SIXTH ANNUAL MEETING OF THE BOARD OF TRUSTEES.

The Board of Trustees of the Illinois Industrial University met on Tuesday, March 12, 1872, at four o'clock P. M., in the University Building, the Regent in the chair.

After the meeting was called to order by the Regent, and the scriptures read and prayer offered by him, the roll was called, the following gentlemen answering to their names:

Messrs. Blackburn, Brown of Pulaski, Brown of Sangamon, Cunningham, Goltra, Hayes, Harrington, Mahan, McMurray, Pearson, Pickard, Pickrell, Pullen, Scott, Slade, Van Osdel, Wright and the Regent—18.

Absent:—Messrs. Anderson, Bowen, Bateman, Brayman, Cobb, Edwards, Galusha, Greenleaf, Griggs, Johnson, Lawrence, Scroggs, Wagner and the Governor.

The Regent stated that letters had been received from Messrs. Brayman, Bowen, Cobb, Edwards, Galusha and Judge Lawrence, regretting their inability to attend this meeting of the Board, and giving the respects and good wishes to the gentlemen of the Board.

On motion, the reading of the minutes of last meeting was dispensed with.

The Regent then proceeded to read his report:

ANNUAL REPORT OF REGENT.

To the Board of Trustees of Illinois Industrial University:

GENTLEMEN:—Four years have now elapsed since the University first opened its doors to students. These years, through the good providence of God, have been years of prosperity and rapid growth, and the University has now reached a position which fully justifies your plans, and affords a most brilliant promise for its future. In tendering you this annual report, I am no longer offering you a scheme for a doubtful experiment, but the yearly record of a great and prosperous institution—an institution which, while rooted in the hearts of thousands of warm and active friends at home, has already won a name across the Atlantic and in distant States. But while it thus repays your care in the past, it will still demand new and not less wise and earnest care for the future. Its progress must orever tax the best thought and the noblest efforts of its officers and trustees.

REPORT OF EXECUTIVE COMMITTEE.

The Executive Committee has held meetings nearly every month of the year. The reports of it proceedings have been published, and furnished each month to the Trustees. The record is herewith again placed before you for your information and approval. The great building enterprises in which we have been engaged, heav received the close and careful attention of the Committee, and have con-

stituted a large share of their work. I believe that especial thanks are due to these gentlemen for the large amount of valuable time and attention they have given to this public work.

ATTENDANCE.

The entire attendance for the last year, ending June 7, 1871, was 277. The attendance thus far during the current year is 365. This will probably be considerably increased before the close of the year. The number in the several colleges or courses, is as follows:

In the College of Agriculture and Horticulture	68
" " Mechanical Science and Engineering	37
" " Literature and Arts	20
" School of Mechanical Engineers	37
" " Civil "	54
" " Mining "	4
" " Architectural "	4
" " Analytical Chemistry	12
" " Military Tactics	62
" Eclectic Courses, and Unassigned	74

Most of the students in the Military course are also pursuing other courses.

The numbers pursuing the several branches of study, were as follows:

Agriculture, Practical, (seniors)	26
Analytical Mechanics	7
Algebra	76
Anatomy, Comparative	9
Astronomy, Descriptive	3
" Practical	2
Botany	81
Book-keeping	120
Commercial Law	60
Chemistry	107
Chemical Physics	67
Chemical Laboratory Practice	70
Calculus	13
Drawing	85
English Literature	192
Entomology	8
Fruit Growing	17
French	51
German	99
Geometry	129
" Descriptive	27
" Analytical	33
Geology	28
Greek	3
Geography, Physical	5
History, Constitutional and Ancient	10
Hydraulics	2
Latin	
Logic	9
Mineralogy	28
Mental Philosophy	9
Military Science	86
Moral Science	7
Principles of Mechanism	11
Physics	13
Philosophy, Natural	37
Roads and Railroads	8
Surveying and Leveling	23
Strength of Materials	2
Soils and Fertilizers	7
Shop Practice	35

Trigonometry..... 25
Veterinary Science..... 9
Zoology..... 16

Our plan of freedom of studies has produced no large amount of such mischievous consequences as its opponent fear. Doubtless some have been fickle and changed their studies to their hurt, but they are mainly those who would have pursued a set course with but little earnestness or success. Whatever disadvantage may have resulted to this class from the free choice allowed them, this freedom has been of great advantage to the many, enabling them to take the studies for which they felt a special need or had a special aptitude, and these studies have been pursued with a far greater earnestness than would have been given to any enforced course. The general and unusual interest in study exhibited by the students of this University is no light testimony in favor of the liberty allowed here.

The courses marked out by the Faculty and offered as their recommendation, are largely followed, and counsel is freely asked and freely given, in the case of those who wish to take other studies than their respective courses provide. And so the students are never left without guidance, as it is sometimes unfairly assumed they must be left, where freedom of choice is allowed them.

FINANCES.

The total expenditures of the year, for all purposes whatever, including State appropriations for new buildings, etc., are $166, 917 72. Of this sum, $98, 357 69 were paid directly from the State Treasury, on vouchers signed by a majority of the Trustees, as provided by law. The remaining $68, 560 13 were paid on warrants, a list of which will accompany this report. The Treasurer's report will exhibit the receipts of the year, and the balance now on hand. The income of the year has been increased, as you will notice, by large collections by freights on our building materials. This will not occur again, and our income must be counted on the ordinary basis. The expenditures for the coming year will doubtless exceed those of the year just closed. The proper growth of the institution necessarily increases the expense, and this increase must go on till all the departments of your work are fully developed and supplied with a full corps of instructors. To furnish the best facilities for education—such facilities as are furnished by the better class of universities and industrial schools—we must count on meeting a much larger expenditure than we have thus far encountered. To meet this successfully will require us not only to economize our funds to the utmost, but to seek every opportunity to increase them. I recommend that we take measures:

1st. To sell at once the 25,000 acres of scrip still remaining, and invest the same in good county bonds.

2d. To sell our wild lands as fast as a minimum price of four or five dollars an acre can be realized for them. This will stop taxes and increase income.

3d. To exchange our State six per cent. bonds for county nine or ten per cent. as soon as practicable. We have been losing about $3000 annually, by reason of our failure to make this exchange. If practicable, we must avoid this loss for the future.

4th. Inasmuch as our contemplated entry next fall into our new building will entail upon us much larger current expenses, I recommend that the incidental fee of $2 50 a term, now charged each student, be increased from and after this college year to $5 a term. This amount will be but a small matter to each student, but to the University it is a large and important resource. On a similar occasion the Cornell University increased its term tax to $15, with the just remark that it was better for the student to pay something and have large advantages in return, than to pay nothing and get but poor facilities and instruction. We must either make this change or lessen the advantages already provided.

It may help us to understand the extent of our prospective needs, to note the expense of similar institutions elsewhere. Michigan University has an annual income of about $100,000, and the income of Cornell University is nearly $110,000, and yet both of these institutions complain of the inadequacy of their means for their work. The range of our work, though differing in some departments, is fully as extensive as theirs, and our numbers in attendance will soon be as large.

I call attention to our plans not to indulge ourselves in visions of the prospective magnitude and magnificence of our work, but that we may order our present economies with a wise reference to the large and certain needs of the future. The teaching force of the University will need to be doubled ere all the departments of science are properly represented, and several of these professorships must be filled at an early day. Our library and cabinets are yet in their infancy, and though they are costly and valuable, the University can only keep abreast of its work by constant and costly additions; $100,000 could be expended at once, with great profit, in increasing the scientific books and apparatus. A new Chemical Laboratory must be built within three or four years, large enough for three or four distinct departments of Chemistry and its applications to the arts. A Physical Laboratory will also be needed, furnished with apparatus still more costly than that required in Chemistry, and the schools of Mining and Architecture will each require much more ample outfits than we can yet give them. I say

nothing here of the other departments o earning and of art, which will also be knocking at our doors, ere long, for representation here, nor of the new features which all our departments will develop by their own natural growth. Such an institution can never safely pause in its progress and development. It is not the dead past, but the living present, with which we have always to keep in active sympathy and mutual support.

I have given to the Committee on Finance the items of estimates for the coming year, and this committee will report the same with such modifications as your actions may require.

THE FACULTY AND INSTRUCTORS.

The number of Professors and assistant teachers now employed in the University is seventeen, viz: The Regent and ten Professors; two Lecturers; two Instructors; and two assistants in the Laboratory. There have been added to the Faculty during the year, Prof. D. C. Taft, Professor of Geology and Zoology; Prof. J. F. Carey, Professor of Ancient Language and Ancient History; Prof. J. B. Webb, Professor of Civil Engineering; Mr. Harold Hanson, Instructor in Architectural and Free-Hand Drawing; Mr. Thomas Meehan, of the *Gardeners' Monthly*, was employed for a course of lectures in Horticulture; and Judge J. O. Cunningham is, by my request, delivering the lectures on Commercial and Constitutional Law.

Some further additions to the Board of Instruction will be needed for the coming year, as soon as proper persons can be found to fill the places. Among these we ask the early appointment of a Professor of Agricultural Chemistry. The Department of Chemistry in such an institution is too large, and involves altogether too much labor for one man; and the best interests of this College of Agriculture demand that this chair shall be filled, if possible, by the opening of the next year. No one has yet been found to fill the chair of History and Social Science, provided for at the last annual meeting; but it is hoped the place may be filled during the coming summer. The instruction in Book-keeping and Commercial Science has thus far been given by the Professor of German and Military Tactics. The labor is too much for one man, and cannot be performed in the best manner without more time than can be given to it by one so loaded with other duties. The classes in Book-keeping are large, and it is desirable that all students of both sexes shall learn this practical and useful art. Several assistant teachers will be needed for various departments.

It is recommended that the salaries of those Professors now receiving only $1800 a year. be raised to $2000. I make this recommendation because I believe it just to these gentlemen, and yet with some degree of hesitancy, knowing the too narrow limits of our funds. It is obvious, that till some considerable increase in our income can be secured, we cannot make any general increase in salaries, and it has never been found feasible to maintain an equality of salaries in any such institution. The salaries now paid here, are higher than those paid at the Agricultnral Colleges of Kentucky, Tennessee, Michigan and Wisconsin. They are about the same as those paid in Iowa and Minnesota, and less than the highest salaries paid at Michigan University, Cornell University, and the Agricultural Colleges and Universities generally in the East. I know your generosity as well as your sense of justice will prompt you to give all that the funds committed to your care will permit.

It is with sincere pleasure that I testify to the fidelity and ability which have been exhibited by the entire corps of instructors. Their work, though often excessive in amount, has been done with cheerfulness and with a steady zeal for the success of their classes and the University itself. It would seem invidious to single out any one, where so much praise is due to all.

THE COLLEGE OF AGRICULTURE.

This College embraces the schools of Agriculture proper and of Horticulture and Fruit Growing. The instruction has embraced courses of lectures on soils and on fruit growing by Prof. Burrill, on Agricultural Chemistry by Prof. Stuart: on Theory and Practice of Agriculture and Stock Breeding, etc., by Dr. Miles: on Veterinary, by Dr. Detmers, and on Gardening, by Thomas Meehan, Esq., of Philadelphia. The students in these courses have also pursued by regular class work, Botany, Zoology, Geology, Chemistry and other studies pertaining to their work. The work of the practical department of these schools will be fully shown by the reports of Prof. Burrill for the Horticultural, of Mr. Lawrence for the Stock Farm, and of Mr. Flagg for the Experimental Farm.

The Horticultural Department, under the chief charge of Prof. Burrill, assisted by Mr. Vickroy as Orchardist, and Mr. Franks as Florist, has made valuable progress, although the season was most unfriendly by reason of the severe drought and the insect depredators which swarmed through our grouuds,

An arrangement similar to that which has worked so well on the stock farm has been made with Mr. Vickroy, under which he is to be paid a minimum salary of $1000 a year, with the promise of a maximum of $1500, provided the net income of the gardens and other horticultural grounds will pay it. An arrangement somewhat similar to this is proposed for the Florist. If this proposition is adopted

he will be required to take the entire care of the green houses and grounds of the present campus; to perform all the needful work thereon; to make such improvements as may be req and to keep the grounds well supplied with annuals and bedding plants, equal to the supply in past years. For this he will receive $50 a month and the net income of the green houses till he reaches a maximum salary of $1000 a year.

The Horticultural Grounds, now occupying about 130 acres, exclusive of the campus and parade ground, have made very marked progress, as the reports of Prof. Burrill and his assistants will show. The forest plantations, for which we have been gathering trees for the past year or two, are begun; twelve species of forest trees are already in place, and others are ready to follow. The Nurseries, though suffering from the drought, are exhibiting good results, and the young orchards maintain the thrifty appearance they have shown from the outset. The Horticultural classes have been employed during the winter in root grafting and will soon set their grafts in the nurseries. New hot beds warmed by flues, have been constructed and are about to be put in operation. The underdraining has been continued and over five acres have been added to our thoroughly underdrained grounds.

A beautuful plan for our Arboretum and ornamental grounds about the new building has been prepared by our teacher of Architectural Drawing, and the plantation of trees will be commenced as soon as the weather will permit. The green houses and grounds about this building have been objects of increasing interest, and are of great value in teaching the finer parts of Horticultural Art. The heating apparatus of the new green house has been found expensive and inadequate from the poor character of the boiler. An appropriation will be needed to replace this with a bettsr one.

The Stock Farm has been enriched during the year by the purchase of a male and female of each o the following breeds of cattle: the Short Horn, the Hereford, the Ayrshire and the Jersey. All these are young and choice animals of excellent pedigree and from celebrated families of stock. There has also been purchased a Devon Heifer of rare beauty, and a Devon Bull has been donated by Hon. W. C. Flagg, so that we have now five of the leading breeds of neat cattle to illustrate this important branch of agriculture. There have also been purchased two pure bred Berkshire Swine and three Southdown Ewes, and we have received, by donation, from J. H. Pickrell, Esq., two Berkshire Sows and a South. down Buck, and from Dr. Miles two Essex Pigs. The reports of the Head Farmer show some interesting results in the feeding of the cattle.

The Barn has just been supplied with a steam boiler and engine, with machinery for cutting and grinding feed, affording us now the means to begin our experiments with cooked food. Some steaming tubs or tanks will be needed.

The stock of fatting steers having all been sold off, it is desirable that a new stock be at once purchased, even if they must be sold again within the year, in order to reimburse the funds.

The plan on which the farm has been managed during the year has been satisfactory beyond all former experience, and the balance sheet presented by the Farmer, gained in the face of heavy losses by the fall in prices of stock and grain, is full of promise for the coming year. The Farm still needs some additions to its buildings and machinery, which may be met perhaps from its own income.

The Experimental Farm, of about 80 acres, has been under the care of Hon. W. C. Flagg, who, with the aid of the State appropriations, has inaugurated a somewhat full set of experiments in three departments, viz: 1st, in fertilizers; 2d, in methods in cultivation, and 3d, in varieties of seed and species. He has also prepared for some experiments in stock feeding. His report on these several classes of experiments is not yet in hand, but will be included in the printed volume for this year.

The work has necessarily been partly preparatory, and a series of years must elapse ere any ripe results can be reached. I hope the valuable services of Mr. Flagg may be secured for the coming year to carry on what he has so well begun.

THE COLLEGE OF MECHANICAL SCIENCE AND ENGINEERING.

This College, as now organized, embraces the subordinate schools of Mechanical Engineering, of Civil Engineering, of Mining and of Architecture. There are large classes in the two former, and smaller ones in the latter. The work of the year has shown the increasing popularity and utility of all these courses.

The Mechanical building provided for by the Legislative appropriation of last winter, was erected during the summer and autumn, and is now fully occupied. A new steam engine of 20 horse power, made by students, is daily at work running the lathes, planer and other machinery of the several shops. Over $7000 worth of new machines and tools have been added to the outfit of the several shops, and when fully set up will furnish facilities for a great variety of profitable labor.

Over five hundred models were received during the year from the patent office, furnishing illustrations of great value to the student, of mechanical devices and their endless applications. A set of models, manufactured by Mr. Riggs, of Chester, England, purchased from the maker, and are in the cases Besides these, several fine models have been constructed by the students as shop practice. With the

facilities thus multiplying, this department cannot fail to be of great public value. Not only students from the schools but young mechanics from the shops and manufactories are coming here to take courses of study in scientific principles relating to their arts. This is a most encouraging fact. Those who have already attained practical skill have great advantage in the acquisition of principles, and will doubtless make our best mechanical engineers.

QUALIFICATIONS FOR ADMISSION.

The University has now reached a point in its career when it may wisely raise the standard of qualifications for admission to its several colleges. Under the rule now prevailing, many students enter who not only are not prepared to prosecute successfully the studies, but who have not fairly tested their power to study, nor the genuineness of their desire for education. They often struggle on a term or two with little profit to themselves, and with real injury to the University, and then suddenly leave us, concluding wisely, though late, that they have mistaken their minds.

I am aware that many friends of the University have desired to see it remain accessible to young men and women from the rural districts, who, having in their own neighborhoods nothing but schools of low grade, are unable to gain there any but the most common literary entertainments. I confess myself to have deeply sympathized with this desire. It has seemed hard to refuse admission to young men of mature age, who, awakening thus late to their need of education, have sought the University, and found themselves unprepared to meet its requirements and to keep pace with its classes. But their misfortune, either in the lack of good opportunities or in the misimprovement of these opportunities, can be remedied as well by a resort to a good public high school as by lowering our standard of admission here. To consume the resources of the University, and use up the time and strength of its teachers in doing this mere elementary work, would simply prove a futile, if not foolish attempt to meet the lower wants of our school system, the want of more high schools by the sacrifice of the highest need—the need of a great university devoted to the highest education for industrial arts. If we succeeded we should but add one more high school to our system—an expensive State high school—and students that did not choose to go to the high schools in their own county, would come here to get high school studies at State expense. But where, then, would those students of the high schools, who have by patient study fitted themselves for university work, look for proper university instruction? If the teachers here must consume their time and strength in teaching the mere elements of the sciences, who shall teach those sciences in their higher forms and in their manifold and grand applications in the great fields of human art and industry? Some few ambitious young men would learn their algebra and geometry, their elementary botany and zoology in a university, so called, rather than in a high school. But the State would look here in vain for its thoroughly educated, scientific agriculturists, engineers and mechanicians—for its broad-breasted, liberally educated men to lead its gigantic industries.

Thus far the University, in its infancy has found the great mass of its students in the lower classes, and the faculty, not yet loaded with the higher work, have willingly and wisely given their toil and strength to the more elementary part of their work, but the time has come when we must choose between the two classes of work. Our teaching force is wholly insufficient to take care of all the higher grades of instruction, if we are to remain loaded with the lower.

The natural and reasonable remedy is to raise the standard of qualifications for admission. This need not be done by any great and violent step, but by small degrees, properly advertised a year or two in advance.

I recommend that the executive committee be instructed to prepare and advertise at an early day a scheme for admission to the several colleges and schools of the University, increasing the required qualifications, by successive steps, to take effect in successive years.

These new requirements should be in the direction in which the public schools themselves are moving; so that the University, which is in a sense the head of the common school system, may be kept as closely as possible in connection and sympathy with the entire system.

The new school law recognizes the "elements of the natural sciences" as common school studies, and requires that henceforth, teachers in the common schools shall have passed an examination in those sciences. Now, these are the very studies which furnish the fit preparation for our college of agriculture. Our charter already requires that students shall come prepared to pass examination in the common school studies, and it is therefore imperative that these new studies must now be added to our requirements for admission. As this is fixed by law simply as the lowest limit of qualifications, the trustees may add others, in their discretion, for any of the colleges as need requires.

THE LABOR SYSTEM.

The labor system still costs us much care. Its importance, still felt, forbids its discontinuance, though the large increase in the number of our students puts it out of our power to furnish profitable labor to all that desire it.

Much of the difficulty attending an educational labor system comes from the diversity of aims involved in it.

1st. The labor is designed, first and foremost, to aid the instruction, to give practical exercises which may illustrate principles, and make the student familiar with the facts and forces with which his studies are concerned.

2d. To provide this practical instruction we must have farms, gardens and shops, and having these, all the work must be done which is necessary to carry them on effectively. So we are at once put in position of employers who must get a certain amount of labor.

3d. But with many of the students who are depending on their wages for their support, the pay and not the instruction becomes the main aim, and they are naturally anxious to get the highest wages, instead of the most information.

These several aims are not altogether incompatible with each other, but, to prevent disagreements it is important to fix carefully the rate of compensation, and this must be fixed so low that our business departments, hampered as they are with their educational work, shall not become a burden on our resources. I recommend that the maximum rate of wages henceforward be as follows: On the farms and gardens, ten cents an hour; in the shops, ten cents an hour; on the ornamental grounds, eight cents an hour.

These rates, though somewhat lower than those we have heretofore paid, are still higher than those paid at other institutions of this character. To compensate those who shall attain high skill and show great fidelity and efficiency, I recommend that the superintendents be allowed to give piece-work to such as they deem worthy.

All students in the technical courses are required to take a certain amount of shop or field practice, as a part of their course, and are not entitled to any compensation for this. Other students desiring work in the shops, are required to serve a short apprenticeship before they are entitled to any pay, unless they have learned their trade before entering.

THE NEW GRANT OF LANDS.

It has already, doubtless, met your notice that a bill is now pending before Congress for a further grant of lands for the more adequate endowment of the Colleges of Agriculture and the Mechanic Arts, founded under the grant of 1862. This movement originated in the Agricultural Convention lately held in the City of Washington. The conviction seems nearly universal among the friends and officers of the industrial colleges and universities, that a much larger endowment is absolutely required to carry out successfully the great work of technical education. Certainly our experience here fully confirms this view, and the necessity of this grant ought to be urged upon Congress by all the arguments we can offer.

THE COLLEGE OF CHEMISTRY.

A report is expected from Prof. Stuart, which will give the work of this College during the year. The number of students who are pursuing chemistry with reference to agriculture and other arts, has rapidly increased. Our laboratory, wholly insufficent for a University of the character of this, has tables for only thirty-four students to work at once. It has, this year, been crowded to the overflow two sets of students succeding each other at the same tables. The number of special students of chemistry as a profession, is not large, only fourteen being enrolled in the course, but there is a growing comprehension of its value and an imperative demand will soon come for ample accommodations.

A large addition has been made during the year to its valuable apparatus and its means of illustration and work are already noteworthy. If the present building shall be surrendered to the uses I have elsewhere described, it will be necessary to transfer the laboratory, temporarily, to the basement rooms of the new building till a new laboratory can be built.

COLLEGE OF NATURAL HISTORY.

The course of studies in this College is attracting increased attention. Rich additions have been made to our library in all the branches of Natural History, and some additions have accrued to the cabinets. But the latter need large reinforcement at an early day. The collections heretofore purchased are rich in valuable duplicates, and with a moderate fund devoted to this purpose, exchanges could be made which would be of great benefit.

COLLEGE OF LITERATURE, SCIENCE AND ART.

The practical aim in this College is to fit students for literary pursuits, as writers, editors, teachers, etc. It affords, also, to the students in Agriculture and Mechanical sciences, the literary side of their education. Its course embraces the modern and ancient languages, English language and literature, Historical Science, Mathematics, Natural History, Chemistry and Philosophy. Only twenty are enrolled

as intending to take this course, but nearly all the students are receiving instructions in some of its classes. The English and other modern languages are much more largely pursued than the ancient and are taught with a gratifying success.

I append a report from Prof. Baker on the classes in English Literature, giving an account of the important work being done in that most useful department of study. This report urges the importance of a printing press, to give a more practical value and character to this work, and conveys the pleasant information that a press has been promised us, by a member of the board. The instruction in ancient languages has now been committed to very competent hands, and the sciences of nature are receiving a degree of attention not often given to them in colleges. Historical Science, from its importance to the intelligent citizen and statesman, has been assigned a liberal place in the course, and has been pursued in part by a large number of students.

LIBRARY.

There have been expended during the year in the purchase of new books, $5,420.67. The number of bound volumes now in the library is 7,307. Besides these are valuable collections of unbound books and phamplets.

The library, instead of being locked away in some remote hall, to be opened only once or twice a week to permit the drawing and return of books, occupies the most central and accessible of all our rooms. The spacious library hall is fitted up with reading tables and seats, and is warmed by steam and lighted with gas, With the first hour of our work it is thrown open to all who wish to read. Librarians are constantly in attendance till the closing evening hour, and every facility is furnished the student who wishes to consult its volumes. It is in constant use and furnishes one of the most potential of the educational influences presented by the University.

THE LECTURE COURSES AND FARMERS' INSTITUTE.

Five public courses of lectures, for the benefit of farmers and fruit-growers have been given during the year. The first was at the University, in January, and lasted one week. The others were held respectively at Dixon, at Avon, at Pontiac and at Pittsfield. The attendance at most of these Farmers' Institutes, as they were called, was in most cases larger than at any former series, and the expressions of public appreciation were frequent and gratifying. The number of applications for such institutes the coming year will be larger than we can meet.

The report of the Regent was referred to the standing committees, as the different parts may concern them; so much thereof as relates to the fitting up of the old University building to the exclusive use of female students, was referred to a special committee, to be appointed by the chair. Messrs. Pickard, Cunningham, Slade, Blackburn and Wright were so appointed. The oath of office was then administered to the new member, Mr. R. B. Harrington, of Pontiac. The reports of Mr. E. L. Lawrence, the Farm Superintendent, and Prof. T. J. Burrill, of the Horticultural Department, were read and referred to the committees of their respective departments.

REPORT OF THE FARM SUPERINTENDENT.

To the Regent of the Illinois Industrial University:

I entered upon the duties of Head Farmer on the stock farm of the University on the 1st day of March, 1871, and now, at the close of my first year's service, I herewith present my report of the transactions of the year.

Immediately on my arrival on the farm, an invoice of property likely to be disposed of was made, as follows:

5 fat hogs	$80 00
12 stock hogs, 2,640 lbs., 7c	184 80
4 breeding sows	72 70
4 pigs	28 00
60 steers	3,475 00
425 bushels corn, 40c	170 00

2,320 bushels oats, 35c	$812 00
255 " " 65c	165 70
60 " " 50c	30 00
75 tons hay	375 00
2 two-year old colts	180 00
1 one-year old colt	45 00
3 barrels cider	18 00
Total	$5,626 20

The tools and machinery on the place was invoiced at $1,517.

The teams were estimated to be worth $1,000.

The invoice of oats was made on the statement of the former manager of the place. When the oats were disposed of I found that they fell short 725 bushels of the amount stated. On referring to the books kept at the time of threshing I found that the amount threshed and the amount disposed of by my account corresponded, and this difference of 725 bushels was made by allowing 40 pounds to the bushel, machine measure. As the oats were very wet at the time of threshing, they would do well to hold out. With these facts in view, I have corrected the invoice in my account by deducting that amount at 40 cents per bushel (the average price), making $290. I have added to the invoice $44 10 for corn that was in crib at the horticultural barn and overlooked. After these changes the invoice stands $5,380 30.

I have invoiced the property on hand as follows:

52 stock hogs, 7,280 lbs., 3¾c	$273 00
1 three-year old colt	135 00
1 two-year old colt	80 0
1 one-year old colt	40 00
30 tons hay, $10	300 00
1 cow	65 00
1,600 bushels corn, 25c	400 00
800 bushels oats, 25c	200 00
Shock corn	20 00
4 barrels cider	24 00
Grass seed, just bought	78 34
Fine stock, at cost	2,614 48
Total	$4,225 82

The tools and machinery I have invoiced at $1,391. For details see "Invoice of tools," herewith presented. Quite a large share of the tools have not been in use the past year. The Johnson reaper, Cycloid and Bucyrus mowers were used but very little. Any machine in this line that is not sold and extras kept by a local agent, and it is necessary to send to Chicago for repairs, is dear as a gift, especially so when such machine becomes worn. Although the old tools are put in about 50 per cent. lower than last year, I cannot do justice to myself and put them at a higher figure.

The tools received are, on the whole, about the same as last year, except the ordinary wear. The plows are better than when they came into my hands.

The teams are about the same as when received. One mare was sold for $100, and that amount paid for a riding horse.

The crops raised on the place the last year consisted of 85 acres of corn, 45 bushels per acre, 3,825 bushels; 35 acres of rye, 16 bushels per acre, 555 bushels; 45 acres of oats, 20 bu, hels per acre, 900 bushels; 110 acres of hay, yield 112 tons; 80 bushels potatoes and about 400 bushels apples were raised.

The corn is accounted for as follows:

Fed to fattening cattle	740 bushels.
" young cattle	140 "
" cow	30 "
" teams	300 "
" hogs	845 "
Sold	55 "
On hand	1,675 "

Of the rye, 535 bushels sold at 60c, $321; used for seed, 12 bushels; fed 8 bushels. The field of rye last spring should have been invoiced. I have now to show, to balance the rye, 10 acres rye, 9 acres wheat (probably killed), and 50 acres fall plowing, of which there were none last year.

One hundred bushels of oats have been fed, and 800 bushels now on hand.

Hay has been sold of the new crop to the amount of $458 42. 30 tons now on hand; the rest has been fed.

Potatoes sold for $48 75; a few bushels were buried for seed.

Fruit was sold to the amount of $177 67.

The sixty steers were disposed of as follows:

31	sold in August, $5 30 per hundred	$2,260 55
16	" December 29, $4 90 "	1,177 45
11	" in January, $4 85 "	790 75
1	" February, $4 "	51 00
1	was killed for his hide	4 70

Hogs have been sold for $490 98, averaging about 4 cents per pound.

The total receipts of the year amount to $7,934 45. See statement marked "A."

The total expenses of the year amount to $6,726 72. See statement marked "B."

The item of labor is for all labor done on the place, mechanical or otherwise. 580 rods of fence have been made, including 280 rods temporary fence for protection of hedges, and 60 rods to fence off a part of the pasture for mowing, 920 rods have been made—nearly three miles. See statement marked "C."

Early in the season the discovery was made that we were likely to be short of water, a well was dug and a wind-mill put up, which has performed well. I purchased one of L. H. Wheeler's mills, manufactured at Beloit, Wis.; $65 discount was made on the mill. I think no better investment could have been made. For expense of mill, well tank, etc., see statement marked "D."

Eighty rods of new hedge were set and tended; the old hedge was filled up and tended, and 280 rods fence made for protection. See statement marked "E."

A hog pen was built, costing, in labor and material, $37 04.

In anticipation of feeding cattle as an experiment, I arranged cattle stalls in the barn for that purpose. On account of the delay in getting the engine and boiler repaired and in position, this had to be deferred. The cost of stalls and other improvements on the barn, including glass for the doors below, door latches, etc., amounted to $34 53.

I have expended on the farm, under the head of general improvements, $47 28. $5 of this was for maple trees, the rest for labor.

A bill was presented by S. A. Hutchinson, amounting to $37 50, for breeding mares in 1869–70. Also, one by Mr. Chas. Ells, for breeding sows in January, 1871. After satisfying myself of their correctness, they were paid, and are accounted for as old debts paid. Accounts that came over from last year, amounting to $112 62, were on the bookkeeper's book, which will be found in my statement. For statement of all extraordinary expenses, see paper marked "F."

Donations to the farm have been made to the amount of $504 98. See statement "G." Donations have not been added to the profits of the farm in the final statement.

Four hundred and twenty-one dollars is charged for "Care and feed of fine stock." See statement "H." The item of $210 is for all care of fine stock, cattle, hogs and sheep, time of getting them to the farm, etc., including time of two trips to Chicago.

For a showing of the weights of the cattle at different times and comparative feed of grain, see paper marked "J." Although this paper may be somewhat instructive, it would not be safe to "jump at any conclusions." There are so many circumstances that enter into an experiment of this kind, which, to give in detail, would require too much space for this report, that it would be necessary to continue such weighing with different animals for a series of years before definite conclusions could be reached.

There has been hauled out on the land during the year, 368 loads of manure. All the manure made during the winter has been hauled out, as well as that made the winter previous, and the remains of straw stacks found at different points on the place.

Of the amount paid for labor during the year, $287 68 was paid to students of the University. This amount was profitably expended, and I think the wages paid has been satisfactory to those employed.

The season has been an exceedingly dry one, yet I am not prepared to say that we could have made a better showing had we had all the rain we might have asked for. The poorest cultivation may bring good crops and produce profits, when all things are favorable. It seems to me that good tillage should produce favorable results under unfavorable circumstances. What has tended most to make a poor showing of profits is the low price received for farm products, and the high price allowed for the same on articles invoiced one year ago. By the average of profits made by cattle-feeding in the last ten years, we should have cleared at least $1,000 on the cattle that have been kept on the place. Instead of that I have to report a loss. Hogs for which I was charged 7½ cents per pound one year ago, were sold in the fall for 4 cents, and six months' feeding entirely lost. The hogs raised on the place and bought through the season, helped to cancel the loss. The oats that I sowed last spring were invoiced

at 65 cents per bushel, while the product on hand is put at 25 cents. Corn on hand last spring cost me 40 cents. 1,675 bushels, now in crib, is put in at 25 cents.

Comparing the present invoice with that of one year ago, and the total receipts with total expenditures, I find a balance of receipts of $210 27. Giving the farm credit for permanent improvements and new tools purchased, which amounts to $1,266 46, gives us a total balance of $1,477 83. See statement marked "K."

For statement of loss and gain, see paper marked "L." This had to be partly estimated, as the showing of the cost and value of crops, etc., and the real profits and losses did not correspond, and the difference had to be made up to make this showing.

The first few months of the year were exceedingly trying and laborious, and I was convinced of the truth of the saying, that "Eternal vigilance is the price of success."

It would have been a satisfaction to have seen another thousand dollars added to the balance in this report; yet on the whole, taking all things into consideration, I am gratified with the result of our labors, and hope it may be satisfactory to yourself and the Board of Trustees.

In closing this report I tender you my sincere thanks for the interest you have taken in "The Stock Farm," and also to the Executive Committee for the readiness with which they have met my requests for the means and material necessary to forward our labors.

Respectfully submitted,

E. L. LAWRENCE,
Head Farmer I. I. U.

STATEMENT A.—FARM RECEIPTS.

From sales of old hay	$444 93
" new hay	458 42
" corn	15 86
" rye	321 00
" oats	670 55
" cattle	4,284 45
" fruit	177 67
" straw	51 25
" hogs	490 98
" potatoes	48 75
From sale of mare	100 00
" colt	125 00
" grass seed	17 50
" unenumerated articles	23 37
From receipts for pasture	85 61
" cash for freight on cattle sold	100 00
For work done off the farm	97 96
" care and feed of fine stock	421 05
	$7,934 45

STATEMENT "B."—EXPENSES.

Head Farmer's salary	$720 00
Paid for farm and all labor on place	1,046 29
Board of hands	528 70
Cultivator	41 00
Reaper and mower and extra knife	196 00
Wind-mill	50 00
Hay carrier, power and freight	11 86
Horse rake	40 00
Well, brick, curb circles and pump	34 41
Hay fork and rope	19 25
Check rower and freight	12 00
Hardware bills	51 11
Blacksmith bills	28 02
Paints, oils and druggists bills	24 86
Hogs bought	126 70
Paid for grinding corn	7 25
Seed of all kinds purchased	117 27
Hedge plants purchased	7 75
Lumber and wire	275 47
Expenses to Chicago twice for cattle	36 05
Old debts paid	53 00
Paid for horse	100 00
Express charges on pigs	16 00
Paid for salt	5 55
Harness, repairs, etc	15 60
Freight paid 4 cars cattle, 3 hay, 10 oats, etc	278 23
Horticultural department account	62 15

EXPENSES—*Continued.*

Carpt. department account	$23 54
Mechanical department account	66
Lightning rod for barn	16 00
Paid for fence posts	87 63
Old account paid	112 62
Paid for cow	65 00
First cost of fine stock (less expense)	2,493 50
Unenumerated articles	13 35
Total year's expense	$6,726 72

STATEMENT "C."—COST OF FENCE.

30 rods front yard fence, painted	
50 " 5 board fence	
200 " 4 "	
100 " 6 wire fence	
80 " 4 "	
120 " rail fence made	
Total cost as shown by accounts, including material and labor	$500 16
This should be increased by adding:	
Freight on two cars lumber	50 00
1,000 feet lumber purchased here	22 00
65 cedar posts	13 00
This should have been charged to the Stock Farm, but has been accounted for in some other way, and is not allowed on either side in the statement of expenses and receipts. This would make the total expense of fence	$585 16

STATEMENT "D."

Paid for wind-mill	$50 00
" freight on same	5 45
" lumber for derrick	20 00
" curb and circles for well	8 00
" brick	18 00
" pump	8 00
" digging well	22 50
Cost of setting up mill, hauling, etc., etc.	22 00
" tank	23 54
" painting derrick and tank	13 00
" hauling and setting up tank	5 00
	$195 49

STATEMENT "E."—HEDGES.

3,100 plants	$7 75
Setting 80 rods new and filling up old	6 00
Making 280 rods protection fence	35 00
Work, hoeing and plowing	8 50
	$57 25

STATEMENT "F."—EXTRAORDINARY EXPENSES.

Paid for small tools	$5 70
" reaper and mower and extra knife	196 00
" cultivator and freight	44 85
" horse hay rake	40 00
" check rower and freight	12 00
" hay fork and rope	19 25
" lightning rod	16 00
" harrow	11 00
Paid old debts	45 50
" last year's accounts	112 62
Total expense of hay carrier power and track	31 91
" two hay racks	18 00
" well, wind mill, etc	195 49
" fencing	500 16
" hedges	57 25
" hog pens	37 04
Expense of work, etc., on barn	34 53
" improvements	47 28
Total	$1, 424 58

STATEMENT "G."—DONATIONS TO FARM.

J. H. Pickrell, discount on bill	$200 00
" 1 Southdown buck	25 00
" 2 Berkshire pigs	100 00
Dr. Miles, 2 Essex pigs	40 00
Hayworth & Co., discount on check rower	20 00
Angle & Sabin, " reaper	35 00
O. B. Olmsted, " wind-mill	65 00
Wm. Loudon, " hay carrier	6 66
" " elevating power	13 32
	$504 98

STATEMENT "H."—CARE AND FEED OF FINE STOCK.

Wages and board of men, 6 months	$210 00
10 tons hay, $12	120 00
140 bushels corn, 30c (for cattle)	42 00
60 bushels corn, 30c (for hogs)	18 00
8 bushels rye	4 80
10 bushels oats	3 00
Straw for littering	6 00
Feed for sheep	10 00
Paid for grinding corn	7 25
	$421 05

STATEMENT "J."—CARE AND FEED OF FINE STOCK.

Animals.	Age, Sept. 1st.		When received.		Dec. 1st.		Jan. 1st.			Feb. 1st.			March 1st.			Total gain.....	Total time—days.....	Gain per day.	Since 1st Dec., took—lbs. meal to make 1 lb. growth.....	Average feed since Dec. 1st.
	Mo's.	Days.	Date.	Wei't	Wei't	Gain.	Wei't	Feed.	Gain.	Wei't	Feed.	Gain.	Wei't	Feed.	Gain or loss					
1 Short Horn Bull.....	7	7	Oct. 12	730	848	118	900	5	52	925	6	25	1030	7	105	300	139	2.16	4.7	6
2 Short Horn Heifer.....	16	25	Sept. 10	990	1120	130	1140	4	20	1180	4	40	1195	4	15	205	171	1.20	6.1	4
3 Hereford Bull.....	8	17	Aug. 21	790*	814	24	854	5	40	894	6	40	965	7	71	171	120	1.41	5.7	6
4 Hereford Heifer.....	16	19	Aug. 21	800*	840	40	900	4	60	938	4	38	935	2	—3	135	120	1.11	5.1	3
5 Ayrshire Bull.....	4	.....	Oct. 12	560*	566	6	616	4	50	670	5	54	730	2	60	170	120	1.40	3.0	3
6 Ayrshire Heifer.....	15	19	Oct. 12	700*	774	74	794	4	20	820	4	26	815	2	—5	115	120	.95	11.7	3
7 Jersey Bull.....	12	22	Nov. 27	258	258	.....	275	2	17	315	2	40	360	2	45	102	93	1.10	2.8	2
8 Jersey Heifer.....	14	25	Nov. 27	482	482	.....	550	4	68	590	4	40	634	2	44	152	93	1.63	5.7	3
9 Devon Heifer.....	13	8	Nov. 4	630	636	6	674	4	38	724	4	50	720	2	—4	90	116	.78	14.3	3

* Numbers 3, 4, 5 and 6, first weight, Nov. 1st. In the column marked "feed," the figures show the relative feed of grain for the month previous. The hay was fed the same to all, what they could eat.

STATEMENT "K."

1872. March 1	By sales of the year	$7,415 34
" 1	By work done off the farm	97 96
" 1	By care and feed of fine stock	421 15
" 1	By fine stock, at cost, including freight, etc	2,614 48
" 1	By old debts paid	45 50
" 1	By accounts from last year	112 62
" 1	By present invoice	1,611 34
" 1	By permanent improvements and tools	1,266 46
		$13,584 85
	CONTRA.	
1872. March 1	To expenses of the year	$6,726 72
" 1	To invoice, March 1, 1871	5,380 30
" 1	Balance found	1,477 83
		$13,584 85

NOTE.—Since the first of March there has been an account of $31.15 paid for transportation of Hereford cattle Also, an account of $145 for repairs on boiler, which is not here shown, but will be in the report of the book keeper.

STATEMENT "L."—LOSS AND GAIN.

March 1	Profit on 85 acres corn	$520 00
" 1	Profit on 35 acres rye	66 00
" 1	Profit on 110 acres meadow	605 00
" 1	Profit by care of fine stock	40 00
" 1	Profit by outside labor	42 00
" 1	Profit on fruit	90 00
" 1	Profit on pasture, and after feed	355 00
		$1,718 00
March 1	Loss on cattle	$75 00
" 1	Loss on hogs	85 00
" 1	Loss on 45 acres oats	81 00
" 1	Balance found	1,477 00
		$1,718 00

ESTIMATE OF AMOUNT OF MONEY REQUIRED FOR EXPENSES ETC. OF THE STOCK FARM ILLINOIS INDUSTRIAL UNIVERSITY.

For labor, and boarding hands	$1,500 00
" wear and tear	200 00
" steam engine	500 00
" ditching and tile draining	200 00
" trees and shrubbery	100 00
" tools, straw-cutter, corn-sheller, and perhaps corn cultivator	120 00
" salary of head farmer	720 00

INVOICE OF TOOLS AND MACHINERY.

One Cycloid mower	$25 00
One Bucyrus mower	25 00
One lumber wagon	45 00
" " "	30 00
One spring wagon	125 00
Three sets harness	50 00
One roller	95 00
One Skinner gang plow*	80 00
Five plows	60 00
One Scotch harrow	10 00

INVOICE OF STOCK AND MACHINERY—*Continued.*

One new harrow	$12 00
One sod harrow	20 00
One Thomas harrow*	.....
One Hoosier cultivator	10 00
One Bradley cultivator (no good)*	.....
One Cravuth cultivator (in fragments)*	.....
One drill	70 00
One Gopher cultivator*	10 00
One broadcast seeder	40 00
One shovel plow*	5 00
One double-shovel plow	4 00
One Johnston reaper, transferred*	.....
One Fairbanks scales	100 00
One revolving horse rake*	2 00
One horse hay fork, Randall's*	6 00
One fanning mill*	10 00
Three sets plow whiffletrees	6 00
Two three-horse clevises*	7 00
One three-horse whiffletree*	5 00
One Van Derno corn planter	45 00
One hay press	40 00
One saddle and bridle	10 00
Three hoes	1 51
Three spades	2 50
Two shovels	1 50
Four hand rakes (new)	75
Two spading forks	1 50
Two bush hooks	3 00
One scythe and snath	1 50
Brushes, cards and curry combs	3 00
Four hay forks (two new)	3 00
One manure fork	1 00
Three planes	2 50
One hammer (new)	1 00
Two hatchets	1 00
Four saws	4 00
Bit stalk and bits	3 00
Two augers	1 50
One iron square (new)	50
One crow bar (new)	2 00
One ax (new)	1 25
One Champion reaper and mower (new)	190 00
One horse rake (new)	40 00
One Bertrand & Sames cultivator (new)	45 00
Horse power, fork and rope pulleys, etc., for unloading hay (new)	50 00
One revolving harrow*	.....
Three sets fly nets	12 00
Fragments of an old set of harness*	.....
Two chisels	1 00
One Frazier cultivator	5 00
Check rower for corn planter (new)	25 00
One draw shave	50
One grub hoe	1 50
One saw set	50
One cold chisel	50
Three monkey wrenches	2 00
One grindstone	3 00
Two sickle grinders (broken)*	.....
One try square	25
One bevil rule	25
One scoop shovel	1 00
One grain cradle*	.....
One log chain	1 00
One hand corn planter	5 00
Two post mauls	1 00
Three corn knives	1 50
One hand straw cutter	5 00
One corn grinder*	30 00
One sub-soil plow (lifter)*	.....
Two hay racks (new)	18 00
	$1,391 00
Teams—1 pair mules	$300 00
6 horses (plugs)	450 00
	$750 00

NOTE.—Tools marked with a * have not been used in the last year.

REPORT FROM DEPARTMENT OF HORTICULTURE.

ILLINOIS INDUSTRIAL UNIVERSITY,
MARCH 8, 1872.

J. M. GREGORY, *Regent Illinois Industrial University:*

SIR: I respectfully submit the following report of the operations in and the condition of the Horticultural Department for the year now ending:

DROUGHT.

The summer of 1871 was remarkable for its excessive and prolonged drought. Very little rain fell after e first of March, and in consequence many of our plants and crops suffered severely. However, the little rain that did fall came in such good time that, in numerous instances, a fair growth was made, and reasonable harvests obtained. Newly planted trees suffered most. The Scotch and Austrian pine, planted in the timber lot, nearly all died, and some of the ash did not leaf out; but, curiously enough, remained green, and will probably grow this year. Seed corn lay in the ground over two weeks without germinating; yet, after a slight shower, soon appeared. But the dry season afforded an excellent opportunity for the destruction of weeds, and was thoroughly improved.

INSECTS.

Of the insect scourges, none were so devastating as the Cinch-bug (*Rhyparochromus leucopterous*) and the Colorado Potato-beetle (*Drophora decemliniata*). The former appeared on and after the —— day of ——, in the air, myriads in number, and settled down upon the fields of grain. All of the spring wheat, most of the oats, and much of the corn and broom corn in the vicinity were destroyed. Even the grass upon some of the lawns was completely killed. They do not ordinarily attack corn until about the wheat harvest time, when they migrate from the stubble to adjoining fields, but it was observed as a fact new to the writer, that hosts of the insects bred in the corn fields, and to a greater extent in the broom corn. There were two broods, the second appearing in swarms about the middle of July. The pests belong to the Hemipterous insects, true bugs, all of which are provided with sucking beaks, with which they pierce tissues and obtain their juices, hence no means of poisoning can be of any avail. The last brood creep under and into the crevices of corn stalks and other rubbish, and live in the adult state over winter, so that burning or burying with the plow all such things affording shelter must destroy multitudes. There is every indication of their numerous appearance again this year.

The Colorado Potato-beetles made their first appearance with us in 1870, but did little damage that year. Before any, except the very earliest, potatoes had been planted in 1871, the beetles came from the ground in great numbers, and their attacks upon every green thing of the potato and tomato kind foretold at once their great ravages during the summer. We tried hand picking, sometimes gathering a half-bushel at a time, poisoning with Paris green and with arsenic, and scalding with hot water—all of which were more or less successful, but for ease and effectiveness, poisoning proved best. Paris green sometimes seemed preferable; however, arsenic did nearly as well, and was certainly much cheaper. Flour was found best of many things tried for reducing the strength of the poison, ten parts to one; this applied when the leaves were wet, formed a paste that did not readily blow off. As the season advanced, insect enemies of the beetles nearly relieved us of our part of the warfare. The "Lady Bugs" (*Coccinella*) fed upon the eggs, and the "Soldier Bug" (*Arma spinosa*) upon the larvæ. The ground proved too dry for the transformations of the larvæ, and many perished for this reason. Upon the whole, little fear is felt for the coming season, although continued warfare will doubtless be necessary. Machines are coming into use that will materially aid in their destruction.

The White Grub (*Lachnostema fusca*) was everywhere destructive; the nursery, the forest plantation, the gardens and the fields were all subject to their devastations. The roots of the grass upon the Campus lawn were eaten off an inch or two below the surface, so that the dead turf could be rolled up like a carpet. Many of the ornamental plants were likewise attacked. For these no adequate remedy is known.

EXPERIMENTS.

The location of the new University building in the midst of the garden brought to an untimely end the experiments attempted with many garden and nursery plants. Special attention is asked to the experiments with different kinds of root grafts found elsewhere. (See paper A.) About 400 varieties of pear cions were received as a donation from Chas. Downing, Esq., of Newburgh, N. Y. These were grafted in the best manner upon pear stocks, and a large proportion are now living, but they made very little growth. Others from the same source are promised the coming year. The accompanying

statements, by Mr. Vickroy, will show the fruits and orchard trees now upon the grounds of the Department (Paper B), and the ornamental plants are catalogues by Mr. Franks (Paper C). For forest Tree Record, see Paper D.; for Experimental Apple Orchard, see Paper E.

An attempt was made at canning tomatoes for market, and although at first we partially failed, progress was made towards perfecting the process, and I am confident we can, at another trial, do the work as well as the best. From our inquiries during the summer, we found the canning establishments in existence were jealous of their skill, making it hard for any one to obtain the desired information. Should we fully succeed, it seems to me much good would be done in disseminating important knowledge, and in providing a market for crops upon which students would find labor. The Alden process of drying fruits and vegetables is worth investigation, and may prove a valuable aid in providing labor for students, and securing a market for nearly all our horticultural products.

During the summer vacation, I spent some time at Cobden, Ill., making microscopical observations upon the fire and leaf blight of the pear, the twig blight of the apple, and the rotting of grapes and stone fruits. The latter only is here reported. It has been evident enough that the decay of these fruits, especially peaches and plums, and a mould-like fungus, accompanied each other, but whether the latter was the cause or consequence of the former has not been well understood. To my mind it became certain that the fungus *caused* the disease, being sometimes, but not always, aided by the punctures of insects. When one peach of a cluster rots the others are sure to follow, and plainly take the disease from the first; when a decaying one is above others, those below, if whole, remain sound till a shower of rain occurs, and then speedily rot; when the dusty mass (spores) from a decaying fruit is placed by hand upon the whole and dry surface of healthy ones, no change is observed, but if the skin is broken or sufficiently moistened, decay rapidly ensues, and upon examination I repeatedly found the thread (mycelium) of the fungus in the substance of the flesh before any indications of decay was observed on the outside. In a short time, however, the tissues were destroyed, and soon after the masses of spores burst from the surface, as in nature. As a practical demonstration that these spores cause the disease, Col. Forbes and others found the decay of the fruit could be almost entirely prevented by carefully removing from the first all rotting specimens. Each pustule, the size of a pin's head, is made up of numberless bead-like chains of spores, attached end to end, but readily separating when mature, and flying off as dust. When wet, they would not float in the air, hence during rain, only the fruit so situated as to have the spores *washed* down upon them would be affected. Punctured fruit would likely be attacked in any situation when decaying ones were permitted to remain in the orchard. The same fungus attacks all the stone fruits. It is doubtless closely allied to the vine fungus of Europe, and the rose mildew with us, both belonging to the old genus oidium; but as all these parasites have a second kind of fruit by which they are specifically identified, and not having yet seen this, I cannot name the destroyer. It doubtless works upon the leaves of tender varieties, and may here perfect its fruit.

STUDENT LABOR.

The subject of student labor has received a good deal of attention, and upon the whole, I think considerable advance has been made in the Horticultural Department during the year. The difficulty of supplying work, however, increases as the permanent improvements, draining, fencing, etc., grow less. During the planting season considerable hand labor is required, but otherwise the greater part of our work can be better done by teams and machinery. To render student labor effective, much more and closer supervision is necessary than is needed by permanent workmen. The question of dollars and cents must, almost of necessity, go against the employment of students, or any other workmen, for a few hours at a time. But for the good of the students themselves, and for the true interests of the Universlty as a whole, I see nothing against and everything in favor of providing for and employing in some useful way all students who wish to labor. With us I think eight cents per hour should be fixed upon as the standard price, leaving any sum above this, up to ten cents per hour, as a premium in cases of special skill or of diligence and faithfulness. The Horticultural class have each grafted this winter 1,000 apple cions in roots, and each will have the planting and care of his grafts during the year. No pay is given for this. Some have, however, besides the above, grafted for pay at the common rates.

VEGETABLE GARDEN.

The location of the new University building rendered it necessary to choose another site for the garden, and four acres immediately south of the barn on the experimental farm has been selected and partially underdrained. This is intended for the main crops of vegetables, the experimental plats being nearer the school buildings. During the remarkably dry weather of the season little difference could be perceived between the drained and undrained land; but, in the spring, that underdrained could be worked much earlier. The work of tile draining should go on as rapidly as the funds will admit.

ARBORETUM.

The arboretum has received due attention, but no planting has yet been done. Most of the land is now in readiness, and quite a number of trees are also ready. Planting should begin this spring.

ORNAMENTAL GROUNDS AND GREEN HOUSE.

The ornamental grounds, notwithstanding the difficulties previously mentioned, presented a good appearance during the summer, and were much admired by visitors and others. The University has achieved quite a name for its display in this direction, and is by example as well as by precept, accomplishing a needed good. The green house plants have been considerably increased since last year, and the whole are now in good condition. Arrangements are also in progress for further increasing the stock by way of exchange.

TILE DRAINING.

About five acres of land south of the new University building, and three acres south of the barn have been underdrained since the last meeting of the Board. These drains are placed forty feet apart in the direction of greatest descent, and from three to four feet deep, mains being usually run in the depressions forming the natural water courses. The manner of conducting the work has received much study, and our experience has been instructive. The books in many instances recommend beginning at the lower end and laying the tile as fast as the excavation is made, thus avoiding an accumulation of water so as to impede the work, and this latter is the only advantage claimed. When the ground is dry, there can be no difference in this respect, which was the case during our fall work, but in the spring it is a matter of great importance. Attempting to follow out the above advice, we were repeatedly obliged to take up all that had been laid and clean out the mud that had settled in the tile from the work above. Even mains having good descent, and well laid and provided with silt basins choked up when laying laterals opening into them.

We afterwards dug the mains and left them open till the laterals were laid, and each of these was completely opened and leveled, then tile laid, beginning at the upper end. When the excavating had been done with sufficient care, never exceeding the required depth, the running water proved an advantage instead of a hindrance, showing accurately the required level. In cases where the mains had been previously laid, not nearly so much silt washed in when the work of tile-laying began above and progressed downward.

Most of the tile has been laid with nothing but clay pressed down upon the joints, and are working well; yet, for further security, some drains are laid with scraps of tin, and others with paper over the joints. Two-inch tile is used for the lateral drains, increasing in size for the mains according to the amount of water they are to carry. Through a natural water course south of the new University building, where there has been in spring-time a large amount of running water, two five-inch tile are laid side by side in the same trench; these will doubtless avoid the necessity of the open ditch heretofore existing.

The cost has not been far from forty dollars ($40) per acre. Students dug the trenches by the rod at twenty cents, and averaged about their usual pay per hour, the trenches being about three and a half (3½) feet in depth. This is as low as the work upon our soil can be done by hand. The use of a team and proper implements might, perhaps, reduce the cost somewhat. The laying of the tile and the filling of the ditches can be done for from five to ten cents per rod, the team and scraper being used for the latter. Two-inch tile at the best manufactories of Illinois are about fifteen dollars ($15) per thousand, upon which some discount has usually been allowed to the University. Delivered upon the ground, their cost is about two cents per running foot, or say thirty cents per rod, making from fifty-five to sixty cents per rod for total cost. In some localities the cost of the tile would be more and in other places less than the above amount, but the total cost upon prairie lands, not remote from railway stations, will probably be not less than fifty cents, and need not be more than seventy. With parallel drains forty feet apart, there are about sixty-five rods, running measure, to the acre; at sixty cents each, the cost per acre is thirty-nine dollars ($39), to which something must be added for the extra expense of the larger tile in the mains, and in some cases for angular spaces having more than one drain for each forty feet of width.

It is too early to speak confidently about the value of these drains as seen upon the University lands, excepting the advanced dryness observed in the spring and consequent early fitness for working. This has always been very noticeable, but observed difference is reported during the drought of the last season. A single drain runs from north to south on the east side of the present college grounds to the stream crossing the arboretum plot, and it is a marked fact that the teamsters crossing the low portion near the brook went out of their way some distance to the line of this drain, and there found much the best roadway during the wet spring time.

FOREMEN.

Mr. Vickroy as foreman of the orchards, and vegetable and fruit gardens, and Mr. Franks, as florist, have been faithful and efficient in their work, and as I believe, have been earnestly endeavoring to advance the interests of the University. Harmony and good will have prevailed during the year, and it is hoped some progress in the right direction has been accomplished.

DONATIONS.

One Kirby Two-wheeled Mower	D. M. Osborne & Co., Auburn, N. Y.
One Wier Corn Cultivator	Wier Plow Company, Monmouth, Ill.
One Corn Dodger Cultivator	Harper & Mitchell, El Paso, Ill.
One Champion Cultivator ($25 off)	King & Hamilton, Ottawa, Ill.
One Deere Cultivator ($18 off)	John Deere & Co., Moline, Ill.
One Patent Stirring and French Plow	Fleuner & Call, Urbana, Ill.
One Patent Harrow	S. Hutchinson, Griggsville, Ill.
Collection of small Fruits	A. S. Fuller, Ridgewood, N. J.
Turner's Seedling Raspberry	I. Baldwin, Jacksonville, Ill.
Collection Peach Buds	P. R. Wright, Cobden, Ill.
Collection Cherry Buds	Dr. E. S. Hull, Alton, Ill.

Very respectfully submitted,

T. J. BURRILL,
Prof. Botany and Horticulture.

PAPERS ACCOMPANYING REPORT OF PROF. BURRILL.

"A."—*Record of Experimental Grafts*, 1871.

	Per cent. living.	Av. growth in inches.
1st cut of root and 1st cut of cion	90	14 7-9
" " " " 2d " "	70	9 5-14
" " " " 3d " "	80	8 1-16
" " " " 4th " "	60	19 1-16
2d " " " 1st " "	70	14 8-14
" " " " 2d " "	80	15 13-16
" " " " 3d " "	30	8 1-2
3d " " " 1st " "	30	0
" " " " 2d " "	40	9 5-8
" " " " 3d " "	70	10 1-4
" " " " 4th " "	40	7
4th " " " 1st " "	30	11 2-3
" " " " 2d " "	none.	
" " " " 3d " "	40	12 1-8
" " " " 4th " "	20	8
6-inch root, 1st cut of root	80	22 9-16
6 " " 2d " "	50	8 2-15
4 " " 1st " "	80	16 1-8
4 " " 2d " "	70	19 1-7
$2\frac{1}{2}$ " " 1st " "	60	14 1-16
$2\frac{1}{2}$ " " 2d " "	20	9
$2\frac{1}{2}$ " " 3d " "	10	9
$2\frac{1}{2}$ " " 4th " "	30	12 2-3
$1\frac{1}{2}$ " " 1st " "	30	21
$1\frac{1}{2}$ " " 2d " "	10	23
$1\frac{1}{2}$ " " 3d " "	40	12 1-2
$1\frac{1}{2}$ " " 4th " "	30	17
$2\frac{1}{2}$ " " 1st " inverted	30	14 5-6
$2\frac{1}{2}$ " " 2d " "	30	14 1-4
$2\frac{1}{2}$ " " bottom cut inverted	none.	
1st cut of root 6 times larger than cion	80	21 3-4
" " " 4 " " " "	70	18 9-14

The above grafts were grafted February 8, 1871. using Ben. Davis cions, 10 each of the above list, wrapping the grafts with waxed thread, and packing them in moist saw dust. They were set in nursery April 8, 1871, all with the same care, and gave them the same attention and cultivation. The cions used for grafting the different lengths and sizes of roots were taken from the same part of different shoots as nearly as we could get them. Those making the most even growth, 1st and 2d cut of root, and the 2d cut of cions; 2d 6-inch roots, 1st cut of roots; 3d roots, 6 times larger than cions.

AVERAGES, PER CENT. AND GROWTH.

	Per cent. living.	Av. growth inches.
1st cut of root	72	12.81
2d " "	60	12.98
3d " "	45	8.96
4th " "	30	8.21
1st " of cion	52	12.51
2d " "	63	11.59
3d " "	55	9.63
4th " "	40	11.35

"B."

SMALL FRUITS.

We planted the following varieties for experiment, received from A. S. Fuller. N. Y.:

RASPBERRIES.—American White Cap, Canada Black Cap, Davidson's Thornless, Doolittle, Elsie, Fay's Thornless, Gardener, Garden, Mammoth Cluster, McCormick, Miami, Ohio Everbearing, Pearl, Purple Cane, Surprise, Summit, Seneca, Woodard's Monthly, Westchester, Arnold's No. 3, Arnold's Orange, Turner, Cattawisla, Corse's Seedling, Clarke, Ellisdale, Hornet, Prince of Wales, Imperial or Bristol, Philadelphia, Brinkle's Orange, Rivers' Black, Red Canada.

CURRANTS.—Downing Cluster, Missouri, White Goudoin, White Dutch, Variegated Leaf, Fertile de Patters, Cherry, Connecticut Sweet,Caucasian, Black Naples, Budden's Hillroth, Long-bunched Red, Bang up Black, Imperial, Native de Beston, Holland Long Grape, Hockroth's, Fertile de Anjers, Red Provens, Prince Albert, Ogden's Black Grape, May Victoria, Knight's Early Red.

BLACKBERRIES.—Claret, Crystal White, Dorchester, Halcomb, Kittatinny, Mason's Mountain, Sable Queen, Wilson.

GOOSEBERRIES.—Houghton, Mountain Seedling, Smith's Gooseberry, Transparent, Warrington.

These were not planted till quite late, and the dry weather killed quite a number of them.

SMALL FRUITS FOR PROFIT.

We planted three-fourths of an acre of Concord, Ives, Hartford and Clinton; mostly Concord. One fourth of an acre of Kittatinny blackberries, and two or three hundred raspberries.

The following varieties of grapes were planted for experiment, placing one Concord between each variety, to compare with two of each of the other varieties: Albey, Arnold's No. 1, Clinton, Cassady, Catawba, Creveling, Delaware, Eumelan, Gothe, Herbemont, Hartford, Ives, Isabella, Israella, Lyman, Lenoir, Norton's Virginia, Oporto, Salem, Tokalen Taylor, Telegraph, Union Village, Adirondac, Diana, Mary Ann, Martha, Maxatawney, Northern Muscadine.

"C."

NATURAL ORDERS; ORNAMENTAL PLANTS.

1. Begoniaceae.
2. Verbenaceae.
3. Labiatae.
4. Borraginaceae.
5. Polemoniaceae.
6. Convolunlaceae.
7. Solonaceae.
8. Apocynacea.
9. Asclepiadaceae.
10. Yasminaceae.
11. Araliaceae.
12. Caprifoliaceae.
13. Dipsaceae.
14. Compositae.
15. Lobeliaceae.
16. Primulaceae
17. Plumbaginaceae.
18. Begoniaceae.
19. Pedaliaceae.
20. Scrophulareacea.
21. Oleaceae.
22. Nyetaginaceae.
23. Phytolaccoceae.
24. Basellaceae.
25. Amarantaceae.
26. Geraniaceae.
27. Onagraceae.
28. Crassulaceae.
29. Sarcifragaceae.
30. Possifloriaceae.
31. Ruphorbiaceae.
32. Ulmaceae.
33. Artocarpaceae.
34. Urticaceae.
35. Platanaceae,
36. Peglanstaceae.
37. Cupuliferae.
38. Ranunculaceae.
39. Berboridaceae.
40. Papaveraceae.
41. Fumariacea.
42. Cruciferae.
43. Resedeacea.
44. Violaceae.
45. Caryophyllacea.
46. Porterlaceae.
47. Wesembryacea.
48. Malvaceae.
46. Camelliaceae.
50. Aurantaceae.
51. Linaceae.
52. Oxalidaceae.
53. Balsamnaceae.
54. Tropaedlaceae.

55. Rutaceae.
55. Anacardiaceae.
57. Pittosporaceae.
58. Auraceae,
59. Sapindaceae.
60. Celastraceae.
61. Vitaceae.
62. Leguminosae.
63. Rosaceae.
64. Myrtaceae.
65. Dethraceae.
66. Polygonaceae.
67. Acanthaceae.
68. Rubiaceae.
69. Liliaceae.
70. Commelynaceae.
71. Cyperaceae.
72. Gramineae.
73. Lycopodiaceae.
74. Filices.

CATALOGUE OF PLANTS, IN THE UNINERSITY GROUNDS AND GREEN-HOUSES.

Natural Order, BEGONIACEÆ.

Genera Begonia:
- Zebrina.
- Hydrocotilifolia,
- Lairusii.
- Ricinifolia,
- Agrostigma.
- Cocularis.
- Nidida.
- Semperflores.
- Sandersii.
- Parvifolia.
- Dragii.
- Odorata.
- Carnea.
- Fuchioides Alba.
- Hybrida Multiflora.
- Manicata.

Begonias (Rex varieties):
- Rex.
- Argentea.
- Queen of Hanover.
- Silver Chain.
- Estrella de Brazil.
- Picta.
- Queen of England.
- Silver Queen.
- Marshalii.

Natural Order, VERBENACEÆ.

Verbena Hybrida:
- Philadelphia.
- Flirt.
- Loyalty.
- Alexis.
- Imperatrice Elizabeth.
- Banner.
- Claret Queen.
- Monstrosa Superba.
- Acme.
- Alemna.
- Snowdrift.
- Ball of Fire.
- Waregan.
- William Dean.
- Harkaway.
- White Fawn.
- Jessie.
- Colfax.
- Carminata.
- Defiance.
- Annie.

Verbana Hybrida:
- Melville.
- Argus.
- Lord Carnarvon.
- Formosa.
- Vesta.
- Purpurea.
- Isoline,
- Romance.
- Fire-Fly.
- John Tulleys.
- Snowflake.

Latana Hybrida:
- Marcella.
- Adolphus Avas.
- Alba Multiflora.
- Multabilis.
- Grand Sultan.

Aloysia Citrodora.

Clerodendrum:
- Balfordii.
- Fragrance Flora Plena.

Natural Order, LABIATÆ.

Salvia:
- Coccinea.
- Leucanthea.
- Splendens.

Sylvia:
- Gordonii.
- Carnea.
- Patens.

NATUCAL ORDER, LABIATÆ,—*Continued.*

Coleus Verchafeltii:
Albert Victor.
Her Majesty.
Prince Arthur.
Officinalis.

Coleus Verchafeltii:
Setting Sun.
Maurettii
Bansuii.
Berkleyii.

NATURAL ORDER, BORRAGINACEÆ.

Heliotropium Peruvianum:
Triomphe de Leige.

Heliotropium Peruvianum:
Jersey Belle.

NATURAL ORDER, POLEMONIACEÆ.

Phlox:
Paniculata.
Drumondii.

Phlox:
Subulata.

NATURAL ORDER, CONVOLVULACEÆ.

Quamoclit.
Vulgaris.
Coccinea.
Batatas:
Edulis.

Pharbitis Nil.
Ipomea grandiflora.
Convolvulus:
Muritanicus.

NATURAL ORDER, SOLANACEÆ.

Solanum:
Jasmenoides.
Pseudo capsicum.
Capsicastitum.
Brugmansia:
Suavolens.
Petunia Hybrida:
General Grant, double.
Magnet, " "

Petunia Hybrida:
Gem, double.
Mrs. Parker, " "
Adriene, " "
Nierembergia:
Rivularis.
Gracillis.
Fabiana Imbricata.

NATURAL ORDER, APOCYNACEÆ.

Vinca:
Minor.
Major.
Varigata.
Rosea.
Alba.

Vinca:
Alba.
Nerum:
Oleander rosea.
Alba.
Aure.

NATURAL ORDER, ASCLEPIADACEÆ.

Hoya;
Canosa.

Hoya:
Bella.

NATURAL ORDER, JASMINACEÆ.

Genera Jasminum:
Fruticans.

Genera Jasminum:
Officinale.

NATURAL ORDER, ARLIACEÆ.

Genera Hedera Helix:
Variety Hibernica.

Genera Chinevesis.
Varigata.

NATURAL ORDER, CAPRIFOLIACEÆ.

Genera Symphoricarpus, (or Snowberry):
Racemosus.
Occidentalis.
Lonicera, or Honeysuckle:
Tartarica.
Japonica.

Genera Symphoricarpus, (or Snowberry):
Grata.
Viburnum or Snowball:
Opulus.
Tinus.

NATURAL ORDER, DIPSACEÆ OR TEASELWORTS.

Scabiosa:
Atropurpurea.

NATURAL ORDER, COMPOSITÆ OR ASTERWORTS.

(Tribe 2) Eupatoriacea:
Ageratum:
Mexicana.
Variety Wrex Alba.
" " Varigata.
Mikania Scandens:
Eupatorium:
Augustifolia.
(Tribe 3) Grandiflora:
Asteroideae.
Aster:
Chinensis.
Bellis or Garden Daisy:
Perennis.
Dahlia, (about30 varieties.)
(Tribe 4) Zinnea:
Elegans.
Achillea:
Millefolium.
Matricaria:
Parthenium.
Chrysanthemum.
Chrysanthemum:
Sinense.
Tanacetum:
Vulgare.
Artemisia:
Abrotauum.
Argentea.
Stellaris.
Helichrysum:
Bracteosum.
Cacalia:
Coccinea.
Cineraria:
Platanifolia.
Populifolia
(Tribe 5) Tagetes:
Patula.
Erecta.
Centaurea:
Candida.
Gymnocarpa.

NATURAL ORDER, LOBELIACEÆ.

Lobelia speciosa.

NATURAL ORDER, PREMULACEÆ.

Primula:
Sinensis rubra.
Alba.
Alba, fl. pl.
Cyclamen:
Persicum album.
Rubrum.
Lysimachia:
Nummularia.

NATURAL ORDER, PLUMBAGINACEÆ.

Plumbago: Capensis.

NATURAL ORDER, BEGNONIACEÆ.

Ticonia:
Radicans.
Catalpa:
Bignonioides.

NATURAL ORDER, PEDALIACEÆ.

Martynia: Proboscidea.

NATURAL ORDER, SCROPHULARIACEÆ.

Calceolaria:
Hybrida.
Linaria:
Vulgaris.
Antirrhinum:
Majus.
Maurandia:
Barklayana.
Lophospernum:
Scandens.
Penstemon:
Gentianoides.
Paulowni:
Imperialis.
Russelia:
Juncea.
Mimulus:
Lutens.
Moschatus.
Digitalis:
Hybrida.
Veronica:
Spicata.
Varigata.

NATURAL ORDER, OLEACEÆ.

Fraxinus:
- Americana.

Syringa:
- Vulgaris.
- Persica.

Forsythia:
- Veridissima.

Ligustrum:
- Vulgare.

Olea:
- Americana.

NATURAL ORDER, NYCTAGINACEÆ.

Mirabilis: Jalapa.

NATURAL ORDER, PHYTOLACCACEÆ.

Phytolacca:
- Decandra.

Rivina.

NATURAL ORDER, BASELLACEÆ.

Boussingaultia: Baselloides.

NATURAL ORDER, AMARANTACEÆ.

Amarantus:
- Paniculatus.
- Melancholicus.
- Tricolor.
- Salisifolia.

Celosia:
- Cristata.

Alternanthera:
- Versicolor.

Alternanthera:
- Parichoides.
- Amabilis.

Achyranthes:
- Gibsonii.
- Borbonica.
- Aurea reticulata.
- Lindenii.
- Verschafeltii.

NATURAL ORDER, GERANIACEÆ.

Pelargonium:
- Adoratissimum.
  - Nutmeg-scented.
  - Apple-scented.
- Zonale:
  - White Perfection.
  - Donald Beaton.
  - Mrs. Smith.
  - Bridesmaid.
  - Florie de Corbany.
  - Indian Yellow.
  - Stella.
  - Christiana.
  - Tom Thumb.
  - General Grant.
  - Queen of England.
  - Amy Hogg.
  - Bicolor.
  - Sheen Bird.
  - Snowball.
  - Luna.
  - Giganta.
  - Queen of the West.
  - M'lle Nillson.
  - Ephraim.
  - Mrs. W. Paul.
  - King of Scarlets.
  - President.
  - Glorie de Nancy—Wm. Phitzer.
  - Madam Lemoin—Triomphe de Loraine.

Pelargonium—
- Zonale marginata:
  - Manglesii.
  - Cloth of Gold.
  - Sunset.
  - Mrs. Pollock.
  - Burning Bush.
  - Mount of Snow.
  - Flower of the Day.
  - Golden Chain.
- Peltatum:
  - Elegans.
  - Fairy Belle.
  - L'Elegant.
- Quercifolium: Oak-leaf.
- Radula:
  - Peppermint-scented.
  - Spice-scented.
- Graveolens:
  - Lemon.
  - Rose-scented.
  - Dr. Livingstone.
  - Shrubland Pet.
  - Rose Balm.
  - Walnut-scented.
  - Lady Plymouth.
- Hybrida:
  - Mr. Beck.
  - General Taylor.
  - Masterpiece.

NATURAL ORDER, GERANIACEÆ—*Continued.*

Pelargonium—
Hybrida:
Madam Mullet.
Captivation.
Ignea.
Cardinal Richelieu.
Eleanor.
Carlos.
Child of Achilles.
Comptonian.

Pelargonium—
Hybrida:
Butterfly.
Plato.
Arabian.
General Hancock.
Lady Ulrice.
Brutus.
Souvenir.
Vesper.
Diadematum.

NATURAL ORDER, ONAGRACEÆ.

Centradenia:
Grandiflora.
Florabunda.
Rosea.
Clarkia:
Pulchella.
Fuchsia:
Coccinea.
Fairy.
Fulgens.
Hybrida:
Black Prince.
Annie.
White Perfection.
Madam Cornelisson.
Rose of Castelle.
La fu du Rhin.
Duchess of Lancaster.
Emperor of Fuchsias.
Little Bopeep.
Mastodon.

Fuchsia—
Hybrida:
Prince Imperial.
Schiller.
Albertus.
Meteor.
Marshall McMahan.
Elm City.
Madam Polk.
Speciosa.
Souvenir de Cheswick.
Day Dream.
White Lady.
Garabaldi.
Herculanum.
Puritain.
Weltshire Lass.
Margenata.
Lord of the Isle.
Beatrice.

NATURAL ORDER, PASSIFLORACEÆ.

Passiflora:
Decaisneana.
Alata.

Passiflora:
Trifaceata.
Incarnata.

NATURAL ORDER, CRASSULACEÆ.

Sedum:
Carneum.
Varigatum.
Seaboldii.
Varigata.

Sempervivum:
Tectorum.
Echeveria:
Secunda.
Rochea:
Coccinea.

NATURAL ORDER, SAXIFRAGACEÆ.

Hydrangea:
Hortensis.
Varigata.
Philadelphus:
Inodorus.

Philadelphus:
Grandiflorus.
Deutzia:
Gracilis.
Scabra.

NATURAL ORDER, EUPHORBIACEÆ.

Euphorbia:
- Splendens.
- Cyparissias.
- Marginata.

Poinsettia:
- Pulcherrima.

Ricinus:
- Communis.
  - Sanguinea.
  - Bourbonica.
  - Macrocarpus.
  - Giganteus.

Buscus:
- Sempervirens.
  - Varigata.

NATURAL ORDER, ULMACEÆ.

Ulmus:
- Americana.
- Racemosa.

Celtis:
- Occidentalis.

NATURAL ORDER, ARTOCARPACEÆ.

Maclura:
- Aurantiaca.

Ficus: Carica.

Ficus:
- Bengalensis.
- Nitida.

NATURAL ORDER, URTICACEÆ.

Pilea:
- Indica.

Boehmeria:
- Argentea.

NATURAL ORDER, PLATANACEÆ.

Platanus: Occidentalis.

NATURAL ORDER, JUGLANDACEÆ.

Juglands:
- Cinerea.
- Nigra.

Carya:
- Alba.

NATURAL ORDER, CUPULIFERÆ.

Castanea: Vesca.

NATURAL ORDER, RANUNCULACEÆ.

Clematis:
- Flammula.

Hepatica:
- Triloba.

Aquilegia:
- Vulgaris.

Delphinium:
- Consolida.
- Grandiflorum.

Pæonia:
- Officinalis.
- Albiflora.

Liriodendron:
- Tulipefera.

NATURAL ORDER, BERBERIDACEÆ.

Berberis:
- Vulgaris.
- Aquifolium.

Berberis:
- Purpurea.

NATURAL ORDER, PAPAVERACEÆ.

Bocconia:
- Japonica.

Papaver: Rhæas.

Eschscholtzia:
- Californica.

NATURAL ORDER, FUMARIACEÆ.

Dicentra: Spectablis.

NATURAL ORDER, CRUCIFERÆ.

Matthiola:
- Annuus.
- Incanus.

Arabis:
- Verna.

Cheiranthus: Cheri.

Alyssum:
- Maritimum.
  - Varigatum.

Iberis:
- Umbellata.

NATURAL ORDER, RESIDACEÆ.

Reseda:
- Adorata.

Reseda:
- Luteola.

NATURAL ORDER, VIOLACEA.

Viola:
- Odorata.

Viola:
- Tricolor.

NATURAL ORDER, CARYOPHYLLACEÆ.

Dianthus:
- Barbatus.
- Chinensis.
- Caryophyllus.

Dianthus:
- Plumarius.

Saponaria:
- Officinalis.

NATURAL ORDER, PORTULACACEÆ.

Portulaca: Grandiflora.

NATURAL ORDER, MESEMBRYACEÆ.

Mesembryanthemum:
- Crystallinum.

Mesembryanthemum:
- Grandiflorum.
- Spectablis.

NATURAL ORDER, MALVACEÆ.

Althea:
- Rosea.

Abutilon:
- Striatum.
- Thomsonii.
- Mesopotamicum.

Abutilon:
- Van Houtii.

Malviviscus:
- Floridana.

Hibiscus:
- Syriacus.

NATURAL ORDER, CAMELLIACEÆ.

Camellia: Japonica.

NATURAL ORDER, AURANTIACEÆ.

Citrus: Chinensis.

NATURAL ORDER, LINACEÆ.

Linum:
- Trigynum.

Linum:
- Grandiflorum.

NATURAL ORDER, OXALIDACEÆ.

Oxalis: Violacea.

NATURAL ORDER, BALSAMINACEÆ.

Impatiens: Balsamina.

NATURAL ORDER, TROPÆOLACEÆ.

Tropæolum:
- Majus.
  - Plena.

Tropæolum:
- Aduncum.

NATURAL ORDER, BUTACEÆ.

Mahernia:
- Odorata.

Ailantus:
- Glandulosa.

NATURAL ORDER, ANACARDIACEÆ.

Rhus: Cotinus.

NATURAL ORDER, PITTOSPORACEÆ.

Pittosporum: Tobira varigata.

NATURAL ORDER, ACERACEÆ.

Acer:
- Rubrum.
- Saccharinum.
- Platanoides.

Negundo:
- Aceroides.

NATURAL ORDER, SAPINDACEÆ.

Æsculess:
- Hippocastanum.

Cardiospermum:
- Haliacabum.

NATURAL ORDER, CELASTRACEÆ.

Euonymus:
- Americanus.
- Japonica.

Euonymus—Japonica:
- Varigata aurea.
- Argentea.

NATURAL ORDER, VITACEÆ.

Ampelopsis: Quinquefolia.

NATURAL ORDER, LEGUMINOSÆ.

Mimosa:
- Rudica.

Acacia:
- Armater.

Gymnocladus:
- Canadensis.

Cercis:
- Canadensis.

Swainsonia:
- Galegifolia.

Clianthus:
- Dampierii.

Lathyrus:
- Adoratus.
- Latyfolius.

Wistaria:
- Frutescens.

NATURAL ORDER, ROSACEÆ.

Amygdolus:
- Pumila.

Cydonia:
- Japonica.

Rosa:
- Getigera.
- Multiflora.
- Rubiginosa.
- Indica.
- Eglanteria.

Rubus:
- Alba-grandiflora-plenum.

Fragaria:
- Chinensis.

Spireaia:
- Hypericifolia.
- Ulmaria.
- Lobata.
- Prunifolia.

NATURAL ORDER, LYTHRACEÆ.

Lagerstrœmia:
- Indica.

Cuphia:
- Platzcentria.

NATURAL ORDER, POLYGONACEÆ.

Coccoloba: Indica.

NATURAL ORDER, ACANTHACEÆ.

Justicea:
- Nerosa.
- Carnosa.

Justicea:
- Pendiculata.

NATURAL ORDER, RUBIACEÆ.

Bouvardia:
Aurantacæ.
Hogarth.

Bouvardia:
Liantha.

NATURAL ORDER, MYRTACEÆ.

Myrtus:
Communis.
Romana.

Psidium:
Cattleianum.
Metrosideros:
Floribunda.

NATURAL ORDER, LILIACEÆ.

Tulipa:
Gesneriana.
Fritillaria:
Imperialis.
Dracæna:
Ferrea.
Confesta.
Terminalis.
Yucca:
Filamentosa.
Scilla:
Præcox.
Sibirica.
Convallaria:
Majalis.

Ayacinthus:
Orientalis.
Lachenalia:
Quadricolor.
Lilium:
Candidæm.
Lancifolium Album.
Rubrum.
Roseum.
Auratum.
Trigrinum.
Atrosanguineum.
Martagon.
Venustum.
Tritorna:
Uvaria.

"D."

Forest Record and Cost, so far—February 29, 1872.

Name of trees.	No. acrs	No. of trees.	Age of trees when plant'd.	Cost of trees.	Cost of planti'g	Cost of culti-vation.	Dis-tance plat'd	Per cent. living	Av. gro'th in feet and inch's	Total cost—so far.
Ash, Green	¼	1,360	3 ys.	$27 20	$6 95	$6 19½	2x4	.98	.6	$40 34½
Ash, White	2¾	14,974	2	149 74	35 63½	4 79	2x4	.95	.6	190 16½
Catalpa	¼	1,361	2	21 77	4 17½	2 53	2x4	100	1	28 47½
Chestnuts	¼	1,361	2	30 00	6 79½	3 95	2x4	.50	.6	40 74½
Elm, White	⅛	860	2	4 76	3 95	3 43	2x4	100	1	12 14
Larch, European	2	10,890	1	98 01	21 20½	8 50	2x4	.25	.6	127 71½
Maple, White	⅛	680	3	8 16	6 17½	3 89	2x4	.98	1	18 22½
Osage Orange	¼	1,361	2	5 44	4 78	1 30	2x4	.98	2	11 52
Pine, Austrian	¼	680	9 to 12 in	30 00	4 40	2 94	4x4	.2	.....	37 34
Pine, Scotch	¼	680	1 to 2 ft.	30 00	4 25	3 04	4x4	.2	.....	37 29
Walnuts, White	¼	1,361	2 ys.	20 40	3 43½	85	2x4	.99	.6	24 98½
Willow, White	¼	1,361	1	8 00	4 67	1 42	2x4	.98	2	14 09
Totals	7	36,749		$433 48	$106 72	$42 83½				583 03½

All the above trees looked fine the first part of the season, but the after part the White Grub (the larvæ of the May Beetle,) almost destroyed some of the varieties. They worked mostly on the European Lark and White Ash; in some instances girdling the roots entirely,

from one and a half inches below the surface, several inches down; and owing to the season being so dry, they could not repair the injury. White Ash two feet high were girdled in the same manner. In the case of the Austrian and Scotch Pines, we attribute it mostly to the dryness of the season in losing so many. The Scoth Pine were never transplanted before, which we think was one cause of so many dying. Chestnuts were injured somewhat by the grub.

"E."

The Experimental Apple Orchard.

The Experimental Apple Orchard was planted to corn, and kept well cultivated. The trees made an average growth of two and a half feet. The following varieties bore a few apples: Seedling of the Red Siberian Crab; very fine specimen, as large as the Transcendant; very dark red flush, in the sun; good to eat from the hand. This tree bore a few apples last year. Cooper's Early White bore two apples; Rambo, one; both proving true to name.

Insects were not quite so numerous in the orchards as last year. We had a few of the Tent and Datana Ministra Caterpillars. The Hammond leaf-tier was not so numerous as last season.

We planted, in orchard, 42 varieties of apple trees—two of each variety, received from Hon. W. C. Flagg, Alton, Illinois, as a donation.

We planted every tenth row througd the orchard, north and south, with Norway Spruce fifteen to eighteen inches, two feet apart, designing to thin out eight feet when necessary.

VARIETIES OF APPLES IN EXPERIMENTAL ORCHARD.

No.	Name.	Origin.	Season.
1	Aberdeen		
2	Abraham	Pennsylvania	
3	Adams	Pennsylvania	
4	Aisles	Pennsylvania	
5	Alabama Pippin	Pennsylvania	
6	Alleis	North Carolina	October and November
7	Alleis, Sweet	Massachusetts	
8	Alleghany Spot	Maryland	
9	Alleghany, Nickajack		
10	Alexander		October and December
11	Alluae	North Carolina	January and April
12	Alphian	Kentucky	
13	Amelia	Europe	January and February
14	American Beauty	Massachusetts	December and April
15	American Golden Pippin		November and February
16	American Maygold		November
17	American Nonpariel		August
18	American Pippin		Winter
19	American Summer Pearmain		
20	American Summer Pippin		
21	Amos Jackson	Pennsylvania	

Catalogue—Continued.

No.	Name.	Origin.	Season.
22	Anderson		
23	Andrew's Red		
24	Ananas Reinette		
25	Anjou Pippin		
26	Apple—resembling Nickajack		
27	Ashmore		October and November
28	Aucubifolia Crab		
29	Augusta Pippin		
30	Aunt Susan's Favorite	Missouri	August
31	Austin Pippin		
32	Autumn Bough		August and October
33	Autumn Sweet Bough		
34	Averill Bough		February and June
35	Baccalinus	Missouri	March
36	Baccatus Crab		
37	Baker	Connecticut	October and February
38	Balm	Vermont	October
39	Balsburg		
40	Bailey's Sweet, of Ind		November and March
41	Baltimore		December and April
42	Battlefield	North Carolina	
43	Bard		
44	Barrett	Connecticut	January and March
45	Bastard Janet		
46	Beachenwell	England	December and March
47	Beauty of Kent		October and March
48	Beauty of West		November and February
49	Belle, Southern		
50	Bell et Bonne	Connecticut	March
51	Belle des Jardus	France	November and January
52	Benjamite		
53	Benoni	Massachusetts	August
54	Bentley's Sweet	Virginia	
55	Bergner	Missouri	February and April
56	Berry		
57	Best		
58	Best Pool	England	November and March
59	Betsy		November and January
60	Betsy's Fancy		December and March
61	Betsy's Favorite		
62	Bevau's Favorite	New Jersey	
63	Beverly		
64	Bidit	France	December and February
65	Black Apple (Preble)		November and February
66	Black Apple (Teas)		
67	Blackburn	Kentucky	September and November
68	Black Coal		November and February
69	Black Detroit		September
70	Black Crab		
71	Black Gilliflower		November and February
72	Black Hawk		
73	Black Jack	Ohio	January and February
74	Black Warrior	Alabama	November and December
75	Black Annette		November and December
76	Blakesly Seek-no-further		
77	Blanche Precoce	France	June and August
78	Bledsoe	Kentucky	September and April
79	Bledsoe Pippin	Kentucky	December and April
80	Blinkbonny	Canada	September
81	Blockley	Pennsylvania	November and January
82	Blondin	Indiana	October and November
83	Blood Red Crab		
84	Blooming Orange	Pennsylvania	November and December
85	Blue Mountain		November and February
86	Bluff Pearmain	Indiana	
87	Boss	Pennsylvania	January and March
88	Bruner	North Carolina	November and December
89	Bruner, or Green Winter Sweet, of Ky		
90	Boran's Winter	Delaware	
91	Borsdorfor		November and January
92	Bough		July and August
93	Bouler's Favorite		
94	Brabant Belleflower	Holland	October and January
95	Brandywine	Delaware	January and February
96	Brenneman	Pennsylvania	August and September
97	Brewer	Mississippi	October and November

Catalogue—Continued.

No.	Name.	Origin.	Season.
98	Bristol	Connecticut.	January and March
99	Brittle Sweet		October and November
100	Brooks' Pippin	Virginia	November and March
101	Brown	Pennsylvania	October and November
102	Brown's Superior	Ohio	
103	Brown's Sweet	Indiana	
104	Bruce's Summer		
105	Bucks County Pippin	Pennsylvania	November and March
106	Buckram	Long Island	August
107	Buckingham	Virginia	November and February
108	Buel's Favorite		November
109	Buff	North Carolina	December and January
110	Bull Head		
111	Bullock's Pippin		
112	Burchardt	France	
113	Burley's Sweet		
114	Burman's Sweet		
115	Burrough's Greening	New York	January and February
116	Burr's Winter Sweet	Massachusetts	November and March
117	Bush	Pennsylvania	September
118	Bushwhacker	New Jersey	February and May
119	Butter, Ind	Indiana	
120	Byers		
121	Cabbage Head	New Jersey	December
122	Cabin		
123	Cable's Gilliflower		
124	Cache	Illinois	November
125	Camack's Sweet	North Carolina	February
126	Campbleite		
127	Campfield		April and May
128	Canada		
129	Canada Reinette		December and April
130	Cam		
131	Cannon Pearmain		December and March
132	Captain		December and March
133	Cardinal Red		January and February
134	Carolina Red	North Carolina	
135	Carolina Red Streak		
136	Caroline of W. J		December and March
137	Carpenter		January and March
138	Carpenter's Winter		
139	Carter of Ala	Alabama	November and March
140	Carter of Pa		
141	Carter of Miss		
142	Carver of N. Y		
143	Cathead		October and November
144	Cathead of Pa		
145	Cathead of Jones		Fall
146	Cedar Falls	North Carolina	November and February
147	Celestia	Ohio	September
148	Challenge	Ohio	October and June
149	Champagne	France	November
150	Chancelor of Oxford		
151	Chenango Strawberry	New York	September and October
152	Chester Red Streak	Pennsylvania	November and December
153	Chester, Spitzenberg	Pennsylvania	February and April
154	Cherokee Red		
155	Cheston		November and March
156	Cheoor (?)	North Carolina	
157	Chronical	Indiana	
158	Cider (not Smith's)	Wisconsin	Fall
159	Clapington		September
160	Clarke	New York	October and November
161	Clarkson	Michigan	
162	Clarke's Pearmain	North Carolina	December
163	Claude Provens	France	March and April
164	Cloth of Gold	Europe	Fall
165	Cloud, S. C		
166	Coe's Golden Drop		November and February
167	Coeur de Bouf	France	November and January
168	Cogswell	Connecticut	December and March
169	Cole's Quince	Maine	
170	Columbus Red		
171	Columbia		
172	Compte d'Orloff	Russia	
173	Compton		
174	Congress	Massachusetts	November and December
175	Conic June		

Catalogue—Continued.

No.	Names.	Origin.	Season.
177	Connecticut Red Sides		
178	Cook's Greening		
179	Cook's Red		
180	Coon's Red	Indiana	
181	Cooper		
182	Cooper's Early White	Illinois	September and October
183	Cooper's Russet	New Jersey	October and December
184	Cornell's Fancy	Pennsylvania	
185	Corse's Favorite	Canada	September
186	Country Sweet		
187	Cox's Orange Pippin		
188	Cranberry Pippin	New York	November and February
189	Crain's Spice	Illinois	
190	Crawford's Keeper	Ohio	January and March
191	Crimson Pippin		
192	Creek	Pennsylvania	December and March
193	Crooked Red		
194	Crooked Red, S. C		
195	Crow's Egg	Kentucky	October and November
196	Crow's Nest	Ohio	November and January
197	Cullasago	North Carolina	November and March
198	Cullasago, so called		
199	Cullawhee		December and March
200	Cumberland Seedling	Pennsylvania	October and December
201	Curtis' Sweet	Vermont	August and October
202	Curry's Striped Winter	North Carolina	January
203	Cushman's Black		November and February
204	Custard	New York	November and December
205	Daddy	Delaware	August and September
206	Dalongea		
207	Dana Greening		December and March
208	Dartsmouth Sweet	Massachusetts	October
209	Davis of Michigan	Michigan	April and May
210	Davis' White Belleflower		November and February
211	De Boutinge		November and March
212	De Gruchy	South	
213	Delasure		
214	Delight	Ohio	December and March
215	Des Feumes		November and December
216	Deterding's Early		
217	Dickskill		November and December
218	Dr. Fulcher	Kentucky	December and January
219	Dr. Whitset's Winter	Indiana	
220	Dodd Apple		
221	Dodd's Favorite		
222	Dominie		
223	Donahue's Late Blossom		
224	Doucklaer		
225	Dox d'Argent	France	December and January
226	Downing's Favorite		
227	Dpicen Sweet		
228	Drop d'Or		
229	Drumore		
230	Dubriel		
231	Ducket	South	
232	Dumelow of Wis		
233	Dumelow's Seedling		November and March
234	Dunlap Sweet		
235	Durable Keeper	Indiana	
236	Dutch Mignonne	Holland	February and May
237	Duchess of Oldenburg	Russia	September
238	Early Belleflower		
239	Early Joe	New York	August and September
240	Early Harvest		
241	Early Pennock		August and September
242	Early Rambo		
243	Early Red		
244	Early Ripe		
245	Early Strawberry	New York	
246	Easter Pippin		
247	Eggmont Calville		
248	Ellwell's Late		March
249	Emperor		
250	English Crab		January
251	English Golden Pippin		
252	English King		
253	English Red Streak		
254	English Russet of Western N. Y		
255	English Russet of England		

Catalogue—Continued.

No.	Names.	Origin.	Season.
256	Eptings' Premium		
257	Epting's Red		
258	Equinettee	Georgia	
259	Ernst Pippin		
260	Evening Party	Pennsylvania	December and January
261	Ewalt	Pennsylvania	November and March
262	Excel	Connecticut	December and February
263	Exquisite		September and October
264	Fallawater		November and February
265	Fall Beauty		
266	Fall Cheese		October and November
267	Fall Harvey	Massachusetts	October and November
268	Fall Orange	Massachusetts	October and November
269	Fall Pearmain	Connecticut	September and October
270	Fall Stripe		
271	Fall Wine		September and November
272	Fameuse		October and November
273	Fancy June		
274	Farley's Red	Kentucky	January and April
275	Father Abraham	Virginia	Spring
276	Favorite	Kentucky	November and January
277	Fay's Russet	Vermont	April and June
277½	Federal Late Keeper	New York	
278	Fenouillet de la Chine	France	
279	Ferris of Delaware		March and April
280	Fine Juicy Red, like Jeffries		
281	Fine Early		
282	Fink	Ohio	
283	Firm Walter		
284	Fisher's Fall Seedling	New Hampshire	October and November
285	Fleiner		October and November
286	Flora		August
287	Flower of Kent		October and January
288	For a Name		
289	For a Name		
290	For a Name		
291	Foster's Sweet		
292	Fourth of July	Ohio	
293	Foxly Crab		
294	Franklin		
295	Franklin's June		
296	French Apple		
297	From J. B. Proctor, Vt		
298	Fulton	Illinois	
299	Fulton's Summer		
300	Fulton Strawberry		September
301	Garden Royal	Massachusetts	August and September
302	Gardner's Swaar		
303	Gelbe Gestrust		
304	Genesee Chief		September
305	Geneva Pippin		
306	Gentler's Large Red		November
307	Germanite	Ohio	December and March
308	Gestreifter Sommer Zummet Apfel		August and September
309	Gerviss Good	Pennsylvania	December and February
310	Gilpin	Virginia	February and May
311	Gold Apple		
312	Golden Apple		
313	Golden Ball, of Maine	Connecticut	March
314	Golden Ball, of New York		
315	Golden Ball of Preble		
316	Golden Ball, of Downer		
317	Golden Pearmain		November
318	Golden Pippin (Carpenter)		
319	Golden Pippin (Corse & Son		
320	Golden Russet		
321	Golden Russet, of Mass		January and April
322	Golden Seedling	Missouri	February and May
323	Golden Sweet of Lawver		
324	Golden Sweet of Tenn		August and September
325	Golden Winter		
226	Gorden's Seedling	North Carolina	
327	Goudie of Ala		
328	Grab	Virginia	
329	Grafton Sweet		
330	Granny Spice		
331	Grantham		
332	Grantham (Evans)	Georgia	November and April
333	Gravenstein		September and October

Catalogue—Continued.

No.	Names.	Origin.	Season.
334	Great Keeper		
335	Green Belleflower		
336	Green's Choice	Pennsylvania	August and September
337	Green Crank	North Carolina	November and March
338	Green Limber Twig	South Carolina	
339	Green Mountain Russet		
340	Green Pippin	Virginia	Winter
341	Green of Va		Longkeeper
342	Green Winter Sweet		
343	Green Sweet	Pennsylvania	December and March
344	Greist's Fine Winter	Pennsylvania	December and February
345	Grey Apple		
346	Grey House		
347	Grey Vandevere	Indiana	December and April
348	Grimes' Golden	Virginia	March
349	Gross		December
350	Grosse Pigeonette		
351	Grosse Verte (E. B.)	France	Winter
352	Grosse Verte (Leroy)		
353	Gully	North Carolina	
354	Gully, true	Pennsylvania	August
355	Hague	Indiana	December and February
356	Hall	North Carolina	December and April
357	Hallock's Favorite		
358	Hancock	Pennsylvania	December and March
359	Hard Red		
360	Harris	North Carolina	September and November
361	Harrison	New Jersey	November
362	Hart's Pippin		
363	Harvest Red Streak		August and September
364	Hare Apple	Pennsylvania	
365	Hawthornden		
366	Hawley	New York	September
367	Hector	Pennsylvania	November and March
368	Heister	Pennsylvania	
369	Helper		
370	Hempstead		November and January
371	Henwood	Indiana	January and April
372	Henwood's Belleflower, No. 1	Indiana	
373	Henwood's Belleflower, No. 2	Indiana	
374	Herman of Pa	Pennsylvania	November and February
375	Herman of Mo	Missouri	December and May
376	Herr's Winter		
377	Hess	Pennsylvania	December and February
378	Hicks	Long Island	August
379	Higby's Sweet, of Cleveland	Ohio	November and January
380	Higby's Sweet (Davis)		
381	Higby's Sweet (Matteson)	New York	
382	Hightop Winter	Indiana	
383	Hightop Winter Sweet		
384	Hill's Favorite	Massachusetts	September
385	Hill's Long Stem		
386	Hinckley's Sweet		
387	Hislop Crab		
388	Hobb's Late Sweet	Pennsylvania	November
389	Hobb's Late Winter		
390	Hocking	Pennsylvania	August and September
391	Hocket's Sweet	North Carolina	December and March
392	Holdfast		
393	Holland Pippin		
394	Holland's Red Winter	Kentucky	
395	Hollis' Red		March
396	Holly	Georgia	November and March
397	Hominy		August and September
398	Honey Greening		November and February
399	Hooker	Connecticut	November and February
400	Hoops		
401	Hoops' New Pearmain		
402	Hoosier Red	Indiana	
403	Hoover	South Carolina	November and February
404	Hoover's June		
405	Hopkins' Red	Virginia	
406	Horn		December and March
407	Horse Apple		
408	House Apple		
409	Housom's Red	Pennsylvania	December and February
410	Howe's Russet		
411	Hubardston		
412	Hubardston's Nonesuch	Massachusetts	November and March

Catalogue—Continued.

No.	Names.	Origin.	Season.
413	Hughes' Virginia Crab		
414	Hulse's Sweet		
415	Hunge		September and October
416	Hurlburt	Connecticut	October and December
417	Hyatt's Wonderful	North Carolina	
418	Illinois Red		January and April
419	Imperial Gestriester		
420	Imperial Magnifique		October and November
421	Imperial Pearmain		
422	Indian	Pennsylvania	November and April
423	Indiana Winter		
424	Ingraham's Winter	North Carolina	January
425	Iola		
426	Irish Peach		August
427	Isle of Wight Pippin		January and February
428	Jacob Apple		
429	James Coal		
430	James River		
431	Jane	Pennsylvania	December and March
432	Janet of Muir		
433	Jarmine Ballard	Indiana	
434	Jarmonete	Ohio	December and March
435	Jersey Black		
436	Jersey Sweet		August
437	Jewett's Best	New York	December and February
438	Jewett's Fine Red	New Hampshire	November and February
439	John Stuart's Red		November and May
440	Johnson of Massac Co	Illinois	December and March
441	Johnson of Pa		
442	Johnson of Sharp		
443	Johnson of Va		
444	Johnson's Fine Winter	Pennsylvania	November and February
445	Jonathan of Buler		
446	Jonathan (black bark)		
447	Jonathan (red bark)		
448	Jones' Early Harvest		
449	Jones' Sweet		
450	Josephine	France	
451	Julian		July and August
452	Junaluskee	North Carolina	November and March
453	June Apple		
454	Keddleston Pippin		October and June
455	Keim	Pennsylvania	December and March
456	Kelsey	Pennsylvania	March
457	Kennedy Red	Pennsylvania	December and February
458	Kennedy Red	Georgia	November
459	Kentucky Cream	Kentucky	December and March
460	Kentucky King	Kentucky	December and February
461	Kentucky Long Keeper		
462	Kentucky Long Stem		
463	Kentucky Queen		
464	Kentucky Red		
465	Kentish Fill Basket		October and January
466	Keswick Codlin		August
467	Kikita		November and December
468	King Apple		
469	King, S. C	South Carolina	
470	King of Pippins		October and November
471	King's Pocket	Maine	
472	King Tom	North Carolina	August
473	Kingsley	New York	November and February
474	Kirkbridge White		August and September
475	Kleiner Bohn		
476	Knowle's Early	Pennsylvania	August
477	Krauser	Pennsylvania	December and March
478	Krauser's Pippin	Pennsylvania	December and March
479	Kyle's Winter	Kentucky	
480	Lady Apple	France	
481	Ladies Blush	Georgia	October and November
482	Lady Crab		
483	Ladies Favorite		
484	Lady Fitz Patrick	Mississippi	
485	Lady's Sweet		
486	LaFayette of Mass		December and February
487	Lake	Ohio	September and October
488	Lalle		
489	Lancaster Co		
490	Lancaster Greening	Pennsylvania	December and May
491	Lancaster of Ind		

Catalogue—Continued.

No.	Names.	Origin.	Season.
492	Lancaster of Jones	Indiana	
493	Large Fine Red		
494	Large May	Georgia	June
495	Large Never Fail	Illinois	
496	Large Rambo		August and December
497	Large Yellow Bough		
498	Late Strawberry		October and December
499	Ledge Sweet	New Hampshire	December and March
500	Leicester Sweet	Massachusetts	
501	Liberty	Ohio	December and May
502	Limber Twig (of Ring)	Illinois	
503	Limber Twig (Mathias)	Illinois	
504	Lincoln		
505	Lindenveld	New York	September
506	Locust Grove		
507	London Pippin		November and February
508	London Sweet	Ohio	November and February
509	Long Island Russet	New Jersey	October and February
510	Long Stem	Connecticut	September and January
511	Long Stem of Jones		
512	Louries	North Carolina	January
513	Lyon's Pippin		
514	McKoy's Pippin	Pennsylvania	October and December
515	McDowel's Sweet	North Carolina	October and December
516	McLean's Favorite		November and February
517	McLean's Winter Pippin		
518	McLean	Connecticut	December and March
519	Magnolia	Massachusetts	December and January
520	Magnum Bonum		
521	Maiden Apple		
522	Maiden's Blush	New Jersey	Fall
523	Maiden's Bosom	Alabama	July and August
524	Major	Pennsylvania	November and April
525	Mammoth June	Kentucky	July and August
526	Mangum		October and Novembor
527	Mann	New York	
528	Manington		
529	Manington's Pearman	England	October and December
530	Mansfield Russet	Massachusetts	
531	March's Red Seedling	Ohio	November and January
532	Marietta Russet		
533	Marietta Seek-no-further		Spring
534	Marshall of Maine	New Hampshire	April and May
535	Marshall's Sweet	Ohio	November and December
536	Marshall's Red Winter	New Hampshire	December and March
537	Maryland Beauty		October and November
538	Maryland Red Streak		
539	Mary Mayer	Georgia	October
540	Massac Pippin	Illinois	January and March
541	Masters' Seedling of New York	New York	December and March
542	Mattock's Summer		August
543	Mattamusket	North Carolina	December and March
544	Mavorack's Sweet	South Carolina	November and February
545	May of Adair		
546	May Queen		
547	Mead's Keeper	Virginia	November and June
548	Melon	New York	November and March
549	Melt-in-the-Mouth	Pennsylvania	November and December
550	Merwin		December and March
551	Mexico	Connecticut	September and October
552	Michael Henry Pippin	Ohio	November and March
553	Middle	New York	December and February
554	Milam		December
555	Minister	Massachusetts	October and February
556	Mishler's Sweet	Pennsylvania	October
557	Mississippi Red		October and January
558	Missouri Keeper		October and January
559	Missouri Pearmain		
560	Missouri Superior		
561	Monarch		September and October
562	Monk's Favorite	Indiana	November and December
563	Montalivet	France	January and February
564	Moore's Sweeting of Indiana		October and December
565	Morey's Melon		
566	Motes' Red Seedling		
567	Mother	Massachusetts	November and February
568	Mountain Belle	Georgia	November and May
569	Moultrie's Winter	Alabama	
570	Mountain Pippin		

Catalogue—Continued.

No.	Name.	Origin.	Season.
571	Mountain Sprout	North Carolina	December
572	Mountain Sprout of Tennessee	Tennessee	
573	Munson's Sweet	Massachusetts	September and February
574	Murphy's Red		
575	Myer's Nonpareil	Ohio	
576	Nautahatee	Alabama	July and August
577	Naig's August		
578	Neasly Belleflower	Ohio	December and March
579	Needles		December and January
580	Ned or Taylor	Pennsylvania	December and February
581	Nelson's Victory		May and July
582	Neversink	Pennsylvania	May and March
583	Newark King	New Jersey	November and February
584	Newcomer	Virginia	
585	New Hampshire Sweet		
586	Newtown Pippin		
587	Nickajack (Johnson Co.)	Illinois	December and April
588	Nickajack (Berckman's)	North Carolina	
589	Nine Partners		
590	Nix's Large Redstreak		November and May
591	Norfolk Beaufin		January and May
592	N. C. Baldwin		
593	North Carolina Red		
594	Nottingham	Pennsylvania	
595	Nourell's Imperial		
596	No. 55 of Morrison	Ohio	
597	No. 106 of Morrison		
598	No. 108 of Morrison		
599	Nursery		December and February
600	Oblong Crab		
601	Oconee Greening	Georgia	October and November
602	Ohio Limbertwig		
603	Ohio Limbertwig, Massac Co		
604	Ohio Nonpareil	Ohio	October and November
605	Ohio Red Cheek		
606	Orange Pippin	Normandy	October and January
607	Orange Red, Johnson Co		
608	Ortley		November and March
609	Ornament de Table	France	
610	Osborne's Cheese	Georgia	November and February
611	Osborne's Pippin	Georgia	November and February
612	Osceola	Indiana	January and March
613	Oskaloosa		November
614	Ox Sweet	Massachusetts	October and November
615	Panden Sweet		November
616	Paradise Striv d'Hivor	France	January and February
617	Parker		
618	Park's Spice	New York	December and March
619	Partnership		
620	Parmenties Reinette	France	March and May
621	Parrot Reinette		
622	Pasche		
623	Passe Letters		
624	Paulet Russet		
625	Pawpaw	Michigan	December and January
626	Peach		December and April
627	Peach of Kentucky		
628	Peach Pound Sweet	New York	September and November
629	Peak's Red	South Carolina	December
630	Peak's Red Winter	South Carolina	December
631	Pearmain Rouge d'Hivor		
632	Pearmain Russet		
633	Peck's Pleasant	Rhode Island	November and March
634	Pedrick's Mulberry	Indiana	
635	Pekin of Indiana, (Jones)		
636	Pennock	Pennsylvania	
637	People's Choice	Pennsylvania	December and March
638	Pekin d'Or de Large	France	February and March
639	Perkins	North Carolina	October and December
640	Perkins Winter		December
641	Perpetulle	France	
642	Philadelphia Queen		July
643	Phillips' Sweet	Ohio	December and March
644	Pickard's Reserve	Indiana	December and January
645	Pickman	Massachusetts	January and April
646	Pifer	Pennsylvania	January and July
647	Pigeon Blanc		August and September
648	Pigeonette Jerusalem	France	
649	Pine Apple Russet		September and October
650	Pippin, of Mosely	Illinois	

Catalogue—Continued.

No.	Name.	Origin.	Season.
651	Pittsburg	Pennsylvania	November and April
652	Pioneer		
653	Platte a Groose Queen	France	March and April
654	Pleasant Valley Pippin		October and November
655	Poeschell's Sweet	Missouri	
656	Poland Winter		
657	Pomaria Greening	South Carolina	December
658	Pomme de Grisse d'Or		
659	Pomme de Letters	France	
660	Poplar Bluff		
661	Porter Apple	Massachusetts	September
662	Pound Georgia		
663	Pound's July	Kentucky	July and August
664	Pound Pippin of Massac Co		
665	Pound Pippin, N. J		
666	Pound Royal	France	December and April
667	Pound Royal, of Michigan		August and September
668	Pound Royal, of Ohio		
669	Pound Royal, of Kentucky		
670	President	Indiana	February and June
671	President Ewing	Kentucky	February and April
672	Price	South Carolina	February
673	Pride of Richmond		
674	Priestly	Pennsylvania	December and March
675	Priestly Russeting		
676	Primate		August and October
677	Princely	Pennsylvania	October and January
678	Princesse Noble		November
679	Prince's Yellow Winter		November and April
680	Princeton		
681	Prior's Red		January and March
682	Prior's Red	Indiana	
683	Prize Sweet		
684	Prother's Winter	North Carolina	
685	Pum Water Sweet		
686	Pylas Winter		
687	Queen	Georgia	November and April
688	Ragan's Red Sweet	Indiana	October and November
689	Rambo	Delaware	Fall
690	Rambour France	France	September
691	Ramdell's Red Sweet		October and February
692	Rare Ripe		
693	Rare Ripe, (Maning, Ga.)		
694	Rasche of Maine	Maine	December and March
695	Rawle's Janet	Virginia	January and March
696	Rebecca	Delaware	August and September
697	Red Ashmore		
698	Red Astrachan		July and August
699	Red Bonum		
700	Red Cathead	Virginia	October and November
701	Red Cedar		
702	Red Detroit	Canada	Autumn
703	Red Fall Pippin		January and March
704	Red and Green Sweet		August and September
705	Red Jewel of Kentucky	Kentucky	December and January
706	Red Junating		
707	Red Oats	Pennsylvania	
708	Red Limbertwig		
709	Red May	North Carolina	June
710	Red Neverfail		
711	Red Ox	Tennessee	
712	Red Pawpaw		
713	Red Pippin, of Maryland		
714	Red Rance		December and February
715	Red Robinson	Maryland	
716	Red Russet	New Hampshire	January and April
717	Red Seek-no-further	Pennsylvania	December and January
718	Red Seek-no-further, Teas	Illinois	
719	Red Siberian Crab		September and October
720	Red Simmons		
721	Red Streak		Winter
722	Red Stripe, of Pennsylvania		August
723	Red Sheep Nose		
724	Red Sweet-for-a-name	Ohio	November and February
725	Red Sweet Pippin		
726	Red Sweet Pippin, of Indiana		
727	Red Winter Sweet, of Kentucky	Virginia, Maryland	December and February
728	Red Warrior	North Carolina	November and March
729	Refuge	Tennessee	

Catalogue—Continued.

No.	Name.	Origin.	Season.
730	Reinette		
731	Reinette Danil		November and February
732	Reinette d'Bretange	France	December
733	Reinette d'Canterbury		
734	Reinette d'Cheine		December and March
735	Reinette France	France	
736	Reinette de Madere		
737	Reinette des Reinettes	France	
738	Reinette de Thorn		
739	Reinette Dolbear		November and December
740	Reinette Doree		
741	Reinette de Vignan		December and March
742	Reinette Ette Konig	Holland	
743	Reinette Grisse d'Anjou		
744	Reinette Grisse Francaise		
745	Reinette Suisse		May and June
746	Reinette Ouze		December and March
747	Reinette Pepin	France	January and April
748	Relish		
749	Resembling Buckingham		
750	Ribston Pippin	England	November and March
751	Richmond	Ohio	October and February
752	Richmond of New York		
753	Richmond Sweet	Ohio	
754	Rich Spicy Longkeeper		
755	Ridge Pippin		March and April
756	Rijiner		
757	Riviere	France	
758	Roadstown Pippin	New Jersey	April and September
59	Robertson's Pearmain		
760	Robinson's Superb	Virginia	September and October
761	Robey's Limbertwig		
762	Robey's Seedling	Virginia	November
763	Rock	New Hampshire	September and October
764	Rock Pippin	Ohio	
765	Rock Sweet of Maine	Massachusetts	September
766	Rosea		
767	Roxbury Russet	Massachusetts	January and June
768	Royal Limbertwig	North Carolina	
769	Royal Pippin		
770	Russet Cider		
771	Russet Greening		
772	Russeting		
773	Rusty Coat		
774	Salem	Massachusetts	October and December
775	Sallie's Sweet		
776	Santouchee	North Carolina	November and February
777	Savannah Crab	Georgia	
778	Scarlet Golden Pippin		
779	Scarlet Pearmain		August and October
780	Scarlet Sweet		October and February
781	Schull		
782	Schroder's Black		
783	Schreen		October and December
784	Schribner's Spitzenburg		
785	Sear's Spice		
786	Sedgwick	Indiana	
787	Seedling of a large Red Apple		
788	Seedling of Northern of Spy		
789	Seedling of Johnson Co		
790	Seedling of Union Co		
791	Seedling Russet		
792	Seedling Siberian Crab	Illinois	September
793	Seek-no-further, of Pennsylvania	Pennsylvania	
794	Selma	Ohio	November and December
795	September	Pennsylvania	October
796	Shaker		
797	Shaker Greening	New Hampshire	November
798	Shannon	Ohio	November and January
799	Sharp Apple		
800	Sharp's Sweet		November and March
801	Sharp's Winter	North Carolina	
802	Sheepnose of Virginia		
803	Sheepnose		
804	Shippard's Sweet	Connecticut	October and November
805	Sheanasse Beauty	Michigan	October and January
806	Shiloh Pippin	Illinois	
807	Shipley Greening	Virginia	
808	Shipley Winter		

Catalogue—Continued.

No.	Name.	Origin.	Season.
809	Shipper's Russet	Pennsylvania	November and February
810	Shockley	Georgia	April and May
811	Sigler's Pound	France	January and March
812	Simmons' Winter	North Carolina	
813	Sine-qua-non	Long Island	August
814	Sink	Pennsylvania	September
815	Sloan's Seedling	Alabama	November and January
816	Small Red		
817	Small Red (Ring)	Illinois	
818	Small Red (Purdy)		
819	Smith's Cider	Pennsylvania	December and March
820	Snooky Twig		
821	Snedeker		December and February
822	Somerset	Maine	August and September
823	Sops of Wine		August and September
824	Southern Greening	South Carolina	November and March
825	Southern Pearmain		
826	Southean Pennock		
827	Southern Winter		
828	Southern Winter King		
829	Southern Queen		
830	Spafford Russet	Ohio	December and February
831	Sparhawk		
832	Spark's Late		
833	Spice Pippin		
834	Spice Russet		December and March
835	Spitzenburg	Long Island	October and February
836	Spreading Bough		
837	Springhill Spitzenburg	New York	
838	Springport Pippin		December and March
839	Sprouts from roots of Golden Sweet		
840	Spring Swaar	Illinois	
841	Stansill	North Carolina	January
842	Strawn's Seedling	Virginia	December and April
843	Stevenson's Winter	Michigan	January and April
844	Strawberry		
845	Streaked Pippin	Long Island	January
846	Stermer Pippin		January and May
847	Styx of Coxe		
848	Sudbury Sweet		
849	Sugar Loaf Pippin		July
850	Summer Belleflower	New York	August and September
851	Summer Janet		September
852	Summerour		
853	Summer Queen		August and September
854	Summer Rambo		September and October
855	Summer Rose		August
856	Summer Sweet Paradise	Pennsylvania	August
	Superior Early		
857	Superb	New York	November and December
858	Surprise		November and January
859	Susan's Spice	Pennsylvania	October
860	Sutton	Connecticut	
861	Swasey	Ohio	January
862	Sweet Beile et Bonne		October and December
863	Sweet Belleflower	Pennsylvania	October and November
864	Sweet Belleflower		Winter
865	Sweet Bough		July
866	Sweet Crab		
867	Sweet Doctor	Pennsylvania	November
868	Sweet Janet	Indiana	December and January
869	Sweet June	Massachusetts	August
870	Sweet King	Long Island	October and March
871	Sweet Meat		
872	Taunton	Alabama	September and October
873	Taylor's Harvest		
874	Terral's Late		October and November
875	Tetofsky	Russia	August
876	Tewbner's Cider		
877	Texan Red		
878	Thornbury		
879	Tillaqua	North Carolina	November and March
880	Titmouth Sweet		November and February
881	Trader's Red		
882	Trader's Fancy	Pennsylvania	January and May
883	Transparent de Rouen Crab		
284	Triumphant		August
885	Tufts	Massachusetts	September and October
886	Tulpehocken		
887	Turner's Greening		

Catalogue—Continued.

No.	Name.	Origin.	Season.
888	Turner's Seedling		
889	Turn of Lane	New Jersey	
890	Tuscaloosa	Alabama	October and February
891	Uchella		
892	Ulloa		
893	Uncle John	Pennsylvania	November and December
894	Union	Iowa	January
895	Union Crab	Illinois	
896	Unique	France	November and December
897	Unknown Crab		
898	Ulters	Wisconsin	
899	Vaughn's Winter	Kentucky	January and March
900	Vermont Beauty		
901	Vermont Pippin		
902	Vestal	Virginia	
903	Very Fine and Very Early		
904	Victuals		
905	Victuals and Drink		October and January
906	Virginia Cathead		
907	Virginia Greening		
908	Virginia July		
909	Virginia Red Pippin		
910	Virginia Red Streak		
911	Wagener	New York	November and February
912	Walkup Seedling	Ohio	
913	Wall		
914	Walpole	Massachusetts	August and September
915	Waltham Abbey		October and January
916	Ward's Late Seek-no-further		
917	Warfield	Iowa	September and October
918	Washington		
919	Washington Strawberry	New York	September and October
920	Washington Sweet	Massachusetts	October and November
921	Wautaugah		
922	Water	Pennsylvania	October and November
923	Waugh's Crab	Virginia	February and April
924	Wax Apple		December and February
925	Webb's Winter	Massachusetts	December and February
926	Weidner's Golden Reinette		
927	Weilburgen		
928	Welford's Yellow	Virginia	June
929	Well	New Jersey	
930	Wells of Ohio		
931	Western Beauty		
932	Western Spy	Ohio	October and June
933	West's Spitzenburg	Pennsylvania	December and April
934	Wetherill's White Sweet	New Jersey	Fall
935	White Pearmain		
936	White Rawle's Janet		
937	White Robinson		
938	White Spanish Reinette		
939	White Sweet	New Jersey	September and October
940	White Winter Pippin		
941	White's Long-keeper		
942	White's Winter	Pennsylvania	January and May
943	White's Zurdel		
944	Wiley's Greening	Illinois	
945	Wiley's Sweet		Fall
946	Wilfong	North Carolina	December and March
947	William's Prince		
948	Wille's Sweet	Long Island	August and September
949	Willow Leaf	Ohio	February and June
950	Willow		
951	Wilson's Large Red		
952	Wilson's Sweet		
953	Wilson's Summer	North Carolina	August and September
954	Wine Apple		
955	Wine of Kansas		
956	Winesap		
957	Winslow	Virginia	
958	Winter Buff		
959	Winter Beauty		
960	Winter Blush		
961	Winter Cheese		
962	Winter Green		
963	Winter Harvey		January and March
964	Winter King		
965	Winter Peach		
966	Winter Red		

Catalogue—Continued.

No.	Name.	Origin.	Season.
967	Winter Red (Hussman)		
968	Winter Redstreak		December and March
969	Winter Strawberry		December and January
970	Winter Spice	North Carolina	
971	Winter Sweet Bough		
972	Winter Sweet (Downer)		
973	Winthrop Greening	Maine	September
974	Winthrop Pearmain	Maine	September and January
975	Wood		
976	Wood's Sweet	Vermont	September and November
977	Wood's Winter		
978	Woodland		
979	World's Wonder		
980	Wonder		
981	Wright's Janet		January and June
982	Yacht	Pennsylvania	November and January
983	Yahoola	Georgia	September and January
984	Yates	Georgia	March and May
985	Yellow Crab		
986	Yellow Belleflower	New Jersey	
987	Yellow Bough		
988	Yellow June		June and July
989	Yellow May		
990	Yellow Newtown Pippin		February and May
991	Yellow Siberian Crab		
992	York's Imperial	Pennsylvania	November and February
993	Zawsen Von Welter		

It was moved and carried that the Finance Committee be filled up temporarily, until absent members may arrive. The following gentlemen were so appointed: Judge A. M. Brown, to serve as Chairman; Messrs. Pearson, Wright, and Brown, of Sangamon.

It was resolved that the Board take a recess at 3 o'clock P. M., to-morrow, to witness the drill of the University Battalion.

On motion, a recess was taken, to reassemble at 7:30 P. M.

EVENING SESSION.

The Board reassembled at the appointed time.

After considerable discussion on the State and the appropriation prospectus of the new University building, the Board adjourned for the work of committees, to meet again at 9:30 A. M., to-morrow.

SECOND DAY'S SESSION.

The Board met at 9:30 A. M., agreeable to adjournment.

Scriptures were read and prayer offered by Dr. J. M. Gregory.

Present—Messrs. Blackburn, Brown of Pulaski, Brown of Sangamon, Bateman, Cunningham, Goltra, Hayes, Harrington, Lawrence, Mahan,

McMurray, Pearson, Rickard, Pickrell, Pullen, Scott, Scroggs, Slade, Van Osdel, Wright, and the Regent—21.

Absent—Messrs. Anderson, Brown, Brayman, Cobb, Edwards, Galusha, Greenleaf, Griggs, Wagner, and the Governor—10.

The Treasurer, J. W. Bunn, Esq., then read the following report, which was accepted and referred to the Auditing Committee, together with the unaudited bills.

THE ILLINOIS INDUSTRIAL UNIVERSITY.

IN ACCOUNT WITH JOHN W. BUNN, TREASURER.

1872. March 1....	To board expense		$1,169 35	
" 1....	" salaries		23,473 58	
" 1....	" Agricultural Department		6,716 30	
" 1....	" Horticultural Department		6,854 86	
" 1....	" insurance		460 50	
" 1....	" taxes on lands		2,461 70	
" 1....	" building repairs		2,654 63	
" 1....	" fuel and lights		2,190 93	
" 1....	" printing, advertising and stationery		1,477 56	
" 1....	" incidental expenses		1,231 41	
" 1....	" library and cabinet		7,029 96	
" 1....	" safe		142 50	
" 1....	" Military Department		256 47	
" 1....	" Mechanical Department		4,487 99	
" 1....	" Chemical Department		3,077 60	
" 1....	" carpenter's account		1,725 70	
" 1....	" experiments and lectures		2,417 66	
" 1....	" unpaid bills—1870 and 1871		731 43	
				$68,560 13
" 1....	To balance			8,494 60
				$77,054 73
1871. March 1....	By balance from last report			$6,125 38
1872. March 1....	" am't received for interest on bonds		26,894 00	
" 1....	" " " on account 160 acres Griggs' farm sold		1,000 00	
" 1....	By am't received on account interest Griggs' farm		688 00	
" 1....	" " " " farm account		7,019 88	
" 1....	" " " " rent		1,423 59	
" 1....	" " " " Horticultural Department		1,338 52	
" 1....	" " " " Mechanical Department		1,763 07	
" 1....	" " " " carpentry		1,072 48	
" 1....	" " " " fees		5,043 50	
" 1....	" " " " fuel		689 74	
" 1....	" " " " advertisement in University paper, etc.		542 85	
" 1....	By am't received on account library		154 31	
" 1....	" " " " insurance		59 29	
" 1....	" " " " sundry items		24 39	
" 1....	" " " for advances to State appropriation		96 85	
" 1....	By am't received for broom corn		76 48	
" 1....	" " " " Illinois Central Railroad Co. freight		10,541 40	
" 1....	By am't received on account State appropriations			58,429 35
" 1....				
" 1....	For Agricultural Department		3,000 00	
" 1....	" Horticultural "		1,750 00	
" 1....	" Chemical "		2,750 00	
" 1....	" apparatus and books		5,000 00	
				12,500 00
				$77,054 73

URBANA, *March* 13, 1872. JOHN W. BUNN.

A Committee on Nominations, of five, were appointed, consisting of Messrs. Lawrence, Slade, Mahan, Blackburn, and McMurray.

They asked and received leave for retiring.

The Corresponding Secretary then read a report on "Experiments, etc.," which was adopted, and referred to the Committee on Agriculture.

REPORT UPON EXPERIMENTS—1871.

The ground assigned for the purpose of agricultural experimentation, comprises an aggregate of a little over 95 acres, situated east of the road running from the new University building to the farm house on the Horticultural Farm. The tract measures 141 rods east and west, by 108 rods north and south. A road runs through the center east and west, dividing it into equal or nearly equal parts. The barn and other out-buildings of the Horticultural Department, occupy the northwest corner of the south half, and about 29 acres of the south end were appropriated to timber plantations. These, with roads and hedge rows, diminished the amount of land to be used for field experiments, to about 60 acres, in the midst of which lay from eight to ten acres of wet, undrainable land quite unfit for experimental purposes.

Before I was placed in charge, the plots running across the west end of the grounds were staked off 2x4 rods into 1-20th of an acre plots, and the 36 plots on the south end, sown at my suggestion, with grass and grain seeds, viz: Timothy, Redtop Orchard and Curled Dog Tail grasses, Lucerne, Alsike, Dutch, Mammoth and common Red Clover, Brewer's Delight, Barley, Surprise, Somerset, Black Swedish, White Schonen, Excelsior and Norway oats, and White and Red Australian Wheat—all sown April 12, 1871; but owing probably to the unremitting drought, all failed to produce any crop worth the saving, and the ground was plowed up for a fall sowing; but owing to the exigencies of the Horticultural Department, was turned over for its uses.

The 72 whole and 6 half plots lying on the north-west corner, were used as

EXPERIMENTAL CORN PLOTS.

(Comparative productiveness of adjacent plots.)

The ground on which this experiment was tried, lies immediately east of the road leading from the new University building through the Horticultural Department southward in the angle formed by the road running east and west past the farm buildings on the horticultural grounds. Its topography, which is not much varied, is shown on the map. It was in naked fallow in 1869, and in wheat and oats in 1870, and plowed in the fall of that year. It was staked into 1-20th acre plots in the spring of 1871, and plowed in lands north and south, throwing the ridges against the stakes and leaving the dead furrows in the middle between, on the 29th and 30th April, 1871, to the depth of 8 to 9 inches, with a width of cut of little over 13 inches. Results went to show that a better yield would have been had without the spring plowing, as a field of corn across the road planted on ground only fall-plowed, gave a better yield. The ground was laid off with a marker, so as to give 4 rows of corn to the rod each way on each plat, or 128 hills. It was planted May 3d, by hand, with "one hundred day Yellow Dent corn," donated by B. F. Johnson, Esq., of Champaign; cultivated June 4, thinned June 7, and cultivated again June 9, 19, 27, and July 6.

Although the cultivation was clean and the condition of the ground apparently the best, the crop was nearly a failure, resulting probably from drought in the first place and the attendant chinch bugs in the second. The drought, I am inclined to believe, would have been less injurious in its effects if the ground, after plowing, had been thoroughly compacted with the roller, so as to leave fewer air spaces in the soil, which, when dry, lies very loose; and hence I think has given some of our Champaign county farmers a prejudice against deep plowing. The chinch bugs were irresistable, and came from the adjoining oats in destructive quantities, so as to vitiate the result of our experiments to a great degree. I thought it best, however, to follow the experiments out to results, and accordingly on the 2d of September the hills, stalks and ears (of eight inches in length or more) were counted, and on the 4th, 5th and 6th of November, the corn was husked and the ears weighed, with the results shown in the following table:

MAP OF EXPERIMENTAL PLATS,

Containing 8 rods, each 2 × 4, except the half plats at north end, 128 hills planted on each full plat. The figures on each plat show: 1st, number hills matured; 2d, number stalks matured; 3d, number ears eight inches long; 4th, pounds corn when gathered.

Minimum number of hills, 94; stalks, 303; ears, 100; weight of ears, 27.

Maximum number of hills, 128; stalks, 491; ears, 394; weight of ears, 177.

	A	B	C	D	E	F
12½	57	62	60	60	63	60
	208	218	195	190	199	197
	112	122	93	95	62	90
	38	36½	24½	28	18½	21
12	125	124	125	121	122	124
	460	455	456	417	381	403
	318	272	280	225	162	174
	120	105	91	65	52	51½
11	123	127	126	128	125	127
	479	491	475	444	411	415
	394	361	380	294	259	223
	177	157	157	116	89	78
10	94	130?	125	125	121	121
	350	498	469	479	412	423
	288	364	363	306	242	263
	148	149	145	121½	86	98
9	112	118	130?	120	119	116
	377	419	427	393	400	376
	270	298	285	267	220	217
	103	113½	105	93	75	75½
8	133?	115	126	115	113	118
	380	348	388	371	372	397
	230	215	260	239	201	201
	57	74½	69½	80	63	63½
7	107	120	126	128	116	119
	329	392	422	427	402	376
	200	218	200	247	185	169
	73	72	60½	63½	56½	44½
6	116	116	117	116	112	105
	380	365	386	390	348	303
	207	216	204	199	144	105
	72	69	68	61½	44½	31
5	111	101	119	118	116	108
	323	308	388	403	355	328
	181	170	192	202	130	123
	54½	46	57½	56	37	33
4	120	113	110	119	114	114
	368	359	337	384	335	348
	186	170	137	191	130	100
	69½	42	27½	41	32	30
3	122	117	124	125	106	118
	358	398	408	403	324	355
	187	235	197	202	143	177
	63	71	61	47½	39	55
2	113	127	124	126	112	120
	354	437	432	418	349	365
	195	231	218	217	159	173
	66	74	57	51	41½	52½
1	125	126	126	123	120	111
	415	457	458	420	400	351
	285	286	319	255	220	196
	100	101	112	83	66	72½

TOTALS.

	No. Hills.	*No. Stalks.*	*No. Ears.*	*Weight Ears.*
A plats	1,458	4,781	3,053	1,141
B "	1,496	5,145	3,158	1,110½
C "	1,538	5,241	3,128	1,035½
D "	1,524	5,139	2,939	907
E "	1,459	4,688	2,257	700
F "	1,461	4,637	2,211	706
	8,936	29,631	16,746	5,600
Average per tier	1,489⅓	4,938½	2,791	933⅓
" " plat	118.78			74.66
1 plats	731	2,501	1,561	534½
2 "	722	2,355	1,193	342
3 "	712	2,246	1,141	336½
4 "	690	2,131	914	242
5 "	673	2,105	998	284
6 "	682	2,172	1,075	346
7 "	716	2,348	1,219	370
8 "	720	2,256	1,346	407½
9 "	715	2,392	1,557	565
10 "	716	2,631	1,826	747½
11 "	756	2,715	1,911	774
12 "	741	2,572	1,431	484½
12½ "	362	1,207	574	166½
Totals	8,936	29,631	16,746	5,600
Averages per tier	714.88	2,370.48	1,339.68	448
" " plat	118.78			

An examination of the map and tables develops the following facts:

1. Instead of 9,600 hills, only 8,936 matured—a loss of nearly 7 per cent.

2. These hills, instead of containing 38,400 stalks, matured only 29,631—an additional loss of 22 per cent. from the hills remaining, making the total failure of the "stand" about 27 per cent.

3. A large number of the stalks had no ears, there being only 16,746 ears on 29,631 stalks, 12,885 stalks, or 43 per cent. of the standing stalks were barren, making a farther loss of 40 per cent. upon the field planted, even reckoning one ear to the stalk.

4. The ears were very light in weight, averaging only about one-third of a pound each.

5. This experiment, however, was designed primarily to test the comparative productiveness of different parts of the same field; and in spite of the unfavorable season, gave some interesting facts. The tables show that the "E" plats in one, and the "4" in the other, gave the poorest yield, and we consequently would expect to find that plat "E, 4" would be the least productive in the field. As a matter of fact it is a nearly adjoining plat "C, 4," while the adjoining one, "F, 4," comes next to it—the three producing respectively 27½, 30 and 32 pounds. The tables show the "A" and "11" plats to have been most productive, and "A, 11" is the most productive plat in the field.

Referring to the topography, we find:

1. The highest ground produced less than the lowest lands, probably because the soil was less fertile and less moist—the last fact being the important one in the past dry season.

2. The southern slopes average a greater yield than the northern, though the inference is not a decisive one.

The experiments on these plats are to be repeated at least two more years in order to determine by the average of not less than three years, the natural productiveness of the plats before applying manures, the comparison of the different sorts of which will be the ultimate object.

EXPERIMENTS WITH BROOM CORN.

The five acres next east of the experimental plats just mentioned, were planted with broom corn of five varieties, four of which were kindly furnished by Messrs. Johnson and Bogardus, who also gave us instructions in their methods of managing the crop, and assisted in planting.

The ground was plowed to the depth of about six inches, harrowed and then, immediately before planting, rolled with a large wooden roller. The most fertile and moist part of the land, apparently,

was the south acre, planted with the dwarf variety. All but that variety were planted May 10, and the dwarf May 16. The rows were "scraped" June 3, hoed June 10 to 15, cultivated with the diamond plow June 27, with the double-shovel plow June 28, and with the gopher plow July 14; weeds were cut out July 24, and the brush cut and hauled August 17 to 30. The brush, not only of the different varieties, but of same variety, planted differently, were weighed separately, whilst green and uncleaned, but it was impracticable for Messrs. Bogardus and Johnson, who cleaned the brush, to do more than keep the different varieties separate in weighing the cleaned brush. This is to be regretted, as we hoped to ascertain the effect of thick seeding on the yield of cleaned and saleable brush. It was impossible, also, to get a part of the brush cleaned immediately after cutting, which may have affected the final result. The brush first cut, owing to ignorance of the proper method of cutting, contained more leaves and weighed more, relatively, than that cut later.

The varieties planted ripen ordinarily in the following order:

1. Chinese Brush.
2. Mohawk.
3. Early Evergreen?
4. Missouri Evergreen?

Dwarf.

But this year the Mohawk ripened first, the others following in their order. The following table shows varieties, distance between rows, distance in the rows and amount of seed planted:

Chinese Brush.

Weight, green, uncleaned, 2,052. Cleaned, 380.

12	rows,	3	feet apart,	15	inches in row,	10	seeds,	518	pounds—43.16	pounds per row.
6	"	3.9	"	15	"	10	"	265	" 44.16	"
12	"	3	"	18	"	8	"	377	" 31.41	"
12	"	3	"	18	"	6	"	233	" 19.33	"
12	"	3	"	18	"	12	"	660	" 55	"
54	Total weight brush, green, with seeds, 2,052								" 38	average.

Early Evergreen.

Weight, green, uncleaned, 1,568. Cleaned, 275.

12	rows,	3	feet apart,	18	inches in row,	11	seeds,	350	pounds—29.16	pounds per row.
12	"	3	"	18	"	6	"	324	" 27	"
12	"	3	"	18	"	8	"	354	" 29.50	"
6	"	3.9	"	15	"	10	"	186	" 31	"
12	"	3	"	15	"	10	"	354	" 29.50	"
54								1,568		29.04 average.

Missouri Evergreen.

Weight, green, uncleaned, 2,538. Cleaned, 500.

12	rows,	3	feet apart,	15	inches in row,	10	seeds,	737	pounds—61.41	pounds per row.
6	"	3	"	15	"	11	"	447	" 74.50	"
12	"	3.9	"	18	"	9	"	672	" 56	"
12	"	3	"	18	"	6	"	283	" 23.58	"
6	"	3.9	"	18	"	6	"	221	" 36,83	"
4	"	3	"	18	"	12	"	178	" 44.50	"
54								2,538	"	48.80 average.

Mohawk.

Weight, green, uncleaned, 1,520. Cleaned, 178.

12	rows,	3	feet apart,	18	inches in row,	12	seeds,	384	pounds—32	pounds per row.
12	"	3	"	18	"	6	"	250	" 20.83	"
12	"	3	"	18	"	8	"	266	" 22 16	"
12	"	3	"	15	"	12	"	424	" 35.33	"
6	"	3.9	"	15	"	11	"	196	" 32 66	"
54								1,520	"	28.15 average.

Dwarf.

Weight, green, uncleaned, 3,290. Cleaned, 579.

24	rows,	3	feet apart,	18?	inches in row,	8	seeds,	1,073	pounds—44 70	pounds per row.
6	"	3.9	"	18	"	8	"	382	" 63 66	"
12	"	3	"	18	"	6	"	667	" 55 58	"
12	"	3	"	18	"	12	"	1,168	" 97.33	"
54								3,290	"	60.92 "

The largest and lowest yields may be seen from the following tables :

COMPARISON OF VARIETIES.

VARIETIES.	Weight of brush with seed, green.	Weight of brush without seed, cleaned.
Mohawk	1,520 lbs.	178 lbs.
Early Evergreen	1,568 "	275 "
Chinese Brush	2,052 "	380 "
Missouri Evergreen	2,538 "	500 "
Dwarf	3,290 "	579 "

COMPARISON OF DISTANCES BETWEEN ROWS.

VARIETIES.	Field of green brush, 3 ft. between rows.	Field of green brush, 3 ft. 9 in. bet. rows.
Mohawk	35 33 lbs. per row.	32 66 lbs. per row.
Early Evergreen	29 50 "	31. "
Chinese Brush	43 16 "	44 16 "
Missouri Evergreen	*35 33 "	32 66 "
Dwarf	44 70 "	63 66 "
Total	188 02 lbs. per row.	204.14 lbs. per row.

* A little more seed planted than in the other rows with which it is compared.

From which it would appear that whilst the area planted over was increased 25 per cent., the additional yield from the same seed was about 9 per cent. greater, and that the closer planting was most profitable.

COMPARISON OF DIFFERENT AMOUNTS OF SEED DROPPED IN A PLACE.

VARIETIES.	Field, per row, uncleaned of brush.		
	6 seeds.	8 seeds.	11 & 12 seeds.
Mohawk	20 83 lbs.	22 16 lbs.	32. lbs.
Early Evergreen	27. "	29 50 "	29.16 "
Chinese Brush	19 33 "	31.41 "	55. "
Missouri Evergreen	23 58 "	----------	44 50 "
Dwarf	55 58 "	44 70 "	97 33 "
Totals of five varieties	122 74 lbs.	127.77 lbs.	257.99 lbs.

From this it would appear that increase of seed to the amount of 33⅓ per cent. did not practically increase the yield over 4 per cent., whilst doubling the seed more than doubled the yield. These results are contradictory, and we must make further experiment before drawing conclusions.

The broom-corn was sold to Messrs. Johnson & Bogardus, 1,912 pounds, at 4 cents per pound: $76 48; they cleaned the brush.

A NEW CORN PLANTER.

One acre of corn, the same as that prescribed by B. F. Johnson, was planted on the north acre of plat 2 north, May 10th, with the corn planter of Richard Penniston, of Tolona. This was cultivated June 1st, 10th and 26th, and yielded 2,756 lbs. of corn, husked December 8th. The ground was better than the average of the field, and the yield one of the best, if not the best, on the premises.

The remainder of plat 2 north was planted with peas, beans, flax and potatoes. The peas and flax were harvested as worth something, but the beans were worthless.

SEVENTY-SIX VARIETIES OF POTATOES.

The potatoes on this plat and adjoining the barn, as well as along the roadway left north of the plats, were from seed donated by the Michigan Agricultural College, and (the Breese's Peerless) planted May 13th, 17th and 18th—one piece of three acres in hills, at wide distances, 4x4 feet. The late planting and unfavorable season made the yield small, but sufficient for more extended experimentation the coming year. Seventy-six varieties were planted. They were attacked both by the Colorado beetle and three-lined beetle; but by the use of Paris green, arsenic, and hand-picking, their mischief was checked to a considerable extent. They were cultivated June 19th and 27th, and July 7th and 19th; hoed June 19th, and dug October 27th. The following is the list of varieties, and the yield:

No.	VARIETIES.	Hills.	Tubers of good size.
1	Black Chenango	34	44
2	Black Mercers	30	57
3	British Queen	23	15
4	Bulkley's Seedling	35	49
5	Calico, No. 1	28	37
6	Calico, ?	15	45
7	Casto	42	* 82
8	Chenango	27	28
9	Chili, No. 2	17	4
10	Chenery	37	116
11	Cleason [Gleason?]	22	27
12	Coldbrook's Seedling	12	7
13	Coppermine	38	20
14	Cuzco	48	* 150
15	Davis Seedling	26	32
16	Delmahoy	24	98
17	Dogger	30	72
18	Early Cottage	21	18
19	Early Don	20	21
20	" Dykeman	27	23
21	" Goodrich	38	45
22	" Handsworth	16	35
23	" Indiana	20	14
24	" London White	24	76
25	" Pinkeye	24	16
26	" Sovereign	24	15
27	" Stevens	22	25
28	Excelsior	12	26
29	Extra Early White	14	25
30	Forfarshire Red	30	76
31	Flukes	22	43
32	Irish Cups	22	65
33	Irish Grey	22	18
34	Jersey Peach Blow	24	37
35	Kearsarge	14	14
36	Lady Finger	15	10
37	Late Pinkeye	24	20
38	Lapstone Kidney	22	14
39	Massasoit	20	20
40	Mercer	23	43
41	Merino	37	56
42	Napoleon	16	8
43	No Blow	24	47
44	Old Red	16	22
45	Orono, No. 1	37	75
46	Orono, No. 2	26	12
47	Patterson's Blue	23	22
48	Patterson's Regent	19	15
49	Penn. Search Warrant	23	20
50	Pinkeye Minnesota	32	45
51	Pinkeye Rustycoat	18	15
52	Prince Albert	12	12
53	Prince of Wales	16	39
54	Rough and Ready	31	169
55	Russet	22	22
56	Sebec	26	50
57	Seedlings' Rock	20	33
58	Shakers' Russet	26	31
59	Six Weeks	14	18
60	Snow Ball	25	98
61	Snow Flake	21	60
62	Spotted Shad	12	9
63	Strawberry	21	27
64	Titicaca	29	46
65	Vandevere's Seedling	27	32
66	Wheeler's Milky White	17	28

* Rotted.

LIST OF VARIETIES —Continued.

No.	VARIETIES.	Hills.	Tubers of good size.
67	Western Red	28	26
68	White Apple	17	20
69	White Chili	28	69
70	White Mountain	30	55
71	White Peachblow	28	29
72	White Rock	22	70
73	White Spirit (all large tubers)	15	12
74	No. 1 Unnamed	23	44
75	No. 2 Unnamed	19	14
76	Breese's Peerless	169	995

ROOT CROPS.

On plat 3 north we attempted to grow one acre each of beets (white sugar), rutta bagas, parsnips, carrots and white turnips, but failed either to get the seed to germinate, as in the case of the parsnips and carrots, or were delayed by drought, and cut off by insects or frost in other cases. The failure was nearly complete.

HILLS AND DRILLS—WIDE AND CLOSE PLANTING.

On plats 4 and 5 north we attempted to compare planting corn in hills and drills. At the north seeds were planted—an acre each, planted 3 feet apart between rows; but one in hills, three kernels in a hill; the other drilled, one kernel to a foot. On the next the hilling and drilling was repeated, but at a distance of 3½ feet between rows and hills, maintaining the amount of a kernel to a foot in the drilled rows, and an additional kernel for each foot between rows in the hills. On the next tier a distance of 4 feet was taken, then 4½, and finally 5 feet. The corn was planted as follows: The six northernmost acres, May 20th; the next two, May 20th; the last ten, May 23d. It was harrowed June 3d, cultivated the 15th, thinned the 16th and cultivated June 26th, July 8th, and July 20th; husked December 10th to 22d. The ground was very unequal in its dryness and arable condition—the south ends in an ordinary season would probably have been too wet for cultivation. The chinch bug did a good deal of mischief, and hardly anything definite can be made of the figures, which are as follows:

	Drills, 1 kernel to a foot.	Hills 1 kern'l for each foot.
Planted rows 3 feet apart	1,326 lbs.	1,081 lbs.
" 3½ "	628 "	853 "
" 4 "	596 "	618 "
" 4½ "	738 "	956 "
" 5 "	1,336 "	1,326 "
Total	4,624 "	4,836 "

Most of the work on the preceding experiments was done and conducted by C. W. Silver, of Champaign county, and G. N. Gridley, of Lake, both of whom proved themselves intelligent, industrious and efficient workers.

In addition to these experiments, the following made and reported by E. L. Lawrence, head farmer, will be of interest:

EXPERIMENTS WITH POTATOES.

Made by E. L. Lawrence, Head Farmer on "Stock Farm."

The variety used was the Peach Blow, planted in rows 3½ feet apart, and 21 inches apart in the row and two peices in a place except as otherwise noted. The areas planted all equal:

Conditions of planting.	Time of planting.	Pounds seed planted.	Product marketable	Product small.	Total product.	Product in excess of seed.	Per cent. small potatos.	Per cent. seed of product.	1 Pound seed produced.
1. Old of moon	May 18	11	39	8	47	36	17x	23½	4 27
2. New of moon	" 20	11	42	10	52	41	19¼–	20	4 72
3. Large, cut large	" "	32	51	7	58	26	12x	55x	1 81
4. " small	" "	11½	45	7	52	41½	13½–	22x	4 52
5. Small cut	" "	4½	28½	4	32½	28	12½x	14x	7 22
6. " whole	" "	16	43	8	51	35	15½	31½–	3 18
7. Seed ends	" "	5	40	4½	44½	39½	10x	11x	8 90
8. "Butt" ends	" "	15	45	6½	51½	36½	12½	21–	3 43
9. Hills 3½ by 3½	" "	5½	32	2½	34½	29	7½	16—	6 27
10. One piece in a place	" "	5½	35	3½	38½	33	9x	14¼x	7 00
Totals		117	400½	61	461½	345½	128⅓	218¼	51.32
Averages		11.7	40	6.1	46.1	34.5	12 8	22.8	5.13

EXPERIMENTS IN CORN PLANTING,

Made by E. L. Lawrence, Head Farmer, Stock Farm.

The ground, which had been in corn in 1870 was plowed to the depth of about 5 inches and planted May 29th, 1871. Each plat contained 4 rows, 50 rods long, planted 3 feet 10 inches by 3 feet 10 inches, with the check row corn planter. It was cultivated four times with a cultivator and the last plat, in addition to this, was hilled up with the plow.

Plat 1, left as planted, with 4 to 6 stalks, produced..... 840 lbs.
" 2, thinned to 2 stalks in a hill..... 660 "
" 3 " 3 " ..... 850 "
" 4 " 4 " ..... 830 "
" 5, left as planted, with 4 to 6 stalks, and hilled up with plow, produced..... 850 "

The ground in the south plats was not used for experimental purposes, and specially requires drainage before being much used for experiments requiring any exactness and uniformity of conditions. It was cultivated by Mr. Lawrence, as a part of his department, in corn.

Arrangements for experiments in feeding this winter were made with Mr. Lawrence but owing to the delay in receiving the engine and boiler from the machine shops only a part of what was agreed upon has been done, and the report thereon must be made later.

EXPERIMENTS FOR 1872.

I would recommend a repetition of the experiments in testing the futility of adjacent plats, with, if possible, analyses of their soils; of the experiments with varieties of broom corn; of the varieties of the potatoes; of root crops; of planting corn in hills and drills, and of manured and unmanured plats. Also of the 21 varieties of grass seed and 6 varieties of clover seed procured last fall, but not sown on account of the drought. The ground prepared in part for these has been assigned to the horticultural department, but other ground can no doubt be got ready in time.

These experiments include three or four that we are endeavoring to have tried simultaneously at all the agricultural colleges so that our experimental work may require less repetition and proceeed more rapidly by being in many hands at once.

Besides this, I have received from several points situated in the different soils and in the different climates of the states, assurances that with a little expense on the part of the university these common experiments may be carried on simultaneously at seven different points in our own s ate, such as Belvidere, LaMoille, Macomb, Champaign, Moro, Mount Vernon and Villa Ridge, where, perhaps, by paying the *additional* cost above growing 3 or 4 acres of corn in the ordinary way, we may have experiments conducted under the general supervision of the trustees respectively residing near those points.

I have received from Prof. Turner, Dr. E. S. Hull, Dr. Manly Miles, B. F. Johnson, Esq., and several others, valuable suggestions as to other experiments in the field, and elsewhere, that it is desirable should be reached and at least begun upon at any e arly day.

REPORT OF CORRESPONDING SECRETARY.

I would respectfully submit the following preliminary report: Our fourth annual report was placed in the hands of the State printer within the time prescribed by law, several months since, but owing to the great amount of printing for the General Assembly, which has been in session nearly ever since, the printing is not yet begun. I would suggest that a topographical survey be made of the farms the coming summer, and a map of good size, that can be folded up in the report, be engraved therefrom, to illustrate future reports.

Besides the Catalogue, report of the proceedings of the Board of Trustees and its Executive Committee, I have procured for this fourth volume the addresses of Prof. Turner and Dr. Bateman, at the laying of the corner stone of the new University building, and several of the lectures of 1871, delivered at the Farmers' Conventions at Champaign, Springfield, Pekin and South Pass. I have also proposed to add a report of the Convention held in Chicago last August, by the officers of agricultural colleges. This meeting discussed many of the more important topics connected with the new education, and the report published in the "Prairie Farmer" having been destroyed by fire, it seems best to preserve it in a more permanent form.

For the fifth annual report, I have already issued and received a good many answers to a circular in regard to the early native and improved breeds of cattle in Illinois. In addition to these, the winter meetings at Champaign, Dixon, Pontiac, Avon and Pittsfield, besides furnishing and eliciting a good deal of useful information to the people, will contribute some valuable papers to this report.

These agricultural lectures and discussions, I may add, were generally well attended, and awakened a good deal of interest, both in agriculture and in the University. The expenses and pay of lecturers amounted to $533 98, and the advertisement of them to $25.

There is an opportunity of procuring, through the Smithsonian Institution, exchanges with similar institutions, societies, etc., throughout Europe and other countries, by sending our report to the Smithsonian Institution, addressed to such societies as we may desire to exchange with. This will furnish, at the mere cost of transportation from here to Washington and back, a good many desirable volumes for our library.

In the charge of the State Geologist are about 150 samples of different varieties of soils collected in different parts of the State, especially the Southern, which we can have for examination and exhibition by arranging for packing and transporting them, and giving a receipt therefor.

There is a continued and increasing demand, and almost a necessity, for analyses of such soils and the working of other laboratory experiments directly related to agriculture and other industrial arts for which there is no adequate supply, and cannot be until the chemical force of the University is increased.

Much could be done towards exhibiting the industrial resources of our State, and its changes in population, production, etc., by a series of colored and shaded maps, on the plan of those already made by Secretary Wines of the State Board of Charities. If the means for lithographing or otherwise duplicating these can be furnished, I can supply at an early date, and in time for the next annual report, maps showing such facts, as the following, by counties: density of population and its increase, wealth per capita and its increase, changes in corn production, in wheat production, in cattle, horses, swine and sheep, founding of towns, building of railways, and opening of coal mines.

Respectfully submitted,

W. C. FLAGG.

Mr. J. H. Pickrell read the following report from the Committee on Agriculture, which was accepted:

To the Board of Trustees of the Illinois Industrial University:

Your Committee on Agriculture, to whom the report of the head farmer was referred, beg leave to report that they have had the same under consideration, and that it is with no small degree of satisfaction that they can endorse the same as a *full, fair* and *just* report and that the balance, $1,477.83, is correct, and that Mr. Lawrence is entitled to his maximum salary of $1,200 per year. The balance of the net profit, together with the amount of $686.41, from State appropriation, we recommend to be placed to the credit of the farm, for the purchase of additional machinery, and to pay for the amount (engine, etc.,) already partially put up. The estimates for the next year—$3,340—made by the head farmer, we think very reasonable, especially as we think, (unless some unforeseen and unusual occurrence should prevent,) that it will be all refunded by the end of the year. Until the actually *necessary* improvements of the farm are supplied, we suggest that the net profits of the farm should be kept for that purpose.

We would further recommend that the minute details and care be left for the year to the Executive Committee.

We also would recommend that Mr. Lawrence be continued a head farmer for the ensuing year, on same terms as those of last year. We would also ask that $1,500 be loaned to us, for the purpose of stocking the farm with cattle to consume our products. The amount could perhaps be refunded before it would be needed by other departments.

All of which is most respectfully submitted.

J. H. PICKRELL,
D. A. BROWN,
JAS. R. SCOTT,
R. R. HARRINGTON.
A. BLACKBURN.

Mr. M. C. Goltra, Chairman of the Committee on Building, read the following report, which was adopted:

To the Board of Trustees of the Illinois Industrial University:

Your Committee on Buildings and Grounds, to whose supervision the University building and adjacent grounds was at the beginning of the year entrusted, would respectfully report, for the information of the Board, that such repairs and improvement have been, from time to time, made upon the building as was found necessary, or within reach of the means at the command of the committee. Floors of walnut and ash have been laid over the pine floors of the basement and first stories, the same being found necessary. On the 30th day of December, a fearful storm of wind partially removed the tin roof from the wing of the building, exposing to damage the structure underneath and the valuable library and cabinets of the University.

Temporary repairs were at once made by the use of paper roofing, until the damage could be permanently and thoroughly repaired. We think the building now in good repair, and so far as your committee are advised, it is now in the best possible condition for subserving the interests of the University.

The large additions to the number of students in attendance on the University, have rendered additions to the out-houses and other conveniences upon the grounds necessary, which additions have been made with reference to economy. The extreme and unprecedented drought of the year, has on more than one occasion, exhausted the supply of water in the cisterns and wells of the grounds, rendering the sinking of one well and the deepening of others necessary to obtain the necessary supply. The ornamental part of the grounds has been under the care of Mr. Thos. Franks, the florist of the University, and notwithstanding the difficulties in the way of floral culture during the entire season, the grounds from May until November were radiant in beauty and attraction.

The new buildings projected by the Board at the last annual meeting, in pursuance of the law of 1871, although not within the scope of supervision of your committee, have received careful attention in every stage of their progress, and your committee take pleasure in bearing witness to the faithful compliance on the part of the builder, Mr. Gehlman, with the requirements of the contracts; both in character of the work and of the materials used.

All of which is respectfully submitted.

M. C. GOLTRA,
J. M. VAN OSDEL,
JAS. R SCOTT,
J. O. CUNNINGHAM,
Committee.

The report of Mr. J. S. Pickard, Chairman of the Committee on State of Institution was read:

To the Board of Trustees of the Illinois Industrial University:

Your Committee on the state of the Institution begs leave to report as follows:

At different times during the year members of the Committee have visited the Institution, and have attended upon its exercises. They are pleased to notice steadily increasing attention to the condition of the buildings and grounds, and to observe a marked change for the better in all the public rooms of the building. The students give evidence of broader and better culture than during previous years. Their deportment in the class-room is that of earnest self-reliant men and women, who bend their energies to the accomplishment of the one purpose that has brought them here. The more advanced classes are specially commended for clearness and independence of thought.

The farm and workshops are in good condition, more than meeting our expectations, in that they are so soon self-sustaining. The less advanced classes still show some lack of earlier advantages which

should be atoned for by a little more personal attention than can be given them by the present instructional force; and your committee would inquire whether this lack might not be supplied without much cost to the Institution, by the employment of the young men, who, having already acquired a good degree of general culture, are seeking to perfect themselves in some one of the higher courses of study If one or two such could be employed a portion of the time, a double purpose might be served The better instruction of members of classes altogether too large, and quite acceptable aid to worthy young men or women, who would honor the Institution by becoming its students in special studies.

The interest manifested by the students in the library and by a large class in the laboratory is specially commendable. The constant and general use of the library is quite a marked feature of the Institution.

The general discipline of the Institution seems to be good. Your committee would suggest that more be made of the examinations held at the close of the term, and that they be made attractive to patrons and friends of the school.

Respectfully submitted,

J. L. PICKARD,
D. A. BROWN,
JAS. P. SLADE,
Committee.

The report was adopted, and so much of it as refers to the employment of students of advanced standing for aid in teaching in the lower classes, was referred to the Executive Committee.

The following report of Judge A. M. Brown, Chairman of the Committee on Horticulture, was read:

REPORT OF COMMITTEE ON HORTICULTURE.

MR. PRESIDENT: The Committee on the Department of Horticulture make the following report. For what has been done during the past year in the orchards, nurseries, forest and ornamental grounds, they refer to the reports of the Regent and the Professor of Horticulture.

The work of the season will consist chiefly of the care of the grounds and orchards, progress in planting the forests and arboretum, cultivation of the gardens, nurseries, etc.

The appropriation by the Legislature available the present year for the purchase of trees and seeds, and for labor on the tree plantations, is $1,750, all of which will be needed.

Your committee estimate the gross receipts of the gardens and fields at $1,500, of the green house, at $2,150; making the resources of the department, $3,650.

They estimate the appropriations required as follows:

Salary of foreman	$1,000 00
Labor	2,000 00
Incidental expenses	300 00
Care of green house and plants and seeds for same, and ornamental grounds	1,000 00
	$4,300 00

Your committee believe that the green house and ornamental grounds can be managed by the students who have become familiar with the work, under the supervision of the Professor of Horticulture. In this way the services of the gardener may be dispensed with and the cost of the work will be reduced at least fifty per cent.

In view of the condition of the finances of the University, your committee recommend that this course be taken, and, in that case, they ask for an appropriation for the department of $3,800.

Of this sum, the state appropriation will be $1,750, leaving $2,050 to come ont of the general fund, And of this latter it is believed, as before estimated, that the receipts from the gardens, green house, etc., will pay at least $1,900.

Your committee approve the contract made with Mr. Vickroy, the superintendent of the orchards and forests, as reported by the Regent.

Respectfully submitted,

A. M. BROWN,
P. R. WRIGHT,
B. PULLEN.

The report was received, and so much of it as relates to appropriations referred to the Committee on Finance.

The recommendation of the Committee to dispense with the services of the florist, Mr. T. Franks, was adopted.

The Committee on Nominations made the following report, which was adopted:

Executive Commiitee.—J. M. Gregory, Jas. R. Scott, L. W. Lawrence, J. O. Cunningham, Em. Cobb, A. M. Brown, J. H. Pickrell, John M. Pearson, M. C. Goltra.

Committee on Agriculture.—J. H. Pickrell, Alex. Blackburn, W. B. Anderson, D. A. Brown, James R. Scott.

Committee on Horticulture.—A. M. Brown, B. Pullen, S. Edwards, O. B. Galusha, P. R. Wright.

Finance Committee.—Em. Cobb, I. S. Mahan, S. S. Hayes, C. R. Griggs, L. B. McMurray.

Committee on Building and Grounds.—M. C. Goltra, J. M. Van Osdel, Jas. R. Scott, R. R. Harrington, J. O. Cunningham.

Auditing Committee.—L. W. Lawrence, P. R. Wright, O. B. Galusha, I. S. Mahan, Alex. Blackburn.

By-Laws.—I. S. Mahan, J. L. Pickard, D. A. Brown.

Committee on Courses of Study and Faculty.—The Regent, and Messrs. Bateman, Pickard, Hayes, Slade and Edwards.

Committee on Military.—Messrs. Brayman, Anderson, Bowen, Scroggs and Wright.

Committee on Library and Cabinet.—Messrs. Bateman, Slade, Mahan, Pickard and Griggs.

Mechanical Committee.—Messrs. Pearson, McMurray, Bowen, Harrington and Goltra.

Committee on the Institution.—Messrs. Pickard, Slade and Pullen.

Corresponding Secretary.—Willard C. Flagg.

Recording Secretary.—Edward Snyder.

The special committee on Education of Women, reported through the Chairman, Mr. J. L. Pickard, as follows:

To the Trustees of the Illinois Industrial University:

GENTLEMEN: The special committee to whom was referred so much of the Regent's report as relates to the furnishing additional facilities for the Education of Women, has considered the subject so referred, and begs leave to report as follows:

1. That the recommendations of the Regent, so far as they relate to the extension of educational facilities, meet our most hearty approval.

2. That the question of the conversion of the building now used by the University into a boarding and lodging house for the exclusive use of women, demands more serious consideration than the time allowed the committee will warrant, and inasmuch as the ability of the Trustees to make such a change of use within the year is very questionable, no harm can result from delay.

3. Many of the special demands made upon the University on account of the admission of women to the privileges of its courses of study, seem to your committee to warrant the recommendation that there be added to the Faculty some lady competent to instruct the young women in Physiology and Hygiene, and to superintend generally, their physical and æsthetic culture.

Respectfully submitted,

J. L. PICKARD,
A. BLACKBURN,
JAMES P. SLADE,
P. R. WRIGHT,
J. O. CUNNINGHAM,
Committee.

AFTERNOON SESSION.

The Board met at the time apointed.

The subject of fitting the old University building for the exclusive use of female students was discussed at some length.

Hon. Newton Bateman, Superintendent of Public Instruction of the State, and Hon. J. L. Pickard, Superintendent of Public Instruction of

the city of Chicago, being requested to give their opinoin on the subject, responded and expressed themselves both favorably to the plan as recommended by the Regent.

On motion of Mr. Brown, the matter was referred to the Executive Committee.

The Board took a short recess, to witness the Exibition Drill of the University Battalion.

The report was received and the committee discharged, on motion of Mr. Pickrell.

Mr. Lawrence moved that so much of the report as relates to employment of additional teachers be referred to the Committee on Finance.

Mr. Pearson moved to amend by referring to Committee on Course of Study and Faculty.

On motion it was so referred.

The Board then adjourned till 2 o'clock, p. m.

The Board reassembled at 4 o'clock P. M.

The reports being called for, Mr. Pickrell made the following additional report from the Committee on Agriculture:

SUPPLEMENTAL REPORT OF AGRICULTURAL COMMITTEE.

That portion of Mr. Secretary Flagg's report that relates to further experiments on the plan that was last year followed, for the ensuing year, we have had under consideration. We fully concur in his suggestions, and would recommend that Mr. Flagg be requested and empowered to carry out the plans according as he may be able to procure suitable persons at the points named.

J. H. PICKRELL,
JAS. P. SCOTT,
D. A. BROWN,
A. BLACKBURN.
Committee.

The report was accepted, and referred to the Finance Committee.

The following additional report of the Treasurer was then read and accepted:

ADDITIONAL REPORT OF TREASURER.

Statement of Sale of Agricultural College Scrip for Illinois Industrial University and Investment of Proceeds.

313 pieces, of 160 acres each, 50,080, at 89½c	$44,821 60
Invested in $15,000 00 Champaign county 10 per cent. bonds, cost	$15,000 00
" 30,000 00 Kankakee county 10 per cent. bonds, cost	29,700 00
Balance on hand	121 60
	$44,821 60

Bonds belonging to Illinois Industrial University:

$55,000 00 Champaign county 10 per cent. bonds, cost	$55,000 00
50,000 00 Sangamon county 9 per cent. bonds, cost	50,000 00
25,000 00 Morgan county 10 per cent. bonds, cost	25,000 00
30,000 00 Pike county 10 per cent. bonds, cost	30,000 00

$25,000 00	Chicago city 7 per cent. water bonds, cost	24,961 80
30,000 00	Kankakee county 10 per cent. bonds, cost	29,700 00
13,000 00	Putnam county 10 per cent. bonds, cost	13,000 00
66,000 00	Illinois State 6 per cent. bonds, cost	67,153 34
$294,000 00	in bonds, costing	$294,815 14
	Balance due scrip	198 87
		$295,014 01

$60,000 00 Champaign county 10 per cent. bonds:

180,000	acres of scrip sold for	$101,764 50
100,000	" " "	58,427 91
100,000	" " "	90,000 00
50,080	" " "	44,821 60
430,080		$295,014 01

6,400	acres of scrip used to enter	6,362 63-100	acres of land in Pope county, Minnesota.
5,440	" " "	5,433	" " Kandigoh county "
4,160	" " "	4,167	" " Renville " "
9,440	" " "	9,340	" " Gage " Nebraska.
25,440	" " "	25,302 63.100	
24,480	" on hand.		

JOHN W. BUNN, *Treasurer.*

SPRINGFIELD, ILL., *March* 1, 1872.

The following report from the Auditing Committee, was presented by Judge L. W. Lawrence, the Chairman:

To the Board of Trustees of the Illinois Industrial University:

The Auditing Committee report that they have examined the Treasurer's report, and find the same correct—that they have examined his vouchers, consisting of orders 1 to 723, current series, and canceled the same by punching, and recommend that they be returned to the Treasurer for safe keeping.

The committee have examined the following bills, and find them correct, and recommend that orders be drawn for their payment:

UNPAID BILLS.

B. D. Whitney, planer	$250 00
J. W. Bunn, printing vouchers	5 50
J. L. Wayne & Son, tools	507 55
Larrabee & North, tools	162 25
Miller & Toll, cloth and towels	4 25
Enterprise Coal Company, four cars coal	74 00
Nicolet & Schoff, printing	4 00
T. J. Burrill, petty expense	1 95
H. K. Vickroy "	3 05
Flynn & Scroggs "	9 00
Walker Bros, oil	1 50
E. V. Peterson, stationery, etc	32 18
Dodson & Hodges, hardware	87 69
H. Peddicord, coal and plaster	43 25
J. W. Keys, hanging paper	5 00
Adams, Blackmer & Lyon, blank books	61 50
J. M. Wills, pear scions	5 00
John Tischer, flower pots	7 00
J. M. Gregory, periodicals	2 95
Hosford & Spear, furniture and oil	2 30
N. W. Manufacturing Company, tools, etc	58 92
Fuller & Fuller, oil and paint	72 62
Hesse & Co., castings, etc	31 53
A. P. S. Stuart, expense for department	25 25
Walker Bros., material and labor	39 95
Hovey & Co., seed	3 40
Graham & Stevenson, car work	26 00

Peterson, Henderson & Co., seed	$14 95
Jas. Vick, seed	16 50
J. C. McKee, lumber	43 35
E. Snyder, petty expense	2 67
Total	$1,605 06

The committee report the following bills, with the recommendation that they be referred to the Executive Committee, with power to act:

G. H. Burt, sash	$19 50
Flynn & Scroggs, binding	76 55
G. E. Hessell, harness, etc	47 45
H. Swannell, paints, oils, etc	24 23
Geo. Ely, blacksmithing	8 60
J. W. Dowell, draughting	15 00

Respectfully submitted.

L. W. LAWRENCE,
P. R. WRIGHT,
A. BLACKBURN,
I. S. MAHAN.
Committee.

The Board adjourned until 7:30 P. M.

The Board convened at the hour appointed.

Mr. J. M. Pearson, Chairman of the Committee on Mechanics, read the following report:

REPORT OF COMMITTEE ON MECHANICAL DEPARTMENT.

To the Board of Trustees of Illinois Industrial University:

After the account given you of the operations of this department, by the Regent, and witnessing, as most of you have, something of what has been done, we do not feel called upon to enter at length into the detail of operations.

These can only be ascertained by reference to the books of accounts. It is, however, needful to state that this newly developed department is growing beyond precedent. It embraces forty-two students in its operations, and many others are preparing for the course. It furnishes more labor for those students who wish to labor than all the other departments together.

To meet this growth and provide the means to utilize this labor, has required considerable expenditure of means. The larger part of this has been furnished by the liberality of the State Legislature, and has been invested in tools and machinery, as partially shown in the report of the book-keeper.

We still need further appropriations in order to enable the Professor to teach successfully the practice as well as the theory of mechanics. When these arrangements are once completed, we hope and believe that the department will be self-sustaining, that is, that the current expenses will be met by the earnings.

Accompanying this we submit statement of Prof. Robinson, of the more immediate wants of this department, and hope that the Board will be able to grant such help as is needed to carry out his suggestions.

JNO. M. PEARSON,
R. R. HARRINGTON,
Committee.

The report was received, and referred to the Finance Committee.

REPORT OF THE MECHANICAL DEPARTMENT.

ILLINOIS INDUSTRIAL UNIVERSITY,
March 8th, 1872.

Dr. J. M. Gregory, Regent:

DEAR SIR: I offer the following estimate of expenses for running the mechanical shops, and including the carpenters' shop, for the year 1872-73. In making this estimate, a few considerations which I present here have been taken into account.

Some additional machinery and tools are very much needed. Although the department congratulates itself on having so fine an outfit for the purposes of practical instruction, and feels that it owes a debt of gratitude to those who have taken an interest in its behalf, yet a few more machines would add much to its facilities, not only for educational purposes, but for furnishing the students with the needed facilities for paid labor. We now have conveniences for about eleven workmen in the machine shop, by using every tool, machines and vises, but it is not possible to so lay out the work that every one of them shall be economically employed the whole time. We cannot, then, count on more than a half or two-thirds the number employed that we seem to have facilities for. Some of the additional machinery and tools we can manufacture ourselves, which wewould prefer to do for two reasons. 1st: We will get better tools for the same money; and 2d: We can get them to better suit us in design, and having patterns, we can make for others.

Among the number of machines we wish to make ourselves are, a drilling machine or drill press, a shaping machine, a gear cutter, a milling machine, and a pattern lathe for the pattern makers' room. I would only ask at present to make the drill press and pattern lathe.

We find we can melt iron as well as brass in crucibles. Such iron makes the finest castings. We wish to do the casting in both iron and brass for the class work when the castings are not large. But our brass furnace, though working admirably for brass, has not sufficiedt draft for iron. A ten or twelve inch blower would increase the draft amply, and also blow the forge fire; and besides our bellows are nearly worn out. The needed fan can be obtained for about $30. It is quite desirable that the drill press, pattern lathe and fan blower be added the present year; and the fan as soon as convenient.

A fresh stock of materials of nearly all kinds used in the shop is now needed, including iron, steel, materials for brass casting, machine oil, pattern lumber, which should be kept in considerable stock, and the older it gets the better, so that costly patterns when made will keep their shape.

ESTIMATES FOR THE YEAR.

Iron and steel	$250
Materials for brass castings, mostly for models	40
Pattern lumber 1,000 ft	50
We should have a stock of this sufficient for several years, say 5,000 ft., at $40 per M. ($200)	
Barrel of combined lard and paraffine oil, about	40
Sheet brass and brass tubing	25
Twist drills and drill check	50
Files of various grades	50
A floor in the pattern room for patterns, 2,000 feet of lumber, about $70, work $20	90
Non-conductor materials, the Chalmers-Spencer, for covering steam pipes, engine cylinder, three barrels, at $12	36
Sturtevant blowing fan, 12½ inches. (I think this can be got at a reduction.)	45
Drill press, adapted for milling and boring	300
Pattern lathe, iron bed	175
Total, including the larger lot of pattern lumber	$1,301

The following brief statements are made regarding the machine and pattern shops of the mechanical department. Do they pay?

The detailed annual account is not made out, but the following, embracing the principal part of the work of the past year, is probably sufficient at this time.

The amount of nineteen bills, mostly for parties outside of the University, is $673 90. In each of these bills there is a profit, the amounts exceeding the cost to the department, arising from undertaking the jobs. For a large number the profit is from twenty-five to fifty per cent., and for some 100 per cent.

The pipery, for heating the mechanic and military building, when completed, will cost about $790, the pipe, about 4,000 feet, costing about $700, and the work done entirely by the department, about $90. This includes the pipe connections for the engine. This, compared with bids of a year or two ago, for steam piping in the main building, will probably show a great saving over having had the work done by contract.

The engine for the new mechanical shops, cost about $760. A Rider cut-off of same size, or a Corliss engine, working steam on the same principle, would have cost, unless discounted to us, about $1,150.

Much work has been done in fitting up the new shops, which greatly benefit the department, although not appearing as a money profit, and should the general account not make a favorable exhibit, this may serve as the explanation.

When we consider the objects of the shop as educational instead of remunerative, I regard them as amply paying, and the facilities, now or soon at hand, leave but little to be desired. Everything, from the originating of new designs to the tightening the last screw, including moulding and casting in iron and brass, is now being performed by the students in the shop-practice classes. Although the financial profit of the shop, should not be ignored, still I believe a shop, when regarded as part of an institution of learning, and necessary for advancing its educational interests, its educational facilities should be regarded as of first importance. To make the shop a necessarily paying adjunct to the Institution may detract from, or even cripple its efficiency in accomplishing its legitimate work. Shops are generally expected to pay, but why, necessarily, more than a laboratory, when part of a University.

The shop offers excellent facilities for experimenting, which I believe can very properly be regarded as a perfectly legitimate employment, and a much more profitable one than mere money making, and it is hoped that some experiments may be allowed to be undertaken before a very distant day.

Most respectfully, S. W. ROBINSON.

The report from the Committee on Finance was read by the Chairman, Judge A. M. Brown :

REPORT OF COMMITTEE ON FINANCE.

The Finance Committee, to whom was referred that portion of the Regent's report relating to the finances of the University, and the reports from the committees on Agriculture, Horticulture and Mechanics, beg leave to make the following report:

The committee approve the recommendation of the Regent in reference to the sale of the 25,000 acres of scrip still remaining unsold, and recommend that the Regent, Treasurer and Chairman of the Finance Committee be instructed to make the sale as early as possible, and for the best attainable price, and to invest the proceeds in safe interest-paying bonds. They also approve his recommendation in reference to the sale of the wild lands belonging to the University, except, that in their opinion, the minimum price should be fixed at $2 50 per acre. They have considered the subject of increasing the charge to the students for incidental expenses, to $5 per term, and have concluded that the change is not advisable at present. They also recommend that the Regent, Treasurer and Chairman of the Finance Committee be instructed to exchange our 6 per cent. State bonds for good, safe county or municipal bonds, bearing a higher rate of interest.

The resources of the University, available for the current year, actual and estimated, are as follows:

Interest on land notes	$600 00
" bonds	31,500 00
Matriculation and In. fees	5,000 00
Receipts from farm	4,500 00
" Horticultural department	1,900 00
" Mech. and Car. shops	4,000 00
" rent	1,000 00
Balance in treasury belonging to general fund	3,600 00
	$51,500 00

The expenses for the year, as estimated, and for which appropriations should be made, are as follows:

Regent's salary	$4,000 00
Four Professors, at $2,000	8,000 00
Five Professors, at $1,800	9,000 00
Course of Agricultural lectures	1,000 00
French teacher	800 00
Drawing teacher's salary	1,500 00
Lectures on Con. and Com. law	500 00
" Vet. science	600 00
Librarian and assistant	600 00
Private secretary	600 00
Treasurer	500 00
	$27,100 00

Wages of three foremen:		
Lawrence	$720 00	
Vickroy	1,000 00	
Steadman	1,000 00	
		$2,720 00
Outstanding debts due		2,600 00
Board expenses		800 00
Buildings and grounds		1,000 00
Fuel and lights		1,000 00
Stationery and printing		1,000 00
Incidental expenses		1,000 00
Insurance		500 00
Military department		250 00
Taxes		2,500 00
For carrying on farm		3,000 00
For Horticultural department, exclusive of foreman's salary and State appropriation		1,100 00
For Mechanical department, for each shop $3,000		6,000 00
		$50,570 00

The Agricultural department has a balance of the legislative appropriation of $686 41, which your committee recommend may be appropriated to the purchase of or payment for necessary farm machinery, under the direction of the Executive Committee.

The legislative appropriation for the Horticultural department for the present year, is $1,750, which should be appropriated for seeds, plants, labor on forest tree plantations.

The Chemical department has an unexpended balance of last year's legislative appropriation of $1,636 45, and an appropriation for the present year of $2,750, making together the sum of $4,386 45; and the Library and Cabinet have an appropriation of $5,000. There is an unexpended balance from last year of the legislative appropriation for Agricultural experiments and lectures of $582 34, and $3,000 for the current year. Those several sums should be appropriated in accordance with the laws on the subject.

Your committee have carefully considered the recommendation of the Regent in reference to an increase to $2,000 each, of the salaries of the five Professors, who are now receiving $1,800 a year. They appreciate very highly the value of the services of the gentlemen filling these professorships, and would not hesitate to recommend an increase of their salaries, if the financial condition of the University would allow it. But it must be seen, from the statements we have made above, that our treasury will not, at present, bear any increase of salaries whatever, especially when we consider that additional teaching force will probably become absolutely necessary at the opening of the Fall Term.

The committee ask the adoption of the resolutions herewith presented.

All of which is respectfully presented.

A. M. BROWN,
P. R. WRIGHT,
JNO. M. PEARSON,
D. A. BROWN,
S. S. HAYES.

Resolved, That the Regent, the Treasurer, and the Chairman of the Finance Committee, be authorized and instructed to sell, as early as possible and for the best price obtainable, the 25,000 acres of land scrip belonging to the University, and to invest the same in good, safe interest-bearing bonds.

Resolved, That the Executive Committee be authorized and instructed to provide for the early sale of the wild lands belonging to the University, (fixing the minimum price of said land at $2 50 per acre.)

Resolved, That the several sums of money reported by the Finance Committee as necessary for the expenses of the University during the current year, be and are hereby appropriated to the various objects and departments, as is specifically set forth in said report.

The report was received, and the resolution adopted.

The Chairman of the Committee of Finance then presented the following additional report:

ADDITIONAL REPORT OF FINANCE COMMITTEE.

To Regent and Board of Trustees of Illinois Industrial University:

Your Finance Committee, to whom was referred the report of Hon. W. C. Flagg, of experiments conducted during the past year, and recommendations for future operations, ask leave to report the following resolutions:

1. *Resolved*, That a warrant be drawn in favor of W. C. Flagg, for $476 50, to be paid out of State appropriation for Experimental purposes. Said amount to be in full for balance due Mr. Flagg on that account.

2. *Resolved*, That the plan proposed for future operations be referred to the Executive Committee, to be acted upon at its next meeting.

A. M. BROWN, *Chairman.*

The report was accepted and the resolutions proposed therein were adopted.

The following report was made by Hon. Newton Bateman, Chairman of the Committee on Library and Cabinet:

To the Board of Trustees of the Illinois Industrial University:

GENTLEMEN: Your Committee on Library and Cabinet report that they find the Library has been increased during the year by the addition of 2,413 volumes—making the total number of volumes at present in the Library 7,307. Valuable collections of minerals have been added to the Cabinet—in most cases without expense, save express charges.

Both Library and Cabinet are now in a very satisfactory condition, and are consulted daily by large numbers of students.

Your committee recommend that the appropriation of $5,000, now available for the increase of the Library and Cabinet, be expended, or so much thereof as may be deemed expedient, during the current year, under the direction of the Regent and Faculty, due regard being had to the special needs of the several departments of the University, in the selection of the books and apparatus.

NEWTON BATEMAN,
JAMES P. SLADE,
B. PULLEN,
Committee.

The report was accepted.

The Chairman of the Finance Committee offered the following additional report; which was accepted:

The Finance Committee, to which was referred the Treasurer's statement of the sale of Agricultural College Scrip for the University, and the investment of the proceeds, report that they have examined the same and found it correct. They report the paper back that it may be placed upon the record.

A. M. BROWN, *Chairman.*
P. R. WRIGHT.

On motion of Judge A. M. Brown,

Resolved, That so much of the report of the Finance Committee as relates to the increase of the charges to students for incidental expenses, be referred to the Executive Committee, with power to make such increase, provided in their judgment a necessity for the charge shall become apparent.

On motion of Mr. Pearson, the appointments of Prof. J. C. Carey, Prof. D. C. Taft and Prof. J. B. Webb, were confirmed.

Mr. Harold Hansen was appointed Instructor in Architecture and Free-hand Drawing, at a salary of $1,500 per annum.

On motion of Judge Cunningham,

Resolved, That the measure introduced in Congress by the Hon. J. S. Morrill, of Vermont, to further endow the Agricultural Colleges, meets with the hearty approval of the members of this Board, and that our fellow-citizens, representing the people and the State of Illinois in Congress, be earnestly solicited to give the measure their full support.

Resolved, That the Secretary be instructed to forward a copy of the above to each of the Senators and Representatives from Illinois, in Congress.

The Board adjourned to meet again on the second Tuesday in March, 1873.

J. M. GREGORY, *Regent.*

E. SNYDER, *Recording Secretary.*

URBANA, *March* 12, 1872.

DR. J. M. GREGORY, LL. D.,
Regent of the Illinois Industrial University:

DEAR SIR: Enclosed please receive the following documents:

I. List of warrants from No. 1 to 723 inclusive, drawn from March 15, 1871, to date.
II. Statement of the assets of the Illinois Industrial University.
III. Classified statement of appropriations and expenditures thereon.
IV. Statement of the payments of students' labor, in the various departments.

Very respectfully,

E. SNYDER, *Recording Secretary.*

List of Warrants, No. 1 to 723, from March 15, 1871, to March 5, 1872.

No.	Date.	To whom.	For what.	Total.
1	March 15..	J. L. Pickard	Expense to Board meeting	$11 15
2	" 15..	Samuel Edwards	" "	14 50
3	" 15..	O. B. Galusha	" "	9 00
4	" 15..	E. Cobb	" "	23 55
5	" 15..	A. Blackburn	" "	26 00
6	" 15..	L. W. Lawrence	" "	23 80
7	" 15..	I. S. Mahan	" "	18 20
8	" 15..	B. Pullen	" "	18 20
9	" 15..	John M. Pearson	" "	24 85
10	" 15..	D. A. Brown	" "	7 50
11	" 15..	M. C. Goltra	" "	10 00
12	" 15..	J. P. Slade	" "	19 10
13	" 15..	J. M. VanOsdel	" "	14 50
14	" 15..	A. M. Brown	" "	28 25
15	" 15..	N. Bateman	" "	10 50
16	" 15..	L. Allen	" "	11 00
17	" 15..	E. L. Lawrence	Pay of farm labor	18 46
18	" 15..	Doane House	Entertainment of legislative committees	114 00
19	.....	Geo. S. Upstone	Boarding farm hands	35 12
20	.....	F. K. Phoenix	Nursery stock and flowers	52 85
21	.....	Griggs House	Entertainment of legislative committee	21 00
22	.....	Avery & Neff	Blacksmithing	3 90
23	.....	Angle & Sabin	One tile	4 40
24	.....	Journal Company	Printing memorials	12 00
25	.....	Larrabee & North	Materials for shop	8 80
26	.....	Hovey & Co.	Garden seeds	12 91
27	.....	Dickerson & Collier	Carpenter work	31 50
28	.....	T. R. Leal	Walnut lumber	47 80
29	March 18..	Joseph McCorkle	Hardware	114 83
30	" 18..	Henry Swannell	Glass, paint, etc	41 42
31	" 18..	Trevett & Green	Hardware, spades, etc	54 30
32	" 18..	E. Snyder	Petty expense	117 71
33	" 18..	W. C. Flagg	Salary Corresponding Secretary	250 00
34	" 18..	J. W. Bunn	" Treasurer	500 00
35	" 18..	J. M. Gregory	Periodicals for library	40 13
36	" 18..	E. L. Brown	Expense to meeting	15 50
37	" 20..	A. Herbert	Pressing hay	26 00
38	" 20..	D. J. Tibbards	Gas fixtures	7 75
39	" 20..	T. J. Burrill	Work in Horticultural department	11 10
40	" 20..	Wm. M. Baker	Salary April, 1871	166 66
41	" 20..	E. Lochrie	Printing and advertising	6 00
42	" 22..	Peabody & Ayres	Castings	68 51
43	" 23..	Henderson & Fleming	Seeds and plants	7 20

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Tota
44	March 23..	J. M. Gregory	Salay April	$333 33
45	" 31..	A. P. S. Stuart	"	166 66
46	" 31..	S. W. Robinson	"	166 66
47	" 31..	T. J. Burrill	"	150 00
48	" 31..	S. W. Shattuck	"	150 00
49	" 31..	E. Snyder	"	150 00
50	" 31..	James Bellangee	"	83 33
51	" 31..	H. M. Douglas	"	83 33
52	" 31..	R. B. Warder	"	50 00
53	" 31..	I. D. Foulon	"	50 00
54	" 31..	H. K. Vickroy	"	75 00
55	" 31..	Thos. Franks	"	75 00
56	" 31..	A. Thomson	"	83 33
57	" 31..	H. M. Douglas	Expense, library	19 05
58	April 1..	Herman Plessner	Work in Horticultural Department	25 66
59	" 1..	N. O. Albert	" " "	27 43
60	" 1..	Wm. Burchnell	" " "	7 70
61	" 1..	F. Brickett	" " "	3 08
62	" 1..	J. Kyle	" " "	4 85
63	" 1..	P. Gennadius	" " "	5 00
64	" 1..	E. A. Robinson	Work, Mechanical Dep t	38 63
65	" 3..	J. H. Detmers	On account of salary	50 00
66	" 5..	J. F. Drake	Work on farm	8 46
67	" 5..	E. L. Lawrance	Farm expenses, March	242 81
68	" 5..	E. Snyder	Pay-rol students' labor	391 80
69	" 6..	Union Coal Company	Two cars coal	30 00
70	" 8..	John Limbarger	Drawing posts	5 82
71	" 8..	A. P. S. Stuart	Petty expense	12 42
72	" 12..	Judge A. M. Brown	Expense to meeting	24 40
73	" 12..	J. M. Pearson	" "	17 15
74	" 12..	L. W. Lawrence	" "	25 30
75	" 14..	Hovey & Co	Seeds	1 58
76	" 14..	Beach & Condit	Coal	17 50
77	" 14..	J. J. Thomas	Smoothing harrow	20 00
78	" 14..	Tenbrook, Pearce & Co	Sweet potatoes	6 50
79	" 14..	Dr. E. S. Hull	Expense to lectures	38 25
80	" 14..	H. Shepherd	Brick	20 25
81	" 14..	Hosford & Spear	Kerosene, wicks, etc	5 65
82	" 14..	Elisha Eldred	5,000 feet fencing	72 50
83	" 14..	A. F. Childs	Drain tile	117 10
84	" 14..	T. R. Leal	Wood for green house (fuel)	28 00
85	" 14..	Joseph McCorkle	Pumps, ropes for hay baling	77 50
86	" 14..	Flynn & Scroggs	Advertising and printing	25 50
87	" 14..	E. Snyder	Petty expense	27 47
88	" 18..	H. J. Detmers	Salary in full	50 00
89	" 20..	S. Edwards	Expense to meeting	27 10
90	" 20..	O. B. Galusha	" "	7 70
91	" 20..	A. M. Brown	" "	22 90
92	" 20..	J. L. Pickard	" "	12 60
93	" 20..	Geo. S. Brown	" "	11 50
94	" 20..	B. Pullen	" "	14 00
95	" 20..	P. R. Wright	" "	21 85
96	" 20..	A. Blackburn	" "	14 50
97	" 20..	L. W. Lawrence	" "	24 55
98	" 20..	J. P. Slade	" "	20 30
99	" 20..	M. C. Goltra	" "	19 00
100	" 20..	Geo. M. Pearson	" "	19 65
101	" 20..	Geo. S. Upstone	Salary March	60 00
102	" 20..	T. J. Burrill	Purchase of cow and hogs	68 25
103	" 20..	A. P. S. Stuart	Expense to lectures	2 75
104	" 20..	John Fischer	Flower pots	21 50
105	" 21..	Trevor & Co	10,000 labels	5 75
106	" 21..	Hovey & Co	One pound plaster	3 00
107	" 21..	W. C. Flagg	Expenses Corresponding Sec	11 25
108	" 21..	Geo. C. Hopkins	Library books	65 00
109	" 21..	Robert Douglas & Son	Trees	656 20
110	" 22..	J. M. Gregory	Salary April, 1871	333 33
111	" 22..	J. W. J. Kennedy	Cabinet case for Ent	90 00
112	" 22..	Marder, Luse & Co	Electrotype of building	4 00
113	" 22..	Adams, Blackburn & Lyon	One ream letter paper	5 00
114	" 30..	Wm. M. Baker	Salary April	166 66
115	" 30..	A. P. S. Stuart	"	166 66
116	" 30..	S. W. Robinson	"	166 66
117	" 30..	T. J. Burrill	"	150 00
118	" 30..	S. W. Shattuck	"	150 00
119	" 30..	E. Snyder	"	150 00
120	" 30..	Jas. Bellangee	"	83 33
121	" 30..	H. M. Douglas	"	83 33
122	" 30..	A. Thompson	"	83 33

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Total.
123	April 30..	J. D. Foulon	Salary April	$50 00
124	" 30..	R. B. Warder	"	50 00
125	" 30..	H. K. Vickroy	"	75 00
126	" 30..	Thos. Franks	"	75 00
127	" 30..	G. Deuerlich	Chemicals and apparatus	52 52
128	May 3..	H. K. Vickroy	Boarding of hands	87 85
129	" 3..	H. K. Vickroy	Petty expense	7 02
130	" 3..	G. W. Graves	Two boxes horseradish	7 10
131	" 3..	J. Kile	Work in Horticultural Dept	18 00
132	" 3..	P. Gennadius	" " "	10 00
133	" 3..	H. Plessner	" " "	20 00
134	" 3..	F. Brickett	" " "	20 00
135	" 3..	G. S. Haskell	Grass seed	3 00
136	" 3..	S. Hutchinson	Two harrows	18 00
137	" 3..	Union Coal Company	Two cars coal	30 00
138	" 3..	Griggs House	Entertainment legislative com	22 50
139	" 3..	J. W. Colberg	Instruction of Union Band	65 00
140	" 3..	E. L. Lawrence	Expense of farm	454 69
141	" 3..	W. M. Haney	Black walnut lumber	20 96
142	" 3..	T. J. Burrill	Petty expense	21 85
143	" 3..	E. Snyder	Pay-roll for students' labor	498 76
144	" 3..	Thomas Franks	Plants, seeds, etc	30 50
145	" 3..	Fuller, Finch & Fuller	Glass	47 02
146	" 3..	Flynn & Scroggs	Book-binding for library	37 65
147	" 3..	P. Locrie	Advertising	6 00
148	" 3..	W. C. Flagg	On account farm expenses	200 00
149	" 13..	J. M. Gregory	Salary May, 1871	333 33
150	" 13..	W. M. Haney	Black walnut lumber	26 43
151	" 13..	J. Mauz	Engravings for catalogue	78 50
152	" 13..	S. W. Shattuck	Salary May, 1871	150 00
153	" 13..	A. W. McDonald	Five days' plowing	15 00
154	" 13..	J. W. Bunn	Local land taxes	2,168 54
155	" 13..	W. M. Baker	Salary May, 1871	166 66
156	" 13..	A. P. S. Stuart	"	166 66
157	" 13..	S. W. Robinson	"	166 66
158	" 13..	T. J. Burrill	"	150 00
159	" 13..	E. Snyder	"	150 00
160	" 13..	Jas. Bellangee	"	83 33
161	" 13..	H. M. Douglas	"	83 33
162	" 13..	A. Thomson	"	83 33
163	" 13..	R. B. Warder	"	50 00
164	" 13..	J. D. Foulon	"	50 00
165	" 13..	Thos. Franks	"	75 00
166	" 13..	H. K. Vickroy	"	75 00
167	" 13..	S. P. Percival	Seed potatoes	18 85
168	" 29..	J. E. Turnell	Hogs	40 00
169	" 30..	A. Moller & Co.	Duties on chem. from Germany	111 87
170	June 2..	E. L. Lawrence	Farm expenses, May	358 12
171	" 2..	H. K. Vickroy	Board of hands	66 40
172	" 2..	H. K. Vickroy	Petty expense	2 16
173	" 2..	J. H. Kile	One month's wages	17 66
174	" 2..	P. Gennadius	" " "	15 00
175	" 2..	Herman Plessner	" " "	20 00
176	" 2..	F. Brickett	" " "	20 00
177	" 2..	T. J. Burrill	" " "	16 18
178	" 2..	O. W. Silver	Work on Exp. farm	14 60
179	" 2..	G. N. Gridley	" " "	29 22
180	" 7..	I. D. Foulon	Salary balance of year	50 00
181	" 7..	R. B. Warder	" " "	150 00
182	" 7..	J. H. Pickrell	Expense to meeting	18 90
183	" 7..	J. M. Pearson	" "	21 65
184	" 7..	L. W. Lawrence	" "	27 05
185	" 7..	M. C. Goltra	" "	12 00
186	" 7..	T. J. Burrill	Salary balance academic year	450 00
187	" 7..	A. M. Brown	Expense to meeting	30 65
188	" 7..	S. W. Shattuck	Salary balance academic year	450 00
189	" 7..	James Bellangee	" " " "	250 00
190	" 7..	A. P. Stuart	" " " "	500 00
191	" 7..	Wm. M. Baker	" " " "	500 00
192	" 7..	S. W. Robinson	" " " "	500 00
193	" 7..	E. Snyder	" " " "	450 00
194	" 7..	H. M. Douglas	" " " "	250 00
195	" 7..	J. M. Gregory	" " " "	1,000 00
196	" 7..	D. C. Taft	Salary spring term	120 00
197	" 8..	E. Snyder	Contingent fund	75 00
198	" 8..	J. Mauz & Co.	Engraving	44 75
199	" 8..	S. W. Shattuck	Excavation for new building	92 25
200	" 8..	Geo. Ely	Blacksmithing	21 62
201	" 8..	Union Coal Co.	Two cars coal	30 00

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Total.
202	June 8..	R. Peacock	Lumber	$102 74
203	" 8..	Larrabee & North	Circular saw and brass	4 80
204	" 8..	Deere & Co	One cultivator	18 00
205	" 8..	King & Hamilton	One corn plow	10 00
206	" 8..	Hovey & Co	Seeds	32 45
207	" 8..	Nicolet & Schoff	Printing and advertising	15 75
208	" 8..	Fuller & Fuller	Paints	11 63
209	" 8..	S. W. Robinson	Petty expenses Mech. department	20 80
210	" 8..	J. W. Colberg	Instruction of University Band	42 00
211	" 8..	E. V. Peterson	Stationery, etc	61 95
212	" 8..	M. E. Lapham	Lumber	51 59
213	" 8..	W. Price	Paint	4 02
214	" 8..	H. M. Douglas	Expense for library	10 07
215	" 8..	E. Snyder	Petty expense	51 13
216	" 8..	E. Snyder	Students' labor	573 71
217	" 9..	J. O. Cunningham	Cash adv. on taxes lands	284 32
218	" 14	P. Locrie	Printing and advertising	4 00
219	" 14..	Johnson Harvester Co	Parts and repairs	10 33
220	" 14..	I. B. and W. R. R. Co	Freight on chemicals	25 15
221	" 14..	Champaign Gas Co	Gas for May, 1871	16 40
222	" 16..	W. A. Baker	On account of purchase for library	200 00
223	" 19..	J. M. Gregory	" " " "	250 00
224	July 1..	H. K. Vickroy	Expense Horticultural department	210 82
225	" 1..	C. W. Silver	Work for June, 1871	29 25
226	" 1..	N. C. Ricker	Work on buildings	50 17
227	" 1..	E. C. Swartz	" "	21 00
228	" 1..	E. L. Lawrence	Expense of farm for June	653 18
229	" 1..	W. A. Chase	Work in gardens	10 00
230	" 1..	Rudolph Jeorg	" Horticultural department	21 96
231	" 1..	H. E. Robins	" shop	32 80
232	" 1..	G. N. Gridley	" Exp. farm	23 37
233	" 7..	J. Mauz	Engravings	53 50
234	" 7..	J. N. Wharton	Work in shop	33 25
235	" 7..	Chadden & Hesse	Lumber, etc	8 83
236	" 7..	Union Coal Co	Two cars coal	15 00
237	" 7..	J. Teeple	Assist. in library and office	50 00
238	" 7..	J. E. Cantrell	Work in shop	28 00
239	" 7..	I. C. R. R. Co	Advanced freights	55 17
240	" 7..	Frank Dunayski	Painting	6 40
241	" 12..	W. A. Chase	Work in orchards	3 00
242	" 12..	J. P. Campbell	" "	12 12
243	" 12..	John Paton	" armory	6 25
244	" 12..	C. A. Singlitary	" shop	18 11
245	" 12..	F. W. Satterlee	Cleaning cistern	3 00
246	" 13..	C. I. Hays	Work on University grounds	11 25
247	" 13..	A. White	One month's work in building	35 00
248	" 13..	T. Davis	" " " "	35 00
249	" 13..	Thomas Franks	Salary for June	75 00
250	" 13..	Alexander Thomson	Salary for June, 1871	83 33
251	" 13..	W. LeBaron	Lecture expenses	11 60
252	" 13..	George Ely	Blacksmithing	5 75
253	" 15..	Flynn & Scroggs	Printing catalogues, 1871	739 90
254	" 15..	Flynn & Scroggs	Programmes and advertising	19 80
255	" 15..	Fuller & Fuller	Chemicals, paints, glass	55 66
256	" 15..	J. M. Gregory	Petty expense	26 15
257	" 15..	W. C. Flagg	Expenses farm	50 00
258	" 15..	Simoneaw & Colburn	Muriatic acid	9 00
259	" 15..	State Journal Printing Co	Printing memorials	20 00
260	" 15..	Hovey & Co	Seeds	9 35
261	" 15..	E. Snyder	Petty expense	200 66
262	" 21..	Hovey & Co	Seeds	2 70
263	" 21..	F. W. Christian	Periodicals	22 00
264	" 21..	Dodson & Hodges	Hardware	106 90
265	" 21..	E. Snyder	Stand of colors	10 65
266	" 21..	M. F. Hatch	Work in machine shop	13 30
267	" 24..	D. Van Nostrand	Books for library	30 00
268	" 24..	E. Eldred	Lumber	279 10
269	" 24..	Leggat Bros	Books for library	556 68
270	" 24..	C. A. Prickett	Work in orchards	26 00
271	" 29..	H. E. Robins	" machine shop	29 75
272	" 29..	J. N. Wharton	" " "	36 75
273	" 29..	W. H. Hase	Cerpenter work in building	3 45
274	" 31..	J. E. Cantrell	Work in machine shop	50 00
275	" 31..	G. Gabriel	" harvest	6 50
276	" 31..	John Paton	" machine shop	42 00
277	" 31..	N. C. Ricker	" on building	59 80
278	" 31..	G. N. Gridley	" Experimental farm	24 64
279	" 31..	C. W. Silver	" " "	49 00
280	" 31..	E. L. Lawrence	Farm expense, July, 1871	301 83

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Total.
281	Aug. 1..	L. W. Lawrence	Expense to meeting	$23 10
282	" 1..	J. H. Pickrell	" Ex. meeting	17 95
283	" 1..	J. H. Pickrell	Two Berkshire pigs	100 00
284	" 1..	M. C. Goltra	Expense to meeting	14 50
285	" 3..	A. M. Brown	" "	47 25
286	" 3..	H. Peddicord	Lime and lard	11 75
287	" 3..	E. Snyder	Petty expense	49 90
288	" 3..	F. W. Satterlee	Plastering	20 77
289	" 3..	Jesse Nash	1,008 feet lumber	30 24
290	" 3..	Hussey, Wells & Co	Tools, materials, etc	30 07
291	" 3..	Hall, Kimball & Co	Iron for engine	81 77
292	" 3..	J. Mauz	Engraving	17 00
293	" 3..	Editors of Nation	Subscription for 1871	5 00
294	" 3..	Fuller & Fuller	Paint	22 88
295	" 3..	Hall Safe and Lock Co	One safe	142 50
296	" 3..	D. M. Ford	Castings	29 63
297	" 3..	Frank Douglas	Oil cups and lubricator	10 99
298	" 3..	Larrabee & North	Tools and hardware	92 07
299	" 3..	Jefferson & Son	Teaming	7 00
200	" 3..	Frank Dunayski	Work on building	7 05
301	" 3..	Thomas Franks	Salary July, 1871	75 00
302	" 3..	A. Thomson	" "	83 33
303	" 3..	H. K. Vickroy	" "	75 00
304	" 3..	J. H. Kyle	One month's work, July, 1871	18 00
305	" 3..	P. Gennadius	" " "	12 69
306	" 3..	Herman Plessner	" " "	20 00
307	" 3..	F. Brickett	" " "	20 00
308	" 3..	H. K. Vickroy	Board of hands, July	71 63
309	" 3..	Rudolph George	Work in orchards	9 00
310	" 3..	Geo. H. Lyman	" shops	27 50
311	" 3..	A. C. Swartz	" on building	36 00
312	" 3..	T. J. Burrill	Sundry expenses	42 60
313	" 3..	C. A. Singletary	Carpenter work on building	15 75
314	" 3..	J. W. Dowell	Painting	17 00
315	" 3..	A. White	Work cleaning and white-washing	16 20
316	" 7..	J. Teeple	One month's work in library	50 00
317	" 7..	W. M. & J. F. Olcott	30 tons hard coal	255 00
318	" 7..	I. C. R. R. Co	Advanced freights	6 40
319	" 7..	George Ely	Blacksmithing	17 35
320	" 7..	Jesse Nash	Walnut lumber	79 29
321	" 7..	W. C. Flagg	Experimental farm	19 90
322	" 7..	W. J. W. Kennedy	Case for recitation room	20 00
323	" 7..	D. C. Kennedy	Work in shop	9 97
324	" 7..	T. Davis	" building	35 00
325	" 7..	F. Dunayski	" "	10 78
326	" 7..	W. J. Nash	Oak and ash lumber	62 35
327	" 19..	W. S. Chase	Work on building	10 08
328	" 19..	Meininger & Schick	Books and periodicals	26 09
329	" 19..	Larrabee and North	Tools and materials	17 13
330	" 19..	Park & Royer	Lumber	4 20
331	" 19..	Stock Journal Co	Subscription, 1871	2 00
332	" 22..	Keene & Cook	Books for library	267 30
333	" 22..	J. W. Dowell	Painting	23 20
334	" 22..	Charles Weeks	Oak and walnut lumber	202 15
335	" 22..	Champaign Gas Co	Lights for March and April	38 80
336	" 22..	Frederic Kaempfer	Eyes for cabinet	6 43
337	" 22..	A. Thomson	Salary to Aug. 25, 1871	69 45
338	" 22..	E. A. Robinson	Work in mechanical shop	25 00
339	" 29..	E. L. Lawrence	Farm expenses, August	317 59
340	" 30..	J. C. McCauley	Work in fields	7 12
341	" 30..	M. C. Goltra	Expenses to meeting	12 00
342	" 30..	W. C. Flagg	Salary superintendent	250 00
343	" 30..	A. M. Brown	Expenses to meeting	8 00
344	Sept. 1..	Frank Dunayski	Whitewashing building	18 23
345	" 1..	F. Brickett	One month's work in orchards	19 62
346	" 1..	Herman Plessner	" " "	18 00
347	" 1..	J. H. Kyle	" " "	18 00
348	" 1..	P. Gennadius	" " "	13 63
349	" 1..	W. S. Chase	Carpenter, building	10 20
350	" 1..	J. E. Cantrell	Work in shop	54 00
351	" 1..	C. I. Hayes	Work in shop and orchards	11 02
352	" 1..	J. Paton	" "	32 37
353	" 1..	N. C. Ricker	Carpenter work, building	67 65
354	" 1..	E. E. Perry	Work in shop and orchards	38 40
355	" 1..	C. W. Silver	Wages, August	38 40
356	" 1..	Enterprise Coal Co	Three cars coal	45 00
357	" 1..	Thos. Naughton	Photograph of building	3 00
358	" 1..	E. Eldred	Lumber	200 13
359	" 1..	J. McCorkle	Hardware	18 16

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Total.
360	Sept. 1..	Fuller & Fuller	Paints and glass	31 32
361	" 1..	J. N. Wharton	Work in shop and building	53 00
362	" 1..	E. P. Walker	" "	53 00
363	" 1..	Thos. Franks	Salary, August, 1871	75 00
364	" 1..	H. K. Vickroy	" "	75 00
365	" 1..	A. C. Swartz	Work on building	47 25
366	" 1..	E. Snyder	Sundry expenses	57 14
367	" 1..	Wright & Bussey	Barrel salt	2 75
368	" 2..	H. K. Vickroy	Boarding hands, August	66 40
369	" 2..	T. Davis	White-washing building	59 24
370	" 2..	John Paton	Work in armory	13 75
371	" 2..	H. E. Robins	" shop	47 25
372	" 2..	T. J. Burrill	Petty expense	26 05
373	" 5..	Leggart Bros.	Books	37 03
374	" 7..	J. M. Gregory	Salary, September	333 33
375	" 8..	F. W. Stone	Two Hereford cattle	457 50
376	" 9..	G. D. Wicks	Team and carriage	10 00
377	" 11..	Harvey Sadowsky	Short-horn heifer	200 00
378	" 11..	G. Gabriel	Work in orchards	19 37
379	" 11..	W. S. Chase	Carpenter work on building	11 55
380	" 11..	C. I. Hays	Work in green house and grounds	53 23
381	" 11..	I. C. R. R. Co	Advanced freights	12 83
382	" 14..	Prairie Farmer Co	Publishing meeting of Industrial Ass'n	25 00
383	" 14..	S. W. Shattuck	Salary, September	150 00
384	" 14..	T. Davis	Carpenter work	14 00
385	" 14..	T. E. Rickard	Work in cabinet	21 25
386	" 14..	M. E. Lasher	Moving barn	60 00
387	" 14..	J. W. Dowell	Painting and materials	29 15
388	" 14..	D. E. Owens	Three stones for engine	70 00
389	" 18..	Frank Dunayski	Cleaning building	7 83
390	" 18..	E. A. Robinson	Work in mechanical shop	104 00
391	" 19..	Mrs. M. Clark	Scrubbing building	6 60
392	" 19..	N. W. Manufacturing Co	Engine furnishing	148 20
393	" 19..	E. E. Perry	Work in shop	15 62
394	" 19..	C. W. Silver	Work on Experimental farm	12 32
395	" 19..	B. K. Bliss & Son	Grass seed	12 17
396	" 19..	Mrs. P. W. Frisbie	Five American Cyclopedias	24 98
397	" 20..	Moller & Co	Shipping charges from Germany	56 51
398	" 20..	I. D. Foulon	Salary, August	75 00
399	" 20..	Chadden & Hessee	Engine castings	60 36
400	" 23..	Wier & Burson	Plastering and material	220 15
401	" 23..	Rohrbeck & Gobler	Chemicals, etc	87 30
402	" 23..	A. P. Stuart	Purchase of Mineralogical Cabinet	279 16
403	" 25..	R. A. Rogers	One Richards' indicator	76 50
404	" 25..	De Volson Wood	Morau's Hydrauliques	3 25
405	" 25..	M. Lukanitsh	Tools for shop	18 90
406	" 26..	N. C. Ricker	Carpenter work	54 65
407	" 26..	J. C. Craver	Work on farms	6 70
408	" 26..	J. Teeple	One month's salary	50 00
409	" 26..	Geo. Ely	Blacksmithing	3 85
410	" 26..	Adams, Blackmer & Lyon	Blanks and stationery	104 50
411	" 26..	Herman Plessner	One month's wages	21 23
412	" 29..	A. K. Williams	Books	13 00
413	" 29..	S. W. Robinson	Sundry expenses for shop	49 75
414	Oct. 2..	C. W. Silver	Salary, September 10–30, 1871	26 66
415	" 2..	W. M. Baker	Salary, September 1871	166 66
416	" 2..	S. W. Robinson	" "	166 66
417	" 2..	A. P. Stuart	" "	166 66
418	" 2..	T. J. Burrill	" "	150 00
419	" 2..	E. Snyder	" "	150 00
420	" 2..	H. K. Vickroy	" "	75 00
421	" 2..	Thos. Franks	" "	75 00
422	" 2..	D. C. Taft	" "	125 00
423	" 2..	H. J. Detmers	" "	150 00
424	" 2..	H. Hanson	" "	83 33
425	" 3..	A. M. Brown	Expense to meeting	12 25
426	" 3..	E. Snyder	Petty expense	56 29
427	" 3..	E. Snyder	Students pay roll, September	406 15
428	" 3..	E. Lawrence	Farm expenses, September	179 31
429	" 3..	H. K. Vickroy	Boarding farm hands	34 82
430	" 3..	F. Brickett	Wages, September	19 23
431	" 3..	Henry Swannell	Paint. glass, etc	67 51
432	" 3..	Miller & Toll	Material for erasers	2 33
433	" 3..	Beach & Condit	Coal for shop	6 25
434	" 3..	F. C. Marguard	Chemical apparatus	69 38
435	" 3..	Fuller & Fuller	Paint, glass, etc	52 83
436	" 3..	E. F. Hollister	Matting for library	24 98
437	" 3..	Elisha Eldred	Lumber	302 57
438	" 9..	J. M. VanOsdel	Expense to meetings	103 00

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Total.
439	Oct. 9..	Enterprise Coal Co.	Six cars coal	90 00
440	" 9..	I. C. R. R. Co.	Advanced freights	75 40
441	" 9..	W. C. Flagg	Expense experimental farm	6 55
442	" 9..	J. M. Gregory	Salary, October	333 33
443	" 9..	I. D. Foulon	" one month	75 00
444	" 9..	John Fisher	Flower pots	11 46
445	" 9..	B. Westerman & Co.	Books	5 34
446	" 9..	Meininger & Schick	"	8 40
447	" 9..	Flynn & Scroggs	Printing and advertising	24 40
448	" 0..	S. W. Shattuck	Salary, October 1871	150 00
449	" 9..	R. Peacock	Lumber	60 92
450	" 18..	C. Green	Brooms, pails, etc	4 15
451	" 23..	J. D. Wilder	Thirty yards slated paper	22 50
452	" 23..	A. S. Barnes & Co.	Shipping charges on books	5 50
453	" 23..	Elisha Eldred	Lumber	31 04
454	" 23..	Dodson & Hodges	Hardware	55 28
455	" 23..	Jones & Co,	Bell	315 60
456	" 23..	J. Teeple	Salary one month	50 00
457	" 30..	A. S. Barnes & Co.	Freight on books	37 05
458	" 31..	W. M. Baker	Purchase of books, etc., in Europe	2, 826 84
459	" 31..	A. P. S. Stuart	" chemical apparatus	1, 084 84
460	" 31..	W. M. Baker	Salary, October 1871	166 66
461	" 31..	A. P. S. Stuart	" "	166 66
462	" 31..	S. W. Robinson	" "	166 66
463	" 31..	T. J. Burrill	" "	150 00
464	" 31..	E. Snyder	" "	150 00
465	" 31..	D. C. Taft	" "	125 00
466	" 31..	H. J. Detmers	" "	150 00
467	" 31..	H. Hansen	" "	83 33
468	" 31..	Thos. Franks	" "	75 00
469	" 31..	H. K. Vickroy	" "	75 00
470	Nov. 1..	J. O. Cunningham	Six hundred and twenty-one posts at 12½c.	77 62
471	" 1..	J. O. Cunningham	Expense to meeting	5 75
472	" 1..	J. M. Gregory	Purchase of books and apparatus	558 75
473	" 1..	J. H. Pickrell	Expense to meeting	8 90
474	" 1..	Flynn & Scroggs	Printing	38 00
475	" 1..	M. C. Goltra	Expense to meetings	13 00
476	" 1..	L. W. Lawrence	" "	22 60
477	" 1..	A. M. Brown	" "	6 00
478	" 1..	J. H. Pickrell	Money order for stock purchase	1, 051 00
479	" 2..	J. W. Colberg	Music lessons to band	20 00
480	" 2..	E. V. Peterson	Stationery, etc	34 87
481	" 2..	I., B. and W. R. R. Co.	Freight on books	8 15
482	" 2..	Palmer, Fuller & Co.	Lumber	25 67
483	" 2..	Nicolet & Schoff	Printing	18 00
484	" 2..	S. S. Shattuck	Payment of digging well, etc	45 45
485	" 2..	Trevet & Green	Hardware and tools	214 86
486	" 2..	Geo. Ely	Blacksmithing	20 45
487	" 2..	E. G. Larned & Co.	Hardware	13 68
488	" 2..	Keen & Cook	Books	7 17
489	" 2..	H. K. Vickroy	Board of hands, October	9 10
490	" 2..	Walker Bros.	Planing lumber	71 00
491	" 2..	C. W. Silver	Services in laboratory	40 00
492	" 3..	T. J. Burrill	Cash paid for labor	3 42
493	" 3..	J. M. Gregory	Expense purchasing books	4 43
494	" 4..	M. Parr	Work in laboratory	3 65
495	" 4..	W. P. Sweet	Lightning rods	101 60
496	" 6..	E. Snyder	Students' pay-roll, October	565 02
497	" 7..	F. M. Hatch	Teaching the classes, to date	70 00
498	" 7..	E. L. Lawrence	Salary, October, and farm expenses	209 53
499	" 7..	I. C. R. R. Co.	Advanced freights	10 15
500	" 13..	I. D. Foulon	Salary one month	75 00
501	" 13..	B. C. Westerman & Co.	Books	5 85
502	" 13..	H. M. Clark	6,908 tile	117 30
503	" 13..	W. C. Flagg	Account of salary	23 50
504	" 16..	Enterprise Coal Co.	Three cars coal	51 00
505	" 2..	J. M. Gregory	Salary October, 1871	333 33
506	" 21..	D. Van Nostrand	Books	224 64
507	" 25..	J. Duerlich	Books	244 34
508	" 25..	H. Mahlman	Chemical apparatus	217 18
509	" 25..	J. Teeple	One month's salary	50 00
510	" 27..	Fairbanks, Greenleaf & Co.	Bills of scales	197 00
511	" 27..	M. Miles	Devon heifer	200 00
512	" 27..	Col. Sam'l. L. Colt	Two Jersey cattle	475 00
513	" 27..	A. S. Barnes & Co.	Shipping expense from Europe	66 70
514	Dec. 1..	W. M. Baker	Salary—November	166 66
515	" 1..	A. P. S. Stuart	" "	166 66
516	" 1..	S. W. Robinson	" "	166 66
517	" 1..	J. F. Carey	" "	166 66

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Total.
518	Dec. 1..	T. J. Burrill	Salary—November	$150 00
519	" 1..	S. W. Shattuck	" "	150 00
520	" 1..	E. Snyder	" "	150 00
521	" 1..	J. E. Webb	" "	150 00
522	" 1..	H. J. Detmers	" "	150 00
523	" 1..	D. C. Taft	" "	125 00
524	" 1..	H. M. Hansen	" "	83 33
525	" 1..	Thos. Franks	" "	75 00
526	" 1..	H. K. Vicroy	" 's	75 00
527	" 1..	I., B. and W. R. R. Co.	Freight	9 55
528	" 1..	E. L. Lawrence	Farm expense	191 51
529	" 2..	C. Butler	Work in orchards	5 39
530	" 2..	H. K. Vickroy	Boarding hands	5 35
531	" 2..	N. O. Albert	Work in orchards	16 17
532	" 2..	C. Bussey	Eight days' work in orchard	6 15
533	" 2..	C. W. Silver	Salary, November	40 00
534	" 2..	Leggat Bros	Books	161 89
535	" 5..	Thos. Bradburn	Books	45 00
536	" 6..	M. C. Goltra	Expense to meeting	12 00
537	" 7..	C. Green	Pail and oil can	5 10
538	" 7..	R. Peacock	Lumber	396 34
539	" 7..	J. D. Welder	State paper	11 67
540	" 7..	Chadden & Hesse	Castings	20 50
541	" 7..	Robinson & Son	Fire brick	41 25
542	" 7..	J. Grinnel	Shipping models	15 00
543	" 7..	Nicolet & Schoff	Printing	18 50
544	" 7..	Empire Coal Co	Fuel and light	24 00
545	" 7..	Walker Bros	Dressing lumber	28 97
546	" 7..	Lee & Sons	Apple stocks	64 50
547	" 7..	L. Woodward	Pear stocks	60 75
548	" 7..	L. W. Faulkner	Glass and paint	3 30
549	" 7..	J. A. Root	Apple seeds	41 50
550	" 7..	A. P. S. Stuart	Periodicals	11 54
551	" 7..	E. T. Gehlman	Plastering and lumber	138 56
552	" 7..	Otto Rettig	Hanging wall paper	6 00
553	" 7..	Herman Plessner	Work	1 54
554	" 7..	J. Burt	Four pigs	4 00
555	" 7..	M. E. Lapham & Co	Lumber	6 58
556	" 7..	S. W. Robinson	Traveling expenses	46 50
557	" 8..	Prof. E. Snyder	" "	20 15
558	" 8..	Prof. E. Snyder	Petty expenses October and November	106 39
559	" 8..	Prof. E. Snyder	Students' pay-roll November	521 99
560	" 8..	W. C. Flagg	Salary	500 00
561	" 11..	J. H. Kyle	Two days' work	1 54
562	" 11..	Leggat Bros	Nautical almanac	1 79
563	" 11..	J. M. Gregory	Salary December, 1871	333 33
564	" 11..	M. Gifford	Four and half days' work	5 20
565	" 11..	Christian Lese	Models	203 13
566	" 16..	J. Colberg	Lessons to University Band	32 00
567	" 16..	A. P. S. Stuart	Purchase of chemical apparatus	288 83
568	" 16..	J. D. Fonlon	Salary one month	75 00
569	" 16..	Ayers & Dean	Castings for shop	249 79
570	" 16..	L. W. Morris	Freight from Germany	23 45
571	" 16..	I. D. Foulon	Petty expense	4 30
572	" 16..	Champaign Gas Co	Gas for October and November	64 80
573	" 18..	Stillwell & Bierce	No. 2 heater	87 50
574	" 18..	L. H. Corey	600 crinoidea	50 00
575	" 18..	J. F. Corey	Salary—December, 1871	166 66
576	" 20..	W. M. Baker	" "	166 66
577	" 20..	A. P. S. Stuart	" "	166 66
578	" 20..	S. W. Robinson	" "	166 66
579	" 20..	T. J. Burrill	" "	150 00
580	" 20..	S. W. Shattuck	" "	150 00
581	" 20..	E. Snyder	" "	150 00
582	" 20..	J. B. Webb	" "	150 00
583	" 20..	H. J. Detmers	" "	150 00
584	" 20..	D. C. Taft	" "	125 00
585	" 20..	H. Hansen	" "	83 33
586	" 20..	Mathews & Dever	Insurance	460 50
587	" 20..	J. Teeple	One month's work	50 00
588	" 20..	G. Lemberger	Work on Experimental farm	27 75
589	" 26..	J. O. Cunningham	Books	14 50
590	" 26..	J. M. Gregory	Periodicals	100 00
591	" 27..	I., B. W. and R. R.	Freights	11 15
592	" 27..	I., B. W. and R. R.	Freights	15 10
593	Jan. 3..	N. O. Albert	Work in orchards	29 35
594	" 3..	E. L. Lawrence	Farm expense	124 86
595	" 3..	H. K. Vickroy	Salary, December, 1871	75 00

List of Warrants—Continued.

No.	Date.	To whom	For what.	Total.
596	Jan. 3..	Thos. Franks	Salary, December, 1871	$75 00
597	" 3..	Ohlrich & Co	Shipping charges	64 29
598	" 4..	Moller & Co	"	22 00
599	" 5..	E. C. Coal Co	Two cars coal	40 00
600	" 6..	C. W. Silver	Salary, December, 1871	40 00
601	" 6..	U. S. Patent Office	Reports	22 50
602	" 8..	I. C. R. R. Co.	Advanced freights	35 20
603	" 8..	J. H. Pickrell	Expense to meeting	23 55
604	" 8..	J. H. Pearson	" two meetings	40 50
605	" 8..	E. Cobb	" to meeting	23 05
606	" 8..	A. M. Brown	" "	28 25
607	" 8..	L. W. Lawrence	" "	23 85
608	" 8..	M. C. Goltra	" "	12 00
609	" 10..	D. Van Nostrand	Books	1 32
610	" 10..	Journal Printing Co	Printing circulars	10 00
611	" 10..	Trevess & Green	Hardware	201 20
612	" 10..	E. Halberstand	Flower pots	7 65
613	" 10..	T. J. Burrill	Sundry expenses	60 90
614	" 10..	Hessler & Coler	Fruit cans, etc	163 10
615	" 10..	Thos. Lindsay	Fence posts	24 00
616	" 10..	Rock River Paper Co	Building paper for green-house	22 30
617	" 10..	R. F. Pope	Scions and seeds	25 42
618	" 10..	Strong Bros	Brooms	3 25
619	" 10..	Jefferson Bros	Use of team	2 00
620	" 10..	Walker Bros	Dressing lumber	7 75
621	" 10..	George Ely	Blacksmithing	10 80
622	" 10..	I. D. Foulon	Care of library	97 25
623	" 10..	Nicolett & Schoff	Printing and advertising	18 50
624	" 10..	Hosford & Spear	Kerosine oil	2 90
625	" 10..	A. Barr	Sash for barns	3 75
626	" 10..	Samuel Edwards	Pear Cions	4 25
627	" 10..	Webster, Davis & Co	Lumber	35 88
628	" 10..	S. W. Shattuck	Brick for house	5 00
629	" 10..	T. J. Burrill	Sundry expense	15 65
630	" 10..	T. S. Hubbard,	Redeeming lot No. 206	8 84
631	" 10..	Ohlrichs & Co	Shipping charges	23 60
632	" 10..	I. D. Foulon	Salary, one month	75 00
633	" 11..	Thos. Meehan	Services as lecturer	200 00
634	" 12	Prof. E. Snyder	Students' labor pay-roll, Dec	467 79
635	" 12..	Rohrbach & Gobler	Apparatus and chemicals	61 60
636	" 13..	D. A. Steadman	Salary, Dec. 25 to June 1	20 83
637	" 22..	J. Teeple	" January	50 00
638	" 24..	J. M. Gregory	" "	333 33
639	" 24..	P. Lochrie	Printing and advertising	10 00
640	" 27..	W. Apel	Phil. apparatus	358 12
641	" 27..	W. M. Baker	Salary, January	166 66
642	" 27..	A. P. S. Stuart	" "	166 66
643	" 27..	S. W. Robinson	" "	166 66
644	" 27..	J. F. Carey	" "	166 66
645	" 27..	T. J. Burrill	" "	150 00
646	" 27..	S. W. Shattuck	" "	150 00
647	" 27..	E. Snyder	" "	150 00
648	" 27..	J. B. Webb	" "	150 00
649	" 27..	D. C. Taft	" "	150 00
650	" 27..	H. Hanson	" "	83 33
651	" 27..	D. A. Steadman	" "	83 33
652	" 27..	H. K. Vickroy	" "	75 00
653	" 27..	T. Franks	" "	75 00
654	" 27..	C. W. Silver	" "	40 00
655	" 27..	M. Miles	" "	333 33
656	" 27..	I. C. R. R. Co	Three cars coal	150 00
657	Feb'y 3..	E. L. Lawrence	Farm expenses, January	140 82
658	" 3..	W. F. & J. M. Olcott	One car hard coal	110 00
659	" 3..	E. C. Coal Co	Two cars coal	40 00
660	" 3..	E. Snyder	Students' labor, January	489 30
661	" 3..	W. L. Smith	Repairing chimney	7 00
662	" 3..	I. D. Ferris	" furnace	5 00
663	" 3..	S. M. Marble	9,870 lbs. coal	25 20
664	" 3..	I. D. Foulon	Salary, one month	75 00
665	" 12..	F. W. Christian	Bill of periodicals	70 60
666	" 13..	Wm. Williams	Repairing boiler	145 00
667	" 13..	H. K. Vickroy	Salary, February	75 00
668	" 22..	A. M. Brown	Expenses to meeting	33 50
669	" 27..	Schaffer & Harwood	One car coal	45 00
670	" 27..	U. S. Patent Office	Bound reports	32 50
671	" 27..	Ayres & Dean	Castings	9 60
672	" 27..	A. H. Andrews	Liquid slating	4 75
673	" 27..	J. Bacon	Thirteen cars coal	120 62
674	" 27..	N. O. Albert	Work, January, 1872	17 90

List of Warrants—Continued.

No.	Date.	To whom.	For what.	Total.
675	Feb'y 27..	Fuller & Fuller	Glass and oils	$157 97
676	" 27..	Fuller & Fuller	Shipping charges	33 08
677	" 27..	R. A. Sutton	Brick	69 00
678	" 27..	E. L. Lawrence	Farm expenses, February	185 52
679	" 27..	E. L. Lawrence	Lecture expenses	27 30
680	" 27..	B. F. Johnson	" "	26 63
681	" 27..	Enterprise Coal Co	Two cars coal	40 00
682	" 27..	Metallic Plane Co	Tools	11 00
683	" 27..	Miller & Toll	Goods for library	6 08
684	" 27..	L. W. Morris	Shipping charges	19 93
685	" 27..	D. Van Nostrand	One book	8 28
686	" 27..	L. C. Garwood	Clock repair and glass	21 25
687	" 27..	T. G. Landsden	Piping	8 78
688	" 27..	J. M. Gregory	Lecture expense	43 80
689	" 27..	Bliss, Tillotson & Co	Electric wire	6 25
690	" 27..	J. M. Gregory	Salary, February	333 36
691	" 27..	M. Miles	" "	333 33
692	" 27..	Wm. M. Baker	" "	166 72
693	" 27..	A. P. S. Stuart	" "	166 72
694	" 27..	S. W. Robinson	" "	166 72
695	" 27..	J. F. Carey	" "	166 70
696	" 27..	T. J. Burrill	" "	150 00
697	" 27..	S. W. Shattuck	" "	150 00
698	" 27..	E. Snyder	" "	150 00
699	" 27..	D. C. Taft	" "	150 00
700	" 27..	J. B. Webb	" "	150 00
701	" 27..	H. Hansen	" "	85 35
702	" 28..	A. D. Steadman	" "	83 34
703	" 28..	Thomas Franks	" "	75 00
704	" 28..	J. Teeple	" "	50 00
705	" 28..	Chas. W. Silver	" "	40 00
706	" 28..	Trevett & Green	Hardware	288 03
707	" 28..	Finch & Co	100 paper bags	3 50
708	" 28..	M. Miles	Expense for cattle and lecturing	37 55
709	" 28..	W. C. Flagg	Salary	.....
710	" 28..	A. P. Stuart	Lecturing expenses	13 65
711	" 28..	J. B. Turner	" "	14 75
712	" 28..	Wm. Le Baron	" "	14 10
713	" 28..	L. D. Whiting	" "	26 50
714	" 28..	T. A. E. Holcomb	" "	1 00
715	March 4..	D. C. Taft	" "	7 60
716	" 4..	S. W. Shattuck	" "	27 25
717	" 4..	E. S. Hull	" "	125 00
718	" 4..	E. Snyder	Students' pay-roll	475 04
719	" 4..	J. M. Gregory	Sundry expenses	174 37
720	" 4..	Champaign Gas Co	Gas for Dec. Jan. and Feb	68 40
721	" 4..	E. M. McAllister	Postage on periodicals	9 48
722	" 4..	I. C. R. R. Co	To Treasurer for book transfers	1,344 15
723	" 4..	J. W. Colberg	Ten lessons to University band	40 00
				$68,560 13

J. SNYDER, *Recording Secretary.*

URBANA, *March* 10, 1872.

Statement of assets of Industrial University, March 1, 1872.

Buildings:

New University building (not completed)	$75,000 00
Mechanic and Military Hall	25,000 00
Old University building	45,000 00
Ornamental and Parade Grounds	5,000 00

Apparatus and Furniture:

Library	20,000 00
Cabinets, mechanical and engineering	5,000 00
Chemical Laboratory appropriation	5,000 00
Furniture and heating apparatus	5,000 00

Farms:		
160 acres, "Griggs Farm," (rented)		$9,600 00
410 acres, stock farm		32,800 00
House and barn		10,800 00
Teams		750 00
Stock		2,615 00
Implements and tools		1,400 00
Produce unsold		1,610 00
Experimental farm, per acre, at $200		14,000 00
Balance scales, implements, etc.		200 00
Horticultural Department:		
110 acres orchard, etc., at $250		27,500 00
20 acres forest plantation, at $240		4,800 00
3 dwelling houses		4,500 00
Barn and corn crib		6,000 00
Green and hot house		3,500 00
Nursery stock		2,500 00
Teams		600 00
Implements		1,000 00
Produce unsold		300 00
Shops:		
Carpenter shops, lumber on hand		465 87
Hardware on hand		28 15
Working benches		96 00
Tool cases		75 00
Small tools		360 98
Mechanical Shop:		
Boiler, engine, 3 lathes, plainer, shaftings, beltings, pattern-maker's tools, bench tools, etc., per inventory		5,574 50
Land Scrip and Located Land:		
24,460 M. scrip, 25,440 acres located		50,000 00
Interest Bearing Funds:		
$354,000 in interest bearing bonds, as per Treasurer's statement	$354,000 00	
Mortgage notes, bearing interest at 8 per cent.	8,600 00	
		$362,600 00

RECAPITULATON.

University buildings	$150,000 00
Apparatus and furniture	35,000 00
Farms	73,775 00
Orchards and gardens	50,700 00
Shops	56,602 50
Land scrip, and lands located	50,000 00
Total	$416,077 50
Interest bearing	362,600 00
Grand total	$778,677 50

Appropriations.

Current appropriations, at March meeting, 1871	$41,463 88	
" " additional, for building repairs	1,000 00	
" " " for mechanical department	1.900 00	
		$44,363 88
Unexpended State appropriation of 1870		4,419 70
State appropropriation, 1871:		
Main building	$75,000 00	
Mechanical and Military Hall	25,000 00	
Library and Cabinet	5,000 00	
Experiments and Lectures	3,000 00	
Chemical Department	2,750 00	
Horticultural Department	1,750 00	
		112,500 00
Total appropriations		$161,283 58

Expenditures.

On warrants drawn, from No. 1 to 723, inclusive	$68,560 13
From State Treasury, on warrants and vouchers	98,357 59
Total expenses	$166,283 58

STATEMENT *of the Appropriations, Expenditures and Credits of Departments of the Illinois Industrial University, from March* 1, 1871, *to February* 29, 1872.

Title.	Total appropriations.	Total expense.	Overdrawn.	Unexpend'd balance.	Earnings and credits of departments.	Remarks.
Board expenses	$1,200 00	$1,160 35		$30 65		
Salaries	25,000 00	23,473 58		1,526 42		Part of Treasurer's and Cor. Secretary's salaries, unpaid
Agricultural Department	3,686 41	6,716 30	3,029 89		7,019 88	Sales of farm produce
Horticultural Department	5,498 12	6,854 86	1,356 74		1,338 52	Sales from garden and orchards
Insurance	400 00	460 50	60 50		59 29	Reimbursed by Ætna Insurance Company
Taxes on lands	2,235 00	2,461 70	226 70			
Building repairs	2,000 00	2,654 63	654 53			
Fuel and light	1,000 00	2,190 93	1,190 93		1,044 23	Sales of fuel to students, etc.
Printing, advertising and stationery	1,000 00	1,477 56	477 56		542 85	Advertisements in University Circular
Incidental expenses	1,000 00	1,231 40	231 41			
Library and cabinet	7,000 00	7,029 96	29 96		154 31	Sale of duplicates
Unpaid bills, 1871	800 00	731 43		68 57		
Safe	100 00	142 50	42 50			
Military Department	250 00	256 47	6 47			
Mechanical Department	2,400 00	4,487 99	2,087 99		1,763 07	Sales and work
Chemical Department	4,714 05	3,077 60		1,636 45		
Carpenter shop		1,725 70	1,725 70		1,073 48	Sales and work
New University building	75,000 00	73,357 59		1,642 41		
Mechanic and Military Hall	25,000 00	25,000 00				
Experiments and lectures	3,000 00	2,417 66		582 34	76 48	Sales of broom corn
Total	$161,283 58	$166,917 72				

The fifth column shows the earnings of the departments, for comparison with the excess or overdraft on appropriation. In the shop account the materials and improvements will have to be considered as found in the reports of the Superintendents.

URBANA, ILL., *March* 10, 1872.

E. SNYDER, *Recording Secretary.*

STATEMENT *of the Labor of Students, done in the different Departments named, for the year beginning March* 1, 1871, *and ending March* 1, 1872.

Time.	Mechanical Departm't.	Carpenter shop.	Horticult'al Departm't.	Building repairs.	Agricultu'l Departm't.	Chemical Laborat'y	Janitors' fees and incidental expenses.	Library and Cabinets.	Military Dep't.	Guarding buildings.	Total.
March, 1871	$129 55	$31 14	$154 16	$6 12	$7 08	$1 25	$62 50	.....	.....	.....	$391 80
April, 1871	78 86	30 53	307 04	3 00	3 00	.....	71 40	$4 93	.....	.....	498 76
May, 1871	178 42	32 84	223 09	43 27	.....	.....	90 89	5 20	.....	.....	573 71
Vacation work	728 83	54 65	322 09	135 77	188 37	.....	.....	21 25	$20 00	.....	1,470 96
September and October, 1871	153 53	66 29	144 11	7 88	2 49	.....	29 85	.....	2 00	.....	406 15
November, 1871	168 08	169 13	134 12	15 53	3 24	.....	55 37	17 25	2 50	.....	565 02
December, 1871	135 11	157 39	125 88	10 67	8 30	.....	77 77	.....	6 87	.....	521 99
January, 1872	212 08	83 57	41 15	12 57	.....	.....	40 95	56 84	.....	$42 14	489 30
February, 1872	194 84	86 39	73 95	5 00	.....	.....	56 69	31 22	3 50	23 45	475 04
Total	$1,979 30	$711 93	$1,525 59	$239 61	$212 48	$1 25	$485 42	$136 69	$34 87	$65 59	$5,392 73

URBANA, ILL., *March* 10, 1872.

E. SNYDER, *Recording Secretary.*