NINTH BIENNIAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

IOWA STATE AGRICULTURAL COLLEGE

AND FARM,

MADE TO

THE GOVERNOR OF IOWA,

FOR THE YEARS 1880 AND 1881.

PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

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1881.

STATE AGRICULTURAL COLLEGE,
AMES, Iowa, December 1, 1881.

To HIS EXCELLENCY, JOHN H. GEAR:

IN accordance with the statute defining the duties of the Secretary of the Board of Trustees of the Iowa State Agricultural College and Farm, I have the honor to transmit herewith the Ninth Biennial Report of said Board.

E. W. STANTON, *Secretary.*

REPORT OF THE BOARD OF TRUSTEES.

To the General Assembly of the State of Iowa:

In the law relating to the Iowa Agricultural College, it is provided that a biennial report shall be made by the Board of Trustees to the General Assembly. In accordance therewith, we hereby submit for your consideration a brief statement of the condition and needs of the College.

We are pleased to report the institution in a prosperous condition. The past two years have witnessed a healthy growth in each of its departments. A new course of study, intended for the specialist in agriculture, has been added to the curricula; the other courses have been revised and improved; additions have been made to the library, the museum, and to the apparatus and means of instruction in the different schools; extensive improvements have been made upon the farm, and new lines of experimentation entered upon in the Agricultural and Horticultural departments. In all the lines of its work the institution gives evidence of an honest and successful endeavor to carry out the Congressional law which gave it existence, and we congratulate the State that there is rapidly being built up here a college where the industrial classes may obtain, at a cost within their reach, a liberal and practical education in the pursuits and professions of life.

By a wise management of the land grant received from the national government, and a careful husbanding of its resources, the College is able to meet all its ordinary running expenses, without cost to the people of the State. In the Congressional law bestowing this magnificent endowment, it is provided that the original fund shall never be diminished, and that the income arising therefrom shall be inviolably applied to the support and maintenance of the College. In this same law the use of college funds for the erection or repair of buildings is strictly forbidden. In accepting the grant with this condition attached, the State assumed the responsibility of furnishing and keeping in repair all buildings necessary to the full accomplishment of the purposes for which the grant was made. In order that the law may be complied with, the growth of the institution fostered, and its useful-

ness extended, we are compelled to ask of your honorable body, appropriations for the following purposes:

First—For four houses to be used as residences by professors	$ 10,000.00
Second—For another boarding cottage, and an addition to the present one, to furnish boarding facilities for an increased number of students	6,000.00
Third—For a building to be occupied by the schools of Mechanical and Civil Engineering, and the Department of Mathematics	8,000.00
Fourth—For sheep barns for the farm	600.00
Fifth—For experimental creamery, with ice-house and cold storage room	1,000.00
Sixth—For one cottage for foreman on the farm, one cottage for foreman in horticulture, and one cottage for farm laborer	2,400,00
Seventh—For experimentation in agriculture and horticulture an annual appropriation of	2,000.00
Eighth—For fire and burglar-proof safe and vault	1,500.00
Ninth—For salaries of Treasurer and Secretary, and expenses of their offices, an annual appropriation of	1,200.00
Tenth—For building to be connected with vault containing the Secretary, Treasurer and President's office	1,300.00
Eleventh—For repairs on highway to Ames, running on south side of College Farm	500.00

Detailed reasons for all but the last three items are given in the President's report and the reports of the Professors of Agriculture and Horticulture, to which your attention is invited. A brief statement of facts will show the necessity for the other appropriations.

We earnestly urge upon your honorable body the necessity of providing an annual fund for the payment of the salaries and expenses mentioned in the ninth item. The duty of the State in this matter is made evident from the following considerations:

First—In accepting the national grant for the endowment of the College, the State obligated itself to pay these expenses. Upon this point the Congressional law is thus explicit:

"All the expenses of management, superintendence, and taxes from date of selection of said lands previous to their sale, *and all the expenses incurred in the management and disbursement of the moneys which may be received therefrom*, shall be paid by the State to which they may belong, out of the treasury of said State, so that the entire proceeds of the sales of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned."

The language of the above law is unmistakable. It plainly declares

that the expenses in question shall be paid by the State. To put the matter, however, beyond all question, the Board, in May, 1879, obtained the opinion of Attorney-General McJunkin. The conclusion arrived at by him is thus concisely expressed: "The State has no right to use interest fund in the payment of commissions, exchange, or salary of Secretary or Treasurer."

Second—The obligation of the General Assembly to provide for these expenses is enforced by a second consideration. The Board of Trustees is appointed to manage and control the affairs of the College. One of its most responsible duties is to manage the lands and funds which constitute the endowment of the College, and to disburse the income received therefrom. The Secretary and Treasurer are officers of the Board, and constitute an essential part of the machinery necessary to such management and disbursement. The Board of Trustees is paid by the State, and the same fund which pays it should pay its officers. At the last session the General Assembly appropriated an annual fund of $1,000, for the repair of college buildings. Previous to this the Board was compelled to use interest money illegally for that purpose. Thanking your honorable body for release from this responsibility, we earnestly ask that you will further relieve us from the necessity of applying funds, in direct contravention of law, to the payment of the salaries mentioned. Both the statute and the interests of the College demand that we shall employ these officers. Their services cannot be secured without compensation. We cannot, without violation of our official oaths, pay them from the interest fund. We therefore earnestly petition your honorable body for this appropriation.

The tenth item of the appropriations needed, is a building to contain the offices of Secretary and Treasurer, also the business office of the President. It can be built, in connection with the vault, at a moderate expense. At present the institution has no safe place of deposit for its important books and papers. The Secretary is without a convenient office, and the room occupied by the Treasurer, since it is easy of access to the students, is much needed by the Steward. The offices of the Secretary and Treasurer should be in close proximity, and so situated that both can have access to the vault. The building, if erected, would be used by the Board of Trustees in the transaction of its business.

Finally, we are compelled, by the dire necessities of the case, to ask

for a small sum with which to repair the public road leading to Ames. For no small portion of the past year this road has been practically impassable. The interests of the farm, and students' boarding departments, and the general good of the College demand a ready means of communication with town.

Amendments suggested to the State law governing the Agricultural College—For the greater convenience of annual settlements of the financial matters, the Board recommend that the fiscal year be made to close on the fourth Wednesday of November, and the new year to commence on the Thursday following. Because of the impossibility of completing the business of the year within the thirty days prescribed by law, we recommend that the time allowed the Board be increased to thirty-six days per year. It is found that the business connected with an industrial institution is unavoidably more complicated and requires more time than that connected with institutions of ordinary character.

For detailed statement of the work performed and progress made in the different departments, you are respectfully referred to the reports of the President and Professors, which are hereby attached to and made a part of this report.

The reports of the financial officers and the proceedings of the Board of Trustees, give full information regarding the business affairs of the institution and the present condition of the college funds.

Your attention is called to the gratifying condition of health in the College, as shown by the report of the Sanitary Committee.

HENRY G. LITTLE, *Chairman.*
WM. MCCLINTOCK.
JNO. N. DIXON.
CHAS. W. TENNEY.
GEO. H. WRIGHT.

REPORTS OF THE PRESIDENT AND THE HEADS OF DEPARTMENTS

THE following twelve reports are made by the President and the heads of departments to the Board of Trustees.

PRESIDENT'S REPORT.

My annual report which is hereby presented in accordance with the law, will embrace a brief sketch (1) of the courses of study as now pursued in the Agricultural College; (2) a list of the teachers employed; (3) a synopsis showing the ratio of attendance from the different counties during the last two years, and (4) a statement of the wants of the institution which its growth has developed and which it is the province of the State under its contract with Congress, to supply.

The organization of the college which meets in all respects the requirements of both the State and the national law, comprises:

1. A general course of studies related to the industries, and
2. Three special schools in which students may prepare themselves for some one of the industrial vocations, as follows:

1. GENERAL—INCLUDING THE COURSE IN SCIENCES RELATED TO THE INDUSTRIES.

2. TECHNICAL—INCLUDING
   1. THE SCHOOL OF AGRICULTURE,
      Containing (1) The Course in Agriculture.
      (2) The Course in Horticulture.

   2. THE SCHOOL OF ENGINEERING,
      Containing (1) The Course in Mechanical Engineering.
      (2) The Course in Civil Engineering.

3. THE SCHOOL OF VETERINARY SCIENCE,
   Containing The Course in Veterinary Science

THE SPECIAL SCHOOLS.

The special schools, while supplying the knowledge which is essential to a higher education, are organized for the purpose of preparing

veterinary physicians, finished farmers, and mechanical and civil engineers.

THE VETERINARY SCHOOL.

The Veterinary School, which occupies spacious rooms in the new North Hall, is supplied with abundant facilities for doing its peculiar work thoroughly. Its arrangements for regular clinical instruction are complete, its course of lectures are full and comprehensive, and the faculty is composed of able and accomplished men. We believe that this school, the only one in the West, meets an urgent public necessity, and as soon as the advantages it offers are fully known, its halls will be crowded with students. It has already several graduates.

THE SCHOOL OF AGRICULTURE.

The School of Agriculture presents a course of instruction in its line which cannot be surpassed either in its practical or its scientific character by any similar school in this country. Its attractive rooms are now in the new North Hall; its apparatus includes the nurseries, vineyards, propagating rooms, all the adjuncts of the vegetable garden; the fine stock, comprising cattle, horses, sheep, swine, and fowls, the experimentations in agriculture and horticulture now systematically conducted on a large scale, and all the numerous operations by which successful farming is now carried on. The special faculty of the School of Agriculture are men of large experience—men who combine scientific knowledge with actual skill, and whose instructions constantly point to practical results.

The urgent demand throughout the country for professors of agriculture and superintendents of large farms, will, it is believed, be supplied hereafter to some extent by the graduates of this school.

THE SCHOOL OF ENGINEERING.

This school contains two departments, that of Mechanical and that of Civil Engineering, both of which have been in operation for the last twelve years, and sent many graduates out into the State. The course of professional studies in this school is strong and thorough, the professors able and earnest, the practice accurate and extensive, and the equipment comprises all the latest improvements in instruments and machinery.

THE GENERAL COLLEGE COURSE.

The general course is composed of such branches as conduce to liberal culture, and, at the same time, give a broad preparation for the future activities. It furnishes, in symmetrical completeness, such available knowledge as will serve as a basis for the work of the physician, druggist, merchant, teacher, journalist, etc. In short, the general course enables the student to attain the mastery of the principles underlying the enterprises by which the world is actually advancing. It aims to bring men into active sympathy with all human interests, and while gaining a liberal education, to become efficient as workers and influential as citizens. Since the sciences on which many of the industries rest are prominent in this course, it is called the General Course in Sciences related to the Industries.

Subjoined are the professors, teachers and other officers now employed.

A. S. WELCH, PRESIDENT,
Professor of Psychology and Sociology.

GEN. J. L. GEDDES, VICE-PRESIDENT,
Professor of Military Tactics and Engineering.

W. H. WYNN,
Professor of English Literature, and Science of Language.

C. E. BESSEY,
Professor of Botany.

A. THOMSON,
Professor of Mechanical Engineering, and Superintendent of Workshop.

F. E. L. BEAL,
Professor of Civil Engineering, and acting Professor of Zoology.

T. E. POPE,
Professor of Chemistry.

M. STALKER,
Professor of Veterinary Science.

J. L. BUDD,
Professor of Horticulture.

J. K. MACOMBER,
Professor of Physics, and Librarian.

E. W. STANTON,
Professor of Mathematics, and Political Economy.

S. A. KNAPP,
Professor of Practical and Experimental Agriculture.

D. S. FAIRCHILD,
Professor of Pathology, Histology, and Therapeutics.

MRS. MARY B. WELCH,
Lecturer on Domestic Economy.

MARTHA SINCLAIR, PRECEPTRESS,
Instructor in English, French, and German.

C. F. MOUNT,
Assistant Professor of Civil Engineering.

HERBERT OSBORN,
Assistant in Zoology and Entomology.

FREMONT TURNER,
Foreman, and Teacher in the Workshop.

E. D. HARVEY,
Assistant in the Chemical Laboratory.

J. C. HAINER,
Instructor in Mathematics and Book-keeping.

GEO. C. FAVILLE,
Assistant in Veterinary Medicine.

ERMINA ATHEARN,
Teacher of Instrumental and Vocal Music.

H. D. HARLOW,
Proctor.

ATTENDANCE BY COUNTIES FOR 1880–81.

COUNTIES.	YOUNG MEN.	YOUNG WOMEN.	TOTAL.
Adair	1	..	1
Adams	1	1	2
Audubon	1	..	1
Benton	4	..	4
Black Hawk	3	..	3
Boone	10	..	10
Bremer	5	1	6
Buchanan	2	1	3
Butler	1	1	2
Calhoun	2	..	2
Carroll	2	1	3
Cass	2	1	3
Cedar	9	6	15
Cerro Gordo	1	3	4
Cherokee	2	1	3
Chickasaw	1	..	1
Clayton	3	1	4
Clinton	8	..	8
Crawford	5	2	7
Dallas	4	2	6
Decatur	..	2	2
Delaware	1	4	5
Des Moines	3	..	3
Dubuque	2	..	2
Fayette	3	..	3
Floyd	5	6	11
Franklin	1	2	3
Fremont	3	..	3
Greene	2	1	3
Guthrie	3	1	4
Hamilton	3	..	3
Hancock	..	3	3
Hardin	7	1	8
Harrison	4	..	4
Henry	2	1	3
Humboldt	2	..	2
Iowa	1	..	1
Jasper	7	1	8
Jones	15	1	16
Keokuk	9	3	12
Kossuth	1	..	1
Lynn	4	..	4
Lucas	..	1	1
Lyon	1	..	1
Madison	1	1	2
Mahaska	1	1	2
Marion	2	..	2
Marshall	5	3	8
Mills	2	..	2
Mitchell	1	..	1
Monona	1	3	4
Montgomery	3	1	4
Page	1	..	1
Palo Alto	..	1	1
Pocahontas	1	..	1
Polk	27	11	38
Pottawattamie	1	..	1
Poweshiek	5	1	6

ATTENDANCE BY COUNTIES—CONTINUED.

COUNTIES.	YOUNG MEN.	YOUNG WOMEN.	TOTAL.
Ringgold	1	..	1
Scott	13	1	14
Story	30	24	54
Shelby	3	2	5
Tama	1	..	1
Taylor	2	..	2
Wapello	1	..	1
Warren	1	..	1
Washington	..	1	1
Wayne	1	..	1
Webster	2	..	2
Winneshiek	2	1	3
Woodbury	1	..	1
Worth	1	..	1
La Salle, Ill	2	2	4
Deer Lodge, Mon	1	1	2
Adams, Neb	1	..	1
Buffalo, Neb	1	..	1
Galena, Ill	..	1	1
Scotland, Mo	1	..	1
Atchison, Kan	1	..	1
Martin, Minn	..	1	1
Clinton, Mo	1	..	1
Rice, Minn	1	..	1
Total	265	105	370

The per cent of industrial pursuits represented by parents who have sent their children to the Agricultural College for 1880 and 1881:

Farmers.....55 per cent.
Mechanics.....10 per cent.
All others.....35 per cent.

WANTS.

CHANGE SUGGESTED IN THE COLLEGE YEAR.

It has been evident for several years that the first of March which is the day on which the college year begins, is unfavorable to the gathering of a freshman class. While the entire college year should continue to occupy the same months as heretofore, leaving the long vacation to occur in winter, the middle of September would be far more convenient for the admission of new students. The summer schools in which students are prepared for our freshman class, very generally close before the first of September, while at the date of our present opening, the winter schools are still in session.

Moreover the college commencement which now occurs during the wet days and bad roads of November, would, under the arrangement proposed, be held the first week of September, when the weather is more propitious and those who wish to attend the exercises are more at leisure.

In view of these facts the faculty have passed the following resolution, which they respectfully ask you to consider.

RESOLUTION.

Resolved, By the faculty that the board be recommended to make the following changes in the times of college terms: 1st. That the year be divided into three terms; fall, spring and summer. 2d, That the college year begin with the fall term. 3d, The fall term to begin the third Tuesday of September, and continue to the fourth Wednesday of November. Spring term to begin second Tuesday of March and end first Wednesday of June. Summer term to begin the Tuesday following and end the first Wednesday of September. 4th, The commencement day to take place upon the first Wednesday of September.

I need only add that all the above salutary changes can easily be made if the legislature will designate the fourth Wednesday of November for the close of each college financial year, and the Thursday following for the opening of the next year instead of the dates as fixed by present statute. The new division of terms proposed by the faculty would be quite as convenient for the various classes, while the entire academic year would be two weeks longer than the present one.

THE NAME OF THE COLLEGE.

The Board are probably aware that many outside parties have lately entered a public protest against the name which this institution now bears, and which it received some years before it became a national school. Such parties claim that the congressional law in declaring that the "leading object shall be to teach the branches of learning related to agriculture and the mechanic arts," makes its purpose cover two great series of industries, while the name designates but one. They urge that in this way, the public in general get the inevitable idea that the legal province of the college is to teach the branches related to agriculture only, that instruction in the branches related to the various mechanic arts is a misapplication of its endowment and that the graduates in mechanics or civil engineering are proofs that the enterprise is drifting away from its purpose. They hold, moreover, that the name, which gives only a partial conception of its work, operates as a serious hindrance to its popularity with a class of students who desire such a practical education as is within the meaning of the congressional law.

Now whatever force these views may have, it is a fact beyond question that if one of the two departments is to give its name to the entire enterprise, then the term *agricultural* is by far the most appropriate epithet the language can furnish, since it applies to the prevailing industry of the State. But if this name were to give place to another that should express the whole scope of the enterprise, I know of none which would answer the purpose so well as the word *industrial*. For the departments of agriculture, horticulture, veterinary science, mechanics and civil engineering are all branches of industry and the whole organization of the college seeks under the law that established it to promote industrial learning and industrial art.

The officers of the college will willingly accept, in this matter, the intelligent decision of the people of Iowa, and they desire in settling such questions, only that which will best forward the enterprise entrusted to their care.

PROFESSORS' HOUSES.

There are now three professors' houses belonging to the State and situated on the college grounds. One of these, the farm-house, is occupied by the Professor of Agriculture, another by the Secretary of the Board, and a third by the Professor of Mechanics. The lack of dwellings near at hand has compelled four of the professors to find homes for their families in the village of Ames. Now this compulsory residence two miles away, is exceedingly inconvenient to the officers and seriously detrimental to the college. A walk of four miles daily throughout the year in all conditions of highway and weather, is an oppressive addition to the year's work. Besides when the roads are precarious, these officers are absolutely prevented from attending important meetings held at the college in the evening. Thus a residence at a distance acts as a hinderance to the completeness of their professional work. The operations of an industrial school demand that its officers should be present early and late to answer a programme of exercises that fills all the hours of the day and often a portion of the evening.

For these reasons I recommend that the trustees ask the legislature to appropriate the sum of $10,000, for the building of four professors' dwellings, to be located on the college grounds. Neat, substantial brick cottages, with a plain finish outside and in and having good cellarage, can be completed for $2,500 each. Plans and specifications can be furnished when needed.

BOARDING COTTAGE.

Under a pressing necessity we are obliged to ask for the means to erect another boarding cottage for the accommodation of students. The Trustees urged the last legislature to grant the sum of $6,000 to be expended in building cottages which should be occupied by students who desire to board at moderate rates. The sum actually appropriated ($3,600) not being sufficient to cover the expense of putting up two separate buildings, was used to complete one double cottage capable of supplying rooms and board for thirty young men, and having the same capacity proposed for the two. The experiment thus tried has been successful in a marked degree. The rooms have been filled throughout the year, and good plain board with fuel and lights has been furnished at two dollars a week. More than half of this, and in some instances the whole of it, has been paid in work. Another cottage of the same dimensions could be filled at once, and it will be well if it can be finished so as to go into operation at the opening of the second term of 1882.

Besides the general demand for another cottage, there is a special reason which we ought to urge. The hour most suitable for meals in the other schools is quite inconvenient for farm work and practice in the special school of agriculture. It is, therefore, urgent that the students of that school should occupy a cottage by themselves where the meal time can be adjusted to meet the work assigned to them by the professor of agriculture. (See Prof. Knapp's report.)

The sum adequate to the erection of the proposed cottage is $5,000.

SAFE FOR TREASURER'S OFFICE.

One of the unavoidable needs which the Trustees petitioned the last legislature to supply in fulfillment of the contract made with Congress, is a vault and safe for the Deputy Treasurer's office. The safe that has hitherto been used as a deposit for college and other funds, is neither fire-proof nor burglar-proof. The Treasurer is, however, compelled to keep in this money-box large sums of money belonging to the institution or to the students. I need not add that with such inadequate means for safety these deposits are kept at the constant hazard of serious loss. Every sound principle of business demands that provision for the security of the funds should be made at once. This is one of the items of expense which the college itself cannot legally meet. The national law expressly declares in section 3d of the act:

"That all the expenses incurred in the management and disbursement of the moneys received from the grant shall be paid by the State to which they belong out of the treasury of said State."

For which reasons we cannot do less than memorialize the General Assembly a second time to take such measures in the matter as business prudence clearly demands.

The value of the vault and safe required is estimated by experts to be $1,500.

ENGINEERING HALL.

The present arrangements for the School of Engineering are by no means adequate to its necessities. The students in mechanics have their practice in the basement of the physical laboratory, where the room is too damp for the machinery and too small for the class. The Professor of Civil Engineering occupies a limited apartment on the first floor of the same building, and a small room for drafting in the attic, which will not hold the numbers that are to be taught. These important departments of the engineering school have outgrown their stinted accommodations, and justly ask for a building that shall be suitable for departments which have been established in conformity with the conditions of the congressional grant.

A building adequate to the needs of the engineering school can with rigid economy in work and the purchase of materials, be put up and finished for $8,000. Carefully considered plans and estimates will be forth coming. (See reports of Professors of Mechanics and Civil Engineering.)

SHEEP BARN.

The successful beginning which the Professor of Agriculture has made in the sheep industry, creates another want in the form of a *sheep barn*. It will be impossible to care for and develop the promising flock which the farm now owns unless means are furnished for feeding and sheltering them separately from the other animals. Certainly the experiments proposed in this line of stock-raising will be of high value to the State. I therefore recommend that the General Assembly be asked to grant the sum of $600 for this purpose.

EXPERIMENTAL CREAMERY, ICE-HOUSE, ETC.

The facilities for industrial education and experiment are expensive, but such collections of apparatus as the college funds can legally supply, are nearly complete. The Agricultural School cannot be instructed in the process of butter and cheese making without a small creamery building which will cost some $600.

To the creamery must be attached a small ice-house and a room for cold storage costing $400. These additions will be indispensable to the complete instruction to be given in dairying and its processes.

All of which I heartily join Professor Knapp in asking the legislature to grant.

Finally, both the departments of Agriculture and Horticulture are put to much inconvenience from a lack of house room for the families of their foremen. One cottage for each department would supply a need which has been felt for many years. Such cottages could be built for $1,000 each.

(See reports of Professors of Agriculture and Horticulture.)

A. S. WELCH,
President.

REPORT OF THE DEPARTMENT OF AGRICULTURE.

In presenting the following report it has been my purpose to make such a statement as would clearly outline the work of this department for the biennial period closing November 9, 1881.

INSTRUCTION IN AGRICULTURE.

The present college course in agriculture seems to meet the wants of such pupils as desire to become proficient in husbandry and have chosen this great department of industry for a vocation. The several studies pursued have been selected with a view to solve, in a practical way, the problems of the farm, from the standpoint of the owner or manager; and with the design of aiding him, as far as practicable, to become a wise observer and successful operator upon the farm. While it is not claimed that perfection has been reached, in a question so difficult of solution, it is thought that this course more comprehensively and successfully outlines the work of the agricultural student and traces the proper mean between simple skill and general theory than any that has hitherto been formulated. The pupil is regarded as the intelligent owner or manager of a farm, and the several problems that arise in farm improvement, drainage, stock-breeding and the dairy, in the soil and application of manures, in the production of the cereals and grasses and their economic uses in husbandry, are carefully discussed from this entirely practical standpoint.

Sufficient manual labor is given under a competent foreman to familiarize the pupil with the methods necessary to the successful application of principles involved and to give him a reasonable amount of skill.

It is not, however, presumed that the student in agriculture, after a course that has taxed his full energies, will be as skillful in ordinary farm industries, as the one who has spent an equal amount of time upon the farm; but the superior knowledge and mental discipline acquired are considered more than a compensation for any temporary lack in skill, and fully vindicate the wisdom of a thorough education for the farmer.

The following classes have been taught this year:

	NO. PUPILS.
1 class in agriculture	39
2 classes in dairying	28
1 class in stock-breeding	25

FARM EXPERIMENTS.

There are valid reasons for farm experimentation in connection with agricultural colleges.

1st. The practical demonstration of the superiority of a machine, a method of cultivation, a variety of fertilizer or product, of thoroughbred stock, etc., is a lesson of inestimable value to the student.

2d. Such experiments, if carefully conducted, are also of value to the entire agricultural portion of the State, and, under a proper plan of publication, would aid in systematizing agriculture in Iowa, and placing it upon well-defined principles.

To place the farm experiments upon a more definite basis, by direction of the Board, it was made a separate department under the Professor of Agriculture.

Forty acres of land were selected for field experiments, and six hundred dollars allowed for expenses, for fiscal year closing November 10, 1880, and eight hundred dollars allowed for year closing November 10, 1881.

All of this has been expended in preparing the soil and making some of the simpler experiments with corn, wheat, oats, potatoes, and green manuring.

For extended report of these I refer to annual report upon experimentation.

FURTHER AID TO EXPERIMENTATION.

I am well aware, the college can not afford, in justice to all, to place any large amount at the disposal of this department; perhaps one thousand dollars is the limit.

The field of investigation is so large, and the methods so expensive, that it will require considerable means to accomplish much. Experiments in drainage and fertilizers in corn, wheat, oats, and the grasses, with the methods of cultivation, in sorghum sugars, in ensilage, in the fodder plants, in the cutting, curing and storing of the grasses, in dairy products, and in improved stock of all kinds, should receive the careful and constant attention of at least one skillful foreman the entire year and of one farm hand—with team and implements—during the summer season.

Then there must be some expenditures for special apparatus and machinery; as for sorghum, ensilage, pulping beets for stock, cutting stalks or straw, creamery etc.: also for storage; as in ensilage pits, tight barns for preserving green clover etc. The law does not permit the use of interest fund for the construction of any building, therefore experimentation must receive some State aid. The least sum, in my judgement, that will meet the annual expenses of an agricultural experimental department, which does careful work, is $2,000. A proportion of this amount, say one thousand dollars, should be provided by the State appropriation,

1st. Because, the whole amount could not be spared from college funds without detriment to other interests.

2d. Because many things must be done in the course of a year, the expense of which can not be met legally from interest fund.

3d. Such portion of the experimental work as is for the State at large, more especially than for the school, should be met by appropriations.

4th. To complete the work of experimentation in new varieties and ascertain their general value, it is necessary, after testing on the farm, to place them in the hands of practical farmers in different parts of the State and under different conditions in order that the final trial may be conclusive for the whole State. To such farmers as co-operate the samples should be sent free.

FARM.

Upon the assumption of my position as Professor of Agriculture, one of my first duties was to carefully inspect the farm, and ascertain the amount, variety and condition of the lands, and to determine their capacity for and adaptation to the purposes designed.

The following condensed statement presents the result :—

Meadow	40 acres.
Land under plow	104 acres.
Upland pasture (including yards)	105 acres.
Bottom land pasture (subject to overflow)	140 acres.
Wood and Timber lands	290 acres.
Total farm	679 acres.

The remaining lands are used for lawns and horticulture.

The small amount of meadow-land is explained by the fact that most of the hay for farm uses has hitherto been cut upon the lawns.

With the rapid growth of the trees and the increased number of buildings, the farm must mainly depend, in future, upon its own resources; hence the immediate establishment of permanent meadows is of pressing importance.

This will tax every available acre of upland to its utmost. I desire, therefore, to emphasize the importance of not allowing any more encroachments upon the farm for buildings or other purposes.

WOODLAND.

So much of the valuable timber has been removed from woodlands, that if they were charged with their just proportion of expenses there would be no balance to their credit; I therefore recommend that the woodland account be incorporated with the general farm account.

To add to the available pasture, about ninety acres of woodland have been thinned and underbrushed, and the work should be continued as rapidly as practicable.

PASTURE.

One hundred and forty acres of the pasture and quite a proportion of the woodlands are subject to deep overflow, which renders them unavailable for stock in wet seasons.

The overflow was, in a measure, due to the tortuous channel of Squaw Creek, which flows through the grounds.

An appropriation was made to straighten this by excavating three canals upon the north and east of the farm. The canals were two rods wide, with a total length of 126 rods. The work was successfully accomplished to the marked advantage of the pasture.

The work of protecting the bottoms should be continued. It has been impossible to use the funds appropriated for this year, on account of high water. I therefore request that the sum of $300 be appropriated for the ensuing year.

FENCES.

About two hundred and forty acres of the farm had never been entirely inclosed by fence; it was thought advisable to construct this at once, and to place all the fences upon the farm in good repair. Upon examination most of them were so decayed that it was found more economical to replace them with wire fences. In the execution of this plan, over seven miles of barbed wire fence have been constructed, and one mile of board fence thoroughly repaired. The

barn-yard fences—in all about 100 rods—have been replaced in a very substantial manner and painted.

About 100 rods of open ditch have been dug, and the whole farm placed in a general state of repair.

BUILDINGS.

In accordance with the appropriations of the last General Assembly, a convenient cattle-barn, swine-house, corn-cribs and poultry-house have been erected, adding greatly to the necessary conveniences in those departments. Other buildings are much needed to practically carry out the purposes of the farm.

MACHINERY.

At the commencement of my work the total machinery upon the farm scarcely amounted to $150. Your liberality has enabled the department to purchase a complete assortment for practical work.

FARM STOCK—HORSES.

Among the first measures taken in this department was to dispose of the old horses and replace them with young half Clyde mares of substance and action, and secondly to secure a suitable stallion to commence a systematic course of breeding horses. The result has been highly satisfactory. The following horses are now upon the farm.

1 Clydesdale stallion.
1 imported Clydesdale filly.
8 brood mares (mainly Clyde or Norman).
3 fillys.
3 geldings.
5 colts.

CATTLE.

It was considered of the first importance to establish a well-defined policy in regard to the kind and quality of cattle to be bred.

The Short-Horns had already been selected to represent the beef-producing animals, and the Holsteins and Jerseys to represent dairy stock. This department has aimed to increase the number of thorough-breds and decrease the grades by selection, until no animal but the thorough-bred should be kept.

The following is the summary of stock:

Short-Horns	19
Holsteins	7
Jerseys	1
High grades	45
Common	45

SHEEP.

On account of insufficient accommodations for sheep, the Merinos have been sold and attention given to increasing and perfecting the flock of South-Downs, of which there are one hundred and four.

For grazing the lawns and utilizing material otherwise waste, this number should be somewhat increased, or another family of the Downs added. For this purpose I would call attention to the Shropshire-Downs as wool and mutton producers.

SWINE.

Every effort has been made to place the department in excellent condition, and I am able to report marked progress. The herd is perfectly healthy. Forty-four hogs and pigs are on hand, all Poland-Chinas. It should be the policy to select, improve and add by purchase other breeds, till model animals of several of the best breeds are kept.

DOES THE FARM PAY?

Some years the ledger may say it does and other years that it does not.

It is doubtful whether any agricultural college farm will pay as a strictly financial investment; and the same is true of every farm for experiment and instruction. The farm should be regarded as a piece of apparatus for instruction in certain lines of work, and for the demonstration of specific problems. Its profit cannot be determined by footings of ledger columns, but must be estimated by the values it adds to practical education.

The college farm should be a great object lesson, where the buildings, grounds and fences, each tree and shrub, the several domestic animals and the various cereals and grasses convey lessons to every student.

In another direction the farm pays. It has furnished labor to hundreds of young men who could not have obtained an education without it.

APPROPRIATIONS.

DAIRY BUILDING.

To provide suitable rooms for class instruction in the manufacture of butter and cheese upon the most improved methods will require a building with several rooms. It should combine all the essential and progressive features of the best dairy houses and be furnished with the most improved apparatus.

Such a building should have separate apartments for the manufacture of cheese, for setting the milk, for churning, and for the engine.

COLD STORAGE AND ICE-HOUSE.

A small building for storing fruit, butter and eggs upon the refrigerator plan would be of great advantage to the school and to the State;

1st. As a model to show upon how simple a plan the perishable products of the farm can be preserved and placed upon the most advantageous market.

2d. For the practical use of the boarding departments and to enable them to purchase and store supplies at the season when the lowest market had been reached.

SHEEP-BARN.

The necessity of keeping sheep separate from other stock is too well known to require discussion.

A building for this purpose is greatly needed. It should contain storage for hay, a wool-room, a floor for shearing, shelter for the sheep and a small root cellar.

COTTAGES FOR LABORERS.

Experience has shown that as a rule men with families are more experienced, faithful and contented on the farm than single men. They are also more permanent and economical. Your attention is invited to the imperative need of at least two cottages. One for the farm foreman and one for the stock hand.

FARM WORK.

The farm operations have been seriously retarded the present year, by the number of rainy-days and the immense rain-fall, which, with the lateness of the spring, has made farm work more difficult and expensive than usual. The farm suffered severely by the July freshets, in the destruction of pastures, meadow, and fencing. The loss in hay and fence was about $600, in bridges, $50, and in labor, $100 during that month.

CROPS.

Wheat, oats, corn, and potatoes were largely a failure in Story county, owing to the causes above mentioned, and I estimate that, upon the College farm, the product was one-third less than it would have been in an average year. Corn in the field yielded forty-eight bushels per acre. Experimental corn ranged from eighty bushels in white to seventy-nine bushels in yellow, per acre.

Field oats produced forty-one and three-fourths bushels per acre; experimental oats, from twenty to sixty-five bushels.

The seventy-five varieties of potatoes yielded from ten to three hundred bushels per acre, according to variety.

REMARKS.

STUDENT LABOR.

The present system of manual labor—limiting the work in each department to the students pursuing related studies—has worked satisfactorily. If each student were graded upon the character and quantity of his work, basing the wages paid upon this, would go far toward solving the manual labor problem. While student labor is unprofitable from a financial standpoint, there are compensating advantages that vastly outweigh any considerations of profit.

1st. In an industrial school, student labor should be regarded as a part of the education and hence financially stands upon the same basis as any other department of instruction.

2d. It is impossible to acquire a practical knowledge of agriculture without an actual performance of some work.

3d. When the student ceases to labor he is related to the industries only in theory, and a tendency to gain wealth without labor is fostered.

4th. A reasonable amount of labor in connection with study adds to the health and vigor, promotes scholarship, and sends out to the world a broader and more practical man.

Respectfully submitted,

S. A. KNAPP,
Professor of Agriculture.

CONDITION OF THE DEPARTMENT OF HORTICULTURE AND FORESTRY, 1881.

INSTRUCTION IN HORTICULTURE.

The recently inaugurated course in agriculture furnishes very good facilities for class instruction in horticulture.

In the freshman year instruction is given to the students in both the agricultural and scientific courses. No text-book is used. The topics are presented in lecture form with object lessons and illustrations. Careful notes are taken by each student, subject to after inspection and review.

Each recitation commences with a review and discussion of the points presented in the previous lesson. To avoid confusion as to the management and propagation of fruits, trees, plants, etc., each topic is completed before another is taken up. For instance, in the lessons in grape-growing the varieties suited to our climate are first taken up and the reasons given why other varieties fail to meet the requirements of our climate; modes of propagation are then considered, verified by object lesson and field inspection. Best modes of setting, training, pruning, laying down, etc., are then taken up in order. From the first to the last lesson, the idea is impressed that the value of all horticultural operations is as the thought put into it. In practice I find that a majority of the freshmen students get a clearer idea of the reasons for modes and methods in tree, shrub and plant-growing than laborers in commercial nurseries or orchards, as here it becomes a study pursued in consecutive order.

In the sophomore and junior years class instruction is only given to the students in the agricultural course. In the sophomore year forestry is first considered separately, the forest and ornamental trees are taken up, identified, and their relative growth, uses, and propagation discussed. This is followed by lessons on climatic modification; identification, management and propagation of shrubs, perennials, bulbs, flowers, etc.

In the junior year the students are prepared by their associate studies in the sciences relating to the industries to comprehend important principles of theoretical horticulture pertaining to vital force, germination, root and stem growth, climatic modification of

leaves, climatic adaptation, etc., intimately associated in our climate with perfect failure or varied degrees of success in all the operations of the propagating-house, the nursery, the orchard, and the garden.

During a large portion of the junior year the class meets from three to five times a week. As the class is relatively small, each topic and principle considered can be verified and impressed by field practice and observation.

As now arranged, the agricultural course furnishes excellent advantages for students desiring to ultimately join the thinly filled ranks of leaders and teachers of scientific agriculture and horticulture.

EXPERIMENTAL HORTICULTURE.

A detailed statement of the operations of the department in its various divisions would occupy considerabie time and space. Such a report was given in 1879 and the advances made since that time have been outlined in bulletins, in the *State Horticultural Report*, and in the public journals.

At this time I wish to direct attention to the fact that as an experimental station we are yet in the formative stage. We lack age, we lack facilities, and we lack the requisite money required to make rapid advances in lines of experimentation so much needed by the State.

As to age it should be remembered that the plan for an experimental station was only outlined in my initial report of 1877.

As to facilties we have, with some aid from the legislature for which we are thankful, made some desirable advances in four years. Our serious lack at this time is a

COTTAGE FOR THE FOREMAN.

Not a laborer's cottage has yet been built on the college farm. All laborers required in the various horticultural lines of work, not performed by students, must live two miles from their work.

For four years the foreman of the department has been compelled to live in Ames and walk two miles to and from his daily work. The inconvenience and loss to the department will be obvious to all when the nature of our work is considered. Not only the foreman, but all other needed help, should reside on the ground. At present, however, I will only urge the appropriation of the amount asked for by the Board of Trustees for a house for the foreman. How to manage propagating-house and other lines of our work without help living nearer than two miles I surely do not know.

To our lack of needed money I wish to direct special attention.

DIRECT STATE AID.

In Europe the idea of founding and supporting experimental stations for the promotion of horticulture and forestry is a part of the general policy of all enlightened governments. England to-day supports ten such stations, in Australia and India, at an annual expense which our new Western States would think fabulous.

At home she has supported in a princely mannner for over a century the celebrated Kew Gardens, and the station at Brighton. In France, Germany, and even Russia, such stations have long been maintained and supplied with every needed facility irrespective of cost.

The older States east of us are now beginning to recognize the importance of experimental stations. New York has made an appropriation for this purpose of such magnitude that we would be glad to receive annually its twentieth part to infuse new life in our incipient work.

If such stations are regarded absolutely necessary in countries with equable climates, how much more are they needed in the newly settled prairie States with their fitful and peculiar intercontinental climate. So far, all our attempts to grow fruit, forest and ornamental trees, as well as shrubs and flowers, have been unsystematic experiments.

The first *systematic trial* of the most promising horticultural products of climates similar to ours in the old world, is now inaugurated on the grounds of the college farm. With needed facilities, and reasonably abundant means to defray expenses, results of inestimable advantage to the State might soon be attained.

We are continually met here with the question: *"Are not the college funds ample for the rapid prosecution of such work?"* Ten minutes given to the study of any one of the biennial reports of the college will exhibit the real facts.

After deducting the very moderate salaries of professors and teachers the amount of interest fund available for general expenses of all kind and character is about $13,000 for each year.

To properly understand these general expenses it must be borne in mind that our so called college is in reality a well developed *industrial university*. From the above limited amount must come all additions to the library and museum, expenses of public rooms, caring for ornamental grounds, and providing for the general expenses and apparatus of a number of scientific and technical departments.

During the past year the board appropriated to the Horticultural Department the relatively large sum of $1,490 as follows:

For general expenses	$1,000
For tile draining	150
For wood specimens and fruit casts	340

As before noted, the distribution of this amount shows the department yet in a formative stage. The tile draining permitted by this appropriation is the first move I have been enabled to make in the direction of fitting our very wet land for tree and plant growing.

The appropriation for cabinet specimens has in like manner permitted the first moves toward furnishing a horticultural museum.

The expenditure of the $1,000 for general purposes also will give evidence of the fact that the department is yet in its swaddling clothes. For the first time in its history, the department *now owns a team, wagon and harness.* For four long years the experimental station of the State of Iowa has *hired a team* as opportunity offered, to save the much needed money to make a start in experimental horticulture.

Aside, however, from such unusual expenditures as for team, school furniture, apparatus, etc., the ordinary expenses of the department for incidentals, salary of foreman, student labor, etc., are more than double the annual appropriation made by the Board. The excess must be met from the sales from the garden, and nurseries. If truly an experimental station *managed by the State, for the benefit of the State,* our surplus trees and plants should not be considered in the light of commercial products. From stations of this character in Europe and the English colonies, trees, scions and plants of great prospective value to the country at large, are entrusted for trial and report to parties of known experience and love for the work. *If advertised and sold* such novelties usually go into the hands of men with more money than horticultural experience and aptitude for the intelligent reporting of results. With this method of distribution, and abundant means at the command of the department as in European stations, rapid results might be reached in the way of trial of trees, shrubs and plants likely to prove of great value to the State. To illustrate: we have been able to propagate and distribute within the past two years, trees of very many of the best varieties of the apple grown in Russia, but we have not yet sent out a single tree of the Russian or north China pears; nor a single tree of the cherries, plums, apricots, peaches, shrubs, etc., of the northern steppes.

With our previous statements as to want of means the reasons will be obvious to practical propagators. From Moscow or other northern sections we can at moderate cost import scions of the apple in condition to grow. Scions of the other fruits, etc., named, fail to reach us in condition for successful propagation after a three or four months' journey. On the other hand small-rooted plants are obtainable in northern China, and at various points across northern Europe and Asia. The lack of needed means has alone prevented such importations except in the way of a few specimen plants which as yet furnish no stock for propagation worth naming.

Taken from any possible standpoint, I can only reach the one view; viz., in addition to the aid derived from the college fund, we need and must have an annual appropriation from the State of

ONE THOUSAND DOLLARS

if a respectable horticultural station be established in the near future on the college farm.

Respectfully submitted,

J. L. BUDD,
Professor of Horticulture.

REPORT OF THE PROFESSOR OF VETERINARY SCIENCE.

At the beginning of the present year, the department was changed from its old quarters in South Hall to the new rooms provided in North Hall. The department occupies six rooms; viz., one lecture-room, a museum, two offices, and two work-rooms. The room is ample for the present needs of the department, and well adapted to the work. The appropriation made by the Board of Trustees one year ago, for furnishing the rooms, has been expended. The furniture purchased consists of a book-case for each of the offices, one museum case, one secretary, three chairs, and three stoves.

The principal part of the instruction is given in the form of lectures. Three days in the week, two hours each are devoted to class-room work, and three hours daily during the remaining two. One half day is devoted each week to clinical work in which the class assists. This, together with museum work, attendance, when required, on animals belonging to the college farm, and answering a large list of veterinary inquiries occupies the time of the professor in charge. During the year, frequent calls have been made on the department, both by the Governor of the State, and private citizens, to investigate epizootics in various parts of the State. I have so far as possible responded to these calls, when there was satisfactory evidence that the disease was sufficiently serious to justify the trouble of making examinations.

Among the more destructive diseases with which I have met during the investigations, may be mentioned anthrax, splenic fever, glanders, and tuberculosis. I have made detailed reports on some of these outbreaks, one of which I submit herewith. For additional information on the nature of this work, I would call your attention to other reports I have published, and to the forthcoming report of the State Board of Health.

REPORT ON SPLENIC FEVER.

To JOHN H. GEAR, *Governor of Iowa:*

DEAR SIR—I have the honor to make the following report on the results of my investigation into the recent outbreak of disease among cattle in Audubon county.

In compliance with your request, I went to Audubon county on

September 19, and commenced the work of investigation. I was enabled to gather a pretty complete statement of facts concerning the outbreak, and was cordially aided by the owners of stock, and others, in making my examination. The disease proved to be *Splenic, or Texan fever.*

HISTORY.

On July 15th a drove of fifty-four Cherokee cattle was brought from Kansas City and placed in a herd of about two hundred and fifty native cattle. The natives belonged to farmers residing in Audubon, Carroll, Crawford and Shelby counties, and had been gathered up in small lots and put together on the open prairie under the care of a herdsman. The cattle all did well until the 8th of September, when the disease made its appearance among the native stock. Only one or two cases appeared the first day. These were soon followed by others and in twenty-four or thirty-six hours deaths began to occur.

A number of new cases were added each day, and at the expiration of twelve days, fifty-five animals had died. Among these were all ages and classes of cattle, from large steers to small calves. Some others were still sick, with little prospect of recovery, while a considerable number had either recovered from the disease or were convalescent. I was unable to ascertain the exact number that had taken the disease, but the herdsman thought one-half of the entire herd had been affected. Some of these had shown but slight indisposition for a few days, and then returned to apparently good health. Eight animals died during the twenty-four hours preceding my arrival. When I left there were signs of the disease abating its virulence.

NATURE OF THE DISEASE.

Splenic fever is a specific febrile disease, affecting, in the Northern States, cattle only, so far as I am able to learn.

It exists in a latent form in nearly all cattle reared in the low, malarial regions in the extreme southern portions of the United States. Though affecting but slightly, if at all, the growth and general health of these animals, they readily communicate the disease in a highly fatal form to Northern cattle when placed at pasture with them.

CONTAGION.

The reproductive elements of the disease seem to be contained in the bowel and kidney discharges.

Northern cattle can stand in the same car with Cherokee or Texas cattle, without appreciable danger. But when allowed to graze on pastures where these Southern cattle have been feeding or have been driven over, they readily contract the disease. Low temperature readily destroys the germs, so that after one or two hard frosts, infected pastures are rendered safe for the admission of healthy stock. After Southern cattle have remained North during the winter months, they are rendered innoxious. The virus apparently loses its vitality with a single transmission, for Northern animals that have contracted the disease in ever so virulent a form will not in turn transmit it to others.

The period of incubation varies greatly in different cases. In this outbreak, fifty-three days elapsed from the introduction of the Cherokee cattle till the disease made its appearance. It has been known to develop in two weeks, or less, from the time of exposure.

SYMPTOMS.

Marked elevation of temperature, reaching, in one case I examined, 107.5, pulsations from 100 to 135, respiration, 80 to 100, dullness and stupor; the animal isolating himself from the rest of herd, and standing with his back arched as if suffering from cold. In the early stages the surface of the body and horns is cold. This symptom alternates with rushes of fever. Ears pendant, and the nose resting almost on the ground. Slight cough accompanied with some frothy discharge from the nose, difficult locomotion, accompanied in some instances with partial paralysis of the posterior limbs, involuntary twitchings of the muscles over the shoulders and hindquarters, constipation, bowel and kidney dejections, tinged with blood. On the thin portions of the skin, drops of blood exude and become hard and firmly adherent. The hair looks dry and unhealthy, and there is pain on pressure over the region of the heart, and in some cases over the loins.

The eyes are intolerant of light, become milky in color; and in some instances total blindness ensues. In some cases death is preceded by profound coma, or stupor, in others the animal becomes frenzied and rushes frantically about.

In nearly all cases there is depraved appetite, the animal showing strong inclination to eat dirt, small stones and refuse matter. The average duration of the disease is three or four days. In a few instances animals died in an hour or two after they were known to be sick. Others lived six or seven days after the attack. In the cases that recovered, the aggravated symptoms began to disappear in the course of four or five days, and the animal gradually regained health.

POST-MORTEM APPEARANCES.

In a few moments after death the carcass becomes firmly rigid. If the animal be destroyed by cutting the large vessels of the neck, there is a free discharge of watery-like blood from both veins and arteries. The pale, watery condition of the blood is one of the most noticeable pathological conditions. There is usually a little swelling of the tissues in the inter-maxillary space, and occasional little vesicles filled with blood, immediately beneath the skin. With the exception of these slight alterations, the carcass, when the skin is removed, presents the appearance of healthy beef. The spleen is enormously enlarged, the weight varying from five to five and one-half pounds when the normal weight would not exceed two. Its tissues are engorged with dark colored blood, and the whole organ seems to be undergoing decomposition. The liver is about double its normal weight, in one instance weighing twenty-six pounds. Its tissues are reddish in color, with a slight tinge of yellow. The bile sack is enormously distended with a black mass of the consistency of thin mortar, and the bladder contains six or seven pounds of wine-colored liquid. The fourth stomach and the entire intestinal track are the seat of

occasional congested spots, and erosions of the mucous membrane. Considerable quantities of watery infiltration are found in the brain cavity, and the brain substance is congested and much darkened in color.

The surface of the heart, both external and internal, shows dark congested spots, and smaller discolored specks are occasionally seen on the peritoneum and especially that portion investing the uterus.

MICROSCOPIC.

But very imperfect microscopic examination could be made with the time and facilities afforded. I made several examinations of blood with uniform results. The white corpuscles were more numerous than in healthy blood, and were abnormally large. The red corpuscles had sustained loss of coloring matter, and appeared shrunken and crenated on their edges.

No bacteria or other organisms were discoverable with a magnifying power of six hundred and fifty diameters. This part of the investigation will be further pursued in the laboratory.

TREATMENT.

I found the curative measures that had been taken recourse to covered a wide range of the field of therapeutics. Some of these were based on the unique notions of the cause of the disease. One explanation for the outbreak, which had gained a good degree of popularity, was the presence of large numbers of "wood-ticks" on the animals. These had been carried from the Indian Territory by the cattle brought from that district and soon found their way to the other portion of the herd.

There was little satisfactory evidence that medication had been followed by any beneficial results. It is barely possible that in some instances cathartics had proved of advantage.

PRECAUTIONS.

In order to prevent as far as possible the further spread of the disease, I advise the removal of the native cattle to fresh pastures while the Cherokees should be kept on their present grazing grounds till after the appearance of frost. In this way all animals not already infected will escape; otherwise the loss would continue till the disease had extended to the entire herd. This, with the administration of alterative stimulants and febrifuge medicines, will doubtless materially diminish the ravages of the disease.

REMARKS.

In order to thoroughly satisfy the owners as to the nature of the disease and its origin, I had a healthy looking Cherokee steer, three years old, slaughtered and subjected to examination. All parts of the body, with the exception of the spleen, seemed to be in a perfect state of health. This organ showed unmistakable evidence of the disease. It was one-half above its normal weight, and structural changes were occurring in its tissues. This was but a single fact in corroboration of what has been often proven before.

All persons dealing in cattle should be reminded of the fact that the statute of Iowa makes them liable for all damages resulting from the introduction of Texas fever, as well as subjecting the offender to heavy fine and imprisonment.

Unintentional violation of the law sometimes occurs through the mistaken notion that Texas cattle only engender the disease. The facts are that a large area of the country outside of Texas furnishes the condition necessary for the development of the poison.

It is highly probable that other outbreaks will occur in the State if not already developed. Farmers should be on their guard and adopt precautionary measures so soon as the disease makes its appearance.

I am yours very truly,

M. STALKER.

Ames, Iowa, September 30, 1881.

I would call your attention to the advisability of providing accommodations for the clinical work that would obviate the necessity of bringing diseased animals into the same barn with stock belonging to the farm. If suitable buildings could be erected within convenient distance of the veterinary rooms, where animals could receive proper hospital care, it would add a valuable feature of instruction to the veterinary school. I would most earnestly recommend that you ask the State legislature at its next meeting to appropriate the sum of $2,500 to be expended in the erection of such building. The President, in his report, will call your attention to other and smaller wants of the department. With these additions to our present facilities, we can offer advantages to the student of veterinary medicine superior to those of any other school in America. The increasing demands on the department for advice and personal examination into the causes of diseases among farm animals, indicates a growing interest in the cause of veterinary education, and a wider field of usefulness for the school in the future.

REPORT OF THE DEPARTMENT OF MECHANICS.

The number of students who receive instruction in the work-shops now averages about twenty. With this increase of attendance it has become impossible to carry on the work with the present equipment. A shaper and smaller engine lathe would allow a greater range of work and relieve the department for the present. It is very desirable that better accomodations be provided as soon as possible. The room now used for the mechanical laboratory being in the basement of the building occupied by the department of physics and chemistry, is damp, poorly lighted, and unfit for the purpose.

A building planned for the School of Engineering and supplied with all the modern improvements in machinery and tools, would relieve the teachers and add enthusiasm to the work. It is necessary to keep pace with other institutions of the kind which grant the same degree; otherwise our students will seek those colleges which offer better advantages in their accommodations and appliances for teaching.

The School of Engineering has been compelled to fit itself to the circumstances and get on the best way it could, while the States around us have made appropriations to advance this department of instruction. Minnesota, Wisconsin, and Kansas have had large appropriations. Illinois Industrial University received $25,000 to build and equip a mechanical laboratory and drill hall, Ohio University $9,500 for work-shops, and President Morton fitted up the shops of the Stephens Institute at an expense of $9,500, giving this amount to the Institute. These figures show that the above named States have taken a long step in advance, and that we must be provided with the necessary funds or be compelled to fall behind. An appropriation of $8,000 would, with the present apparatus, put the school in good working condition. I would therefore ask your Honorable Board to urge the legislature to make this appropriation at its coming session.

The plan of instruction in the department of mechanical engineering is theoretical and practical. The work for the student is laid out by drawings, a description of the processes given him, he then proceeds to execute the work under the instruction of the professor in charge and his assistant.

With careful training in this way a boy can make better progress

here in four years, than he could by the old system of apprenticeships, and at the same time receive a thorough drill in mechanical engineering.

The practical skill thus imparted, together with the theoretical training, is calculated to furnish men who can design and invent, who can superintend shops and factories, and not to make mere artisans. Another feature of the school is, that it is open to those who do not wish to pursue the course of mechanical engineering, but who wish to take special studies and the practical training. Several have already availed themselves of this privilege. One young man who spent one and a half years here, is now engaged at mechanical work at $90 per month. The graduates of this department are all engaged in their profession. T. L. Smith is in Wausau, Wisconsin, at about $1,000 per year; Willis Whited is engaged at the same place; C. H. Lee is a successful architect in Des Moines; W. G. McCannon is engaged putting up electric lights for Mr. Edison, and Fremont Turner is engaged as foreman in the Iowa Agricultural College work-shops.

A small sum expended in advertising the school would undoubtedly lead to a larger attendance.

The course in mechanical engineering is comprised under the following heads, it being accompanied by a thorough course in mathematics, physics, and other studies; machine drawing, descriptive geometry, principles of mechanism, analytical mechanics, resistance of materials, machine drawing and design, and prime movers. Space will not admit of a detailed statement of the course. Each subject, however, is taken up experimentally and theoretically; for example, under the head of prime movers, the proper curves for the vanes of wind engines, are discussed with examples of actual machines at work, their useful effect being determined. Experiments are made with steam engines having different valves, and steam working with different degrees of expansion. Steam boiler tests are performed, the amount of coal used per horse-power per hour is determined, and many problems which come in the line of the mechanical engineer.

WATER AND GAS WORKS.

Nearly all the water used by the institution is raised by two wind engines, one fourteen and the other sixteen feet in diameter. These engines were invented here, and made by the students in the mechanical department. They are made mostly of iron, are strong

and very efficient machines, and would probably supply water at all times if there were sufficient storage room in the main building.

The gas works are J. D. Patten's system, the gas being made from naptha; they work well, are easily managed, and make good gas. With the present holder, gas has to be made every day: this makes it more expensive. If the holder were large enough to contain 10,000 feet, including the time it requires to make the gas, it would last about one week; this would reduce the expense of manufacture. I think that considerable could be saved by making gas from coal. The freight between this and Chicago almost doubles the price of naptha, and a good quality of coal for the manufacture of gas can be bought near here for about four dollars per ton.

Respectfully submitted,

A. THOMSON,

Professor of Mechanical Engineering.

REPORT OF THE PROFESSOR OF BOTANY.

Early in the year the collections and apparatus belonging to the Department of Botany were removed from the building heretofore occupied, to the rooms set apart for them in North Hall, since which time the instruction of classes and the work of the department have been carried on in the last named building. The rooms are very conveniently arranged for the purposes for which they were designed, and enable the work of the department to be satisfactorily done. Room No. 9 has been fitted up with proper cases for the protection and preservation of the herbarium and the other specimens belonging to the botanical cabinet. These specimens have been placed in the cases, and some progress has been made in the work of arranging and labeling. Room No. 10 is occupied by the histological laboratory, and is supplied with tables, chairs, cases, blackboards and charts. The apparatus used in the study of the minute structure of plants is preserved in a case made for the purpose, occupying one side of the room. Room No. 11 is used for lecture and class-room purposes. It can easily accommodate ninety students, and if the need should arise, this number may readily be increased to one hundred or more. Each chair is provided with a broad arm for use in writing notes, or in the dissection and examination of specimens. A large blackboard, extending across one side of the room (forty-one feet), and seven feet in width, has recently been finished. All the rooms are heated by stoves, that in the lecture room being a large, hard-coal stove, while the others are designed for burning wood. Opaque curtains have been hung in all the windows, so that the light may be perfectly controlled.

The work of the year, in addition to the superintendence of the construction of the cases, tables, etc., mentioned above, and the labor of moving the material belonging to the department, consisted for the most part of instruction of various classes in botany. During the first term of the year seventy-four students pursued this branch, requiring an average of a little more than three and one half hours of instruction a day. During the second term there were one hundred and twenty-one students in botany, requiring an average of three hours of instruction each day. In addition to this, instruction was

given three days each week to twenty-three students in landscape gardening, during the last half of the term.

The nature of the work of instruction in botany, it will be seen from the following statement, differs quite considerably from that in most other colleges. The attempt has been made to unite practice with the lecture-room and class-room work, and, so far as possible, to point out at every step in the work, the economic bearings of the scientific principles and laws discussed. The beginner in the study was sent out first to collect and make careful drawings of leaves, buds, stems and flowers. In this way the gross anatomy of many common plants was made familiar to the student. This was followed by a course of carefully prepared lectures, upon the structure and physiology of plants. Beginning with one of the simplest plants, with the aid of specimens and blackboard sketches, its structure, manner of obtaining food, mode of nourishment and reproduction were carefully given. A plant of a little higher organization was taken up next, and so on until the highest plants were reached. In this way the student passed along regularly from the simple structures, with their simple and easily understood physiology, to those of the greatest complexity, thus gaining a good general knowledge of vegetable anatomy and physiology.

The sophomore students, in the first term, were instructed in the analysis and classification of the flowering plants, and each one was required to collect his own specimens from the fields and gardens and thus to acquire a knowledge of the habits and appearances of growing plants. The same students, in the second term of the year, received instruction in the minute anatomy of plants, and the class-room work was supplemented by a course of work in the laboratory in which each student took up the actual examination of the protoplasm, cells, and tissues which make up the substance of the plant. An excellent foundation was thus laid for the subsequent study of the deeper problems in vegetable physiology.

The junior students were first instructed in vegetable physiology, and then taken on to the investigation of the lower plants, especially those which have been found to be injurious to cultivated plants and domestic animals. The regular laboratory practice in which the student examined each plant for himself, enabled him to obtain a much more clear and definite notion of these important organisms than would have been possible in any other way.

The instruction in landscape gardening was confined mainly to the discussion of those general principles of the art which underlie its application in any part of the country. One practical problem, taken for the most part from the college grounds, was given to each student, who prepared a plat, accompanied by estimates and directions for the work.

Some time was given during the year to the investigation of those parasitic organisms which cause the disease known as the rust of grains and other plants. The results I hope to publish soon.

During the year many inquiries upon botanical subjects were received from farmers, gardeners, and others, which were duly answered, generally by letter, sometimes through the public press.

The more important additions to the collections in this department are the following:

(1) Four hundred species of Southern plants, (2) about two hundred species of Iowa plants, (3) one hundred and fifty species of Arizona plants, (4) two hundred species of fungi, (5) one hundred and eighty species of sea-weeds, (6) and in addition, a number of small collections aggregating about one hundred and twenty species from various parts of the West, making, in all, about twelve hundred and fifty species.

Of important apparatus, and other material, may be mentioned, a set of botanical charts and a sciopticon for the lecture-room, a new objective for one of the microscopes to replace an old worn out one, a large lot of paper for mounting the herbarium specimens, and an additional glass case for the cabinet.

The total value of the collections and apparatus under my charge, as per inventory taken November 3d, is $2,562.75.

Respectfully submitted,

C. E. Bessey.

November 5, 1881.

REPORT OF THE DEPARTMENT OF CHEMISTRY.

The general chemistry of the first term, sophomore year, embraces manipulating chemical apparatus, handling and making gases, studying the properties of different chemical elements and their compounds. Qualitative analysis, commenced about the middle of the first term, is continued through the year. The student receiving chemicals, minerals, etc., to determine the elements of which they are composed. The course is very thorough, and no student can go on to the junior year who is unable to analyze correctly inorganic substances. Analyzing chemical reactions and solving problems from an important part of the class work. Three recitations a week are held in the first term, and two in the second; laboratory work two afternoons a week during the year.

In the junior year the student commences by analyzing quantitatively pure chemicals, and as soon as he has acquired sufficient skill analyzes paints, alloys, minerals, cast-iron, water, etc. The second term's work in the laboratory is a continuation of the first, and includes, also, organic analysis, embracing such substances as hay, milk, uric acid, sugar, etc. The class work in the first term consists principally in working out methods of analysis suitable for compounds whose composition is given. During the second term organic chemistry is studied. Two afternoons a week are required for laboratory work during the first term, and three in the second, but the laboratory is open during the whole day, and as each student has a separate desk he can spend as much extra time in the laboratory as his other studies permit.

In the second term of the year a course of lectures on domestic chemistry is delivered to the young women of the junior class.

In the senior year, first term, lectures are given on agricultural chemistry, embracing such topics as chemistry of soils and plants, manures, forcers, foods for domestic animals, etc.

Those students who desire can take a special course in chemistry by dropping certain specified studies and giving an equivalent amount of extra time to chemistry. This course commences at the beginning of the junior year, and is carried through the senior.

The text-books used in the sophomore year are Barker's College Chemistry and Appleton's Qualitative Analysis. Junior year, Fresenius' Quantitative Analysis, Bloxam's Chemistry, Organic and Inorganic. Special course in chemistry: Cook's Chemical Philosophy, Sutton's Volumetric Analysis and Schorlemmer's Chemistry of Carbon Compounds. Senior veterinary, Atfield's Chemistry, general and pharmaceutical.

As a sample of student work I give the analyses of drinking waters made by some of the junior class this year. Most of this work was duplicated, and I consider it reliable. I have also thought best to add those made by myself for the State Board of Health:

TABLE SHOWING ANALYSES OF DRINKING WATERS.

Expressed in parts per million—1,000,000.

WHERE TAKEN FROM.	Free ammonia.	Albuminoid ammonia	Nitrogen as nitrates and nitrites.	Chlorine.	Suspended matter.	Hardness.	Solid matter after evaporation.	Loss on ignition.	Solid matter after ignition.	When collected.	BY WHOM MADE.
Ames, well No. 1	0.054	0.125	10.2	4.55		323			428.0		J. H. Patten and O. C. Peterson.
Ames, well No. 2	0.080	0.020	0.4	0.90		229	438.0		374.0		E. A. McDonald and C. M. Coe.
College, well No. 1	0.054	0.100	9.0	2.50		303			380.0		J. H. Patten and O. C. Peterson.
College, well No. 2	0.065	0.010	0.2	2.59		286	264.0		246.0		E. A. McDonald and C. M. Coe.
College, well No. 3	0.104	0.426	1.6	3.55		310			300.0		J. H. Patten and O. C. Peterson.
College, well No. 4, from top	0.050	0.154	2.4	0.50		243			261.0		J. H. Patten and O. C. Peterson.
College, well No. 4, from bottom	0.026	0.082	2.4	1.50		280			340.0		J. H. Patten and O. C. Peterson.
Slough, well	0.060	0.240	0.4	0.50		258	446.0		408.0		E. A. McDonald and C. M. Coe.
Mt. Pleasant, well No. 1	0.013	0.040	40.0	105.00		643	1033.0		996.0		E. A. McDonald and C. M. Coe.
Mt. Pleasant, well No. 2	0.013	0.015	14.8	40.90		386	469.0		458.0		E. A. McDonald and C. M. Coe.
Dakota, well No. 1, Wheatland		0.440	0.4	9.09		729	3594.0		3302.0		E. A. McDonald and C. M. Coe.
Montgomery, creek	0.160	0.200	1.0	0.45		243	324.0		268.0		E. A. McDonald and C. M. Coe.
Pond water	4.000	1.725	0.8	3.50		111			246.0		J. H. Patten and O. C. Peterson.
Muscatine, river water	0.040	0.220		2.00	14.5	100	142.0	43.0	99.0		Prof. T. E. Pope.
Marshalltown, river water	0.023	0.170		1.25	46.0	200	290.0	34.0	256.0		Prof. T. E. Pope.
Anamosa, river water	0.066	0.190		1.80		93					Prof. T. E. Pope.
Cedar Rapids, river water		0.206		1.70	63.2	157	242.0	32.6	209.4		Prof. T. E. Pope.
Ottumwa, river water	0.040	0.400		2.75	381.4	79	582.0	64.0	518.0		Prof. T. E. Pope.
Raccoon, river water, Des Moines	0.026	0.130		1.95	3.5	143	157.0	11.6	145.4		Prof. T. E. Pope.
Burlington, river water	0.014	0.310		2.90	153.0	107	361.0	41.8	319.2		Prof. T. E. Pope.
Davenport, river water	0.088	0.320		1.35	30.4	129	235.0	31.4	203.6		Prof. T. E. Pope.
Clinton, river water	0.027	0.380		4.70		100	268.8	43.6	225.2		Prof. T. E. Pope.
Muscatine, well water				173.50		657	927.0		797.0		Prof. T. E. Pope

Marshalltown, well water				268.90		757	1045.0		897.0		Prof. T. E. Pope.
Anamosa, E. Booth's well water				66.70		371	554.0		440.0		Prof. T. E. Pope.
Anamosa, J. C. Dietz well water				20.70		143	268.0		208.5		Prof. T. E. Pope.
Cedar Rapids, 2d ward well water				86.10		383	947.0		846.0		Prof. T. E. Pope.
Cedar Rapids, 1st ward well water				161.80		570	1129.0		961.0		Prof. T. E. Pope.
Ottumwa, well water				70.20		293	587.0		515.0		Prof. T. E. Pope.
Dubuque, well water				154.25		586	707.0		562.4		Prof. T. E. Pope.
Dubuque, artesian well water				3.40		293	223.0	14.0	209.0		Prof. T. E. Pope.
Dubuque, city water				3.75		329	254.4	17.4	237.0		Prof. T. E. Pope.
Dubuque, city water		0.030		3.50		329	248.4	16.2	232.2		Prof. T. E. Pope.
Burlington, well water				87.50		807	865.0		750.0		Prof. T. E. Pope.
Des Moines, well water No. 1	0.120	0.060		82.40		543	730.8		644.8		Prof. T. E. Pope.
Des Moines, well water No. 2	0.021	0.046		60.70		686	851.6		751.6		Prof. T. E. Pope.
Des Moines, well water No. 3	0.051	0.150		76.30		1000	1302.4		1198.4		Prof. T. E. Pope.
Des Moines, well water No. 4	0.040	0.040		34.70		686	835.6		738.8		Prof. T. E. Pope.
Davenport, well water	0.027	0.124		49.00		457	751.6		701.6		Prof. T. E. Pope.
Davenport, ice water	0.266	0.194		Trace			23.6	16.2	7.4		Prof. T. E. Pope.
Des Moines, ice water No. 1	0.214	0.054		Trace			12.0	4.0	8.0		Prof. T. E. Pope.
Des Moines, ice water No. 2	0.240	0.034		Trace			13.0	5.0	8.0		Prof. T. E. Pope.

To determine whether a water is suitable to drink, chemists look principally at the amount of albuminoid ammonia; when this is less than 0.08 in the million we say the water is good, and when it exceeds 0.15 it is unfit to drink. In the case of river waters the albuminoid ammonia was generally high, but comes from decaying vegetable, and not animal matter. Pond and slough waters were both found to be very bad. A large amount of chlorine is indicative of the presence of animal matter or sewage, but in these cases it comes from common salt, and the large quantity present furnishes a strong argument against those who think our inland State requires it as a manure. The nitrates and nitrites are not in themselves harmful, but indicate that the water may have been previously contaminated with organic matter which has been destroyed by filtration, etc. The nitrogen was determined by the indigo process. A high degree of hardness renders a water unfit for domestic purposes, but is not unhealthy. One degree of hardness corresponds to one part of carbonate of calcium, or its equivalent in other salts in parts per million.

Quite a number of well waters must be condemned from the large amount of albuminoid ammonia, but they are from either shallow wells or else wells where the surface water has easy access.

Ames well water No. 1 was taken from the old town well situated at the corner of the two main streets, and several privy vaults are within fifty feet. The ground slopes toward the well from the street, and surface water can find easy access; this well is deep, and would furnish good water if the surface water were kept out. Ames well water No. 2 was taken from a well seventy feet deep, and is excellent water. College well No. 4 is forty feet deep, with a garden on one side distant three feet; the two samples show the difference between the water drawn by a bucket from the top, which is poor, and that pumped from the bottom, which is fair. College well No. 3 is fifty feet deep, but filled with surface water. College well No. 1 is twenty-five feet deep. The well water from Dakota was the worst analyzed, and contained sulphuretted hydrogen; this well was planked.

T. E. Pope.

REPORT OF THE DEPARTMENT OF PHYSICS.

The facilities for giving instruction in physical science have improved very much in the past biennial term. In the departments of electricity and magnetism the cabinet is particularly well supplied. The large dynamo-electric machine placed in the mechanical workshop, together with the electric lamp and other apparatus accompanying it, afford superior opportunity for students to attain proficiency in this important branch of science. Last winter I received from Mr. Edison several of his carbon electric lamps for lighting by incandescence. This year I have purchased several of Mr. Crook's tubes for studying what is known as the "fourth state of matter." I also wish to mention the little "Griscom Electric Motor" which has been recently purchased. This little instrument is a marvel in its way for illustrating the facility with which electricity can be turned to practical uses. We have also added a fine large electro-magnet, a lifting coil, several magneto call bells, telephones, and various other pieces of apparatus for illustrating the telephone, telegraph, and other recent electrical inventions. The value of the apparatus in the physical cabinet now amounts to more than five thousand dollars, and every year many valuable pieces are added. The great advances now being made in electrical science render it imperative that we shall if possible keep abreast of the times by supplying our cabinet with new pieces for illustrating these late inventions as soon as possible. Our laboratory is much in need of a good induction coil; no cabinet of philosophical apparatus is complete without one. Such coils can be had now much cheaper than formerly. One which will answer all our purposes can be purchased now for about $150, while the same would have cost twice as much a few years ago. I also desire to supply the laboratory next year with some of *Faure's* secondary batteries for *"storing"* or *"accumulating"* electricity. These batteries are a recent invention, and promise to be of incalculable value in the future. By their use wind-power, water-power, steam-power or any other source of energy can be "stored" up and set free as electricity when wanted, and made to feed electric lights, drive sewing-machines or do any kind of work. In order to make these and other necessary purchases, and pay the

running expenses of the department, an appropriation of about $500 is necessary.

The advance course in mathematics and physics now affords a superior opportunity for such students as desire, to get special instruction in these branches. Under the present arrangement, mathematics is studied during the junior year and physics during the senior year. Two afternoons per week are required of laboratory work. Experiments are performed in mechanics, heat, electricity, and magnetism; the greater portion of the time being given to electricity. Lectures and recitations are held three times each week. Most of the matter is given in lectures, though for a portion of the time Jenkins's Electricity is studied as a text book; and the whole is supplemented by references to subjects to be investigated in the library. It is the intention to make the instruction so far practical that the student can soon prepare himself for practical engineering. The lectures comprehend the following subjects:

1. Elements of physical manipulation and methods of research.
2. Method of finding probable error of observation.
3. Problems in mechanics and gravity.
4. Problems on center of gravity.
5. Calculus applied to discussion of gravitation and center of gravity.
6. Gravitation applied to the solar system.
7. Problems in electricity, including telegraphy, telephone, electric motors, dynamo-electric machines, and other topics.

The course in physics preparatory to this occupies two years, during which the students are required to complete Ganot's Physics, in which all the topics are studied usually included in courses in natural philosophy.

I would respectfully request that some member or members of the Board be appointed as committee on physics, with whom the head of the department can feel free to consult on matters of interest to that branch.

Very respectfully submitted,

J. K. Macomber,
Professor of Physics.

REPORT OF THE DEPARTMENT OF DOMESTIC ECONOMY.

Under the changes made by the Board at their last annual session, and with larger rooms and better facilities, the classes in domestic economy have just completed a satisfactory year's work. Sixty-one young ladies have been under my instruction this year, and all have manifested an interest which has made teaching them a constant pleasure.

SPRING TERM'S WORK.

On Tuesday, Wednesday, and Thursday, each week, the freshman girls prepared dinner for one and sometimes two tables in the college dining-room. The bill of fare and the material needed to prepare it were furnished me by the steward. I received exactly the same amount and quality of provisions that were used in the large kitchen for an equal number of persons at other tables. I copy as a sample the programme of meals cooked by my classes the first week: March 22, roast beef, potatoes, tomatoes, apple pie. March 23, roast beef, potatoes, tomatoes, apple dumplings. March 24, boiled beef, potatoes, boiled onions, blackberry pie. I kept a record of the entire term's work, which the Board can examine if it pleases them so to do.

The sophomore class attended a weekly lecture in the Department of Domestic Economy. They were required to write essays on such subjects as "Education Necessary to the Skilled Cook," "Slovenliness a Sin," "Best Methods of Hanging and Grouping Pictures," "Carpets or no Carpets?" etc., etc., which were read and discussed in class. At the close of the term they were given a thorough examination, in writing, on the lectures.

FALL TERM.

The junior class have worked by divisions three afternoons a week in the new rooms prepared for the department in South Hall. These rooms are comfortable and convenient, and the young ladies have enjoyed their work thoroughly. That it has been profitable as well as pleasant is beyond question. We have been able to dispose of a considerable amount of the food cooked, among the students and the professors' families. The class has supplied yeast regularly to all the families on the farm. We have also sold bread and yeast to the

boarding cottage. Cake, pies, salads, bread, and biscuits, have been sold and uniformly approved as first-class.

That the Board may have a clearer idea of the work done, and the method of instruction, I copy a few specimen questions from those given to the juniors for a written examination at the close of the term's work. Of course these questions cover but a fraction of their actual practice:

Meat—Effect on raw meat of cold water.
Effect on raw meat of hot water.
How to make stock, and why.
How to roast meat, and why
How to boil meat, and why.
How to broil meat, and why.
What meats should be cooked rare?
What meats should be well cooked?

Eggs—Composition of eggs. Why is silver discolored by egg. Their comparative value as food, and methods of cooking them.

Bread—What must flour contain to make it fit for bread making? What is meant by vesciculation? Mention some of the most common adulterations of flour and bread, and give the reasons for their use. What is the most common method of vesciculation? Give the conditions necessary to success in bread making. Reasons why bread retains so much moisture.

The Potato—Its history, food value, and methods of cooking.

MARY B. WELCH.

REPORT OF THE DEPARTMENT OF CIVIL ENGINEERING.

The basis of this course of study is laid by a systematic drill in algebra and geometry during the freshman year. In the sophomore year, first term, plane trigonometry and land surveying are taught in the class-room, and the latter is supplemented by work in the field, where the student becomes acquainted with all the manual portions of the business, and acquires proficiency in the use of the chain, compass, transit, level, and other instruments. Notes are kept of the data taken as in actual work, and from these the areas are calculated and the fields platted. In the second term, descriptive geometry, spherical trigonometry and analytical geometry are begun, and the latter two, finished. In the former two recitations or lectures are given, in addition to which the student prepares twenty plates of drawings (twelve by eighteen inches), each consisting of some special graphical problem which involves one or more of the general problems of descriptive geometry. By this means mechanical drawing is practiced at the same time that its underlying science is studied. Spherical trigonometry occupies three recitations per week during the last eight weeks of the term. During this term, railway surveying is studied in two recitations per week, and two afternoons in the field per week, laying out curves, setting slope stakes, etc.

In the junior year the course becomes more strictly technical. During the first term are taught the principles of the construction of water-works, sewers, retaining walls, and other combined structures. As nearly as possible all the problems investigated in the class-room are taken into the field and staked out upon the ground. In pure mathematics, calculus is taught during the term, there being five recitations per week. Descriptive geometry is continued in much the same manner as before, only dealing with the higher problems of stereotomy, shades and shadows, perspective and isometric. About twenty plates of drawings are prepared.

In the second term analytical mechanics and the strength of materials occupy five recitations per week. During this term also a practice survey of a portion of a railway is undertaken, and the engineering of the work carried as far as is possible without the actual construction. The line is run, the curves put in, the profile taken, the grades determined upon, and it is then cross-sectioned and left ready for the

contractor. The notes of the work are kept exactly as in actual practice, and from them a profile and plan are drawn, including also the more important topographical features of the adjoining lands.

During the senior year the student devotes himself to the higher problems of engineering, such as strength and stability of arches and suspension bridges, the construction of bridge and roof trusses and girders, and the laying of foundations. A portion of this year also is given to the designing of structures and calculations of their strength, with detail drawings of the same; in a word, the office work of a constructing engineer.

A course in astronomy is included in the department in the second term of this year. It is partly descriptive and partly mathematical, extending as far in the latter as the determination of latitudes and longitudes and the laying out of a true north and south line by observing the meridian transit of a star.

During the past year the students in the senior class in civil engineering, accompanied by Prof. Mount, made an excursion, during the summer vacation, to Burlington and St. Louis, to inspect bridges and other engineering works, being furnished with free passes over the lines of the Chicago & Northwestern Railroad to Des Moines and return, and the Chicago, Burlington & Quincy to Burlington and back, also obtaining reduced rates on the Diamond Joe line of steamers to St. Louis and return. The class have also constructed a Howe Truss bridge upon the college grounds, thirty-two feet in length, calculating the strains, designing the parts and making and putting them together, and the structure is now used for travel.

The department is well furnished with field instruments, consisting of three transits, two levels, one compass, chains, tapes, rods, poles, etc. The text-books used are Gillespie's Land Surveying, Hencks's Field Book for Engineers, Shreve on Bridge and Roof Trusses, Stoney on Strains, Allen on Dock Walls; while many others of a similar character are kept in the library for reference.

The pressing needs of the department are for more commodious rooms. Many of its recitations are now held in rooms used for other classes, and the two that are occupied by it exclusively are too small, and not well adapted to its purposes. A new building for the school of engineering such as is needed by both its departments, would place it upon the same footing in regard to room that it already is in other appliances.

F. E. L. BEAL.
Professor of Civil Engineering.

REPORT OF THE DEPARTMENT OF ZOOLOGY.

This course is begun in the second term of the freshman year by the study of descriptive zoology, in which are discussed the external forms, habits and geographical distribution of the various members of the animal kingdom. In the first term of the sophomore year the general subject of comparative zoology is taken up, including the true relations of the different branches of the animal world, their external and internal structure, and their more important physiological functions, the whole term being taken up with the invertebrates. The first half of the second term of this year is devoted to the vertebrates and a study of the laws of development, the origin of species, etc. The second half of the term is occupied with the subject of general and economic entomology; special attention being paid to those insects which have proved injurious to the farmer and gardener. The life-history, as far as known, is examined and the various remedies and checks that have been found efficacious, are suggested. It is thought that by this means much accurate and useful knowledge upon this highly important subject may be diffused throughout the State. Students who leave this college carry with them a knowledge of the habits of many of our most injurious insects, and are prepared to undertake the study of others, and devise remedies for their ravages. In addition to the class-room work of this year, each student is required to collect, prepare and identify a certain number of specimens from some department of the animal kingdom. These specimens are then deposited in the museum. During the last term of the year, the student spends one afternoon, or three hours of each week, in the study and identification of specimens in the laboratory.

During the first term of the junior year, the student spends one afternoon in each week in the laboratory in the dissection and study of typical forms of animal life. In the second term of this year the study of comparative anatomy is taken up in a course of lectures extending through the whole term. The general and special facts of biology and the anatomical structure of various organisms are discussed with as much minuteness of detail as the time will admit, followed by a *resume* of the subject in which the evolution of the different systems of organs is traced from their earliest beginnings to

their most differentiated forms. The whole is supplemented by a short course upon embryology, in which the development of the ovum is traced and compared with those forms already discussed.

The department has an outfit of ten compound microscopes and two simple dissecting microscopes, with which the students are allowed to work, and whose use is fully taught. The library, to which the students have access every day, has a fair supply of books bearing upon zoological topics, among which are the following: Harris's Insects, Carpenter's Comparative Physiology, Owen's Comparative Anatomy, Gegenbaur's Comparative Anatomy, Huxley's Anatomy of the Invertebrata, Darwin's Origin of Species, Descent of Man and Variation of Plants and Animals under Domestication, etc. Jordan's Manual of the Vertebrates of North America is used in identifying specimens.

Ample facilities will be afforded to students who may wish to pursue any special line of zoological or anatomical research. During the past year one young lady student has made a special study of birds, in relation to their food habits, and has ascertained some important facts, and her final thesis upon this subject is a valuable paper.

The museum occupies a large room on the third floor of the south wing of the main building. It includes mounted specimens of a few mammals; several hundred birds representing the avian fauna of the State; a large collection of reptiles in alcohol; a small collection of fishes; the best and largest collection of insects in the State, and a small but typical collection of other invertebrates. A set of the "Ward Models" illustrating the principal larger fossils, and a cabinet of mineralogical specimens are of service in the study of geology. There are, besides, the following collections in process of formation: Sets of the eggs and nests of birds; the brains of vertebrates; skulls of mammals and skeletons of vertebrates.

During the college year the museum-room is used as a laboratory in which students in zoology make a direct study of specimens. Tables and chairs to accommodate twenty students at once are provided, and the room is open three afternoons a week for work. Visitors are admitted to the museum every afternoon from one to five o'clock.

F. E. L. Beal.
Acting Professor of Zoology.

DEPARTMENT OF LITERATURE AND LANGUAGE.

In a college in which the leading object must be to teach the branches of knowledge that are related to the industries, the old classical course cannot prevail. In the absence of this we have built up a literary department in which the aim has been to secure, as far as possible, the same results of refined discipline and culture which were aforetime thought to be the exclusive property of the polished tongues of antiquity. English Literature, pre-eminently, under judicious management, has been found to subserve these ends. We have a literature that has a longer history than that of Greece or Rome; a literature that has passed through as many brilliant epochs, and has furnished as many masterpieces in all branches of the literary art as any language in the world.

In the drama, for example, we should not hesitate to pronounce the great masters of this species of composition of the age of Elizabeth at least equal to the dazzling company of dramatists that made the age of Pericles illustrious in Greece. In epic poetry, Milton and Tennyson may be studied with quite as much profit in the way of culture as Homer or Virgil; and certainly the great galaxy of historians and essayists of our mother tongue, if inferior to those of antiquity in subtlety and breadth of linguistic resource, are vastly superior in the amount of material at their disposal and the philosophical skill with which it is handled.

Nevertheless, these advantages cannot be secured except by some adequate method. To realize this in a scientific curriculum, where of necessity the studies relating to the industries must take the precedence and largely absorb the time and energies of the student, was, at first, a difficult problem. But it soon became apparent that the *direct study* of a masterpiece, under the watchful comment of the teacher, the student furnishing his own summary, was the surest route to the largest results in the briefest time.

Some fruitful epoch is selected, and after sweeping through it in a series of lectures designed to restore as far as possible the under currents of feeling and sentiment determining the social life of the times, one or more of the literary representatives of the era are taken up for direct study, the student being constantly incited to deep and sympa-

thetic communion with the mind of the author. *Mind to mind*—that is the motto. Brooding over the page and giving the imagination time and motive to make its deepest soundings in "the best thoughts of the best minds," the enthusiasm is not slow in kindling, and not unfrequently marked revolutions in the intellectual life are effected. The refining and elevating influence of such study cannot for a moment be doubted.

Thus, at intervals, the classes yield themselves to the magic spell of the great literary artists from Chaucer to Tennyson, never omitting to recognize Shakespeare's preempted right as the towering genius of all letters to the uppermost place in their regard. The juniors having made language an instrument to get at the "best thoughts," are prepared, as seniors, to enter upon the study of language as an end; and, therefore, their last term is devoted to

THE SCIENCE OF LANGUAGE.

In English literature the student discovers that the great literary artists work their wonders through the skill they have over language, and the strange witchery they are able to impart to words. Accordingly language itself becomes now a subject of curious interest to him and he is introduced to the wide and varied field of philological research which the science of language has of late years laid open.

The discoveries and generalizations in this branch of scientific research have equaled in number and brilliancy those of the so-called practical sciences which have so adorned and distinguished our age; and the subject is even fraught with greater interest by as much as the mystery to be solved is dropping familiarly from our tongues, and has a most intimate relation to the thoughts and emotions of the human soul. A word! What is it? How did men in the far off primitive time, just emerging, perhaps, from the brute stage of their existence, come to use articulate language as a means of expressing their ideas? Once originated, what are the laws of change in language, through which from a common center all the countless dialects of this great Babel of ours crept out into all the habitable corners of the globe? What has language to say on race affinities, and the distribution of races over the earth; and on the perplexing question of man's place in nature, and the religious and philosophical problems that are now dividing the world? These and many other points of thrilling interest are suggested in the course of our discussions, as inseparably wrapped up in the mystery of the simplest word we use. This study

deals with all languages on the face of the earth, and is as much interested in the obscure dialects of remote Islanders and Hill Tribes as in the most polished erudite languages known among men. It is co-ordinate in the ground it covers with Comparative Mythology and Sciology—topics now of absorbing interest, and promising to be of revolutionary import in the civilized world. Hereafter the study will be prosecuted in a course of lectures which will avoid as far as practicable the learned processes of the specialist—which are for the most part beyond the reach of students, and will deal wholly with such results as bear upon the practical necessities of life. At the same time independent researches will be encouraged both in this branch and in English Literature; and a suitable number of departmental books will be accessible in the library upon which the student is expected to do work corresponding to the "laboratory work" elsewhere required of the industrial classes.

In the science of language it is not necessary that the the student have a knowledge of any other language than his own, although from the prevailingly analytic habit of the English language it were well for him if he could at least have an accurate elementary knowledge of an inflected literary tongue such as the

LATIN.

Accordingly I have charge of the freshmen in a one year's course in Latin, in which a good foundation is laid, and two books of Cæsar and one of Virgil are read. The Science of Language has quite revolutionized our methods of studying the classic tongues, and in teaching I have endeavored to avail myself of all the new light coming in from this quarter, so that the student at last carrying the results of his drill in Latin up into the Science of Language will find himself fully abreast with the times.

Nor have I omitted to tie up in the same thread of continuous literary labor a brief course in

HISTORY

For the ladies of the sophomore class. Generally, some portion of European history, either leading to, or directly occupied with, the Sixteenth Century, the great era of the Teutonic Renaissance, or the French Revolution as intimately related to the next great period of literary revival in England, is sufficient to exhaust the nine weeks devoted to this study.

Keeping pace with this work of mine are the labors of my efficient and accomplished assistant, Miss Martha Sinclair, in

RHETORIC, FRENCH, GERMAN, AND ENGLISH COMPOSITION,

Running through the freshman, junior and senior years, and aiming in all cases to secure such knowledge and skill in these branches as will serve the student in the practical affairs of life. I take great pleasure in speaking in the highest terms of the valuable services of Miss Sinclair in this department, to which she adds also the onerous duties connected with the supervision of the young ladies of the school.

W. H. WYNN.

REPORT OF LIBRARIAN.

I am able to report our library in a flourishing condition. Every year its efficiency and value increases so that it may be properly looked upon as one of the important forces of the college. During the present year the number of volumes added is two hundred and fifty—of which about two hundred were obtained by purchase. If we add to this the periodicals not yet bound, it will make the total about 330. The total number of books in the library exclusive of pamphlets and duplicates is now 4,500. Counting pamphlets and duplicates which will be available for exchange the number is more than 6,000. It should be noted here in justice to the library, that its actual cost and value are much greater than would appear from the number of volumes, as compared with most libraries. We have few government reports which usually figure by thousands in the enumeration of libraries. There are not more than a dozen books in the whole lot which could be called "trash," and they are sent here gratis. The most valuable works in science, agriculture, mechanics, literature, and history, as well as the standard encyclopedias and books of reference, can be found upon our shelves. It should be noticed here that books on scientific and technical subjects cost much more per volume than works on literary and popular topics. A large portion of our library is made up of works costing from three dollars to twenty-five dollars per volume. As an illustration I might mention Audubon's "Birds and Quadrupeds of North America," eleven volumes at $20 per volume. The same amount of money would purchase five or ten times as many works on standard literature. "North American Sylva"; "British Birds" by Morris; "Lowe's Fern's," and many more might be mentioned which are finely illustrated with colored plates, and are necesarily very expensive works. Within the past biennial term, thirty volumes of standard works upon political economy have been purchased. We have completed our file of the Journal of the Royal Agricultural Society of England. We are getting the new British Encyclopedia as fast as published, and have recently exchanged our old American for the latest edition of the American Cyclopedia. As we have the old Encyclopedia Britannica, and also Chambers', our list of reference books is tolerably good.

It is our endeavor to make the library of the greatest value possible to teachers and students. To this end the room is kept open from 2 to 4:45 P. M., and from 7 o'clock to 9:45 P. M., in the evening, except Saturday and Sunday, when the hours are somewhat different. With this arrangement excellent opportunity is given for reading and investigation. The most prominent newspapers are constantly on file. None but the best periodicals are taken, and it is our policy to continue taking the same year after year, so that when bound they furnish permanent and valuable sets.

The following is a complete list of periodicals taken during 1881:

Mind, quarterly.
Westminster Review, quarterly.
Edinburgh Review, quarterly.
London Quarterly.
British Quarterly.
Quarterly Journal Microscopical Science.
Gardener's Monthly, monthly.
American Journal of Microscopy, monthly.
Eclectic, monthly,
Botanical Gazette, monthly.
Journal Franklin Institute, monthly.
Popular Science Monthly, monthly.
American Journal of Science, monthly.
Wallace's Monthly, monthly.
Canadian Entomologist, monthly.
Blackwood's Magazine, monthly.
Philosophical Magazine, monthly.
Science Gossip, monthly.
Veterinarian, monthly.
Live Stock Journal, monthly.
The Dial, monthly.
Papilio, monthly.
State Register, daily.
Michigan Farmer, weekly.
Rural New Yorker, weekly.
Country Gentleman, weekly.
Nation, weekly.
Living Age, weekly.
Scientific American and Supplement, weekly.

Nature, weekly.
Engineering, weekly.
Botanische Zeitung, weekly.
Gardeners' Chronicle, weekly.
London Times, weekly.
Dubuque Herald, weekly.

The following have been donated to the library:
Anamosa Eureka.
Charles City Intelligencer.
Floyd County Advocate.
Oskaloosa Herald.
Nevada Representative.
Ames Intelligencer.
Vinton Eagle.
Christian Register.
The Standard.
Mitchell County News.
Cedar Rapids Republican.
Monticello Express.
Muscatine Journal.
Independent.
Fayette County Union.
Christian Advocate.
Official Gazette of Patent-office.
New England Journal of Education.
Grocers' Criterion.
The Advance.
Story County Herald.
Journal of Speculative Philosophy.

The most of our periodicals are obtained through a subscription agency, by which we save $25 or $30 per year.

Early in the year lists of books to be purchased for 1881 were sent to the prominent book-dealers for bids. The offer from Jansen, McClurg & Co., of Chicago, being most favorable it was accepted. These books were selected on recommendation from the heads of departments of the college. The amount of money expended is a little more than one thousand dollars.

The work required in the library of the assistants is of such a nature that it is very important that changes be made as seldom as possible.

An assistant librarian should be able to quickly find any book asked for, and it requires a long term of service to be able to do this. The attendant should be able to guide students in their researches in various subjects. This requires a familiarity with the resources of the library which few can expect to attain. Besides this the labor required in keeping the records, classifying and labeling books, arranging pamphlets, covering books, and various other duties cannot be learned in a short time. I recommend that in every case, when possible, a lady of the junior class be appointed second assistant with the expectation of promotion to first assistant for the senior year. By pursuing this policy the library will always be under a capable corps of assistants. It is desirable that an appropriation of at least $1,000 be made for the library for 1882.

I respectfully recommend Miss S. E. Smith for first assistant, and Miss M. McDonald for second assistant for 1882.

Respectfully submitted,

J. K. MACOMBER, *Librarian.*

REPORT ON THE SANITARY CONDITION OF THE COLLEGE.

To the Board of Trustees of the Iowa Agricultural College:

The Health Committee beg leave to submit the following report of sickness occurring in the college building during the college year of 1881.

Whole number of cases four, consisting of: Pleurisy, one case; parotiditis, one case; intermittent fever, one case; tonsilitis, one case.

The total number days of sickness twenty-one, distributed through the year as follows: March, two; July, one; August, one.

Of these four cases, one was due to exposure on the way to Ames, leaving, therefore, three cases arising in the college representing eleven days of sickness. The committee recommend an appropriation of one hundred dollars ($100), for sanitary purposes.

This report is submitted without comment.

Very respectfully,

D. H. FAIRCHILD,

Chairman of Sanitary Committee.

FINANCIAL MATTERS

AND

PROCEEDINGS OF BOARD OF TRUSTEES

APPROPRIATIONS OF EIGHTEENTH GENERAL ASSEMBLY.

REPORTS of the committee appointed to superintend the expenditure of the several appropriations of the Eighteenth General Assembly for buildings and repairs.

To the Board of Trustees:

Appropriations were made for the following buildings; for agricultural, veterinary and botanical buildings; for two boarding cottages; for feeding barns; for corn-cribs, poultry and swine houses; for repair of domestic economy building.

At as early a date as practicable after the appropriations were made, measures were taken to let the contracts for the erection of the several buildings. It was found that the sum of $3,500 was not sufficient to erect two separate buildings, and that it would be more economical, both in cost of construction and after management, to combine the two in one building. The use of the boarding cottage for one year has demonstrated the wisdom of this course. As thus arranged, the contract for the construction of the agricultural, veterinary and botanical building, the boarding cottages, the feeding barns and the corn-cribs was let to F. S. Whiting, of Des Moines, within the limits of the amounts appropriated. Most excellent work was done by the contractor and the several buildings are models of plain and substantial structures and represent an economical investment of money.

The improvements on the building for domestic economy and the construction of swine and poultry houses were under the direct supervision of your committee, who gave to it such attention as the work required. The expenditure of the appropriation for current repairs was under the direction of different committees as the work required, but for convenience, is here reported.

The following itemized statement of expenditures, with the vouchers are herewith submitted.

Respectfully,

S. A. KNAPP,

Committee.

EXHIBIT A.

RECEIPTS.

Amount received from State Treasurer on account of appropriation for the new agricultural, veterinary and botanical building ..... $ 6,000 00

EXPENDITURES.

	1880.			
Vou. 1.	July	3.	To paid F. S. Whiting for labor and material	$ 500 00
Vou. 2.	July	28.	To paid F. S. Whiting for labor and material	500 00
Vou. 3.	Aug.	6.	To paid. F. S. Whiting for labor and material	784 60
Vou. 4.	Aug.	17.	To paid Marshalltown Printing Company	5 00
Vou. 5.	Sept.	13.	To paid F. S. Whiting for labor and material	1,140 75
Vou. 6.	Oct.	9.	To paid John Watts for advertising	4 00
Vou. 7.	Oct.	29.	To paid F. S. Whiting for labor and material	1,109 00
Vou. 8.	Nov.	10.	To paid G. H. Wright for committee services	111 50
Vou. 9.	Nov.	10.	To paid H. G. Little for committee services	39 48
Vou. 10.	Nov.	10.	To paid F. S Whiting for labor and material	652 50
Vou. 11.	Nov.	11.	To paid W. G. McConnon for labor	8 95
Vou. 12.	Nov.	14.	To paid R. R. Merrill for labor	3 63
Vou. 13.	Dec.	14.	To paid *State Register* for advertising	12 60
Vou. 14.	Dec.	21.	To paid F. S. Whiting for labor and material	451 00
	1881.			
Vou. 15.	Jan.	14.	To paid F. S. Whiting for labor and material	614 15
Vou. 16.	Jan.	15.	To paid Jno. Dixon for committee services	4 75
Vou. 17.	Oct.	10.	To paid Castle & Spaulding for plastering, etc	15 00
Vou. 18.	Nov.	9.	To paid college workshop for making seats	25 49
Vou. 19.	Nov.	9.	To paid college book department for expenses	1 10
Vou. 20.	Nov.	9.	To paid J. B. Sherwood for slating	15 00
Vou. 21.	Nov.	9.	To paid W. J. Wicks for labor	1 50
				$6,000 00
				$6,000 00

EXHIBIT B.

RECEIPTS.

Amount received from State Treasurer on account of appropriation for boarding cottages ..... $ 3,500 00

By transfer from domestic economy appropriation 206 50

EXPENDITURES.

	1880.			
Vou. 1.	July	3.	To paid F. S. Whiting for labor and material	$ 500 00
Vou. 2.	July	28.	To paid F. S. Whiting for labor and material	375 00
Vou. 3.	Aug.	6.	To paid F. S. Whiting for labor and material	917 00
Vou. 4.	Sept.	13.	To paid F. S. Whiting for labor and material	297 10
Vou. 5.	Oct.	29.	To paid F. S. Whiting for labor and material	187 10
Vou. 6.	Nov.	10.	To paid F. S. Whiting for labor and material	342 00
Vou. 7.	Dec.	14.	To paid F. S. Whiting for labor and material	450 00
	1881.			
Vou. 8.	Jan.	14.	To paid F. S. Whiting for extras	144 00
Vou. 9.	Jan.	14.	To paid F. S. Whiting for labor and material	394 30
Vou. 10.	March	1.	To paid F. D. Basket for labor and material	70 00
Vou. 11.	March	7.	To paid F. Basket for labor and material	11 25
Vou. 12.	March	19.	To paid G. B. Laseur for labor and material	4 00
Vou. 13.	May	28.	To paid Bingham & Co. for hardware	3 28
Vou. 14.	May	1.	To paid sundry persons for labor	2 15
Vou. 15.	Nov.	9.	To paid college workshop for labor	9 32
				$3,706 50
				$3 706 50

EXHIBIT C.

RECEIPTS.

Amount received from State Treasurer on account of appropriation for domestic economy building ..... $ 460 32

EXPENDITURES.

	1880.			
Vou. 1.	Aug.	18.	To paid Bosworth & Co. for paints and oils	$ 29 00
Vou. 2.	Aug.	19.	To paid Nichols & Maxwell for drawing material	70
Vou. 3.	Aug.	19.	To paid J. Heighton for painting	40 00
	1881.			
Vou. 4.	Jan.	11.	To paid O. P. Stuckslager for labor and material	29 45
Vou. 5.	Sept.	15.	To paid E. Barstow & Co. for paints and oils	40 57
Vou. 6.	Sept.	15.	To paid Wright & Ives for hardware	6 30
Vou. 7.	Sept.	15.	To paid J. F. Eckard for painting roof, etc	16 56
Vou. 8.	Sept.	16.	To paid sundry persons for labor and material	15 30
Vou. 9.	Sept.	16.	To paid sundry persons for labor and material	2 80
Vou. 10.	Sept.	27.	To paid E. Barstow & Co. for paints	6 88
Vou. 11.	Sept.	27.	To paid E. Barstow & Co. for wire cloth for screens	6 48
Vou. 12.	Oct.	1.	To paid college workshop for labor and material	59 78
	Nov.	9.	To amount transferred to boarding cottage	206 50
				$ 460 32
				$ 460 32

EXHIBIT D.

RECEIPTS.

Amount received from State Treasurer on account of appropriation for feeding barns... $ 800 00

EXPENDITURES.

	1880.			
Vou. 1.	June	29.	To paid Farm Woodlands for material	$ 21 00
Vou. 2.	June	29.	To paid F. S. Whiting for labor and material	424 00
Vou. 3.	June	29.	To paid G. B. Laseur for painting	18 00
Vou. 4.	June	29.	To paid Jno. A. Basket for labor	8 60
Vou. 5.	June	29.	To paid F. S. Whiting for labor and material	200 00
Vou. 6.	Aug.	6.	To paid F. S. Whiting for labor and material	101 00
Vou. 7.	Aug.	19.	To paid D. S. Bosworth & Co. for paints	12 00
Vou. 8.	Nov.	10.	To paid F. D. Basket for labor	7 50
	1881.			
Vou. 9.	Jan.	14.	To paid F. S. Whiting for labor and material	7 90
				$ 800 00
				$ 800 00

EXHIBIT E.

RECEIPTS.

Amount received from State Treasurer on account of appropriation for corn-cribs, poultry, and swine houses ..... $ 1200 00
By amount rebate C. & N. W. R. R. 47 66

EXPENDITURES.

	1880.				
Vou. 1.	June	18.	To paid freight on lumber	$ 31 90	
Vou. 2.	June	18.	To paid freight on lumber	35 67	
Vou. 3.	June	21.	To paid sundry persons for labor	187 88	
Vou. 4.	June	23.	To paid Wright & Child for hardware	88 58	
Vou. 5.	June	29.	To paid Farm Woodlands for lumber	46 50	
Vou. 6.	July	3.	To paid Lamb & Sons for lumber	370 35	
Vou. 7.	Aug.	6.	To paid F. S. Whiting labor and material	225 00	
Vou. 8.	Nov.	11.	To paid Jno. A. Basket for labor	6 00	
Vou. 9.	Dec.	4.	To paid F. S. Whiting for labor and material	50 00	
Vou. 10.	Dec.	4.	To paid Lamb & Sons for lumber	78 85	
	1881.				
Vou. 11.	Feb.	10.	To paid freight bills on lumber	17 40	
Vou. 12.	Feb.	14.	To paid L. D. Winchell for labor	50 00	
Vou. 13.	March	19.	To paid Wright & Child, hardware	2 84	
Vou. 14.	April	11.	To paid Lamb & Sons for lumber	24 90	
Vou. 15.	Nov.	9.	To paid Lamb & Sons for lumber	31 79	
				$1,247 66	$1,247 66

EXHIBIT F.

RECEIPTS.

Amount received from State Treasurer on account of appropriation for State contingent fund, 1880 ..... $ 1,000 00

EXPENDITURES.

	1880.			
Vou. 1.	May	4.	To paid E. W. Stanton's expenses at Fort Dodge	$ 6 70
Vou. 2.	June	2.	To paid G. W. Bassett salary to May 13	130 75
Vou. 3.	June	15.	To paid freight bill on paint	2 94
Vou. 4.	June	23.	To paid Wright & Child for repairing tower roof	16 13
Vou. 5.	June	27.	To paid sundry persons for labor	25 75
Vou. 6.	June	28.	To paid Nichols & Maxwell's bill	2 55
Vou. 7.	June	28.	To paid Lamb & Sons for lumber	51 55
Vou. 8.	June	28.	To paid Bingham & Co's bill	3 55
Vou. 9.	June	28.	To paid Geo. B. Laseur for labor	43 11
Vou. 10.	July	2.	To paid L. D. Winchell for labor	00
Vou. 11.	July	27.	To paid Moore & Moore for paints	54 75
Vou. 12.	Aug.	4.	To paid college workshop for labor	3 33
Vou. 13.	Aug.	14.	To paid M. H. Kistler for labor	4 00
Vou. 14.	Aug.	17.	To paid Jno. A. Basket for labor	10 00
Vou. 15.	Aug.	19.	To paid P. S. Bosworth & Co's bill	22 50
Vou. 16.	Aug.	19.	To paid Lamb & Sons' bill	9 45
Vou. 17.	Sept.	21.	To paid Lamb & Sons for repairing farm-house	28 00
Vou. 18.	Sept.	21.	To paid Wright & Child for repairing farm-house	3 13

	1880			
Vou. 19.	Nov.	10.	To paid Geo. B. Laseur for painting	$ 47 48
Vou. 20.	Nov.	10.	To paid F. D. Basket for labor	35 00
Vou. 21.	Nov.	10.	To paid Lamb & Sons for lumber	2 25
Vou. 22	Nov.	10.	To paid D. S. Bosworth & Co's bill	12 65
Vou. 23.	Nov.	10.	To paid Lamb & Son for lumber	38 65
Vou. 24.	Nov.	10.	To paid Wright & Child's bill	4 00
Vou. 25.	Nov.	14.	To paid E. W. Stanton's expenses	8 70
Vou. 26.	Nov.	14.	To paid E. W. Stanton's expenses	6 20
	1881.			
Vou. 27.	Jan.	13.	To paid G. W. Bassett's bill	25 25
Vou. 28.	Jan.	16.	To paid F. S. Whiting for lumber	3 52
Vou. 29.	Feb.	23.	To paid W. L. Apgar for calcimining	94 00
Vou. 30.	March	1.	To paid sundry persons for labor	20 25
Vou. 31.	March	7.	To paid Frank Spalding for labor	3 75
Vou. 32.	March	19.	To paid Lamb & Sons for lumber	6 80
Vou. 33.	March	19.	To paid Wright & Child's bill	1 98
Vou. 34.	May	24.	To paid W. S. Lindsay for labor	3 00
Vou. 35.	May	24.	To paid G. H. Wright for committee expenses	3 00
Vou. 36.	May	30.	To paid Lamb & Son's bill	18 95
Vou. 37.	June	4.	To paid college book department for expenses	70
Vou. 38.	April	23.	To paid Nichols & Maxwell for drayage	2 00
Vou. 39.	June	11.	To paid Lamb & Sons for lumber	11 68
Vou. 40.	June	14.	To paid Ed. Whalen for labor	26 75
Vou. 41.	June	17.	To paid L. D. Winchell for labor	12 00
Vou. 42.	June	29.	To paid O. P. Stuckslager for labor	50 00
Vou. 43.	July	22.	To paid Lamb & Sons for lumber	32 00
Vou. 44.	July	22.	To paid permanent improvements	14 50
Vou. 45.	Aug.	18.	To paid to L. D. Winchell for labor	18 00
Vou. 46.	Nov.	3.	To paid college workshop for labor	3 32
Vou. 47.	Nov.	9.	To paid college workshop for labor	38 51
Vou. 48.	Nov.	9.	To paid college workshop for labor	19 72
Vou. 49.	Nov.	9.	To paid E. Barstow & Co. for material	8 20
				$1,000 00 $1,000 00

EXHIBIT G.

RECEIPTS.

Amount received from State Treasurer on account of appropriations for State contingent fund, 1881 ..... $ 1,000 00

EXPENDITURES.

	1881.			
Vou. 1.	May	26.	To paid freight bills on oil	$ 4 13
Vou. 2.	June	15.	To paid Hawkeye Oil Company for paints and oils	151 97
Vou. 3.	June	2.	To paid freight bills on paints	4 17
Vou. 4.	July	26.	To paid Heath & Milligan for paints, etc	84 67
Vou. 5.	July	23.	To paid freight bills on paints, etc	1 93
Vou. 6.	Sept.	12.	To paid O. P. Stuckslager for labor	3 75
Vou. 7.	Aug.	11.	To paid Lamb & Sons for lumber	5 10
Vou. 8.	Aug.	2.	To paid Bingham & Co. for hardware	21 22
Vou. 9.	Aug.	11.	To paid Barstow & Co. for paints	18 23
Vou. 10.	Aug.	4.	To paid Wright & Ives for material	4 45
Vou. 11.	Aug.	18.	To paid book department for expenses	17 55
Vou. 12.	Sept.	17.	To paid Heath & Milligan for paints	39 76
Vou. 13.	Sept.	17.	To paid Holland & New for material	207 45
Vou. 14.	Aug.	16.	To paid sundry persons for labor, painting	321 23
Vou. 15.	Sept.	16.	To paid L. D. Jackson for labor	1 00
Vou. 16.	Sept.	1.	To paid E. Barstow & Co. for material	3 15
Vou. 17.	Sept.	12.	To paid Lamb & Sons for lumber	38 50
Vou. 18.	Sept.	13.	To paid W. G. Wright for paints	60
Vou. 19.	Sept.	19.	To paid horticultural department for repairs	11 55
Vou. 20.	Nov.	21.	To paid Heath & Milligan for paints	36 60
Vou. 21.	Oct.	4.	To paid college workshop for repairs	14 70
Vou. 22.	Nov.	9.	To paid college workshop for repairs	5 29
				$1,000 00 $1,000 00

REPORT OF THE TREASURER.

(FOR THE YEAR ENDING NOV. 10, 1880.)

The following are the receipts and expenditures on account of the different college funds for the year ending November 10, 1880.

PERMANENT ENDOWMENT FUND.

RECEIPTS.

	Dr.	Cr.
Balance from last year		$71,742 87
Amount from sales of college lands		9,899 05

EXPENDITURES.

Total amount paid State Treasurer for investment	$81,641 92	
	81,641 92	81,641 92

CONTINGENT PRINCIPAL FUND.

RECEIPTS.

Balance from last year		2,520 00
Amount from G. W. Bassett, college land agent		3,600 00
Amount transferred from interest fund to replace money borrowed		1,040 00

EXPENDITURES.

Amount invested by G. W. Bassett in mortgages	3,200 00	
Amount expended	3,200 00	
Amount unexpended	3,960 00	
	7,160 00	7,160 00

CONTINGENT FUND.

RECEIPTS.

Balance from last year		5,802 30
Amount from leases of Sioux City lands		2,100 47
Amount from interest on contingent principal fund		186 89
Amount from interest on sundry notes		73 57

EXPENDITURES.

Paid freight bill and telegram	25	
Amount expended	25	
Amount unexpended	8,162 98	
	8,163 23	8,163 23

INTEREST FUND.

RECEIPTS.

Balance from last year		434 60
Amount from G. W. Bassett, college agent		34,079 43
Amount from State Treasurer, interest on investments		4,931 66
Total receipts		39,445 69

EXPENDITURES.

Amount transferred to contingent principal fund	$ 1,040 00	
Paid for farm department	1,821 79	
Paid for department of farm experiments	614 64	
Paid for department of ornamental garden	300 60	
Paid for department of chemistry	193 15	
Paid for department of mechanics	235 56	
Paid for department of farm improvements	950 00	
Paid for department of horticulture	1,020 20	
Paid for entomology	253 92	
Paid for experimental kitchen	433 14	
Paid for library	1,398 23	
Paid for civil engineering	74 76	
Paid for museum	97 63	
Paid for chemical laboratory furniture	38 76	
Paid *College Quarterly*	393 61	
Paid for physical laboratory	655 09	
Paid for military department	402 92	
Paid for botany	369 38	
Paid for salaries	25,087 63	
Paid for printing office	113 37	
Paid for chapel exercises	350 00	
Paid for veterinary department	271 74	
Paid for contingent expenses	1,807 26	
Paid for furniture for public rooms	206 72	
Paid for fires and lights	740 64	
Paid for creek improvement	500 00	
Amount expended	39,370 74	
Amount unexpended	74 95	
	39,445 69	39,445 69

STATE TREASURER.

Balance from last year—lands sold	71,742 87	
Amount from same source in 1880	9,899 05	
Total debit	81,641 92	

MORTGAGE RECEIVABLE.

Balance from last year	1,800 00	
Amount sent G. W. Bassett for investment, loan No. 5	500 00	
Amount sent Bassett for investment, loan No. 4	1,600 00	
Amount sent Bassett for investment, loan No. 3	1,100 00	
Total amount invested	5,000 00	

BILLS RECEIVABLE.

Balance from last year	1,696 65	
Notes received during 1880	210 00	
Total notes received	1,906 65	
Notes paid during the year		1,554 40
Amount of notes on hand		352 25
	1,906 65	1,906 65

CREAMERY BUILDING.

Balance from last year		112 53

SCHOOL BOOKS.

Balance from last year		$ 86 61

SEED APPROPRIATION.

Balance from last year		141 67
Amount expended for seeds	$ 141 67	
	141 67	141 67

FURNACE PIPING APPROPRIATION.

Balance from last year		150 00

LAUNDRY.

RECEIPTS.

Amount received from students, board department, and others		921 86

EXPENDITURES.

Paid for supplies, fuel, water, and gas	877 75	
Amount unexpended	44 11	
	921 86	921 86

ROOM RENT.

RECEIPTS.

Amount received from students and others		861 00
Balance from last year		167 79

EXPENDITURES.

Amount paid for furniture	423 97	
Amount paid for repairs	216 09	
Amount returned to students in charge of sections	56 65	
Amount paid sundry bills and work, as per vouchers	119 02	
Amount expended	815 73	
Amount unexpended	213 06	
	1,028 79	1,028 79

DIPLOMAS.

RECEIPTS.

Balance from last year		92 82
Amount received from students for diplomas		86 50

EXPENDITURES.

Paid Mills & Co., for thirty diplomas, at $1.50	45 00	
Paid Messrs. Mount & Dodge, for lettering	8 00	
Paid to sundry students, reduction on diplomas	89 50	
Paid express bill and drayage	35	
Amount expended	92 85	
Amount unexpended	86 47	
	179 32	179 32

FARM WOODLANDS.

RECEIPTS.

Amount received on account timber sold		$ 50 27

EXPENDITURES.

Paid for labor	$ 490 37	
Amount expended	490 37	
Amount unexpended	10 83	
	501 20	501 20

DONATIONS.

Balance from last year		180 50

INCIDENTAL EXPENSES.

RECEIPTS.

Amount received from students and others		1,719 13

EXPENDITURES.

Paid for labor, cleaning building, bath-rooms, etc	1,624 04	
Amount expended	1,624 04	
Amount unexpended	95 09	
	1,719 13	1,719 13

BOARDING DEPARTMENT.

RECEIPTS.

Balance from last year		798 13
Amount received from students and others for board		15,627 45

EXPENDITURES.

Paid on account of labor, supplies, and furnishing	16,167 28	
Amount expended	16,167 28	
Amount from increase of inventory	104 54	
Amount unexpended	153 76	
	16,425 58	16,425 58

APPROPRIATIONS OF THE EIGHTEENTH GENERAL ASSEMBLY.

RECEIPTS.

Amount received from State Treasurer		10,937 38

EXPENDITURES.

Amount paid for labor and material, as per vouchers	9,879 93	
Amount unexpended	1,057 45	
	10,937 38	10,937 38

PERSONAL ACCOUNTS.

Amount due from sundry persons	602 71

CASH.

RECEIPTS.

Balance from last year	$ 5,765 39	
Amount received from all sources	87,907 88	
Total receipts	93,673 27	

EXPENDITURES.

Amount paid, as per vouchers in Treasurer's office		$82,438 17
Balance cash on hand		11,235 10
	93,673 27	93,673 27

Cash on hand belongs to the following accounts; viz.,

Boarding department	$ 153 76	
Contingent fund, principal	2,160 00	
State appropriations	1,057 45	
	3,371 21	

The above is available for the accounts mentioned only. The balance, $7,863.89, is available for any purpose the Board may direct.

SUMMARY.

	Dr.		Cr.
State Treasurer	$ 81,641 92	Furnace piping appropriation	$ 150 00
Mortgage receivable	5,000 00	State appropriations, 1879-80	1,057 45
Bills receivable	352 25	Sundry	44 11
Creamery building	112 53	Room rent	213 06
Cash on hand	11,235 10	Endowment interest fund	4,931 66
Personal accounts	602 71	Contingent fund	8,162 98
Interest fund	4,856 71	Diplomas	86 47
School books	86 61	Contingent principal fund	7,160 00
		Farm woodlands	10 83
		Permanent endowment fund	81,641 92
		Donations	180 50
		Incidental expenses	95 09
		Boarding department	153 76
	$103,887 83		$103,887 83

Respectfully submitted,

J. L. GEDDES, *Deputy Treasurer.*

REPORT OF THE TREASURER.

[FOR THE YEAR ENDING NOV. 9, 1881.]

The following are the receipts and expenditures of the different College funds for the year ending November 9, 1881.

PERMANENT ENDOWMENT FUND.

RECEIPTS.

Balance from last year		$81,641 92
Amount from sale of college lands		3,190 80
EXPENDITURES.		
Amount paid State Treasurer for investment	$84,832 72	
	84,832 72	84,832 72

CONTINGENT PRINCIPAL FUND.

RECEIPTS.

Balance from last year		7,160 00
Amount from G. W. Bassett, college land agent		640 00
Amount transferred from interest fund by order of Board of Trustees		3,000 00
EXPENDITURES.		
Amount invested by G. W. Bassett in mortgages	6,500 00	
Total amount expended	6,500 00	
Amount unexpended	4,300 00	
	10,800 00	10,800 00

CONTINGENT FUND.

RECEIPTS

Balance from last year		8,162 98
Amount from leases on Sioux City lands and interest on loans		2,645 15
EXPENDITURES.		
Amount transferred to interest fund	10 808 13	
	10,808 13	10,808 13

INTEREST FUND.

RECEIPTS.

Amount from G. W. Bassett, college agent		36,470 81
Amount from interest on sundry notes		8 28
Amount from State Treasurer, interest on investments		5,250 96
Amount transferred from endowment interest fund		4,931 66
Amount transferred from contingent fund		10,808 13

EXPENDITURES.

Debit balance from last year	$ 4,856 71	
Amount transferred to contingent principal fund for investment by order Board of Trustees	3,000 00	
Paid for entomology	215 68	
Paid for Squaw Creek improvements	339 05	
Paid for *College Quarterly*	82 44	
Paid for printing office	100 00	
Paid for annual catalogue, 1880	150 00	
Paid for boarding cottage furniture	576 68	
Paid for chapel exercises	300 00	
Paid for experimental kitchen	165 95	
Paid for armory	382 50	
Paid for contingent expenses	1,739 19	
Paid for physical laboratory	351 37	
Paid for botany	263 28	
Paid for civil engineering	70 32	
Paid for library	1,000 00	
Paid for veterinary department	276 56	
Paid for salaries	26,110 69	
Paid for north hall furnishing	673 18	
Paid for college furniture	50 00	
Paid for farm experiments	800 00	
Paid for farm permanent improvements	1,394 00	
Paid for department of chemistry	251 48	
Paid for department of mechanics	728 67	
Paid for fires and lights	1 544 36	
Paid for farm department proper	5,057 28	
Paid for horticultural department	1,177 99	
Paid for ornamental grounds	888 14	
Total expended	52,595 52	
Amount unexpended	4,883 32	
	57,478 84	$57,478 84

STATE TREASURER.

Balance from last year' lands sold	81,641 92
Amount from same in 1881	3,190 80
Total in hands of State Treasurer	84,832 72

MORTGAGE RECEIVABLE.

Balance from last year	5,000 00
Amount sent G. W. Bassett for investment	1,500 00
Total amount invested	6,500 00

BILLS RECEIVABLE.

Balance from last year	352 25	
Notes received during 1881	2,484 00	
Total notes received	2,836 25	
Notes paid during the year		371 00
Amount of notes on hand		2,465 25
	2,836 25	2,836 25

DIPLOMAS.

RECEIPTS

Balance from last year		$ 47
Amount received from students for diplomas		43 00

EXPENDITURES.

Amount paid on account of diplomas	$ 27 55	
Amount expended	27 55	
Amount unexpended	101 92	
	129 47	129 47

FURNACE PIPING APPROPRIATION.

Balance from last year		150 00
Amount unexpended	150 00	

PERSONAL ACCOUNTS.

Amount due from sundry persons as per personal ledger	659 43

CASH.

RECEIPTS.

Balance from last year	11,235 10	
Amount received from all sources	73,899 74	
Total receipts	85,134 84	

EXPENDITURES.

Amount paid as per vouchers in treasurer's office		77,324 28
Balance cash on hand		7,810 56
	85,134 84	85,134 84

Of the cash on hand $4,300 belongs to contingent principal fund.

SUMMARY.

	Dr.		Cr.
State treasurer	$ 84,832 72	Furnace piping appropriation	$ 150 00
Bills receivable	2,465 25	Printing office fund	1,500 00
Mortgage receivable	6,500 00	Diplomas	101 92
Cash on hand	7,810 56	Contingent principal fund	10,800 00
Personal accounts	659 43	Permanent endowment fund	84,832 72
		Interest fund	4,883 32
	$102,267 96		$102,267 96

STATE APPROPRIATIONS OF 1879–80.

The accounts of the following appropriations have been closed, and duplicate vouchers for all expenditures filed in the office of the State Auditor, together with an itemized statement by the superintendent of work.

SWINE HOUSE, CORN CRIB, AND POULTRY HOUSE APPROPRIATION.

RECEIPTS.

Amount received from State Treasurer		$ 1,200 00
Amount received from freight drawbacks		47 66

EXPENDITURES.

Amount paid as per voucher	$ 1,247 66	
	1,247 66	1,247 66

FEEDING BARNS APPROPRIATION.

RECEIPTS.

Amount received from State Treasurer	800 00

EXPENDITURES.

Amount paid as per vouchers	800 00

AGRICULTURAL, BOTANICAL AND VETERINARY BUILDING APPROPRIATIONS.

RECEIPTS.

Amount received from State Treasurer	6,000 00

EXPENDITURES.

Amount paid as per vouchers	6,000 00

STATE CONTINGENT FUND, 1880 AND 1881.

RECEIPTS.

Amount received from State Treasurer	2,000 00

EXPENDITURES.

Amount paid as per vouchers	2,000 00

BOARDING COTTAGES APPROPRIATION.

RECEIPTS.

Amount received from State Treasurer		3,500 00
Amount transferred from domestic economy appropriation		206 50

EXPENDITURES.

Amount paid out as per vouchers	3,706 50	
	3,706 50	3,706 50

DOMESTIC ECONOMY BUILDING APPROPRIATION.

RECEIPTS.

Amount received from State Treasurer	460 32

EXPENDITURES.

Amount paid out as per vouchers	253 82	
Amount transferred to boarding cottages	206 50	
	460 32	460 32

Respectfully submitted,

J. L. GEDDES, *Deputy Treasurer.*

REPORT OF THE SECRETARY OF THE BOARD OF TRUSTEES.

[FOR THE BIENNIAL PERIOD ENDING NOVEMBER 9, 1881.]

IOWA AGRICULTURAL COLLEGE,
November 26, 1881.

To the Honorable Board of Trustees:

GENTLEMEN—As directed by law, I herewith submit my report of the proceedings of the Board of Audit, together with a statement of the account kept by me with the Treasurer of the College. With a view to publication in the legislative report, I have made it to cover the biennial period ending November 9, 1881.

It is provided in the Code, that the President of the College and the Secretary of the Board of Trustees, shall constitute the Board of Audit. The duties of said Board are in substance as follows: first, to examine all bills presented against the College, auditing only those for the payment of which the Board of Trustees has made appropriation; second, to make a monthly examination of the books and vouchers of the Treasurer.

In auditing bills the Board of Audit has been governed by the following simple rules: (1) all bills of whatever kind, either for supplies or labor, must be certified to as correct by the head of the department purchasing the supplies or employing the labor; (2) in the judgment of the Board of Audit, each bill must be a correct bill against the College, reasonable in amount for the service rendered, and payable, under the law, from the funds of the institution; (3) payment must have been provided for by an appropriation by your honorable body. These rules have been strictly adhered to. Without the required certificate, no bill has been allowed. All bills ordered paid have, in the judgment of the Board of Audit, been proper claims against the College and legally payable from its funds. No bills have been paid in excess of your appropriations.

The Board of Audit desire that your honorable body should have full knowledge of its policy in all matters of importance and a clear statement of the reasons determining such policy. Regarding the payment of bills for the erection or repair of buildings, the Board of

Audit is guided entirely by the congressional law which forbids the use of interest fund under any pretense whatever for the purchase, erection, preservation or repair of any building or buildings. Under this law the Board of Audit cannot under any circumstances audit bills for the erection of buildings. In this matter, the question of the size of the building is totally irrelevant. No building, however small, can legally be constructed with College funds. Cases may arise in any one of the industrial departments in which the interests of the department urgently demand the erection of some small building. Realizing the inconvenience suffered, the Board of Audit yet deem that in the long run the interests of the institution will be best subserved by a strict adherence to the law. In the matter of repair of College buildings, the proper course to be pursued is even more clearly marked out. The Eighteenth General Assembly gave the institution an annual sum of $1,000 to be used, in part, in making such repairs. It has been decided by the Auditor of State that this fund, like the other State appropriations, can be drawn from the State Treasury only on estimates of work performed and materials furnished. Under this decision it is exceedingly inconvenient to depend upon this fund to make the small repairs upon the farm and other College buildings. Such inconvenience will not, however, excuse the use of interest money for the purpose. For such use of College funds we can no longer plead necessity —only convenience; and such excuse is insufficient.

In the discharge of the second duty imposed upon the Board of Audit, monthly examinations have been made of the books and vouchers of the Treasurer. Special attention is called to the character of these examinations. The correctness of the Treasurer's cash account is first determined in the following manner: (1) The stubs of the Treasurer's receipt book, and the duplicate receipts filed in the office of the Secretary are compared with the debit side of the cash account. Notice is taken that the statements rendered to the Secretary by the State Treasurer, the land agent, and the heads of the different departments, of the amounts paid in by them agree with the sums acknowledged to have been received from those sources. The additions are then proven and the total cash received thus determined. (2) For all expenditures, vouchers are on file in the Treasurer's office. These vouchers are examined to see that they are properly audited, receipted and correctly entered in the day-book. The items of expenditure are then added and the total disbursements ascertained. The difference between the receipts and disbursements will then, of course, show the

cash remaining in the hands of the Treasurer. In addition to the above, the personal accounts of officers and employes are inspected, balances are compared, and the accuracy of the books tested in various ways. As a result of these monthly examinations, the Board of Audit is able to certify that all errors discovered have been corrected and that the books of the Treasurer as they now stand are correct.

Distinct from the duties required of the Secretary as a member of the Board of Audit, he is directed by the statute to keep an account with the Treasurer. Such account has been kept during the past biennial period. The Treasurer has been debited with all cash received and credited with that paid out on vouchers properly audited and receipted. The account for the two years foots up as follows:

Cash on hand at the beginning of the biennial period, November 14, 1879		$ 5,765.39
Total receipts for year ending November 10, 1880	$87,907.88	
Total receipts for year ending November 9, 1881	73,899.74	
		$161,807.62
Total debit against the Treasurer		$167,573.01
Total amount paid out during the year ending November 10, 1880, as shown by vouchers	$82,438.17	
Total amount paid out during the year ending November 9, 1881, as shown by vouchers	77,324.28	
		$159,762.45
Balance now on hand		7,810.56
Total amount accounted for by Treasurer		$167,573.01

Of the balance at present on hand $4,300 belongs to contingent principal fund and is awaiting investment, leaving only $3,510.56 now at the disposal of the Board for use in meeting the ordinary expenses of the College.

To prevent any misunderstanding of the above statement it should be noted that the receipts and disbursements of the Treasurer do not show the ordinary income of the College or the cost of running the institution. The cash transactions of the year are made up in part of the receipts and expenditures on account of the board, fires, lights, and incidentals of the students. All these items must be stricken out before the Treasurer's cash account will show the transactions with the College funds proper. For the information of your honorable body and the general public, I have prepared statements showing the permanent resources of the College; also the ordinary income and expenditures for each year of the biennial term. These statements are attached to this report and marked "Exhibit A," "Exhibit B," and "Exhibit C."

Proposed change in the System of Book-keeping.—Under the present system of book-keeping the interests of the College are most carefully guarded. No plan can be devised by which the funds of the institution can be handled with greater security. The present plan may, however, be somewhat simplified. With this end in view the following changes in the system now in use are proposed for your consideration.

First—That the Steward's accounts, including board, laundry, student fires and lights, incidental expenses, and room-rent be stricken out of the Treasurer's books.

In favor of this change it may be said: (1) that these accounts are not strictly College accounts, the funds sustaining them not being College funds; (2) that their presence in the College books renders the system of book-keeping exceedingly complicated and that such system cannot to any material extent be simplified, except these accounts and the individual account with students which they necessitate be expunged from the Treasurer's books. The books can then be made to show merely the receipts and expenditures of College funds and the financial condition of the different departments. Granting these advantages, it yet remains for you to consider whether the Steward's accounts, if removed from the Treasurer's office, can be placed in such hands, and under such a system of tests, as to insure that they shall be kept with perfect accuracy.

If such separation were made it would be necessary to determine the portion of the expense of heating, lighting, and cleaning the College building which should be paid from interest fund. Such proportion should be determined on strict business principles, and since the Board of Audit will be called upon in the discharge of its duty to pass upon the bills paid from interest fund, it would seem well to appoint a committee consisting of the Board of Audit and the Manager of the Boarding Department, to determine the proper proportion to be paid.

Second—As a second change it is proposed that each department make its own collections. This is done to some extent now in sales to other than College employes.

The general adoption of this policy would require each department to collect all debts due it from whatever source. In case of a sale by one department to another, a bill could be made out and paid by the Treasurer the same as he pays other bills. At the end of each month,

the head of each department should pay all the cash collected over to the Treasurer filing with that officer a complete detailed statement of such receipts, such cash statement to be approved by the Board of Audit. In no case should any professor use the money thus collected to pay bills against his department. Even if the law did not strictly forbid it, a sound public policy would condemn it.

The Treasurer's books should show all receipts and expenditures. Any system that does not insure this result is unworthy a moment's consideration.

Third—The third and last change proposed is that all parties working for or furnishing supplies to the College shall render to each department a separate bill to the amount of its indebtedness, such bills to be paid as now by the Treasurer. This change would require that each Professor in making purchases should give careful instructions as to the manner of making out the monthly bills. He should also see that such bills are sent in promptly at the end of each month.

Summing up the advantages of these proposed changes it is found; (1) that all personal accounts and accounts with funds not belonging to the College, being stricken from the College books, the receipts of the Treasurer would consist of the following items: Appropriations by the State, income from the land department, interest on investments of endowment fund made by the State Treasurer, and sales by the departments. His disbursements would be on account of State appropriations, salaries of officers and expenses of the different departments. A statement of the yearly receipts and expenditures could then be prepared so simple as to be readily understood by the general public; (2) the department accounts would be greatly simplified. The credit side of each account would then show the total sales of the department, the debit side the total expenses incurred and the balance, of course, the amount of the appropriation from interest fund used by the department. The itemized statment of cash received and the vouchers for payments made on account of any department could be kept separate from the cash reports and bills of the other departments, and thus the professor in charge, or the Board of Trustees could readily ascertain the condition or examine and verify the account of any particular department. Under this plan, if the professors were prompt in making collections and sending in bills, the accounts of each month could be settled up and the financial condition of each department made known early in the ensuing month.

In putting the proposed plan into operation the following obstacles present themselves: (1) the difficulty of arranging a plan for keeping the Steward's accounts outside the Treasurer's office; (2) the extra work required of each professor to make his own collections, prepare a full itemized statement of such collections for the Treasurer, gather at the end of each month his monthly bills, and see that such bills are correct and so prepared as to contain only the charges against his department. This would require upon the part of each professor, time, labor, care, patience, promptness. Otherwise the plan would signally fail. (3) Upon the whole, the work of book-keeping would be increased. It is not claimed for the proposed changes that they would lessen the labor but that they would greatly simplify the accounts.

In conclusion, it should be said that the system proposed is a rigid one. To be successful, it must be carried out to the letter. The Board of Audit, or some central authority, must have power to see that it is not departed from in a single instance. The final result would be a greatly simpified system of book-keeping. It is for you to decide whether such result is worth the additional labor necessary to put it into successful operation.

Respectfully submitted,

E. W. STANTON,

Secretary Board of Trustees.

NOTE—The changes in the system of book-keeping, proposed by the Secretary in his report, were adopted by the Board of Trustees. See proceedings of the Board.

EXHIBIT "A."

The following statement shows the amount and condition of the lands and funds which constitute the permanent endowment of the institution. The College receives eight per cent per annum on the appraised value of all land leased.

LANDS AND FUNDS YIELDING AN INCOME.

Lands belonging to Congressional grant, leased as follows:

160.00 acres, appraised at	$ 1.25	per acre	$ 200 00	
190.99 acres, appraised at	1.45	per acre	276 94	
20,367 59 acres, appraised at	1.50	per acre	30,551 39	
320.00 acres, appraised at	1.65	per acre	528 00	
1,656.13 acres, appraised at	1.75	per acre	2,898 23	
4,828.03 acres, appraised at	2.00	per acre	9,656 06	
36,035.97 acres, appraised at	2.25	per acre	81,080 93	
1,600.00 acres, appraised at	2.45	per acre	3,920 00	
8,921.58 acres, appraised at	2.50	per acre	22,303 95	
640.00 acres, appraised at	2.52	per acre	1,612 80	
1,908.65 acres, appraised at	2.55	per acre	4,867 06	
4,626.71 acres, appraised at	2.60	per acre	12,029 45	
1,429.34 acres, appraised at	2.62½	per acre	3,752 02	
3,324.19 acres, appraised at	2.65	per acre	8,809 10	
2,240 00 acres, appraised at	2.70	per acre	6,048 00	
960.00 acres, appraised at	2.75	per acre	2,640 00	
320.00 acres, appraised at	2.80	per acre	896 00	
13,477.34 acres, appraised at	3.00	per acre	40,432 02	
240.00 acres, appraised at	3.25	per acre	780 00	
300.61 acres, appraised at	3.30	per acre	992 01	
320.00 acres, appraised at	3.45	per acre	1,104 00	
13,569.55 acres, appraised at	3.50	per acre	47,493 43	
160.00 acres, appraised at	3.60	per acre	576 00	
160.00 acres, appraised at	3.65	per acre	584 00	
5,767.41 acres, appraised at	3.75	per acre	21,627 79	
17,938.50 acres, appraised at	4.00	per acre	71,754 00	
160.00 acres, appraised at	4.05	per acre	648 00	
320.00 acres, appraised at	4.20	per acre	1,344 00	
805.33 acres, appraised at	4.25	per acre	3,422 65	
160.00 acres, appraised at	4.30	per acre	688 00	
160.00 acres, appraised at	4.35	per acre	696 00	
160.00 acres, appraised at	4.40	per acre	704 00	
160.00 acres, appraised at	4.45	per acre	712 00	
1,120.00 acres, appraised at	4.50	per acre	5,040 00	
480.00 acres, appraised at	4.60	per acre	2,208 00	
10,219.14 acres, appraised at	5.00	per acre	51,095 70	
320.00 acres, appraised at	5.50	per acre	1,760 00	
1,520.00 acres, appraised at	6.00	per acre	9,120 00	
157,047.06 acres, at an average valuation of $2.89 per acre			454,851 53	$ 454,851 53

Lands purchased in 1868, with accumulated interest, leased as follows:

160.00 acres, appraised at	2.25	per acre	$ 360 00	
4,480.00 acres, appraised at	2.50	per acre	11,200 00	
800.00 acres, appraised at	2.75	per acre	2,200 00	
1,413.17 acres, appraised at	3.00	per acre	4,239 51	
640.00 acres, appraised at	3.50	per acre	2,240 00	
1,040.00 acres, appraised at	4.00	per acre	4,160 00	
160.00 acres, appraised at	4.50	per acre	720 00	
1,320.00 acres, appraised at	5.00	per acre	6,600 00	
160.00 acres, appraised at	10.75	per acre	1,720 00	
10,173.17 acres, at average value of $3.28 per acre			33,439 51	$ 33,439 51

Funds realized from sale of land included in Congressional grant:

15,047.06 acres sold for	$84,832 72	
Less cash on hand	732 72	
	84,100 00	

Invested by the State Treasurer as follows:

Muscatine City bonds, bearing six per cent	6,000 00	
Independent school district Newton, bearing six per cent	8,000 00	
Independent school district Maquoketa, bearing six per cent	800 00	
Independent school district Afton, bearing six per cent	8,000 00	
Independent school district Woodlawn, bearing seven per cent	700 00	
Independent school district Stanwood, bearing seven per cent	1,500 00	
Independent school district Sioux City, bearing six per cent	10,000 00	
Independent school district Ankeny, bearing seven per cent	100 00	
Independent school district Harlan, bearing five per cent	11,400 00	
Independent school district Ames, bearing five per cent	10,000 00	
Independent school district East Des Moines, bearing six per cent	10,500 00	
Winnebago county bonds, bearing six per cent	5,600 00	
Davenport city bonds, bearing six per cent	10,000 00	
Independent school district Lucas, bearing ten per cent	1,500 00	
Total	84,100 00	84,100 00

Funds realized from sale of land purchased in 1868, with accumulated interest, and from transfers of interest money:

3,680 acres sold for	7,800 00	
Interest money transferred	3,000 00	
	10,800 00	
Less cash on hand	4,300 00	
	6,500 00	

Invested by Agent Bassett in farm mortgages, as follows:

Loan No. 1, R. E. Carpenter, Nov. 1, 1878, three years, at nine per cent	1,500 00	
Loan No. 2, Elizabeth Clements, March 12, 1879, five years, at nine per cent.	300 00	
Loan No. 3, Mary Ryan, August 12, 1880, three years, at seven per cent	1,100 00	
Loan No. 4, Rev. W. L. Lyons, Oct. 12, 1880, five years, at seven per cent.	1,600 00	
Loan No. 5, F. M. Leathers, October 20, 1880, five years, at seven per cent	500 00	
Loan No. 6, Andrew Jensen, December 1, 1880, five years, at seven per cent.	500 00	
Loan No. 7, Geo. C. McCauley, Dec. 20, 1880, three years, at seven per cent.	1,000 00	
Total	6,500 00	6,500 00
Total investments bearing interest		578,891 04

LANDS AND FUNDS NOT YIELDING INCOME.

Lands belonging to Congressional grant, in market for lease, as follows:

1,560.72 acres, appraised at $3.00 per acre	4,682 16	
2,728.15 acres, appraised at 3.50 per acre	9,548 52	
400.00 acres, appraised at 3.75 per acre	1,500 00	
3,673.69 acres, appraised at 4.00 per acre	14,694 76	
160.00 acres, appraised at 4.50 per acre	720 00	
1,281.17 acres, appraised at 5.00 per acre	6,405 85	
640.00 acres, appraised at 6.00 per acre	3,840 00	
10,443.73 acres, at an average valuation of $3.96 per acre	41,391 29—	41,391 29

Land purchased in 1868, in market for lease, as follows:

480.00 acres, appraised at $3.50 per acre	1,680 00	
80.00 acres, appraised at 4 00 per acre	320 00	
600.00 acres, appraised at 5.00 per acre	3,000 00	
1,160.00 acres, at an average valuation of $4.31 per acre	5,000 00—	5,000 00

Funds awaiting investment:

Cash balance in hands of State Treasurer	732 72	
Cash balance in hands of College Treasurer, to be invested by Agent Bassett.	4,300 00	
Total cash	5,032 72—	5,032 72
Total lands and funds not bearing interest		$ 51,424 01

SUMMARY.

Lands and funds yielding income	578,891 04
Lands and funds not at present yielding income	51,424 01
Total permanent resources of the institution	$ 630,315 05

EXHIBIT B.

Showing the ordinary income of the Iowa Agricultural College for the fiscal year ending November 10, 1880, together with the expenditures on account of its different departments.

INCOME.

Cash balance on hand November 13, 1879	$ 4,247 26	
Net amount realized from sale notes on hand November 13, 1879	1,344 40	$ 5,591 66
Interest on endowment fund invested by State Treasurer	4,931 66	
Rental on endowment fund land	34,079 43	
Rental on land purchased in 1868, with interest money	2,100 47	
Interest on "interest money" loaned on farm mortgages	186 89	
Interest on notes received for stock sold	73 57	
Net amount received from steward's funds and woodland account	195 30	
Net amount received on personal account	223 92	
Total ordinary income for the year	41,791 24	41,791 24
		47,382 90

EXPENSES.

Salaries		25,087 63
Farm department, ordinary expenses	1,821 79	
Farm seed appropriation	141 67	
Farm experiments	614 64	
Farm permanent improvements	950 00	
Creek improvement	500 00	4,028 10
Horticultural department		1,020 20
Ornamental grounds		3 0 60
Mechanical department		235 56
Experimental kitchen		433 14
Military department		402 92
Veterinary department		271 74
Physical laboratory		655 09
Botany		369 38
Chemistry		193 15
Entomology		253 92
Civil engineering		74 76
Printing office		113 37
Quarterly		393 61
Library		1,398 23
Museum		97 63
Contingent expense		1,807 26
Fires and lights		740 64
Furniture for laboratory and college building		245 48
Chapel exercises		350 00
Diplomas and express		6 60
Total ordinary expenses for the year		38,479 01
Amount transferred to contingent principal fund to replace money borrowed		1,040 00
Balance, cash on hand at the close of the year		7,863 89
		$47,382 90

EXHIBIT C.

Showing the ordinary income of the Iowa Agricultural College for the fiscal year ending November 9, 1881, together with the expenditures on account of the different departments.

INCOME.

Cash on hand at the beginning of the year		$ 7,863 89
Interest on endowment fund invested by State Treasurer	$ 5,259 96	
Rental on endowment fund land	36,470 81	
Rental on land purchased in 1868, with interest money	2,483 15	
Interest on "accumulated interest" loaned on farm mortgages	162 00	
Interest on notes received for stock sold	8 28	
Net amount received for diplomas	15 45	
Total ordinary income for the year	44,399 65	44,399 65
		52,263 54

EXPENSES.

Salaries		26,110 69
Farm department, ordinary expenses and new purchases	5,057 28	
Farm experiments	800 00	
Farm permanent improvements	1,394 00	
Creek improvements	339 05	
		7,590 33
Horticultural department		1,177 99
Ornamental grounds		888 14
Mechanical department		728 67
Experimental kitchen		165 95
Military department		382 50
Veterinary department		276 56
Physical laboratory		351 37
Botany		263 28
Chemistry		251 48
Entomology, zoology, and museum		215 68
Civil engineering		70 32
Printing office		100 00
Library		1,000 00
Quarterly		82 44
Annual catalogue		150 00
Contingent expenses		1,739 19
Fires and lights		1,544 36
College furniture		50 00
Cottage furniture and water supply		576 68
North hall furnishing		673 18
Conducting chapel service on the sabbath		350 00
Net amount paid on personal accounts and steward's funds		251 17
Total ordinary expenses for the year		44,989 98
Amount transferred to contingent principal fund		3,000 00
Net amount invested during the year in notes now on hand		763 00
Cash balance on hand		3,510 56
		52,263 54

SETTLEMENT WITH LAND AGENT BASSETT.

REPORT OF THE SECRETARY,

[SETTLEMENT EXTENDING FROM NOVEMBER 1, 1879, TO NOVEMBER 1, 1881.]

AGRICULTURAL COLLEGE, Nov. 27, 1881.

To the Honorable Board of Trustees:

GENTLEMEN—In the contract with Agent Bassett it is provided that the Board of Trustees shall, through its Secretary or other authorized person, make annual settlements of all matters relating to his agency. In accordance with this provision, I have made each year a complete and thorough examination of the books and vouchers of said agent. The results of such examinations for the biennial period beginning November 1, 1879, and ending November 1, 1881, are hereby submitted.

Endowment Fund Land.—Of the lands included in the congressional grant there have been sold during the time covered by this report 5,753.57 acres. The amount received therefor was $13,089.85. This sum was promptly remitted to the College Treasurer, and by him forwarded to the State Treasurer to be invested as provided by law.

During the biennial period the agent received from the rental of endowment fund land as shown by his receipts from No. 6,745 to No. 7,884 inclusive, and by new leases from No. 1,808 to No. 1,993 inclusive, the sum of $70,592.71. The exchange charged on the above amounted to $42.47. The balance, $70,550.24, was remitted to the Treasurer of the College as shown by the agent's vouchers from No. 116 to No. 139 inclusive.

Contingent Fund Land.—Of this land purchased in 1868, with accumulated interest money, there was sold during the past two years 2,080 acres. The amount received therefor, $4,240, was forwarded to the College Treasurer.

From the lease of contingent fund land there was received as shown by receipts from No. 147 to No. 187 inclusive, and by new leases from No. 104 to No. 160 inclusive, the sum of $4,583.62. Said amount was duly paid over to the College Treasurer as per agent's vouchers from number 36 to No. 56 inclusive.

Contingent Principal Fund.—The fund arising from the sale of contingent fund land is known upon the College books as contingent principal fund. At the date of the last biennial report there was to the credit of this fund, not loaned, the sum of $720. From the sale of land there has since been realized the sum of $4,240.

By an order of the Board passed in 1879, there was transferred to this fund from interest fund, to replace money previously borrowed, the sum of $1,040. By an order of the Board passed in 1881, there was transferred from interest fund the further sum of $3,000. These sums make a total to the credit of this fund of $9,000. During the two years Agent Bassett, under his contract with the Board, loaned on farm mortgages the sum of $4,700, leaving $4,300 to the credit of the fund. This balance is now in the hands of the College Treasurer. The agent expects to loan this sum at an early date.

Interest on loans of contingent principal fund to the amount of $213.89 was collected and paid over by the agent to the College Treasurer. The foregoing comprises all the lands and funds included in the agency of Mr. Bassett.

Your honorable body will remember that in accordance with your instructions I keep in my office a complete set of land books. In these is recorded both the land included in the congressional grant and that purchased in 1868 with surplus interest money. An account is kept with each tract of land. The agent is charged with the same and must account for each tract as either sold, leased, or in the market for lease. The fact of sale, the agent establishes by forwarding the purchase-money to the College Treasurer. The fact of lease is proved by payment to said Treasurer of an annual rental equal to eight per cent on the valuation fixed by the Board of Trustees. The land not sold or leased is publicly advertised *for lease*. By comparison of books and by a searching examination of the agent's accounts, I have satisfied myself that he has correctly accounted for all the lands and funds placed under his charge.

In connection with this report I beg leave to call the attention of the Board to the fact that a large number of the earlier leases expire in 1884 and 1885. It is estimated by the agent that over $200,000 of the endowment fund will be paid in at that time. Even if such amount could be promptly loaned, which is not probable, the lowered rate per cent would necessarily cause a large reduction in the annual income of the institution. In the light of these facts it is a question worthy of the careful consideration of your honorable body

whether all surplus interest money which can be spared without crippling the present usefulness of the College should not be transferred to contingent principal fund for investment. Such funds can now be loaned on good security at seven per cent and will furnish an added source of income to the College at a time when such addition will be greatly needed.

Accompanying this report is a summary of the transactions of the land agency for the two years ending November 1, 1881, taken from the books in my office.

Respectfully submitted,

E. W. STANTON,

Secretary Board of Trustees.

SUMMARY.

The following is a summary of the transactions of the land agency for the two years ending November 1, 1881.

ENDOWMENT FUND LAND.

Number of acres of congressional grant		204,206.36
Number of acres patented prior to November 1, 1879		30,962.00
Number of acres patented from November 1, 1879, to November 1, 1881		5,753.57
Total number of acres patented		36,715.57
Number of acres under lease		157,047.06
Number of acres in market for lease		10,443.73
		204,206.36
Amount received from sales of endowment fund land prior to November 1, 1879	$ 71,742 87	
Amount received from sales from November 1, 1879, to November 1, 1881	13,089 85	
Total amount received from sales of endowment fund land, and transmitted through the College Treasurer to the State Treasurer, for investment		84,832 72
Amount of interest on leases of endowment fund land collected during year ending November 1, 1880	$ 34,121 90	
Amount of interest collected during the year ending November 1, 1881	36,470 81	
Total during the two years		70,592 71
Amount paid over by agent to College Treasurer during year ending November 1, 1880	$34,079 43	
Exchange on same	42 47	
Amount paid to College Treasurer during year ending November 1, 1881	36,470 81	
	70,592 71	

CONTINGENT FUND LAND.

Number of acres purchased with accumulated interest money in 1868		15,013.17
Number of acres patented prior to November 1, 1879	1,600.00	
Number of acres patented from November 1, 1879, to November 1, 1881	2,080.00	
Total number of acres patented	3,680.00	
Number of acres under lease	10,173.17	
Number of acres in market for lease	1,160.00	
		15,013.17
Amount received from sales of contingent fund land and paid over to College Treasurer prior to November 1, 1879	$ 3,560 00	
Amount received from sale of land and paid over to College Treasurer from November 1, 1879, to November 1, 1881	4,240 00	
Total received from sale of contingent fund land	7,800 00	
Amount transferred from interest fund	3,000 00	
Total to the credit of contingent principal fund		10,800 00
Amount of interest on leases of contingent fund land collected during the year ending November 1, 1880, and paid over to College Treasurer	2,100 47	
Amount of interest collected during year ending November 1, 1881 and paid over to the College Treasurer	2,483 15	
Total for the two years		4,583 62
Amount of interest on loans of contingent principal fund collected during the two years, and paid over to the College Treasurer	213 89	
Amount collected by College Treasurer	135 00	
Total for the two years		348 89

REPORT OF LAND AGENT BASSETT.

To The Board of Trustees of the Iowa State Agricultural College and Farm:

The following report of the transactions of the Land Department of the Iowa Agricultural College from November 1, 1879, to October 31, 1881, inclusive, is hereby submitted for your consideration.

GEO. W. BASSETT, *Agent.*

INTEREST FUND.

1879.		
To amount collected, month November, 1879	$ 2,441 38	
To amount collected, month December, 1879	5,732 61	
1880.		
To amount collected, month January, 1880	2,045 64	
To amount collected, month February, 1880	1,169 21	
To amount collected, month March, 1880	2,178 99	
To amount collected, month April, 1880	1,363 96	
To amount collected, month May, 1880	2,351 35	
To amount collected, month June, 1880	3,772 69	
To amount collected, month July, 1880	3,037 62	
To amount collected, month August, 1880	2,373 82	
To amount collected, month September, 1880	3,712 53	
To amount collected, month October, 1880	3,942 10	
	34,121 90	
By amount remitted, November 30, 1879, voucher No. 116		$ 2,437 61
By error, receipts Nos. 6245 and 6724		1 02
By exchange on remittance		2 75
By amount remitted, December 31, 1879, voucher No. 117		5,730 36
By exchange on remittance		2 25
By amount remitted, January 31, 1880, voucher No. 118		2,040 64
By exchange on remittance		5 00
By amount remitted, February 29, 1880, voucher No. 119		1,166 71
By exchange on remittance		2 50
By amount remitted, March 30, 1880, voucher No. 120		2,177 49
By exchange on remittance		1 50
By amount remitted, April 30, 1880, voucher No. 121		1,361 21
By exchange on remittance		2 75
By amount remitted, May 31, 1880, voucher No. 122		2,347 35
By exchange on remittance		4 00
By amount remitted, June 30, 1880, voucher No. 123		3,768 19
By exchange on remittance		4 50
By amount remitted, July 31, 1880, voucher No. 124		3,031 62
By exchange on remittance		6 00
By amount remitted, August 31, 1880, voucher No. 125		2,369 82
By exchange on remittance		4 00
By amount remitted, September 30, 1880, voucher No. 126		3,709 53
By exchange on remittance		3 00
By amount remitted, October 31, 1880, voucher No. 127		3,938 90
By exchange on remittance		3 20
		34,121 90

1880		
To amount collected, month November, 1880	$ 3,805 59	
To amount collected, month December, 1880	3,387 29	
1881.		
To amount collected, month Janury, 1881	2,800 43	
To amount collected, month February, 1881	1,451 67	
To amount collected, month March, 1881	1,742 66	
To amount collected, month April, 1881	1,892 42	
To amount collected, month May, 1881	2,474 80	
To amount collected, month June, 1881	3,701 65	
To amount collected, month July, 1881	4,416 60	
To amount collected, month August, 1881	3,153 20	
To amount collected, month September, 1871	2,723 68	
To amount collected, month October, 1881	4,920 82	
	36,470 81	
By amount remitted, November 30, 1880, voucher No. 128		3,805 59
By amount remitted, December 31, 1880, voucher No. 129		3,387 29
By amount remitted, January 31, 1881, voucher No. 130		2,799 73
By over payment on voucher No. 129		70
By amount remitted, February 26, 1881, voucher No. 131		1,451 67
By amount remitted, March 31, 1881, voucher No. 132		1,742 66
By amount remitted, April 31, 1881, voucher No. 133		1,892 42
By amount remitted, May 30, 1881, voucher No. 134		2,474 80
By amount remitted, June 30, 1881, voucher No. 135		3,701 65
By amount remitted, July 31, 1881, voucher No. 136		4,416 60
By amount remitted, August 31, 1881, voucher No. 137		3,153 20
By amount remitted, September 30, 1881, voucher No. 138		2,723 68
By amount remitted, October 31, 1881, voucher No. 139		4,920 82
		36,470 81

CONTINGENT INTEREST.

1879.		
To amount collected, month November, 1879	25 60	
To amount collected, month December, 1879	25 60	
1880.		
To amount collected, month January, 1880	128 00	
To amount collected, month February, 1880	201 60	
To amount collected, month March, 1880	70 40	
To amount collected, month April, 1880	252 80	
To amount collected, month May, 1880	326 40	
To amount collected, month June, 1880	96 00	
To amount collected, month July, 1880	254 07	
To amount collected, month August, 1880	332 80	
To amount collected, month September, 1880	99 20	
To amount collected, month October, 1880	288 00	
	2,100 47	

1879.		
By amount remitted, November 30, 1879, voucher No. 36		$ 25 60
By amount remitted, December 31, 1879, voucher No. 37		25 60
1880.		
By amount remitted, January, 1880, voucher No. 38		128 00
By amount remitted, February, 1880, voucher No. 39		201 60
By amount remitted, March, 1880, voucher No. 40		70 40
By amount remitted, April, 1880, voucher No. 41		252 80
By amount remitted, May, 1880, voucher No. 42		326 40
By amount remitted, June, 1880, voucher No. 43		96 00
By amount remitted, July, 1880, voucher No. 44		254 07
By amount remitted, August, 1880, voucher No. 45		332 80
By amount remitted, September, 1880, voucher No. 46		99 20
By amount remitted, October, 1880, voucher No. 47		288 00
		2,100 47
1880.		
To amount collected, month December, 1880	$ 76 80	
1881.		
To amount collected, month January, 1881	128 00	
To amount collected, month February, 1881	201 60	
To amount collected, month March, 1881	57 60	
To amount collected, months April and May	710 35	
To amount collected, month June, 1881	332 80	
To amount collected, month August, 1881	332 80	
To amount collected, month September, 1881	99 20	
To amount collected, month October, 1881	544 00	
	2,483 15	
1880.		
By amount remitted, December 31, 1880, voucher No. 48		76 80
1880.		
By amount remitted, January 31, 1881, voucher No. 49		128 00
By amount remitted, February 28, 1881, voucher No. 50		201 60
By amount remitted, March 30, 1881, voucher No. 51		57 60
By amount remitted, May 30, 1881, voucher No. 52		710 35
By amount remitted, June 30, 1881, voucher No. 53		332 80
By amount remitted, August 31, 1881, voucher No. 54		332 80
By amount remitted, September 30, 1881, voucher No. 55		99 20
By amount remitted, October 31, 1881, voucher No 56		544 00
		2,483 15

INTEREST ON LOANS OF CONTINGENT FUND.

1879.		
December 5, to interest on loan No. 1	135 00	
1880.		
March 17, to interest on loan No. 2	27 00	
October 14, to interest on loan No. 4	24 89	
1881.		
May 21, to interest on loan No. 2	27 00	
	213 89	
1879.		
December 31, by amount remitted, voucher No. 1		135 00
March 31, by amount remitted, voucher No. 2		27 00
October 30, by amount remitted, voucher No 3		24 89
1881.		
May 31, by amount remitted, voucher 4		27 00
		213 89

CONTINGENT FUND PRINCIPAL.

1880.		
To amount collected, month of March and April, 1880	$ 2,000 00	
To amount collected, month of May, 1880	640 00	
To amount collected, month of July, 1880	960 00	
1881.		
To amount collected, month of July, 1881	640 00	
	4,240 00	
1880.		
By amount remitted, April 30, 1880, vouchers No. 4 and 5		$ 2,000 00
By amount remitted, May 31, 1880, voucher No. 6		640 00
By amount remitted, July 30, 1880, voucher No. 7		960 00
1881.		
By amount remitted, July 30, 1881, voucher No. 8		640 00
		4,240 00

I have loaned of the contingent fund principal since date of last report the sum of $4,700 at seven per cent interest, secured on improved farming land.

AGRICULTURAL COLLEGE ENDOWMENT FUND.

1880.		
To collected during month of December, 1879	400 00	
To collected during month of January, 1880	792 15	
To collected during month of February, 1880	240 00	
To collected during month of April, 1880	1,912 00	
To collected during month of May, 1880	2,571 43	
To collected during month of June, 1880	1,680 00	
To collected during month of July, 1880	1,663 47	
To collected during month of August, 1880	1,440 00	
To collected during month of September, 1880	274 80	
1879.		
By remitted to Treasurer, December 31, 1879, voucher 47		400 00
1880.		
By remitted to Treasurer, January 30, 1880, voucher 48		792 15
By remitted to Treasurer, February 29, 1880, voucher 49		240 00
By remitted to Treasurer, April 30, 1880, voucher 50		1,912 00
By remitted to Treasurer, May 31, 1880, voucher 51		2,571 43
By remitted to Treasurer, June 30, 1880, voucher 52		1,680 00
By remitted to Treasurer, July 5, 1880, voucher 53		939 47
By remitted to Treasurer, July 31, 1880, voucher 54		724 00
By remitted to Treasurer, August 31, 1880, voucher 55		1,440 00
By remitted to Treasurer, September 6, 1880, voucher 56		274 80
	10,973 85	10,973 85
1881.		
By over payment in October, on leases 1073-74		4 00
To collected during month of April, 1881	1,392 00	
To collected during month of August, 1881	728 00	
By remitted Treasurer, April 30, 1881, voucher 57		1,388 00
By remitted Treasurer, August, 1881, voucher 58		728 00
	2,120 00	2,120 00

RECAPITULATION.

Amount interest fund collected during year ending October 31, 1880	34,121 90	
Amount interest fund collected during year ending October 31, 1881	36,470 81	
Amount contingent interest collected during year ending October 31, 1880	2,100 47	
Amount contingent interest collected during year ending October 31, 1881	2,483 15	
Interest on loans collected since date of last report	213 89	
Total income collected since last report	75,390 22	75,390 22
Amount contingent fund principal collected since date of last report	4,240 00	
Amount endowment fund collected since date last report	13,093 85	
		17,333 85
Total collections since last report		92,724 07

Exchange upon the entire amount of all funds remitted is stated in the above account and charged to interest fund up to October 31, 1880. Since the last named date, the expense of remitting funds has been paid from the special appropriation made for that purpose.

Respectfully submitted,

GEO. W. BASSETT, *Agent.*

LIST OF AGRICULTURAL COLLEGE LANDS LEASED, FROM NOVEMBER 1, 1879, TO OCTOBER 31, 1881, INCLUSIVE.

No. of lease.	PART OF SECTION.	Section.	Township.	Range.	Acres.	Price per acre.	Total value.	NAME OF LESSEE.	Date of lease.	Term.	Rate of interest.	First payment of interest.	Office fee.	Total first payment.
									1879.					
1809	n hf nw	10	93	36	80	4 00	320	James Miller	Nov.	1	10	8 25 60	14	39 60
1810	s hf sw	30	86	44	82.37	3 50	288.30	A. C. Campbell	Dec.	2	10	8 23 06	14	37 06
1811	s hf sw	20	90	33	80	5 00	400	A. F. Froid	Dec.	8	10	8 32 00	14	46 00
1812	n hf nw	20	90	33	80	5 00	400	Chas. Ekstrom	Dec.	8	10	8 32 00	14	46 00
1813	w hf ne	28	94	36	80	4 00	320	Ole A. Ring	Dec.	9	10	8 25 60	14	39 60
									1880.					
1814	se qr se	6	89	43	40	3 50	140	Henry B. Winteringer	Jan.	21	10	8 11 20	14	25 20
1815	e hf se	18	90	46	80	5 00	400	L. F. Whitney	Feb.	3	10	8 32 00	14	46 00
1816	n hf ne	26	90	45	80	5 00	400	Fred. K. Blackenberg	Feb.	9	10	8 32 00	14	46 00
1817	nw	36	94	28	160	4 00	640	J. Q. A. Hudson	Feb.	14	10	8 51 20	14	65 20
1818	nw	26	94	28	160	4 00	640	Elias Rowland	Feb.	17	10	8 51 20	14	65 20
1819	nw	28	99	23	160	5 00	800	Anna O. Cleven	Feb.	18	10	8 64 00	14	78 00
1820	ne	32	97	30	160	3 50	560	J. D. Ferris	Feb.	24	10	8 44 80	14	58 80
1821	nw	32	97	30	160	4 00	640	J. D. Torpin	Feb.	24	10	8 51 20	14	65 20
1822	ne	29	95	27	160	3 50	560	Benj. Meeds	Feb.	27	10	8 44 80	14	58 80
1823	nw	28	95	27	160	3 50	560	Robt. Brotherton	Feb.	27	10	8 44 80	14	58 80
1824	nw	26	90	32	160	5 00	800	L. Blanden	March	8	10	8 64 00	14	78 00
1825	Not taken, and	d	les	se	destroye	d.								
1826	nw	13	95	27	160	5 00	800	Timothy Harrigan	March	22	10	8 64 00	14	78 00
1827	s hf nw	28	88	41	80	3 00	240	Michael Bryryelson	March	24	10	8 19 20	14	32 20
1828	nw nw	28	93	36	40	4 00	160	G. Olsen	March	30	10	8 12 80	14	26 80
1829	s hf se	22	90	47	80	6 00	480	Francis Harvey	April	17	10	8 38 40	5	43 40
1830	w hf ne	32	87	40	80	3 75	300	Walter Lightheizer	May	14	10	8 24 00	14	38 00
1831	ne qr	26	90	24	160	6 00	960	Louisa F. Dyer	May	18	10	8 76 80	14	90 80
1832	nw	13	94	28	160	4 00	640	A. M. Horton	May	24	10	8 51 20	14	65 20
1833	nw qr ne	36	84	42	40	5 00	200	Carrie Stewart and W. M. Clark	May	24	10	8 16 00	14	30 00
1834	w hf sw	6	86	44	75.52	4 00	302 08	Harvey Cummings	May	27	10	8 24 16	14	38 16
1835	nw	14	90	32	160	5 00	800	William Chas. Gadan	May	29	10	8 64 00	14	78 00
1836	w hf se	32	86	44	80	3 00	240	C. Frederickson	June	12	10	8 19 20	14	33 20
1837	nw	2	87	40	153.45	3 75	575 44	D. S. Crain	June	23	10	8 46 03	14	60 03
1838	n hf se and sw se	36	87	42	120	5 00	600	W. Wells	June	23	10	8 48 00	14	62 00
1839	nw	9	93	27	160	3 00	480	T. H. Adams	June	30	10	8 38 40	14	52 40
1840	w hf se	22	98	29	80	5 00	400	Fred. K. Shields	July	5	10	8 32 00	14	46 00
1841	ne qr	9	98	29	160	3 00	480	Marcellus Winters	July	8	10	8 38 40	14	52 40
1842	nw nw	4	93	27	56.02	4 00	224 08	Marcus L. French	July	13	10	8 17 93	14	31 93
1843	s hf sw	15	93	27	80	4 00	320	W. D. Weed	July	13	10	8 25 60	14	39 60
1844	e hf sw	6	86	44	80	4 00	320	Hiram James	July	15	10	8 25 60	14	39 60
1845	ne ne	36	87	42	40	5 00	200	Carrie Stewart	July	15	10	8 16 00	14	30 00
1846	sw	26	99	33	160	5 00	800	Harvey Mathers	July	23	10	8 64 00	14	78 00
1847	nw	26	99	33	160	5 00	800	Joseph H. Call	July	23	10	8 64 00	14	78 00
1848	sw	28	99	33	160	4 00	640	Samuel A. Smart	July	23	10	8 51 20	14	65 20
1849	sw	26	98	33	160	4 00	640	John Valentine	July	23	10	8 51 20	14	65 20
1850	se	24	97	34	160	3 50	560	Knud N. Thuesen	July	28	10	9 44 80	14	58 80
1851	n hf ne	28	93	36	80	5 00	400	Geo. C. and Clarence E. Barrow	July	15	10	8 32 00	14	46 00
1852	w hf ne	17	98	36	80	4 00	320	R. T. Barnard	Aug.	6	10	8 25 60	14	39 60
1853	e hf ne	17	98	36	80	4 00	320	D. D. Barnard	Aug.	6	10	8 25 60	14	39 60
1854	nw	12	100	36	112.30	3 50	393 36	Brunson Murvin	Aug.	14	10	8 31 47	14	45 47
1855	w hf nw	28	99	33	80	4 00	320	J. R. Beardsley	Aug.	19	10	8 25 60	14	39 60
1856	nw	4	98	33	162.35	4 00	649 40	R. R. Beardsley	Aug.	27	10	8 51 95	14	65 95
1857	n hf ne	18	87	40	80	4 00	320	Joseph Ferguson	Aug.	30	10	8 25 60	14	39 60
1858	n hf sw	20	90	33	80	5 00	400	Amandus Ziemann	Sept.	4	10	8 32 00	14	46 10
1859	nw	2	87	41	157.77	4 00	627 08	J. T. Harrison and W. P. Evans	Sept.	8	10	8 50 17	14	64 17
1860	ne	22	98	29	160	5 00	800	J. H. Smart	Sept.	15	10	8 64 00	14	78 00
1861	nw	22	98	29	160	4 00	640	C. L. Smart	Sept.	15	10	8 51 20	14	65 20
1862	nw	13	98	29	160	3 50	560	W. Sams	Sept.	15	10	8 44 80	14	58 80
1863	nw	1	95	36	175.56	4 00	702 24	James H. Walsh	Sept.	24	10	8 56 18	14	70 18

LIST OF AGRICULTURAL COLLEGE LAND LEASED—CONTINUED.

No. of lease.	PART OF SECTION.	Section.	Township.	Range.	Acres.	Price per acre.	Total value.	NAME OF LESSEE.	Date of lease.	Term.	Rate of interest.	First payment of interest.	Office fee.	Total first payment.
									1880.					
1864	sw	3	98	29	160	3 00	480	J. R. Carter	Sept.	27	10	8 38 40	14	52 40
1865	se	4	98	29	160	3 00	480	E. Reno	Sept.	27	10	8 38 40	14	52 40
1866	sw	4	98	29	160	3 00	480	A. P Reno	Sept.	27	10	8 38 40	14	52 40
1867	nw	9	98	29	160	3 00	480	James Love	Sept.	27	10	8 38 40	14	52 40
1868	ne	10	98	29	160	3 50	560	Peter Hansen	Sept.	27	10	8 44 80	14	58 80
1869	nw	10	98	29	160	3 50	560	John Peterson	Sept.	27	10	8 44 80	14	58 80
1870	ne	33	99	28	160	3 50	560	Frank Dodson	Sept.	27	10	8 44 80	14	58 80
1871	se	3	98	29	160	3 50	560	E. G. Carter	Sept.	27	10	8 44 80	14	58 80
1872	ne	22	93	37	160	3 50	560	E. J. Sutfin	Sept.	30	10	8 44 80	14	58 80
1873	se	22	93	37	160	3 50	560	Sam l W. Hobbs	Sept.	30	10	8 44 80	14	58 80
1874	sw	14	89	43	160	4 00	640	Thos. Gilbert	Sept.	30	10	8 51 20	14	65 20
1875	sw	3	97	32	160	3 50	560	Thaddeus Binford	Oct.	9	10	8 44 80	14	58 80
1876	sw	12	94	37	160	4 00	640	James Harker	Oct.	15	10	8 51 20	14	65 20
1877	s hf ne qr	4	93	36	80	4 00	320	Everett Cromwell	Oct.	19	10	8 25 60	14	39 60
1878	ne qr and s hf nw	28	93	36	120	4 00	480	Wm. B. Cromwell	Oct.	19	10	8 38 40	14	52 40
1879	s hf ne qr	28	93	36	80	5 00	400	Olof Ovren	Oct.	19	10	8 32 00	14	46 00
1880	s hf nw qr	10	93	36	80	4 00	320	Geo. H. Eastman	Oct.	19	10	8 25 60	14	39 60
1881	nw	4	94	37	138.40	4 00	553 60	J. A. Dean	Oct.	19	10	8 44 29	14	58 29
1882	se qr	12	94	37	160	4 00	640	C. Booth	Oct.	19	10	8 51 20	14	65 20
1883	nw qr	9	94	36	160	3 00	480	Thos. Sargent	Oct.	19	10	8 38 40	14	52 40
1884	n hf sw qr	9	94	36	80	4 00	320	Arthur E. Webb	Oct.	19	10	8 25 60	14	39 60
1885	s hf ne	26	90	45	80	5 00	400	B. F. Holwsy	Oct.	25	10	8 32 00	14	46 00
1886	se	36	90	45	160	5 00	800	L. V. Cassady	Oct.	25	10	8 64 00	14	78 00
1887	ne	35	97	27	160	4 00	640	Robert J. Cary	Oct.	25	10	8 51 20	14	65 20
1888	sw	22	93	37	160	4 00	640	B. F. Felt	Oct.	27	10	8 51 20	14	65 20
1889	n hf of ne and sw ne	36	87	45	120	3 75	450	W. C. Rater	Oct.	29	10	8 36 00	14	50 00
1890	sw	28	90	33	160	5 50	880	Henry Pearce	Nov.	19	10	8 70 40	14	84 40
1891	sw	17	98	36	160	4 00	640	Mary E. Daniels	Nov.	24	10	8 51 20	14	65 20
1892	w hf se	23	97	27	80	3 50	280	James Carey	Nov.	24	10	8 22 40	14	36 40
1893	ne	14	86	42	160	5 00	800	John Burrows	Nov.	26	10	8 64 00	14	78 00
1894	ne	13	94	28	160	5 00	800	C. M. Haller	Dec.	6	10	8 64 00	14	78 00
1895	ne	13	95	27	160	5 00	800	E. G. Crummy	Dec.	13	10	8 64 00	14	78 00
1896	sw	27	95	27	160	3 50	560	S. G. Crummy	Dec.	13	10	8 44 80	14	58 80
1897	ne	33	95	27	160	4 00	640	L. R. Seabright	Dec.	13	10	8 51 20	14	65 20
1898	sw	34	95	27	160	4 00	640	William Brice	Dec.	13	10	8 51 20	14	65 20
1899	ne	35	95	27	160	4 00	640	Peter T. Brice	Dec.	13	10	8 51 20	14	65 20
1900	ne	26	95	27	160	3 50	560	Eliakin Brice	Dec.	13	10	8 44 80	14	58 80
1901	se	2	89	44	160	4 00	640	H. B. Jordan	Dec.	13	10	8 51 20	14	65 20
1902	se	12	89	44	160	4 00	640	W. H. Rawson	Dec.	13	10	8 51 20	14	65 20
1903	ne	6	89	44	151.88	5 00	759 40	A. L. Rawson	Dec.	13	10	8 60 75	14	74 75
1904	nw	12	90	46	160	5 00	800	C. H. Rawson	Dec.	13	10	8 64 00	14	78 00
1905	ne	15	89	43	160	2 25	360	Henry A. Best	Dec.	20	10	8 32 80 28 80	14	75 60
1906	nw	15	89	43	160	2 25	360	David H. Zepp	Dec.	20	10	8 32 80 8 80	14	75 60
1907	se	15	89	43	160	2 25	360	Matthew Stobbs	Dec.	20	10	8 32 80 28 80	14	75 60
1908	sw	15	89	43	160	2 25	360	John C. Rungo	Dec.	20	10	8 32 80 28 80	14	75 60
1909	se qr	10	91	40	160	5 00	800	Hartwell B. Jordon	Dec.	22	10	8 64 00	14	78 00
1910	sw qr	28	94	36	160	4 00	640	John C. Harker	Dec.	22	10	8 51 20	14	65 20
1911	ne qr	10	86	42	160	5 00	800	Clemenc Dessel	Dec.	27	10	8 64 00	14	78 00
1912	se qr	10	86	42	160	5 00	800	Frank Dessel	Dec.	27	10	8 64 00	14	78 00
1913	sw qr	31	95	27	166.84	3 00	500 52	Abel Wilfine	Dec.	27	10	8 40 04	14	54 04
1914	sw qr	30	95	27	163.43	4 00	653 72	E. M. Winchell	Dec.	27	10	8 52 30	14	66 30
1915	se qr	25	95	28	160	5 00	800	A. T. Rathbun	Dec.	27	10	8 64 00	14	78 00
1916	nw qr	36	95	28	160	5 00	800	B. B. Parkinson	Dec.	27	10	8 64 00	14	78 00
1917	s hf nw qr	20	90	33	80	5 00	400	A. W. Ziemann	Dec.	27	10	8 32 00	14	46 00
									1881.					
1918	sw	22	90	46	160	5 00	800	John Kremer	Feb.	5	10	8 64 00	14	78 00
1919	se	14	89	46	160	6 00	960	E. C. Pope	Feb.	26	10	8 76 80	14	90 80
1920	s hf ne	36	87	42	80	4 00	320	Frank Rose	Feb.	26	10	8 25 60	14	39 60
1921	e hf nw	10	86	42	80	4 00	320	Clemens Funke	Feb.	26	10	8 25 60	14	39 60
1922	e hf sw	10	86	42	80	4 00	320	Clemens Funke	Feb.	26	10	8 25 60	14	39 60
1923	sw	28	90	46	160	5 00	800	J. H. and S. L. Woodworth	March	31	10	8 64 00	14	78 00
1924	sw	36	87	45	160	3 75	600	Andrew R. and Geo. R. Gardner	April	6	10	8 48 00	14	62 00
1925	ne	10	97	29	160	4 00	640	Edward Quinlan	April	22	10	8 51 20	14	65 20
1926	ne	22	97	29	160	4 00	640	Geo. P. Quinlan	April	22	10	8 51 20	14	65 20

LIST OF AGRICULTURAL COLLEGE LAND LEASED—CONTINUED.

No. of lease.	PART OF SECTION.	Section.	Township.	Range.	Acres.	Price per acre.	Total value.	NAME OF LESSEE.	Date of lease.	Term.	Rate of interest.	First payment of interest.	Office fee.	Total first payment.
									1881.					
1927	sw	34	98	29	160	4 00	640	Royal Newbern	April 22	10	8	51 20	14	65 20
1928	nw	33	99	30	160	3 00	480	Edgar Newbern	April 22	10	8	38 40	14	52 40
1929	sw qr	32	90	32	160	5 00	800	H. W. Beahrens	April 25	10	8	64 00	14	78 00
1930	nw	14	86	42	160	4 00	640	D. S. Crain	May 13	10	8	51 20	14	65 20
1931	sw	36	100	34	160	4 00	640	Louis E. Jones	Sept. 20	10	8	51 20	14	65 20
1932	sw	4	99	34	160	5 00	800	Lyman F. Wisner	Sept. 20	10	8	64 00	14	78 00
1933	ne	2	98	34	157.77	4 00	631 08	Jesse I. Newcomber	Sept. 20	10	8	50 48	14	64 48
1934	se	2	98	34	160	3 50	560	E. S. Elsworth	Sept. 20	10	8	44 80	14	58 80
1935	sw	4	98	33	160	4 00	640	Alex. M. Bowdle	Sept. 20	10	8	51 20	14	65 20
1936	nw qr	24	94	39	160	4 00	640	R. W. Hill	May 26	10	8	51 20	14	65 20
1937	ne qr	34	94	36	160	5 00	800	J. Q. Adams	May 27	10	8	64 00	14	78 00
1938	se qr	28	96	36	160	5 00	800	M. E. Griffin	May 27	10	8	64 00	14	78 00
1939	se qr	32	95	33	160	3 50	560	E. J. Hartshorn	May 27	10	8	44 80	14	58 80
1940	se	6	89	44	160	3 00	480	W. N. Rawson	May 27	10	8	38 40	14	52 40
1941	n hf of se and sw se	6	87	43	120	3 00	360	D. A. Snyder per E. Hall	May 30	10	8	28 80	14	42 80
1942	ne	8	99	34	160	3 50	560	E. B. Soper	June 1	10	8	44 80	14	58 80
1943	sw	27	99	31	160	4 00	640	I. W. Perry	June 14	10	8	51 20	14	65 20
1944	se	36	98	30	160	4 00	640	Warren Hifley	June 15	10	8	51 20	14	65 20
1945	se	1	98	30	160	3 50	560	Scott Wadsworth	June 15	10	8	44 80	14	58 80
1946	sw	1	98	30	160	3 50	560	James G. Wadsworth	June 15	10	8	44 80	14	58 80
1947	se	2	98	30	160	3 50	560	Wm. Simmons	June 15	10	8	44 80	14	58 80
1948	sw qr	24	96	28	160	6 00	960	R. H. Spencer	June 24	10	8	76 80	14	90 80
1949	se	26	94	32	160	3 50	560	L. W. Raber	June 22	10	8	44 80	14	58 80
1950	se	24	94	33	160	3 50	560	Henry Roberts	June 22	10	8	44 80	14	58 80
1951	ne	31	95	33	160	4 00	640	M. W. Roberts	June 22	10	8	51 20	14	65 20
1952	w hf se	32	94	33	80	3 50	280	Fred. G. Pierce	June 22	10	8	22 40	14	36 40
1953	se	20	94	33	160	4 50	720	Geo. E. Roberts	June 22	10	8	57 60	14	71 60
1954	sw	26	95	33	160	4 00	640	Clarence H. Childs	June 30	10	8	51 20	14	65 20
1955	sw	13	100	36	160	4 00	640	Fred. More	June 30	10	8	51 20	14	65 20
1956	sw	24	94	33	160	3 50	560	J. P. Dolliver	June 30	10	8	44 80	14	58 80
1957	ne	20	94	32	160	3 50	560	Frank H. More	June 30	10	8	44 80	14	58 80
1958	sw	30	94	32	159.69	3 50	558 91	Chas. H. More	June 30	10	8	44 71	14	58 71
1959	ne	30	100	34	160	4 00	640	Gustof Petz	July 1	10	8	51 20	14	65 20
1960	nw	22	94	39	160	4 00	640	J. Londerbaugh	July 5	10	8	51 20	14	65 20
1961	sw	22	94	39	160	4 00	640	A. B. Londerbaugh	July 5	10	8	51 20	14	65 20
1962	ne	28	94	39	160	4 00	640	H. T. Lounderbaugh	July 5	10	8	51 20	14	65 20
1963	nw	28	94	39	160	4 00	640	Mrs. M. E. Londerbaugh	July 5	10	8	51 20	14	65 20
1964	se	14	86	42	160	4 00	640	Peter Moore	July 11	10	8	51 20	14	65 20
1965	nw	26	95	31	160	5 00	800	Stephen Hoskins	July 20	10	8	64 00	14	78 00
1966	se	29	94	33	160	3 50	560	M. A. Hartshorn	July 22	10	8	44 80	14	58 80
1967	se	22	94	39	160	3 50	560	Fred. Zollinger	July 25	10	8	44 80	14	58 80
1968	ne	22	94	39	160	3 50	560	Jacob Zollinger	July 25	10	8	44 80	14	58 80
1969	se	36	100	34	160	4 00	640	J. W. Funk	July 26	10	8	51 20	14	65 20
1970	nw of se	36	87	45	40	3 75	150	O. E. Smith	Aug. 5	10	8	12 00	14	26 00
1971	nw	36	87	45	160	3 75	600	R. C. Rice	Aug. 6	10	8	48 00	14	62 00
1972	e hf se	31	94	37	80	5 00	400	E. K. Walbridge	Aug. 19	16	8	32 00	14	46 00
1973	nw	10	100	35	115.95	3 00	347 85	Walter Roberts	Aug. 19	10	8	27 82	14	41 82
1974	sw	12	100	35	160	3 00	480	C. S. Fletcher	Aug. 19	10	8	38 40	14	52 40
1975	nw	33	94	33	160	3 50	560	E. S. Olney	Aug. 22	10	8	44 80	14	58 80
1976	nw	30	94	32	159.90	4 00	639 60	L. W. Moody	Aug. 22	10	8	51 16	14	65 16
1977	ne	24	94	33	160	4 00	640	Thaddeus Binford	Aug. 22	10	8	51 20	14	65 20
1978	ne	22	89	46	160	5 00	800	Pete Janson and Anthon Storck	Aug. 24	10	8	64 00	14	78 00
1979	nw	24	94	33	160	4 00	640	W. A. Ladd	Aug. 25	10	8	51 20	14	65 20
1980	nw	33	98	28	160	3 50	560	John Ostrander	Sept. 6	10	8	44 80	14	58 80
1981	se	14	89	43	160	4 00	640	Nathaniel F. Taylor	Sept. 12	10	8	51 20	14	65 20
1982	ne	4	94	36	140.79	4 00	563 16	A. W. Stoner	Sept. 20	10	8	45 05	14	59 05
1983	se	11	94	39	160	4 00	640	Samuel Ward	Sept. 24	10	8	51 20	14	65 20
1984	e hf of se	32	87	45	80	3 50	280	S. C. Dunham	Oct. 11	10	8	22 40	14	36 40
1985	n hf of sw	15	93	27	80	4 00	320	Frank D. Williams	Oct. 12	10	8	25 60	14	39 60
1986	ne	30	95	33	160	3 50	560	Stewart Kennedy	Oct. 12	10	8	44 80	14	58 80
1987	nw	4	94	36	140.60	3 30	464	L. T. Hays	Jan. 3	10	8	37 12		37 12
1988	sw	4	94	36	160	3 30	528	D. F. McClure	Jan. 3	10	8	42 24		42 24
1989	ne	26	99	28	160	3 50	560	Dexter Smythe	Oct. 22	10	8	44 80	14	58 80
1990	nw	26	99	28	160	3 50	560	Mary P. Smythe	Oct. 22	10	8	44 80	14	58 80
1991	ne	2	98	30	167.27	3 00	501 11	S. Smythe	Oct. 22	10	8	40 15	14	54 15
1992	nw	10	97	29	160	5 00	800	Amhart Beason	Oct. 24	10	8	64 00	14	78 00
1993	se	28	86	43	160	3 75	600	John W. Connett	Oct. 28	10	8	48 00	14	62 00

ABSTRACT OF LEASES OF LANDS IN THE "SIOUX CITY PURCHASE," FROM NOVEMBER 1, 1879, TO OCTOBER 31, 1881, INCLUSIVE.

No. of lease.	PART OF SECTION.	Section.	Township.	Range.	Acres.	Price per acre.	Total value.	NAME OF LESSEE.	Date of lease.	Term.	Rate of interest.	First payment of interest.	Office fee.	Total first payment.
									1880.					
120	se	36	93	36	160	3 00	480	Andrew Peterson	March 16	10	8	38 40	14	52 40
121	ne	19	98	47	160	2 50	400	S. T. Osborne	March 22	10	8	32 00	14	46 00
122	nw of sw	28	93	36	40	5 00	200	L. Landness	March 29	10	8	16 00	14	30 00
123	ne qr	15	100	45	160	2 50	400	Ebenezer H. Rood	April 28	10	8	32 00	14	46 00
124	se qr	15	100	45	160	2 50	400	Melissa M. Rood	April 28	10	8	32 00	14	46 00
125	se qr	22	100	45	160	2 50	400	Belle Rood	April 28	10	8	32 00	14	46 00
126	nw qr	15	100	45	160	2 50	400	John Rood	April 28	10	8	32 00	14	46 00
127	sw qr	15	100	45	160	2 50	400	Ida Rood	April 28	10	8	32 00	14	46 00
128	ne qr	22	100	45	160	2 50	400	Ellen A. Timerman	April 28	10	8	32 00	14	46 00
129	ne	14	100	45	160	2 50	400	John McNulta	May 31	10	8	32 00	14	46 00
130	nw	14	100	45	160	2 50	400	Henry C. Prevost	May 31	10	8	32 00	14	46 00
131	se	14	100	45	160	2 50	400	Robert E. Williams	May 31	10	8	32 00	14	46 00
132	sw	14	100	45	160	2 50	400	Charles T. Capen	May 31	10	8	32 00	14	46 00
133	ne	27	100	45	160	2 50	400	James S. Ewing	May 31	10	8	32 00	14	46 00
134	se	27	100	45	160	2 50	400	William G. Cochrane	May 31	10	8	32 00	14	46 00
135	se qr	36	90	41	160	2 75	440	Geo. W. Jones	July 6	10	8	35 20	14	49 20
136	nw qr	36	90	41	160	2 75	440	Geo. W. Jones	July 6	10	8	35 20	14	49 20
137	Not issued.													
138	sw	24	99	45	160	2 50	400	Geo. P. Morse	July 27	10	8	32 00	14	46 00
139	se	24	99	45	160	2 50	400	J. S. Daniels	July 27	10	8	32 00	14	46 00
140	ne	32	100	48	160	2 50	400	Geo. W. Fife	Aug. 18	10	8	32 00	14	46 00
141	nw	32	100	48	160	2 50	400	Chas. H. Fife	Aug. 18	10	8	32 00	14	46 00
142	se	32	100	48	160	2 50	400	Wm. J. Fife	Aug. 18	10	8	32 00	14	46 00
143	sw	32	100	48	160	2 50	400	Wm. H. Fife	Aug. 18	10	8	32 00	14	46 00
144	se	24	93	36	160	3 50	560	N. M. Page	Oct. 15	10	8	44 80	14	58 80
145	nw qr	36	93	36	160	4 00	640	Geo. Sargent	Oct. 19	10	8	51 20	14	65 20
146	sw qr	36	93	36	160	4 00	640	J. Sampson	Oct. 19	10	8	51 20	14	65 20
147	se	28	93	36	160	5 00	800	A. L. Wilson	Oct. 21	10	8	64 00	14	78 00
148	se qr	30	91	43	160	3 50	560	Nancy Jordon	Dec. 22	10	8	44 80	14	58 80
149	nw qr	24	98	47	160	2 50	400	Robert Ayres	Dec. 27	10	8	32 00	14	46 00
									1881.					
150	e hf nw	34	93	36	80	4 00	320	E. B. Putnam	April 21	10	8	25 60	14	39 60
151	se qr nw and lots 1 and 2	7	97	48	137.66	3 00	412.98	Fred. A. Keep	May 16	10	8	33 03	14	47 03
		7	97	48				Fred. A. Keep	May 16	10	8			
152	ne qr sw	7	97	48	149.50	3 00	448 50	Fred. A. Keep	May 16	10	8	35 88	14	49 88
	lots 3 and 4	7	97	48										
	lot 3	18	97	48										
153	lots 1 and 2	17	97	48	166.01	3 00	498 03	Fred. A. Keep	May 16	10	8	39 84	14	53 14
	lots 1 and 2	18	97	48	160									
154	ne qr	24	100	38	160	4 00	640	John C. Fox	June 24	10	8	51 20	14	65 20
155	se qr	24	100	38	160	4 00	640	E. O. Soule	June 24	10	8	51 20	14	65 20
156	sw qr	24	100	38	160	4 00	640	J. L. Hoag	June 24	10	8	51 20	14	65 20
157	nw qr	24	100	38	160	4 00	640	Hattie Ellworth	June 24	10	8	51 20	14	65 20
158	se	18	99	47	160	5 00	800	O. W. Jackson	Sept. 29	10	8	64 00	14	78 00
159	ne	18	99	47	160	5 00	800	M. J. Sweeley	Oct. 1	10	8	64 00	14	78 00
160	nw	17	99	47	160	5 00	800	Robert Smylie	Oct. 24	10	8	64 00	14	78 00

GEO. W. BASSETT, *Agent.*

ABSTRACT OF THE PROCEEDINGS OF THE BOARD OF TRUSTEES—1880-1881.

MEMBERS OF THE BOARD.

THE HON. H. G. LITTLE, Grinnell.....1882.
THE HON. JOHN N. DIXON, Oskaloosa.....1882.
THE HON. WILLIAM McCLINTOCK, West Union.....1882
THE HON. GEO. H. WRIGHT, Sioux City.....1884.
THE HON. C. W. TENNEY, Plymouth.....1884.

PRESENT OFFICERS OF THE BOARD.

THE HON. H. G. LITTLE, Grinnell.....CHAIRMAN.
E. W. STANTON, Ames.....*Secretary.*
J. L. GEDDES, Ames.....*Treasurer.*

STANDING COMMITTEES.

Executive and Finance Committee—Trustees WRIGHT, MCCLINTOCK, and TENNEY.
Committee on Faculty and Courses of Study—Trustees TENNEY, DIXON, and LITTLE, and President WELCH.
Committee on Farm and Farm Buildings—Trustees DIXON, TENNEY, and LITTLE.
Committee on Horticulture—Trustees DIXON, WRIGHT, and MCCLINTOCK.
Committee on Workshop—Trustees TENNEY, MCCLINTOCK, and DIXON.
Committee on College Lands—Trustees WRIGHT and TENNEY.
Building Committee—Trustees WRIGHT, DIXON, and LITTLE.

MEETINGS.

1880.

First meeting.....January 28-29
Second meeting.....May 1-5
Third meeting.....May 22-26
Fourth meeting.....November 6-10
Fifth meeting.....December 4-11

1881.

First meeting.....May 17-20
Second meeting.....July 26-28
Third meeting.....November 4-10
Fourth meeting.....November 29-December 2

APPROPRIATIONS OF THE EIGHTEENTH GENERAL ASSEMBLY.

The following appropriations were made by the Eighteenth General Assembly to the Agricultural College:

Veterinary, agricultural, and botanical building	$ 6,000
Two boarding cottages	3,500
Feeding barns	800
Swine-house, corn-cribs and poultry-house	1,200
Repairing and fitting up domestic economy building	500
Annual fund for management of lands and repair of buildings $1,000	2,000

In May, 1880, the Board advertised for sealed proposals for erecting the veterinary building, boarding cottages, feeding barns, and corn-cribs. Bids were submitted by F. D. Basket, F. S. Whiting, Solon Bryan, and Peter Raff & Son. Being in excess of the appropriations, all were rejected. The plans were then slightly modified and new bids requested. The contract was finally let to F. S. Whiting, of Des Moines, upon the following terms:

Veterinary, agricultural, and botanical building	$ 5,752 00
Boarding cottage, sixteen student rooms	3,462 50
Feeding barns	725 00
Corn-cribs	275 00

It was provided in the contract with Mr. Whiting that payments should be made on monthly estimates signed by the Superintendent in charge, and that ten per cent of said estimates should be reserved until the completion and acceptance of the work. It was also provided that Mr. Whiting should give a good and sufficient bond in the sum of $10,000 for the faithful performance of his contract. Said bond was given and approved by the Board.

Professor S. A. Knapp was appointed local Superintendent of Buildings, subject to the directions of the chairman of the Building Committee, who was authorized to make monthly examinations of the work and to settle all controversies which might arise between the superintendent and contractor. During the progress of the work it was found necessary, in order to complete the boarding cottage in good shape, to transfer to that fund from the domestic economy building appropriation the sum of $206.50. The approval of the Executive Council was obtained and said transfer made. The contract of Mr. Whiting was completed to the satisfaction of the Board in December, 1880, and a resolution ordered spread upon the minutes, acknowledging the very exact and honorable manner in which he had discharged his obligations to the College.

Under the authority of the Board, Professor Knapp made all contracts for material and labor necessary to the construction of the swine house and poultry house.

The repairs on the domestic economy building were made under the supervision of Professor Knapp and Mrs. Welch, the committee appointed by the Board for that purpose. Of this appropriation there has been drawn from the State Treasury the sum of $460.32, leaving a balance not yet drawn of $39.68. At its last meeting the Board appropriated this balance to the repair of that portion of the building not needed by the domestic economy department, and which, during the coming year, is to be occupied by Professor Bessey and family.

The fund for the management of lands and repair of buildings was expended under various committees appointed by the Board. The reports of these committees show the fund to have been used for the following purposes:

Painting college building	$ 929.96
Repairing college building and sewer	276.26
Repairing farm-house	215.14
Painting and repairing farm barn	204.13
Repairing slaughter-house	39.00
Repairing boarding cottage	63.08
Repairing north hall	38.51
Repairing civil engineering room	50.00
Repairing roof of chemical laboratory	3.32
Expenses connected with management of lands	180.60
Total	$ 2,000.00

All of the State appropriations, except the one for the repair of the domestic economy building mentioned above, have been drawn and expended. For detailed statement of such expenditures, see report of the Superintendent of Buildings.

COLLEGE APPORPRIATIONS.

At the meeeing of the Board held in December, 1880, the regular appropriations for the succeeding year were made from interest fund, Under the State law these appropriations cannot be exceeded. They therefore limit the expenditures of the different departments. The items for the last year are not given, for, since the fiscal year closed on November 9th, the amounts actually expended are already determined. These amounts, together with the expenditures under the appropriations for 1880, are reported in exhibits "B" and "C" attached to the Secretary's report. (See pages 85 and 86.)

Upon the recommendation of the Executive and Finance Committee the Board, at its late meeting, made the following appropriations to cover the expenses for the fiscal year ending November 8, 1882:

FROM INTEREST FUND:

For salaries		$26,400 00
For Farm Department—		
For current expenses	$ 600 00	
For farm experiments	1,000 00	
For permanent improvements	600 00	
For Squaw Creek improvement	300 00—	2,500 00
For Horticultural Department—		
For current expenses and experiments	1,000 00	
For drainage purposes	500 00	
For wood specimens and fruit casts	250 00	
For ornamental grounds	500 00—	2,250 00
For Mechanical Department—		
For current expenses	600 00	
For bench tools, shaping machine, and small lathe	600 00—	1,200 00
For Department of Civil Engineering—		
For current expenses	100 00	
For instruments	400 00—	500 00
For Department of Botany—		
For current expenses	300 00	
For microscopes	850 00—	1,150 00
For Department of Zoology—		
For current expenses	250 00	
For microscopes	200 00—	450 00
For Department of Physics—		
For current expenses	110 00	
For apparatus	390 00—	500 00
For Department of Chemistry—		
For current expenses	225 00	
For apparatus	237 00	
For analyzing, without charge, articles of general public interest	75 00—	537 00
For Department of Domestic Economy		300 00
For Department of Veterinary Science		190 00
For Department of Military Tactics		300 00
For Museum—Collection of fossils		75 00
For Library—		
For ordinary purchases and expenses	1,000 00	
For books to be used in Department of English Literature	150 00—	1,150 00
For contingent expenses, including clerk hire, stationery, care of public rooms, carrying mail, ringing bell, etc	1,000 00	
For putting up telephone line	63 40	
For purchasing stove for farm-house	45 00—	1,108 40

For heating and lighting public rooms, and for purchase of coal for boarding department to be repaid from charges against students	$ 2,190 00
For sabbath service in College chapel	100 00
For use of sanitary committee	100 00
For department circulars	200 00
For advertising the College by means of circulars	400 00
For care of grounds immediately surrounding domestic economy building—to be expended by Prof. Bessey	50 00
For protecting banks of creek running through College lawn	200 00
Total from interest fund	$41,850 40

FROM FURNACE PIPING APPROPRIATION:

For repairs of pipes	150 00

In addition to the foregoing there was appropriated to the departments the proceeds of their ordinary sales.

The professors in charge of the industrial departments were authorized to make purchases for their respective departments, consulting the President of the College upon general methods of management and all unusual expenditures. It was directed that all other appropriations should be expended under the direction of the President upon consultation with the heads of departments, and in such manner as not to cause even temporary financial embarrassment to the institution.

OFFICERS.

The officers and teachers for 1880 were elected at the meeting of the Board held in December, 1879. Their names and salaries were reported to the General Assembly in the Eighth Biennial Report.

In the spring of 1880, Dr. D. S. Fairchild was voted a salary of $400 per annum for his lectures to the students of the Veterinary School. At the close of the first term Miss Winifred Dudley, Teacher of Instrumental Music, resigned, and Miss Ermina Athearn was elected to that position. No other changes in officers or their salaries occurred during that school year.

At the annual meeting in the fall the following action was taken:

The Board accepted with regret the resignation of Mrs. Mary B. Welch as Preceptress. Her salary as Lecturer on Domestic Economy was fixed at $1,000 per annum.

Miss Martha Sinclair was elected Preceptress and Instructor in English, French, and German, at an annual salary of $1,100.

In addition to their regular salaries, Prof. S. A. Knapp was allowed $200 per annum as Superintendent of the Farm, and Prof. J. L. Budd $200 per annum as Superintendent of the Garden.

Mr. Charles F. Mount was elected Assistant Professor of Civil Engineering at a salary of $900 per annum.

Mr. E. D. Harvey was elected Assistant in Chemistry at a salary of $300, and Mr. Geo. C. Faville Assistant in Veterinary Science at a salary of $200 per annum.

The salaries of the following officers were increased:

Dr. D. S. Fairchild from $400 to $500 per annum; Herbert Osborn from $300 to $500 per annum; H. D. Harlow, Proctor, from $62 per month to $800 per annum.

The salary of Gen. J. L. Geddes as Steward was reduced from $600 to $400, while his salary as Vice-president and Professor of Military Tactics was increased from $900 to $1,100. His salary as Deputy Treasurer was continued at $400, leaving his aggregate salary the same as for the previous year.

The Board directed that all advanced salaries and salaries of newly-elected officers should begin March 1, 1881, except in the case of Mr. Osborn, whose advanced salary was fixed to commence with the fiscal year, November 10, 1880.

Mrs. Thomson presented her resignation as Housekeeper, to take effect March 1, 1881. Resignation accepted and Secretary Stanton directed to tender her the thanks of the Board for her past valuable services.

Mr. A. B. Shaw presented his resignation as Foreman of the Printing Office. The resignation was accepted to take effect at the close of the year's work.

The action of President Welch in assigning the various zoological studies to Professor F. E. L. Beal was approved by the Board.

The title of Professor W. H. Wynn was changed from Professor of English Literature to Professor of English Literature and Science of Language.

Miss Jennie Perrett was appointed first assistant and Miss Sarah E. Smith second assistant in the library for the school year of 1881, at the usual compensation allowed for such services.

The services of the other officers of the College were continued at the salaries of the preceding year.

Previous to the opening of the spring term in March, 1881, Mr. T. L. Smith, who had been re-elected Assistant in Mathematics and Foreman in the Workshop, gave notice of his resignation. President Welch, who had been empowered by the Board to fill vacancies, engaged Mr. J. C. Hainer as Assistant in Mathematics and Instructor

in Book-keeping, and Mr. Fremont Turner as Foreman in the Workshop. At the May meeting of the Board the action of President Welch was approved. The salary of Mr. Hainer was fixed at $500 per annum, and Mr. Turner was allowed $2.50 per day for time actually employed.

In August, 1881, Mr. Geo. C. Faville resigned his position as Assistant in Veterinary Science, to take effect from that date.

At the November meeting of the Board the following changes occurred:

Mr. H. D. Harlow, for several years Proctor of the College, presented his resignation to take effect March 1, 1882. His resignation was accepted and a resolution adopted expressing the high appreciation by the Board of his long and faithful service to the institution.

Gen. J. L. Geddes was relieved of the duties of Steward. He was elected Treasurer of the College at a salary of $400 per annum, to be paid by the State. He was also assigned the classes in book-keeping. His salary as Vice-president, Professor of Military Tactics, and Instructor of Drawing and Book-keeping, was fixed at $1,400, making his total salary $1,800 per annum.

Professor S. A. Knapp was appointed Manager of the College Boarding Department. He was allowed $300 per annum for said service, to be paid from the receipts of the department.

Mr. Charles F. Mount was elected College Recorder in addition to his duties as Assistant Professor of Civil Engineering, and his salary advanced from $900 to $1,000 per annum.

Mr. J. C. Hainer was elected Proctor and Assistant in Mathematics at a salary of $800 per annnm.

The salary of Professor Wynn was advanced from $1,600 to $1,700 per annum, and that of Herbert Osborn from $500 to $700 per annum.

Miss Sarah E. Smith was elected first assistant in the library for the first term of the school year of 1882; Miss Hattie A. Perrett, second assistant for the first term and first assistant for the second term; and Miss Mary McDonald second assistant for the second term.

The following is a list of the officers and teachers for 1882, with their salaries as fixed by the Board of Trustees:

A. S. WELCH, LL. D., PRESIDENT,
Professor of Psychology and Philosophy of Science.
Salary, $3,100. To conduct sabbath exercises two-thirds of school year.

GEN. J. L. GEDDES, M. PH., VICE-PRESIDENT,
Professor of Military Tactics and Engineering, Treasurer and Instructor in Book-keeping and Drawing.
Salary, $1,800. Salary as Treasurer ($400), to be paid by the State.

W. H. WYNN, A. M., PH. D.,
Professor of English Literature, and Science of Language.
Salary, $1,700. To conduct sabbath exercises one-third of the school year.

C. E. BESSEY, M. S., PH. D.,
Professor of Botany.
Salary, $1,600.

A. THOMSON, C. E.,
Professor of Mechanical Engineering and Superintendent of the Workshop.
Salary, $1,600.

F. E. L. BEAL, B. SC.,
Professor of Civil Engineering, and acting Professor of Zoology.
Salary, $1,600.

T. E. POPE, A. M.,
Professor of Chemistry.
Salary, $1,600.

M. STALKER, B. SC., V. S.,
Professor of Veterinary Science.
Salary, $1,600.

J. L. BUDD, M. H.,
Professor of Horticulture.
Salary, $1,800.

J. K. MACOMBER, B. SC.,
Professor of Physics, and Librarian.
Salary, $1,600.

E. W. STANTON, B. SC.,
Professor of Mathematics and Political Economy, and Secretary of Board of Trustees.
Salary, $1,800. Salary as Secretary ($200), to be paid by the State.

S. A. KNAPP, LL. D.,
Professor of Practical and Experimental Agriculture, Superintendent of the Farm, and Manager of College Boarding Department.
Salary $2,100. Salary as Manager of Boarding Department ($300), paid from receipts of department.

D. S. FAIRCHILD, M. D.,
Professor of Pathology, Histology, and Therapeutics, and Chairman of Sanitary Committee.
Salary, $500.

MRS. MARY B. WELCH,
Lecturer on Domestic Economy.
Salary, $1,000.

MISS MARTHA SINCLAIR, PRECEPTRESS,
Instructor in French and English.
Salary, $1,100.

C. F. MOUNT, C. E.
Assistant Professor of Civil Engineering, and College Recorder.
Salary, $1,000.

HERBERT OSBORN, M. SC.,
Assistant in Zoology and Entomology.
Salary, $700.

J. C. HAINER, B. SC.,
Proctor, and Assistant in Mathematics.
Salary $800.

——— ———,
Foreman and Teacher in the Workshop.
Allowed $2.50 per day for time actually employed.

——— ———,
Assistant in Chemical Laboratory.
Salary, $300.

ERMINA ATHEARN,
Teacher of Instrumental and Vocal Music.
Allowed the tuition charged students; also a room, board, fires and lights, and incidentals during the school year for assisting in keeping order in ladies' hall.

The salaries of the Treasurer, the Secretary, and the Assistant in Zoology and Entomology begin with the fiscal year, November 10, 1881. All the other salaries commence March 1, 1882. A house upon the College grounds is set aside for occupancy by the Secretary; also one for the use of the Superintendent of the Workshop; the portion of South Hall not used by the Department of Domestic Economy is to be occupied by the Professor of Botany.

The President of the College was authorized to employ a foreman for the workshop and an assistant for the chemical laboratory.

COLLEGE TREASURER AND COLLEGE ACCOUNTS.

At the annual meeting of the Board in 1879, Mr. W. M. Greeley, of Ames, was elected Treasurer for the fiscal year of 1880. Gen. J. L. Geddes served as his deputy.

In December, 1880, Mr. Wm. D. Lucas was chosen Treasurer for the following year, at a salary of $250 per annum. Gen. Geddes was appointed by him Deputy Treasurer, at a salary, fixed by the Board, of $400 per annum. Under the authority of the Board the Secretary made settlement with Mr. Greeley, and on December 16th Mr. Lucas entered upon the duties of his office.

At its last annual meeting the Board elected Gen. J. L. Geddes Treasurer for the fiscal year commencing November 10, 1881. His salary was fixed at $400 per annum, to be paid by the State.

During the biennial period reports of the financial transactions of each year have been submitted by the Deputy Treasurer. The Secretary has made monthly examinations of the Treasurer's books and vouchers, and the results of these examinations have been reported to the Board. The Executive and Finance Committee have compared the reports of these officers and made such further examinations of the Treasurer's books as to satisfy themselves of the substantial accuracy of his accounts. The limited time allowed the Board by law for the transaction of the business of the year does not permit such extended investigation by them of the College accounts as would seem desirable. At the late meeting of the Board the Secretary proposed certain changes in the present method of keeping the accounts, with a view to a simpler and more intelligible system. These changes as set forth in full in the report of the Secretary, found on page 79, were adopted, and a committee appointed to prepare books, blanks, and make all other arrangements necessary to inaugurate the new plan. The Board of Audit was given full powers to see that the details as far as they relate to the College accounts were strictly adhered to by the heads of departments. The Manager of the Boarding Department was given full charge of the accounts of that department; it was provided, however, that the Secretary of the Board should examine these accounts at the close of each term, and at such other times as he might deem advisable, and that for such purpose he should have free access to the books and papers of the department.

The Board of Audit and the Manager of the Boarding Department were appointed a committee to determine the portion of the expense of heating, lighting, and cleaning the main building which should be paid from College funds.

LAND DEPARTMENT.

A detailed statement of the transactions of this department for the biennial period ending November 1, 1881, was submitted by Agent Bassett. (See page 91.)

Annual settlements were made by the Secretary with the Agent and reported to the Board. (See page 87.)

In May, 1880, the Board made a new contract with Mr. Bassett, of which the following is a copy:

CONTRACT WITH G. W. BASSETT.

This agreement made this 24th day of May, A. D. 1880, by and between the Board of Trustees of the Iowa State Agricultural College and Farm, party of the first part, and Geo. W. Bassett, of Fort Dodge, Iowa, party of the second part, *witnesseth:* That said second party is hereby re-appointed the agent of the first party, for a term commencing at the date hereof, and ending December 31, 1885, and empowered to take a general charge of the lands granted to the State of Iowa by an act of Congress approved July 2, 1862, entitled: "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and mechanic arts."

Also of the lands purchased with accumulated interest fund and designated for the purpose of identification as the "Sioux City Purchase," and is also empowered to receive and receipt for all sums paid as principal and interest or rents upon leases heretofore made and that may hereafter be made through the said agency, and to transmit the sums so collected to the Treasurer of the said Iowa State Agricultural College and Farm.

Said agent is also authorized to lease any or all the said lands remaining undisposed of, and any that may be hereafter forfeited for non-payment of principal or interest as provided by statute, and the order of said first party, and to enter such forfeitures upon such failure of payment, and in general as the financial agent of said first party to do all acts necessary to accomplish the purpose of such agency as above set forth.

Said agent shall, at his office in Fort Dodge, receive and receipt for money tendered him in payment of principal, interest or rents due, or to become due on account of leases or sales of the said lands; he shall conduct all necessary correspondence, shall offer in the market such lands as remain unleased, and to the best of his ability promote the interests of the said department; he shall keep such books and accounts as may be necessary to show at all times the condition of the several funds in his hands.

He shall pay over to the Treasurer of the Iowa State Agricultural College and Farm, monthly, all money in his hands, rendering separate accounts of principal and interest, and of the several permanent funds, and shall transmit to the Secretary of said first party detailed statements of his accounts in the form heretofore adopted.

He shall receive and deliver to purchasers patents of said lands

which may come into his hands in the course of his agency, first preparing and transmitting to the Treasurer of said College certificates of purchase for the purpose of procuring said patents.

He shall annually report to the party of the first part, the transactions of said agency and make annual settlements. He shall also report to the said first party for reappraisement such tracts of land as may hereafter be forfeited.

And in consideration of said services and expenses, said second party, as full compensation therefor, shall be entitled to charge and collect the following fees.

For leasing a quarter section or less subdivison, fourteen dollars.

For correspondence and services in procuring renewals of leases and expenses incurred, five dollars for each renewal.

Also the sum of one dollar per annum on each lease as a collection fee, and the sum of two dollars for obtaining a patent as provided in leases as heretofore made; in all above cases to be paid by the lessee or purchaser, to the end that said agency may be conducted without expense to the said Iowa Agricultural College, except as hereinafter provided.

It is further agreed that said first party will, at its own charge, provide for the use of said agency such permanent books of record as may be necessary in conducting said business, including interest receipt books, and shall provide blank leases and certificates of purchase and shall also pay the exchange upon funds transmitted by said agent to the Treasurer of said College.

Said agency shall be conducted at Fort Dodge, Iowa, for the term herein before stated, time being an essential element of this contract, it being the intent of said parties thereby to secure permanancy in the conduct and management of said business.

Said agency shall be conducted substantially as heretofore as to form, this contract being intended as a substitute for and superseding two similiar contracts relating to said subject, one bearing date March 31, 1876, and the other the 13th day of May, 1876. And the salary provided for in the last named contract shall cease from May 13, 1880.

It is also agreed that said first party shall, by its Secretary or other duly authorized officer, examine annually the accounts of said agent at Fort Dodge, to the end that full and complete settlement may be made annually of the said accounts.

In witness whereof the said Board of Trustees have caused the said contract to be entered of record and these presents to be executed by

its Chairman and Secretary, with the seal of said Iowa State Agricultural College and Farm hereto affixed at the date above written, and said George W. Bassett has hereunto affixed his signature.

HENRY G. LITTLE,
Chairman Board of Trustees.
E. W. STANTON,
Secretary Board of Trustees.
[SEAL.] GEORGE W. BASSETT.

A bond in the sum of $10,000, conditioned on the faithful performance of the foregoing contract, was given by Agent Bassett and approved by the Board.

The committee on College lands reported the following tracts reappraised during the biennial period:

Endowment fund land forfeited January 2, 1880.

PART OF SECTION.	Section.	Township.	Range.	Acres.	Old price.	New price.
w hf sw qr	28	99	48	88	$ 2 25	$ 5 00
sw qr	31	95	27	156.84	3 00	3 00
nw qr	28	95	27	160	3 50	3 50
ne qr	29	95	27	160	3 50	3 50
sw qr	24	94	32	160	3 50	3 50
nw qr	26	99	33	160	5 00	5 00
sw qr	26	99	33	160	5 00	5 00
se qr	26	98	33	160	3 00	3 00
ne qr	12	97	34	160	3 00	3 00
nw qr	12	90	46	160	5 00	5 00
nw qr	9	98	29	160	3 00	3 00
nw qr	9	93	27	160	3 00	3 00
ne qr	32	97	30	160	3 50	3 50
sw qr	28	99	33	160	4 00	4 00
sw qr	26	98	33	160	4 00	4 00
sw qr	13	100	36	160	4 00	4 00
w hf se qr	22	98	29	80	5 00	5 00
nw qr	28	93	36	160	4 00	4 00
sw qr	27	95	27	160	3 50	3 50

Endowment fund land forfeited January 19, 1880.

s hf se qr	22	90	47	80	5 25	6 00

Endowment fund land forfeited June 11, 1880.

PART OF SECTION.	Section.	Township.	Range.	Acres.	Old price.	New price.
ne qr	20	94	32	160	$ 2 25	$ 3 50
se qr	36	98	30	160	2 25	3 50
ne qr	26	95	27	160	3 00	3 50
se qr	20	94	33	160	3 50	4 50
ne qr	6	89	43	151.88	4 00	5 00
w hf nw qr	28	89	33	80	3 50	4 00
nw qr	4	98	33	162.35	3 50	4 00
sw qr	4	98	33	160	3 50	4 00
se qr	28	96	36	160	4 00	5 00

Endowment fund land forfeited July 1, 1880.

nw qr	30	94	32	159.90	2 25	3 50
se qr	26	94	32	160	2 25	3 50
ne qr	15	89	43	160	2 25	4 00
nw qr	15	89	43	160	2 25	4 00
se qr	15	89	43	160	2 25	4 00
sw qr	15	89	43	160	2 25	4 00
se qr	12	94	37	160	2 25	4 00
sw qr	12	94	37	160	2 25	4 00
sw qr	32	90	32	160	4 30	5 00
se qr	25	95	28	160	2 25	5 00
ne qr	4	98	34	153.31	2 55	4 00
nw qr	4	98	34	152.33	2 65	4 00
se qr	32	95	33	160	3 50	3 50
sw qr	30	95	27	163.43	3 00	4 00
ne qr	13	94	28	160	5 00	5 00
n hf nw qr	2	87	41	76.77	4 00	4 00
w hf se qr	23	97	27	80	3 50	3 50
s hf ne qr	4	93	36	80	4 00	4 00
sw qr	27	99	31	160	3 50	4 00
ne qr	24	98	34	160	3 00	3 50

Endowment fund land forfeited December 4, 1880.

sw qr	24	96	28	160	5 00	6 00
sw qr	32	99	30	160	3 50	4 00
nw qr	10	97	29	160	4 00	5 00

Endowment fund land forfeited November 1, 1881.

ne qr	30	96	33	160	2 25	5 50
sw qr	34	97	28	160	4 00	5 00
sw qr	34	98	30	160	3 50	5 00
sw qr	30	86	44	82.37	3 50	4 00
s hf sw qr	18	90	46	80	5 00	5 00
e hf se qr	22	98	29	80	5 00	6 00
e hf se qr						

Contingent fund land forfeited January 2, 1880.

e hf nw qr	34	93	36	80	2 50	4 00
se qr	30	91	43	160	2 00	3 50
se qr	24	93	36	160	2 50	3 50

Contingent fund land forfeited June 11, 1880.

PART OF SECTION.	Section.	Township.	Range.	Acres.	Old price.	New price.
ne qr	24	100	38	160	2 00	4 00
nw qr	24	100	38	160	2 00	4 00
se qr	24	100	38	160	2 00	4 00
sw qr	24	100	38	160	2 00	4 00

Contingent fund land forfeited July 1, 1880.

se qr	18	99	47	160	2 00	5 00
nw qr	17	99	47	160	4 50	5 00
ne qr	18	99	47	160	4 50	5 00

Contingent fund land forfeited December 4, 1880.

ne qr	36	93	36	160	2 50	5 00

Contingent fund land forfeited November 1, 1881.

sw qr	29	98	47	160	5 00	5 00
sw qr	17	99	47	160	4 50	5 00

Report adopted.

In December, 1880, Trustee Wright was appointed a committee to reappraise the College lands in Woodbury and Plymouth counties. The following is his report:

LIST OF LAND REAPPRAISED.

Woodbury County.

ne qr	10	86	42	160	$ 5 00	$ 4 00
e hf nw qr	10	86	42	80	5 00	4 00
se qr	10	86	42	160	5 00	4 00
e hf sw qr	10	86	42	80	5 00	4 00
ne qr	14	86	42	160	5 00	4 00
nw qr	14	86	42	160	5 00	4 00
se qr	14	86	42	160	5 00	4 00
se hf ne qr	36	87	42	80	5 00	4 00
se qr se qr	36	87	42	40	5 00	4 00
se qr	11	89	42	160	4 00	3 00
ne qr	28	86	43	160	3 75	3 00
se qr	28	86	43	160	3 75	3 00
ne qr	6	87	43	160.72	3 50	3 00
n hf and sw se qr	6	87	43	120	3 50	3 00
se qr	20	88	43	160	4 00	3 00
ne qr	30	88	43	160	4 00	3 00
se qr	14	89	43	160	4 00	4 00
sw qr	4	86	44	160	3 00	3 00
se qr	6	86	44	160	4 00	4 00
sw qr	10	86	44	160	3 00	3 00

Woodbury County--Continued.

PART OF SECTION.	Section.	Township.	Range.	Acres.	Old price.	New price.
ne qr	30	86	44	160	$ 3 50	$ 3 50
nw qr	30	86	44	163.44	3 50	3 50
se qr	30	86	44	160	3 50	3 50
n hf sw qr	30	86	44	82.11	3 50	3 00
e hf se qr	32	86	44	80	3 00	3 00
se qr sw qr	32	86	44	40	3 00	3 00
se qr	2	89	44	160	4 00	4 00
se qr	6	89	44	160	4 00	3 00
se qr	12	89	44	160	4 00	5 00
s hf se qr	32	87	45	80	4 00	3 50
nw qr	36	87	45	160	3 75	3 75
nw se qr	36	87	45	40	3 75	3 75
sw qr	36	87	45	160	3 75	3 75
se qr	14	89	46	160	6 00	6 00
ne qr	22	89	46	160	5 00	5 00
nw qr	32	89	46	160	6 00	6 00
sw qr	32	89	46	160	6 00	6 00
nw qr	6	89	47	161.17	5 00	5 00
se qr	6	89	47	160	5 00	5 00
ne qr	6	89	44	151.88	5 00	5 00

Plymouth County.

se qr	30	91	43	160	3 50	3 50
nw qr	8	90	46	160	5 00	4 00
nw qr	12	90	46	160	5 00	4 00
w hf se qr	18	90	46	80	5 00	4 00
sw qr	22	90	46	160	5 00	4 00
sw qr	28	90	46	160	6 00	5 00
n hf se qr	10	90	47	80	4 00	4 00
s hf se qr	10	90	47	80	4 50	4 00
n hf se qr	26	90	47	80	6 50	5 00
s hf se qr	26	90	47	80	4 00	4 00
se qr	26	90	47	160	4 00	4 00
se qr	10	90	48	160	4 00	4 00
ne qr	30	92	48	160	5 50	3 50
nw qr	30	92	48	162.60	5 50	3 50
ne qr	28	93	48	160	5 00	4 00
nw qr	28	93	48	160	5 00	4 00
nw qr	35	92	49	160	5 00	4 00
sw qr	35	92	49	160	4 00	4 00

Report adopted.

At the last annual meeting the Board directed agent Bassett to increase the valuation of such lands in Kossuth, Emmet and Palo Alto counties, as he, in his judgment, deemed appraised at too low a figure.

The Board submitted to the Attorney-general for his opinion the question of the right of the lessee of College lands, to pay the principal of his lease at any time prior to the expiration of the term of his lease; also the question of the legality of taxing renewed leases.

Upon the first question the Attorney-general decided as follows:

(1.) "In my opinion persons claiming under leases issued under laws of 1864, have no right to make payments until the expiration of the lease.

(2.) "Persons claiming under either original or renewals, issued when laws of 1866 were in force, have the right to make payments in full at any time.

(3.) "That persons, claiming under leases or renewals issued when laws of 1874 were in force, have no right to make payment in full until the expiration of the lease."

The following is his opinion upon the question of taxation:

"In my opinion these lands are not taxable until the College ceases to have an ownership in them; or until the purchaser has a right to final papers, showing his title and ownership. In other words, as long as there is only a lease outstanding the lands are not taxable."

By an order of the Board, passed in May, 1880, Agent Bassett was authorized to loan the amount to the credit of contingent principal fund at seven per cent on farm mortgages, as per the terms of his contract of July 24, 1878. During the past two years his reports to the Board show that he has loaned $4,700, leaving a balance now on hand of $4,300.

FARM DEPARTMENT.

In December, 1880, the Board made an arrangement with Professor Stalker to purchase, while in Scotland, a Clydesdale stallion and one or more filleys, for the College Farm. For this purpose an appropriation of $1,500, was made from interest fund. At the meeting of the Board in May, 1881, Professor Stalker reported that in accordance with the agreement, he purchased a Clydesdale stallion and one filley, securing the same upon advantageous terms. The stock was shipped in good condition, but the passage proved to be an exceedingly stormy one and during the voyage the stallion died. The filley arrived in fair condition. The stallion was insured, and the insurance has since been paid. Subsequently a Clydesdale stallion was purchased, under the advice of the Farm Committee, from J. B. Grinnell, and of Grinnell, Iowa.

At the first meeting in November, 1881, the Farm Committee reported in favor of the purchase of a herd of six Holsteins, from the Unadilla Valley Stock-Breeders Association, of New York. The sum of $1,600 was appropriated for that purpose.

At the request of Professor Knapp, the order requiring the farm to supply the boarding department with beef, was rescinded.

An order was passed forbidding the keeping of stock, under treatment by the Veterinary School, in the farm barns or allowing them access to the watering-troughs, yards, pastures, or any portion of the farm visited by the farm stock.

Arrangements were made with Professor Knapp, by which he continues to occupy the farm-house upon the following conditions:

(1.) That he shall be allowed the use of the house and furniture free of rent.

(2.) That the furniture shall be inventoried, and that the said S. A. Knapp shall be responsible to the College for said inventory.

(3.) That he shall not be required to make good the natural wear of the furniture, but that in no case will the College purchase additional furniture for said house.

(4.) That he shall be allowed to furnish the extra horse required upon the farm, and in consideration therefor, be permitted to use the same for private purposes when not required upon the farm.

(5.) That Mrs. S. A. Knapp be granted the privilege of keeping a boarding-house in connection with said farm-house, provided that she accept no students as boarders except upon the consent of the President of the College; that she board the employes of the College Farm at the rate of $3 per week for each boarder; but that in all other cases she be allowed to charge such reasonable rates as she and the parties seeking board may agree upon.

(6.) That in consideration of the wood furnished the creamery and the workman's office, said Mrs. Knapp shall be allowed the down-wood in the timber, the same to be cut and hauled at her expense.

The report of Professor Knapp on the operations of the farm was read and ordered printed. (For report see page 12.)

ENTOMOLOGY.

At the last annual meeting the following resolution was adopted:

Resolved, That the Trustees propose to the legislature that the College will make classifications of the harmful insects of the State, and prepare all possible information respecting their habits and the means of their destruction, provided the State will meet the expenses of publication.

COLLEGE QUARTERLY, DEPARTMENT CIRCULARS, AND PRINTING OFFICE.

At the annual meeting in 1880, the Board directed that the *College Quarterly* should be discontinued. It was further provided that when any three or more of the officers of the College should prepare papers on the results of experiments or original investigations, the President be authorized to publish the same in a single pamphlet or separate ones to the number of 3,500 copies, to be circulated throughout the State.

The Board of Audit was authorized to sell all the material belonging to the College printing office to John Watts for the sum of $1,50 and to arrange with said Watts for doing the College printing.

COLLEGE BOARDING DEPARTMENT.

In November, 1880, Professors Stanton, Knapp, Budd, Geddes, and Mrs. Welch were appointed a committee to consider and propose plans for the management of the College boarding department and for conducting the experimental kitchen in connection with the same.

At the December meeting the committee submitted its report. Its recommendations were in substance as follows:

(1.) That the department be placed under the charge of a superintendent, who should be responsible to the Board of Trustees for its successful management.

(2.) That a housekeeper be employed who should give her whole time and attention to the details of the department, consulting the Superintendent on all matters affecting its general welfare or financial interests.

(3.) That an advisory committee be appointed to consult and advise with the Superintendent in regard to the general management of the department.

(4.) That student labor in the department be abolished. This was found necessary in order to reduce the cost of labor to the minimum and permit a thorough systematizing of the work.

(5.) That certain proposed changes be made in the quality of the supplies.

(6.) That the price of board be reduced from $2.50 to $2.25 per week; that the room rent charged students boarding in the College building be reduced to $1.50, $1.25, or seventy-five cents per term, depending upon the location of room; that the College furnish each room with a wardrobe, a bedstead, a wash-stand, and a table, and that

students be required to supply the rooms with all other furniture; and that the charge for incidental expenses to students boarding outside the building be reduced from $5 to $3 per term.

(7.) That the young women of the freshman class be instructed in plain cooking, using the hours from ten to twelve, in the small kitchen of the main building, helping to prepare the noon meal for the students, and that they receive all supplies from the Superintendent of the boarding department, and return them cooked to the tables of the dining-room.

The report was adopted, and Professors Stanton, Knapp, Budd, Geddes, and Mrs. Welch appointed members of the advisory committee.

At the same meeting of the Board this committee submitted the following recommendations:

(1.) That Gen. J. L. Geddes be appointed Superintendent of the boarding department at a salary of $400 per annum and board during the school year.

(2.) That he be empowered to employ a housekeeper, with the advice and consent of the committee.

(3.) That after the appointment of the Superintendent and Housekeeper the powers of the committee be advisory only.

Report adopted.

At the meeting of the Board in May, 1881, the advisory committee, at its own request, was discharged. A new committee, with the same powers, was appointed—the new committee consisting of Professors Stanton, Knapp, and Budd, and Mrs. Welch.

At the annual meeting the committee reported as follows:

(1.) That the essential features of the plan adopted at the beginning of the year had been put into operation.

(2.) That, notwithstanding the reduction in the price of board of twenty-five cents per week, and the general advance in the price of provisions, the department had been able to furnish board, in general satisfactory to the students, and yet show a small balance at the close of the year.

The report of the committee and the report of the Superintendent show the following financial results:

	Dr.	Cr.
Cash on hand at the beginning of the year to the credit of board and laundry accounts		$ 197.87
Amount received from boarders		12,668.92
Cash paid for labor and supplies	$ 12,605.30	
Cash on hand at the close of the year	261.49	
	$ 12,866.79	$ 12,866.79

The sums received from room rent, fires and lights and incidentals were all used to meet the expenses of those accounts.

The arrangements made by the Board of Trustees for the running of the department for the coming year were as follows:

(1.) Professor S. A. Knapp was appointed a committee to manage the department, and Mrs. Knapp and Mrs. Welch were elected an advisory committee. The salary of Professor Knapp was fixed at $300, to be paid from the receipts of the department. He was required to give a bond in the sum of $5,000, to be approved by the Board of Audit.

(2.) The committee were given full charge of all matters pertaining to the Steward's department, subject to such regulations as the Trustees might make. They were directed to keep the expenditures for the year within the receipts, and at the close of the year to render a full and accurate account of all moneys received and expended, and to furnish vouchers for the same.

(3.) Professor Thomson was appointed a committee to take charge of all matters involving expenditures on account of fires and lights. He was directed to consult with Professor Knapp regarding contracts for the purchase of coal, and all other expenses incurred.

(4.) The price of board was fixed at $2.15 per week; the charge for fires and lights was reduced to thirty cents per week where one burner was used by two students—ten cents extra being charged each student for an additional burner; the other charges against students remain the same as during the past year.

BOARDING COTTAGE.

The boarding cottage, for the erection of which the last General Assembly appropriated the sum of $3,500, was completed in the fall of 1880. The committee appointed in connection with the College boarding department was also directed to prepare plans for conducting the boarding cottage. The following plan was proposed and adopted:

(1.) The general management of the boarding cottage was placed in the hands of a committee having full power to devise and carry into execution a plan for conducting the same. The order in the cottage was placed under the direction of the College Executive.

(2.) It was provided that each student's room should be furnished with a bedstead, a wash-stand, and a table, and an appropriation for this purpose was made from interest fund. A room-rent charge of $1 per term for each student was established, the proceeds of which

should constitute a fund for keeping in repair the furniture purchased by the College.

The Board appointed Professors Stanton, Knapp, Budd, and Geddes, and Mrs. Welch as the committee to take charge of the boarding cottage. At the meeting in May, 1880, General Geddes was, at his own request, excused from the committee. During the year Professor Stanton has acted as manager and Mrs. Fogarty, of Fort Dodge, as housekeeper. The result of this first experiment by the College with the boarding cottage system is thus set forth in the report of the committee to the Board of Trustees:

"In the management of the cottage it has been the aim of the committee to reduce the expenses of the student to the lowest possible figure consistent with furnishing board of good quality, and making the enterprise entirely self-supporting.

"We report:

"*First*—That the charge of $2 per week for board, fires, and lights established last spring by the committee has been continued as the regular rate during the year.

"*Second*—The quality of the board has as far as the committee can learn given general satisfaction to the students.

"*Third*—The receipts have been sufficient to meet all the running expenses, and pay the entire indebtedness incurred at the beginning in purchasing utensils and furniture for the boarding department, said indebtedness amounting to $219. About $50 worth of additional furniture has also been purchased and paid for."

Professors Stanton, Budd, and Mrs. Welch were appointed a committee to manage the cottage for 1882 under the same general plan as that pursued in the preceding year.

MATTERS RELATING TO STUDENTS.

At the College commencements in 1880 and 1881 the following students were graduated:

CLASS OF 1880.

In the Course in Sciences Relating to Agriculture.—Merritt J. Bailey, Dayton D. Briggs, Frank Boddy, Orson S. Brown, Montague Hakes, James Hassett, Edwin Daniel Harvey, David Sewell Hardin, Robert Morris Nicholson, George Edmund Reed, James Leonidas Simcoke, William Buckingham Welch.

In the Course in Sciences Relating to the Industries.—Charles Henry McGrew, Charles Dillon Taylor.

In the Ladies' Course in Science.—Carrie Clinton Lane.

In the Course in Veterinary Science.—William Albert Thomas, James Vincent, Jr., and George Crary Faville.

CLASS OF 1861.

In the Course in Sciences Related to the Industries.—Nellie May Bell, Alex. M. Beresford, Thomas Burke, Marilla Jane Crossmun, Charles Matthew Coe, James S. Dewell, Elbert C. Fortner, Frank Eugene Furry, Mark J. Furry, Julia M. Hanford, Robert John Hopkins, John Lain McGavern, William H. McHenry, Fannie J. Perrett, Dora Sayles, Thomas W. Shearer.

In the Course in Civil Engineering.—William C. Armstrong, Carlton A. Dodge, Frank Eugene Colby, William O. McElroy.

In the Course in Veterinary Science.—R. A. Holyoke.

Upon students graduating in the "Course in Sciences Relating to Agriculture," the "Course in Sciences Related to the Industries," or "The Ladies Course in Science," there was conferred the degree of Bachelor of Science (B. S.); upon students graduating in the "Course in Civil Engineering" there was conferred the degree of Bachelor of Civil Engineering (B. C. E.) and upon the students graduating in the "Course in Veterinary Science" there was conferred the degree of Bachelor of Veterinary Medicine (B. V. M.).

Post graduate degrees were conferred as follows: the degree of Master of Science (M. S.) upon Herbert Osborne of the class of 1879, and W. Keltner Robbins of the class of 1878; the degree of Doctor of Veterinary Medicine (D. V. M.) upon George C. Faville of the class of 1879.

President Welch was authorized to allow the class of 1880 to exchange the diplomas they now hold for diplomas reading "In the Course in Sciences Related to the Industries," upon the payment of the regular fee for said diplomas.

The graduating fee was reduced from $5 to $2.

The charges against students for the school year of 1882, were fixed as follows:

Board per week	$2.15
Lighting and heating, per week, single burner	.30
Lighting and heating, per week, double burner	.40
Incidentals, per week	.21

Room rent, per term	.75 to 1.50
Washing, average per dozen	.50
Janitor's fee for stutents not boarding in the College building, per term	3.00
Board, fires and lights at the cottage, per week (students splitting their own wood)	2.00

MILEAGE AND PER DIEM.

The following is the mileage and per diem of the different members of the Board of Trustees for the biennial period.

1880.

NAMES.	RESIDENCE.	Number of meetings.	Total number miles.	Mileage.	Total number days.	Per diem.	Total.
John N. Dixon	Oskaloosa	5	924	$ 46 20	30	$ 120 00	$ 166 20
Wm. McClintock	West Union	5	1,850	92 50	35	140 00	232 50
George H. Wright	Sioux City	5	1,800	90 00	35	140 00	230 00
Henry G. Little	Grinnell	5	646	32 30	31	124 00	156 30
Buel Sherman	Fredericksburg	1	394	19 70	4	16 00	35 70
Charles W. Tenney	Plymouth	4	1,096	54 80	30	120 00	174 80

1881.

John N. Dixon	Oskaloosa	4	804	$ 40 20	23	$ 92 00	$ 132 20
Wm. McClintock	West Union	4	1,480	74 00	24	96 00	170 00
George H. Wright	Sioux City	4	1,800	90 00	25	100 00	190 00
Henry G. Little	Grinnell	4	536	26 80	21	84 00	110 80
Charles W. Tenney	Plymouth	2	548	27 40	12	48 00	75 40

E. W. STANTON, *Secretary.*

CALENDAR FOR 1882.

Term opens	Wednesday, March 1.
Entrance Examinations	Wednesday, March 1. Thursday, March 2.
Recitations begin	Friday, March 3.
Term Examinations	June 22, to June 28.
Junior Exhibition	Wednesday, 7:30 P. M. June 28.
Summer Recess begins	Thursday, June 29.
Second Term begins	Tuesday, July 18.
Entrance Examinations	Tuesday, July 18. Wednesday, July 19.
Recitations begin	Wednesday, July 19.
Term Examinations	Nov. 1, to Nov. 8.
Address before the Literary Societies	Monday, 7:30 P. M., November 6.
Address before the Trustees	Tuesday evening, November 7.
Commencement Exercises	Wednesday, November 8.

WINTER VACATION: *From November 9, 1882, to March 1, 1883.*

INDEX.

REPORT

OF THE

JOINT COMMITTEE

OF THE

NINETEENTH GENERAL ASSEMBLY

OF THE

STATE OF IOWA,

APPOINTED TO VISIT THE

STATE AGRICULTURAL COLLEGE,

LOCATED AT

AMES.

PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

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F. M. MILLS, STATE PRINTER.
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