sheep		805 82	55 25	.....
Swine		2,166 78	292 60	.....
Genetics .....		.....	2,000 00	.....
Total, Schedule 35	\$44,851 08	\$27,951 99	\$8,218 54	\$8,680 55
Specimens—				
Beef cattle		\$ 11 53	.....	.....
Sheep		20 75	.....	.....
Swine		267 31	.....	.....
Total, Schedule 35	\$2,456 11	\$299 59	.....	\$2,156 52
United States Experiment Station—				
Adams—				
Animal Nutrition		\$1,891 71	\$1,308 32	.....
Genetics		963 68	527 36	.....
Swine		483 41	411 66	.....
Total, Schedule 35	\$8,500 00	\$3,338 80	\$2,247 34	\$2,913 86
United States Smith-Lever				
Animal Husbandry	\$2,000 00	\$17 29	\$1,466 64	\$516 07
Adams—receipts	904 58	79 85	.....	824 73
Total	\$131,109 22	\$64,660 68	\$33,930 44	\$32,518 10

SCHEDULE 353.

STATEMENT OF THE ACCOUNTS FOR THE DEPARTMENT OF DAIRY HUSBANDRY AS AT
DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
College—				
Administration		\$ 7,208 00	\$4,810 24	.....
Bacteriology		2,049 45	1,020 00	.....
Creamery		23,146 05	2,602 23	.....
Economics		1,247 96	874 98	.....
Pure bred herd		8,124 38	1,137 57	.....
Technology		3,220 41	2,782 98	.....
Total, Schedule 35	\$70,162 79	\$41,996 26	\$13,228 00	\$11,938 54

SCHEDULE 353—Concluded.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
Station—				
Bacteriology		\$ 563 07	\$ 425 52	
Economics		2,492 49	1,404 17	
Experiment herd		6,772 22	1,759 57	
Farm Station		3,187 22	517 75	
Official testing		2,723 34		
Technology		483 40		
Testing Association		453 45		
Chemistry		766 79	1,231 60	
Total, Schedule 35	\$31,615 57	\$17,441 98	\$5,338 61	\$8,834 98
United States Experiment Station—				
Bacteriology		\$1,643 06	\$1,674 96	
Chemistry		7 74	58 15	
Economics		1,061 53	1,250 00	
Total, Schedule 35	\$6,000 00	\$2,712 33	\$2,983 11	\$304 56
United States Smith-Lever				
Dairy Husbandry	\$2,000 00	\$849 98	\$699 99	\$450 03
Total	\$109,778 36	\$66,000 54	\$22,249 71	\$21,528 11

SCHEDULE 354.

STATEMENT OF THE ACCOUNTS FOR THE DEPARTMENT OF HORTICULTURE AS AT DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
College—				
Administration		\$4,614 27	\$3,050 96	
Landscape extension		1,298 14	3,454 68	
Landscape gardening		5,929 60	5,133 98	
Pomology		2,795 37	3,083 67	
Olericulture		3,491 24	3,127 96	
Floriculture		4,755 64	655 78	
Olney Farm		1,245 92	305 59	
Urbana Farm		1,466 44	54 90	
General and farming		1,083 87	9 10	
Total, Schedule 35	\$57,892 47	\$29,680 49	\$18,876 53	\$9,335 45
Station—				
Pomology		\$5,387 03	\$4,124 63	
Olericulture		446 75	7 20	
Plant breeding		2,839 80	2,877 10	
Olney Farm		440 00		
Floriculture		4,250 98	5,699 88	
Total, Schedule 35	\$29,400 22	\$13,364 56	\$12,708 81	\$3,326 85
United States Experiment Station—				
Adams—				
Pomology		\$ 150 00		
Plant breeding		3,403 44	\$901 66	
Total, Schedule 35	\$4,500 00	\$3,553 44	\$901 66	\$44 90
United States Smith-Lever—				
Horticulture	\$2,000 00	\$1,199 97	\$399 99	\$400 04
Total	\$63,792 69	\$47,798 46	\$32,886 90	\$13,107 24

SCHEDULE 36.

STATEMENT OF THE ACCOUNTS FOR THE ENGINEERING COLLEGE AND EXPERIMENT STATION
AS AT DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
College—				
Salaries	\$224,037 12	\$105,319 60	\$118,717 52	.....
Administration	15,000 00	613 38	324 00	\$14,062 62
Architecture.....	4,200 00	1,250 24	346 43	2,603 33
Ceramic Engineering.....	5,510 70	2,432 67	1,068 42	2,009 61
Civil Engineering.....	2,500 00	869 87	228 09	1,420 04
Electrical Engineering.....	5,001 05	879 84	1,184 00	2,937 21
General Engineering Drawing	1,000 00	687 89	199 05	113 06
Mechanical Engineering.....	11,837 70	7,461 98	1,202 35	3,173 37
Mining Engineering.....	4,000 00	1,077 24	230 84	2,691 92
Physics.....	6,000 00	870 96	370 60	4,758 44
Railway Engineering.....	4,000 00	970 06	33 74	2,996 30
Theoretical and Applied Mechanics.....	6,000 00	2,331 76	812 01	2,856 23
Station—				
Salaries.....	21,372 88	8,150 27	13,222 61	.....
Administration.....	15,003 00	6,249 63	4,333 80	4,419 57
Civil Engineering.....	500 00	5 75	.....	494 25
Electrical Engineering.....	1,500 00	421 05	269 17	809 78
Mechanical Engineering.....	1,500 00	387 77	.....	1,112 23
Mining Engineering.....	500 00	317 19	.....	182 81
Railway Engineering.....	2,000 00	217 87	.....	1,782 13
Theoretical and Applied Mechanics.....	3,500 00	1,164 36	206 01	2,129 63
Physics.....	500 00	.....	.....	500 00
Coal mines investigation.....	5,000 00	1,441 99	2 05	3,555 96
Miners' and Mechanics' Institutes.....	1,427 77	1,406 73	.....	21 04
Total, Schedule 3.....	\$341,890 22	\$144,528 10	\$142,750 69	\$54,611 43

SCHEDULE 37.

STATEMENT OF THE ACCOUNTS FOR THE GRADUATE SCHOOL AS AT DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
Salaries	\$ 8,100 00	\$3,930 00	\$ 4,170 00	.....
Fellowships and Scholarships.....	22,200 00	8,910 00	13,290 00	.....
Administration.....	1,900 00	509 43	21 90	\$1,368 67
Library—				
Alvord.....	1,500 00	819 08	93 50	587 42
Blondheim.....	150 00	2 90	145 07	2 03
Fitz-Gerald.....	400 00	.....	100 30	299 70
Gillet.....	250 00	.....	50 90	199 10
Green.....	75 00	.....	.....	75 00
Loomis.....	150 00	.....	18 75	131 25
Moore.....	150 00	.....	68 88	81 12
Noyes.....	300 00	.....	.....	300 00
Schoepperle.....	170 00	.....	50 89	119 11
Unassigned.....	355 00	.....	.....	355 00
Research—				
Balke.....	500 00	230 00	.....	270 00
Bayley.....	200 00	17 15	115 45	67 40
Blondheim.....	75 00	.....	75 00	.....
Fairlie.....	200 00	.....	104 06	95 94
Forbes.....	100 00	.....	21 50	78 50
Kunz.....	60 00	60 00	.....	.....
Loomis.....	57 93	57 93	.....	.....
Municipal Research Bureau.....	400 00	.....	.....	400 00
Savage.....	300 00	.....	.....	300 00
Shelford.....	375 00	160 74	151 00	63 26
Stebbins.....	250 00	16 97	90 00	143 03
Stevens.....	200 00	137 67	.....	62 33
Trelease.....	380 00	70 91	224 10	84 99
Washburn.....	210 00	169 52	.....	40 48
Zeleny.....	300 00	29 00	.....	271 00
Unassigned.....	1,392 07	.....	.....	1,392 07
Illinois survey.....	3,000 00	991 11	480 00	1,528 89
Journal of English and German Philology.....	1,500 00	303 77	25 00	1,171 23
Scandinavian Manuscripts.....	2,000 00	.....	.....	2,000 00
University Studies.....	7,500 00	1,154 82	1,023 80	5,321 38
Total, Schedule 3.....	\$54,700 00	\$17,571 00	\$20,320 10	\$16,808 90

SCHEDULE 38.

STATEMENT OF THE ACCOUNTS FOR THE COLLEGES OF MEDICINE AND DENTISTRY
AS AT DEC. 31, 1915.

	Appropriations.	Disbursements.	Encumbrances.	Balances.
General—				
Salaries.....	\$48,150 00	\$23,334 32	\$24,824 68	.....
Administration.....	2,700 00	1,945 10	320 42	\$ 434 48
Physical plant.....	19,272 00	12,460 10	108 15	6,703 75
Livestock.....	800 00	253 75	12 95	533 30
Anatomy.....	2,352 50	986 04	938 11	428 35
Bacteriology.....	1,050 00	702 38	.....	347 62
Chemistry.....	3,590 00	968 54	690 91	1,930 55
Pathology.....	2,850 00	525 40	692 73	1,631 87
Physiology.....	1,600 00	491 52	35 95	1,072 53
Laboratory stores.....	.....	1,460 03	583 57	*2,043 60
Supervisor's stores.....	500 00	277 43	157 70	64 87
Microscopes.....	.....	1,885 80	.....	*1,885 80
Students, lockers.....	1,500 00	.....	.....	1,500 00
Medical—				
Salaries.....	24,290 00	11,076 08	13,213 92	.....
Administration.....	6,055 00	4,130 63	179 20	1,745 17
Dispensary.....	3,000 00	1,148 33	236 95	1,614 72
Medicine.....	2,000 00	198 71	9 00	1,792 29
Obstetrics.....	2,200 00	949 10	5 00	1,245 90
Pharmacology.....	3,788 51	2,475 60	726 15	584 76
Research.....	1,835 00	402 44	18 50	1,414 06
Roentgenology.....	1,100 00	201 23	168 90	729 87
Surgery.....	2,400 00	227 01	36 25	2,136 74
Library.....	5,500 00	2,403 58	1,311 31	1,785 11
Dental—				
Salaries.....	22,020 00	10,358 07	11,661 93	.....
Administration.....	3,450 00	1,838 23	612 16	990 61
Histology.....	650 00	179 35	86 75	383 90
Infirmary.....	7,000 00	4,351 77	121 40	2,526 83
Materia Medica.....	400 00	187 65	96 12	116 23
Operative Dentistry.....	300 00	37 20	30 70	232 10
Oral Surgery.....	500 00	158 13	271 95	69 92
Prosthetic Dentistry.....	750 00	257 68	10 00	482 32
Radiology.....	1,200 00	107 87	709 50	382 63
Research.....	1,000 00	331 41	230 50	438 09
Mortgage and interest and unassigned....	26,189 99	6,526 02	.....	19,663 97
		\$92,836 50		\$49,062 14
Outstanding—				
G-758, General Anatomy..... \$ 0 96	.....	.....	.....	.....
M-142, Medical salaries..... 60 00	.....	.....	.....	.....
237, Medical salaries..... 60 00	.....	.....	.....	.....
324, Medical salaries..... 60 00	.....	.....	.....	.....
G-200, General salaries..... 5 00	.....	.....	.....	.....
259, General salaries..... 5 00	.....	.....	.....	.....
		190 96		190 96
Total, Schedule 3.....	\$200,000 00	\$92,645 54	\$58,101 36	\$49,253 10

* Overdraft.

SCHEDULE 39.

STATEMENT OF THE ACCOUNTS FOR OTHER SCHOOLS AND DEPARTMENTS AS AT DEC. 31, 1915

Colleges and Schools.	Appropriations.	Disbursements.	Encumbrances.	Balances.
Salaries.....	\$99,235 50	\$46,490 08	\$52,745 42	.....
College of Commerce.....	6,755 00	783 09	849 73	\$ 5,122 18
College of Law.....	3,300 00	802 10	34 40	2,463 50
School of Library Science.....	1,175 00	216 25	34 36	924 39
School of Music.....	1,860 00	989 34	30 74	839 92
School of Pharmacy.....	13,580 00	6,224 18	3,421 22	3,934 60
Law Library.....	5,000 00	1,633 21	2,087 23	1,279 56
Summer Session 915.....	23,838 55	23,712 48	30 00	96 07
Summer Session 1916.....	25,000 00	2 25	.....	24,997 75
Water survey—				
Salaries.....	15,000 00	5,665 95	9,334 05	.....
Traveling expenses.....	3,651 31	1,005 67	.....	2,645 64
Supplies and miscellaneous.....	4,076 57	458 73	138 04	3,479 80
New Building equipment.....	1,500 00	.....	.....	1,500 00

SCHEDULE 39--Concluded.

Colleges and schools.	Appropriations.	Disbursements.	Encumbrances.	Balances.
Water survey--Concluded.				
Sewage experiments.....	\$5,000 00	\$ 799 34	\$160 00	\$4,040 66
University.....	8,916 15	4,721 95	.....	4,194 20
Accountancy committee.....	3,387 43	403 20	23 00	2,961 23
Summer Library School.....	665 00	615 00	.....	50 00
Total, Schedule 3.....	\$221,940 51	\$94,522 82	\$68,888 19	\$58,529 50

SCHEDULE 301.

TRUSTS FUND TRANSACTIONS AS AT DEC. 31, 1915.

	Balance July.	Receipts July— December.	Total receipts.	Disburse- ments July— December.	Balance Decem- ber 31.
Trust funds—					
B'nal B'rith Prize Fund.....	\$ 10 00	.....	\$ 10 00	.....	\$ 10 00
Bryan Prize.....	250 00	.....	250 00	.....	250 00
Class of 1895 Loan Fund—					
Interest.....	.....	\$ 5 00	5 00	.....	5 00
Principal.....	78	5 00	5 78	.....	5 78
Graduate Club Loan Fund—					
Principal.....	103 25	.....	103 25	\$ 75 00	28 25
McKinley Loan Fund—					
Interest.....	.....	317 84	317 84	.....	.....
Principal.....	251 02	1,651 00	1,902 02	1,755 00	444 86
Margaret Lange James Loan Fund—					
Interest.....	52 79	146 29	199 08	.....	199 08
Principal.....	2,763 20	2 00	2,765 20	2,750 00	15 20
Plym Fellowship—					
Interest.....	.....	.....	.....	20 96	*20 96
Principal.....	2,000 00	.....	2,000 00	2,000 00	.....
Snyder Loan Fund—					
Interest.....	28 19	284 57	312 76	300 00	12 76
Principal.....	642 17	1,309 18	1,951 35	1,725 00	226 35
Woman's League Loan Fund—					
Interest.....	.....	3 46	3 46	.....	3 46
Principal.....	18 83	300 00	318 83	.....	318 83
Wilson Lectureship.....	100 00	.....	100 00	100 00	.....
Trust deposits—					
Graduate School Theses.....	900 00	225 00	1,125 00	75 00	1,050 00
Keys.....	187 00	68 50	255 50	22 50	233 00
Military suits.....	.....	5,231 40	5,231 40	1,735 70	3,495 70
Prof. S. W. Parr.....	329 45	757 00	1,086 45	968 55	117 90
Towel system.....	301 75	709 00	1,010 75	30 00	980 75
Total.....	\$7,938 43	\$11,015 24	\$18,953 67	\$11,577 71	\$7,375 96

* Overdraft.

SCHEDULE 302.

STATEMENT OF THE STORES AND TRANSFER ACCOUNTS AS AT DEC. 31, 1915.

	Inventory July 1, 1915.	Purchases Schedule 6.	Credits Schedule 2.	Stock on hand.
Office supplies.....	\$ 2,217 96	\$ 2,715 38	\$ 1,979 71	\$ 2,953 63
Postage.....	536 13	5,536 70	4,553 51	1,519 32
Physical plant stores.....	13,361 56	48,995 38	18,282 05	44,074 89
Printograph.....	.....	125 36	123 03	72 33
Blueprinting and photography.....	180 00	2,217 48	2,012 15	385 33
Labor.....	3,191 89	77,269 20	42,921 70	37,539 39
Total.....	\$19,487 54	\$136,929 50	\$69,872 15	\$86,544 89

SCHEDULE 4.

RECONCILIATION WITH UNIVERSITY TREASURER AS AT DEC. 31, 1915.

General fund—		
Treasurer's balance		\$231,264 76
Deduct: Trusts fund receipts		80 87
Treasurer's corrected balance		\$231,183 89
Deduct: Warrants outstanding—		
Issued before July 1, 1913.....	\$ 341 37	
Issued 1913-14	43 49	
Issued 1914-15	764 96	
Issued 1915-16	2,794 98	
		3,944 80
Business office corrected balance.....		\$227,239 09
Add: Error Warrant No. 3946.....		02
Business office balance.....		\$227,239 11
United States Agricultural Experiment Station Fund—		
Treasurer's balance		\$2,324 48
Deduct: Warrants outstanding		188 47
Business office balance		\$2,136 01
College of Medicine Fund—		
Treasurer's balance		\$133 75
Deduct: Warrants outstanding		133 75
Business office balance		\$000 00
United States Smith-Lever Fund—		
Treasurer's balance		\$3,138 02
Deduct: Warrants outstanding		1,397 33
Business office balance		\$1,740 69
Trusts fund—		
Treasurer's balance		\$7,520 09
Add: Receipts credited to general fund.....		80 87
Treasurer's corrected balance		\$7,600 96
Deduct: Warrants outstanding		225 00
Business office balance		\$7,375 96

SCHEDULE 5.

RECONCILIATION WITH STATE AUDITOR AS AT DEC. 31, 1915.

	Auditor's balance.	Deduct.		Business office balance.
		1916-17 ap- propriations.	Unpaid vouchers.	
Buildings, land and equipment.....	\$ 637,898 22	\$ 463,500 00	\$ 1,915 08	\$172,483 14
Administrative offices.....	120,004 55	80,855 00	410 14	38,739 41
General departments	169,756 29	118,450 00	854 45	50,451 84
Instruction.....	1,814,671 71	1,319,945 00	20,115 83	474,610 88
Research.....	167,390 93	103,000 00	1,993 36	62,397 57
Physical plant.....	366,768 15	231,750 00	246 29	134,771 86
Contingent.....	489,933 74	259,629 05	1,115 39	229,189 30
Water survey	22,271 85	7,250 00	973 66	14,048 19
Total.....	\$3,788,695 44	\$2,584,379 05	\$27,624 20	\$1,176,692 19

SCHEDULE 6.

DISBURSEMENT RECONCILIATION DEC. 31, 1915.

	Schedule 31 land and buildings.	Schedule 32 physical plant.	Schedule 33 adminis- tration and general.	Schedule 34 liberal arts and sciences.	Schedule 35 agri- culture.
Funds—					
University and Federal—					
General.....	\$ 36,276 04	\$ 1,722 51	\$18,676 82	\$ 3,646 23	\$ 36,821 82
United States Agricultural Ex- periment Station.....					13,768 57
United States Smith-Lever.....					16,400 41
State—					
Buildings, land and equipment....	262,026 78	577 35	8 16		862 48
Administration offices.....			37,405 59		
General departments.....	68 00		60,348 05	551 95	40 00
Instruction.....			7,880 48	224,334 19	253,665 20
Research.....					
Physical plant.....	96 97	80,076 21			
Contingent expenses.....			8,965 69		
Water survey and investigation.....					
Miners and mechanics institutes..					
Total.....	\$298,467 79	\$82,376 07	\$133,284 79	\$228,532 37	\$321,558 48

SCHEDULE 6—Concluded.

	Schedule 36 engi- neering.	Schedule 37 graduate school.	Schedule 38 medicine and dentistry.	Schedule 39 mis- cellaneous.	Schedule 3 fund totals.
Funds—					
University and Federal—					
General.....	\$ 3,210 28	\$ 9 86	\$ 8,444 61	\$ 5,592 89	\$*114,401 06
United States Agricultural Ex- periment Station.....					13,768 57
United States Smith-Lever.....					16,400 41
State—					
Buildings, land and equipment.....					*263,474 77
Administration offices.....					37,405 59
General departments.....	20			89 96	61,098 16
Instruction.....	121,840 46	43 98	80,924 87	79,732 44	*768,421 62
Research.....	17,085 27	17,517 16			34,602 43
Physical plant.....			3,276 06		*83,449 24
Contingent expenses.....	1,038 12			1,177 84	11,181 65
Water survey and investigation.....				7,929 69	7,929 69
Miners and mechanics institutes.....	1,353 77				1,353 77
Total.....	\$144,528 10	\$17,571 00	\$92,645 54	\$94,522 82	\$1,413,486 96

* Does not include stores.

Trusts, Schedule 301		\$ 11,577 71
Stores, Schedule 302—		
From General Fund.....	\$136,336 01	
From buildings, land and equipment.....	542 09	
From physical plant	28 90	
From instruction	22 50	*136,929 50
Grand total disbursements, Schedule 1.....		\$1,561,994 17

SCHEDULE 7.

OPERATING BALANCE SHEET, FISCAL YEAR ENDING JUNE 30, 1916, AS AT DEC. 31, 1915.
Assets.

Cash—		
University Treasurer, schedule 1 (Not including Trusts Fund)...	\$231,115	81
Petty cash, schedule 1	5,550	00
	<u>\$236,665</u>	<u>81</u>
Revenues receivable—		
From United States Treasurer	\$	33,140 90
From State Auditor—		
1915-16 appropriations, schedule 1	1,185,942	19
Interest on endowment	16,176	70
From current receipts (estimated)	101,232	87
	<u>\$1,336,492</u>	<u>66</u>
Inventory of expendable supplies—		
Schedule 302	\$86,544	89
	<u>\$1,659,703</u>	<u>36</u>

Liabilities.

Appropriation accounts—		
Free balances, schedule 3.....	\$	577,025 96
Outstanding encumbrances, schedule 3	1,102,295	61
Unexpended balances	\$1,679,321	57
Deduct: Amount credited to appropriation accounts in excess of income	39,105	75
	<u>\$1,640,215</u>	<u>82</u>
Surplus—		
On account of expendable supplies, schedule 302	19,487	54
	<u>\$1,659,703</u>	<u>36</u>

REGISTRAR'S REPORT OF FEES, SUMMER, 1915.

The Secretary presented also for record the Registrar's report of fees payable for the Summer Session of 1915.

	Gross.	Refund.	Net total.
Matriculation Fees—			
15 @ \$10	\$150 00		\$150 00
Incidental Fees—			
558 @ \$12	\$6,696 00		
Refund 51 @ \$12		\$612 00	\$6,084 00
37 @ \$6 (one-half)	222 00		
Refund 13 @ \$6		78 00	
Refund 2 @ \$3		6 00	138 00
Total, incidental fees	\$6,918 00	\$696 00	\$6,222 00
Laboratory Fees—			
Botany	80 50	0 25	80 25
Chemistry	1,294 00	94 00	1,200 00
Entomology	50 50	2 00	48 50
General engineering drawing.....	5 00	1 00	4 00
Household science	26 00	2 00	24 00
Manual training	148 50	7 00	141 50
Physics	60 00	5 25	54 75
Theoretical and applied mechanics.....	17 00	3 00	14 00
Zoology	52 00	8 00	44 00
Total, laboratory fees	\$1,733 50	\$122 50	\$1,611 00
Visitors' Fees—			
2 @ \$7.50	15 00		
Refund 1 @ \$7.50		7 50	7 50
Change Fees—			
8 @ \$1	8 00		
Refund 7 @ \$1		7 00	1 00
Special Examination Fees—			
29 @ \$5	145 00		145 00
Total, special fees	\$168 00	\$14 50	\$153 50
Total, fees	\$8,969 50	\$833 00	\$8,136 50

APPOINTMENTS TO FILL VACANCIES.

The Secretary presented also for record the following list of appointments made by President James:

Baker, H. T., Instructor in English, for five months beginning February 1, 1916, at a salary of one hundred twenty dollars (\$120) a month. (February 1, 1916.)*

Bixby, Madeleine, Assistant Chemist in the State Water Survey, at a salary of sixty dollars (\$60) a month, beginning as soon as she reports for duty and continuing not longer than until August 1, 1916. (February 5, 1916.)

Craig, Florence M., Loan Assistant in the Library, on one-third time, at a salary of twenty-one dollars and sixty-six cents (\$21.66) a month, beginning February 14, 1916, and ending June 15, 1916. (February 5, 1916.)

Cuerdon, Fay, Stenographer in the Department of Animal Husbandry, at a salary of fifty dollars (\$50) a month, beginning February 1, 1916, and continuing until further notice, subject to the rules of the Civil Service Commission. (January 27, 1916.)

Curtiss, George, Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Emmett, A. D., Assistant Chief in Animal Nutrition in the Agricultural Experiment Station for twelve months beginning September 1, 1915, at a salary of two thousand dollars (\$2,000) a year. (January 25, 1916.)

French, H. E., Graduate Assistant in Chemistry, for five months beginning February 1, 1916, at a salary of thirty dollars (\$30) a month. (January 29, 1916.)

Graham, A. J., in charge of the Course in Operative Surgery given to the Sophomore Class in the second semester of the current academic year, without salary. (January 27, 1916.)

Gross, C. R., Assistant in Bacteriology for five months beginning February 1, 1916, at a salary of sixty dollars (\$60) a month. (January 27, 1916.)

Hathorne, W. S., Student Assistant in Chemistry, for six months beginning January 1, 1916, at a salary of ten dollars (\$10) a month. (January 29, 1916.)

Hultman, O. N., Student Assistant in Chemistry, for five months beginning February 1, 1916, at a salary of ten dollars (\$10) a month. (January 26, 1916.)

Johnson, L. C., Instructor in Chemistry, for five months beginning February 1, 1916, at a salary of one hundred twenty dollars (\$120) a month. (January 27, 1916.)

Kasten, W. H., Assistant in Military Science for five months, beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Lamkins, L. E., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Langelier, W. F., Assistant in Sanitary Chemistry, for six months beginning January 1, 1916, without salary. (January 29, 1916.)

Little, R. F., Lecturer on Elementary Law in the College of Commerce and Business Administration, for five months beginning February 1, 1916, at a salary of fifty dollars (\$50) a month. (January 27, 1916.)

McCumber, C. W., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Mason, R. S., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Miller, D. E., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Norton, Bertha L., Clerk in the Library, at a salary of forty dollars (\$40) a month, beginning January 17, 1916, and continuing until August 31, 1916, subject to the rules of the Civil Service Commission. (January 29, 1916.)

Pittinger, B. F., Lecturer on Education, for five months beginning February 1, 1916, at a salary of two hundred forty dollars (\$240) a month. (January 25, 1916.)

Robinson, R. E., Instructor in Mechanical Engineering, from February 7, 1916, to June 30, 1916, with salary at the rate of one hundred twenty dollars (\$120) a month. (February 2, 1916.)

Rumry, Florence, Typist in the Department of Pharmacology of the College of Medicine, at a salary of forty dollars (\$40) a month, beginning January 1, 1916, and continuing until further notice, subject to the rules of the Civil Service Commission. (January 11, 1916.)

Shelby, Edwin, Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Steinmayer, R. A. J., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Taylor, N. O., Student Assistant in Chemistry, for five months beginning February 1, 1916, at a salary of ten dollars (\$10) a month. (January 26, 1916.)

Thomas, R. R., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Troster, O. J., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

Tyacke, Dorothy, Secretary to the State Leader of County Demonstration Work, at a salary of seventy-five dollars (\$75) a month, beginning November 1, 1915, and continuing until further notice. (January 17, 1916.)

Van Natter, F. M., Assistant in Military Science, for five months beginning February 1, 1916, at a salary of twenty dollars (\$20) a month. (February 4, 1916.)

* The date in parenthesis is the date on which the appointment was made by the President of the University.

Whitecarver, R. L., Stenographer in the Department of Military Science, at a salary of fifty dollars (\$50) a month, beginning January 13, 1916, and continuing until further notice, subject to the rules of the Civil Service Commission. (January 22, 1916.)

W. L. ABBOTT, *President.*

H. E. CUNNINGHAM, *Secretary.*