

THE UNIVERSITY OF MINNESOTA.

1907

SEVENTH BIENNIAL REPORT

[NO. 18 IN SERIES.]

OF

THE BOARD OF REGENTS

OF THE

UNIVERSITY OF MINNESOTA

TO THE GOVERNOR,

FOR THE

FISCAL YEARS 1891 AND 1892, ENDING JULY 31ST.

*Transmitted to the Legislature at the Twenty-Eighth
(Seventh Biennial) Session, 1893.*

MINNEAPOLIS:
HARRISON & SMITH, STATE PRINTERS

1892

BOARD OF REGENTS.

| | | |
|-------------------------------------------------|---------|------------|
| The HON. STEPHEN MAHONEY, B. A., Minneapolis, | - - | 1895 |
| The HON. SLOAN M. EMERY, Lake City, | - - - - | 1895 |
| The HON. KNUTE NELSON, Alexandria, | - - - - | 1896 |
| The HON. JOHN S. PILLSBURY, Minneapolis, | - - - - | 1896 |
| The HON. OZORA P. STEARNS, Duluth, | - - - - | 1897 |
| The HON. WILLIAM LIGGETT, Benson, | - - - - | 1897 |
| The HON. JOEL P. HEATWOLE, Northfield, | - - - - | 1897 |
| The HON. GREENLEAF CLARK, M. A., St. Paul, | - - - - | 1898 |
| The HON. CUSHMAN K. DAVIS, M. A., St. Paul, | - - - - | 1898 |
| The HON. WILLIAM R. MERRIAM, St. Paul, | - - - - | Exofficio. |
| The Governor of the State. | | |
| The HON. DAVID L. KIEHLE, LL. D., St. Paul, | - - | Exofficio. |
| The State Superintendent of Public Instruction. | | |
| CYRUS NORTHROP, LL. D., Minneapolis, | - - - - | Exofficio. |
| The President of the University. | | |

OFFICERS OF THE BOARD.

| | | |
|---------------------------------------------------------|---------|--------------------------|
| The HON. JOHN S. PILLSBURY, | - - - - | President. |
| The HON. DAVID L. KIEHLE, | - - | Recording Secretary. |
| President CYRUS NORTHROP, | - - - - | Corresponding Secretary. |
| The HON. O. C. MERRIMAN [Address care Commercial Bank.] | | Treasurer. |

STANDING COMMITTEES.

| | | |
|-------------------|---------|--------------------------------------------|
| Executive, | - - - - | REGENTS PILLSBURY, NORTHROP, KIEHLE. |
| Agriculture, | - - | REGENTS LIGGETT, PILLSBURY, NELSON, EMERY. |
| Course of Study | - - | REGENTS NORTHROP, KIEHLE, HEATWOLE. |
| Library, | - - - - | REGENTS KIEHLE, CLARK, NELSON. |
| Law School, | - - - - | REGENTS CLARK, DAVIS, STEARNS. |
| Medical College, | - - - - | REGENTS LIGGETT, MAHONEY. |
| Auditing Accounts | - - | REGENTS NELSON, MAHONEY, HEATWOLE. |
| Salaries | - - - - | REGENTS MAHONEY, CLARK, LIGGETT. |

THE UNIVERSITY OF MINNESOTA,
OFFICE OF THE BOARD OF REGENTS, }
December 13, 1892.

To His Excellency, WILLIAM R. MERRIAM,

Governor of Minnesota:

SIR: In accordance with the law, I have the honor to present herewith the seventh biennial report of the Board of Regents of the University of Minnesota, for the fiscal years of 1891 and 1892, ending July 31st.

Very Respectfully,

Your obedient servant,

JOHN S. PILLSBURY,

President.

REPORT OF BOARD OF REGENTS

OF THE

UNIVERSITY OF MINNESOTA.

To WILLIAM R. MERRIAM, Governor of Minnesota:

The University of Minnesota was established by act of the legislature approved February 13th, 1851, and by this act the regents and their successors were constituted a body corporate under the name and style of The Regents of the University of Minnesota. This act was amended by an act of the legislature approved February 14th, 1860, and a reorganization was accomplished by an act of the legislature approved March 4th, 1868. The preparatory department was opened in October, 1869, with an attendance of 38 students.

The University has an endowment of land made by the general government under acts of congress approved February 19th, 1851, July 2nd, 1862, and January 8th, 1870, which in the aggregate amounts to 186,000 acres. The permanent university fund is derived from the sales of the lands granted by congress, the pine timber thereon and the minerals therein. The interest on the permanent university fund, together with the legislative appropriations, constitutes the general university fund, which is devoted to the support of the University. Fifteen thousand four hundred and ten acres of land were sold to pay the debts incurred for the erection of the University in 1857 and the total number of acres now owned and unsold and belonging to the University is 51,054 acres.

The amount of the permanent fund at interest at the close of the fiscal year ending July 31st, 1892, was \$996,662.

A statement of receipts and disbursements is as follows :

| | RECEIPTS. | 1891. | 1892. |
|-----------------------------------|-----------|--------------|--------------|
| Balance on hand..... | | \$12,710.79 | \$24,713.56 |
| Interest on permanent fund..... | | 38,427.20 | 42,798.15 |
| Appropriation by legislature..... | | 65,000.00 | 65,000.00 |
| (special)..... | | | 15,761.92 |
| From Hatch Bill..... | | 22,500.00 | 11,250.00 |
| From Morrill Bill..... | | 31,000.00 | 17,000.00 |
| From miscellaneous sources..... | | 30,416.20 | 36,811.10 |
| | | \$200,054.13 | \$213,334.73 |

DISBURSEMENTS.

| | | |
|-------------------------------------------|--------------|--------------|
| Salaries of professors..... | \$102,767.85 | \$115,458.35 |
| Salaries of employes..... | 14,009.64 | 19,401.23 |
| Fuel and lights..... | 11,119.42 | 13,677.68 |
| Library..... | 4,709.82 | 4,264.65 |
| Stationery and printing..... | 3,871.23 | 5,383.13 |
| Furniture, apparatus and instruments..... | 5,038.86 | 5,811.49 |
| Repairs..... | 2,815.74 | 3,914.02 |
| Tools and machinery..... | 1,430.92 | 2,724.71 |
| Postage, &c..... | 897.86 | 1,518.68 |
| Miscellaneous—principally supplies..... | 28,679.38 | 28,549.07 |
| Balance on hand..... | 24,713.56 | 12,581.72 |
| | <hr/> | <hr/> |
| | \$200,054.13 | \$213,334.73 |

See page 39 for treasurer's report in detail.

Statement of the fees received and the expenses of the several departments of the university for the years 1891 and 1892 are as follows:

EXPENSES.

| | 1891 | 1892 |
|--------------------------------------------------|--------------|--------------|
| General University..... | \$14,370.77 | \$15,713.22 |
| College of Science, Literature and the Arts..... | 67,448.54 | 74,085.27 |
| College of Agriculture..... | 19,425.19 | 23,165.58 |
| Veterinary department..... | 2,283.93 | 6,085.24 |
| Military Tactics..... | 1,104.38 | 984.75 |
| College of Mechanic Arts..... | 16,650.70 | 18,065.86 |
| Geological Survey..... | 5,530.94 | 11,290.67 |
| College of Law..... | 5,604.10 | 7,284.14 |
| College of Medicine..... | 17,212.83 | 20,854.70 |
| Experiment Station. { | | |
| Gen. station .. | \$7,231.37 | \$7,094.99 |
| Agriculture... .. | 6,817.24 | 7,800.07 |
| Chemistry... .. | 4,752.98 | 3,354.43 |
| Entomology .. | 3,071.43 | 1,515.42 |
| Horticulture. . | 3,638.23 | 2,981.23 |
| | <hr/> | <hr/> |
| | \$25,511.23 | 22,746.14 |
| | <hr/> | <hr/> |
| | \$175,340.63 | \$200,275.57 |

FEEES.

| | | |
|------------------------------------------------------------|------------|-------------|
| From College of Science, L. and A., and Mechanic Arts..... | \$4,818.75 | |
| From College of Law..... | 4,985.00 | |
| From College of Medicine..... | 7,365.00 | \$17,168.75 |
| | <hr/> | <hr/> |
| Amt. refunded..... | | 306.00 |
| | | <hr/> |
| Am't turned into Treasury, (1891).... | | \$16,862.75 |
| From the Col. of S. L. and A., and the Mechanic Arts..... | 5,428.25 | |
| From the College of Law..... | 7,158.00 | |
| From the College of Medicine..... | 9,100.00 | |
| From the College of Veterinary Dept..... | 280.00 | \$21,966.25 |
| | <hr/> | <hr/> |
| Amount refunded..... | | 557.75 |
| | | <hr/> |
| Amount turned into Treasury, (1892)..... | | \$21,408.50 |

The staffs of professors in the various departments of the University are as follows:

THE COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

THE FACULTY.

CYRUS NORTHROP, LL. D., President.
 WILLIAM W. FOLWELL, LL. D., Professor of Political Science.
 JABEZ BROOKS, D. D., Professor of Greek.
 JOHN G. MOORE, B. A., Professor of German.
 CHRISTOPHER W. HALL, M. A., Professor of Geology and Mineralogy.
 JOHN C. HUTCHINSON, B. A., Associate Professor of Greek and Mathematics.
 JOHN S. CLARK, B. A., Professor of Latin.
 MATILDA J. WILKIN, B. L., Assistant Professor of English and German.
 MARIA L. SANFORD, Professor of Rhetoric and Elocution.
 JOHN F. DOWNEY, M. A., C. E., Professor of Mathematics and Astronomy.
 JAMES A. DODGE, PH. D., Professor of Chemistry.
 CHARLES W. BENTON, B. A., Professor of French.
 O. J. BREDA, Professor of Scandinavian.
 CHARLES F. SIDENER, B. S., Assistant Professor of Chemistry.
 HENRY F. NACHTRIEB, B. S., Professor of Animal Biology.
 GEORGE EDWIN MACLEAN, PH. D., Professor of English.
 HARRY PRATT JUDSON, M. A., Professor of History.
 FREDERICK S. JONES, Professor of Physics.
 CONWAY MACMILLAN, M. A., Professor of Botany.
 HENRY T. ARDLEY, Instructor in Free Hand Drawing.
 W. S. HOUGH, PH. M., Professor of Philosophy.
 O. W. OESTLUND, M. A., Assistant in Animal Biology.
 KENDRIC CHARLES BABCOCK, B. L., Instructor in English and History.
 JOSEPH BROWN PIKE, M. A., Instructor in Latin and French.
 E. EUGENE McDERMOTT, B. S., Instructor in Elocution.
 OSCAR FIRKINS, B. A., Assistant in Rhetoric.
 LOUISE MONTGOMERY, B. S., Assistant in Rhetoric.
 EDMUND P. SHELDON, Assistant in Botany.
 ASA J. HAMMOND, B. A., Assistant in Chemistry.
 AMELIA I. RURGESS, Instructor in Free Hand Drawing.
 WILLIS M. WEST, M. A., Assistant Professor of History.
 GEORGE H. MORGAN, Lieut. U. S. A., Professor of Military Science and Tactics.
 D. L. KIEHLE, LL. D., Lecturer on Pedagogy.
 J. A. NESS, M. A., Instructor in Scandinavian and Latin.

The following is a statement of the receipts and disbursements for this department for the years 1891 and 1892:

| | | |
|------|----------------------|-------------|
| 1891 | { Receipts..... | \$ 3,618.75 |
| | { Disbursements..... | 67,448.54 |
| 1892 | { Receipts..... | 4,028.25 |
| | { Disbursements..... | 74,085.27 |

THE DEPARTMENT OF LAW.

THE FACULTY.

- CYRUS NORTHPROP, LL. D., President.
 HON. WM. S. PATTEE, LL. D., Dean and Professor of the Law of Contracts.
 W. W. FOLWELL, LL. D., Lecturer on International Law.
 FRANK B. KELLOGG, Esq., Lecturer on Equity Jurisprudence and Procedure.
 CHARLES A. WILLARD, LL. B., Lecturer on the Law of Bailments.
 JUDGE JAMES O. PIERCE, Lecturer on Constitutional and Statutory Law.
 JOHN DAY SMITH, LL. M., Lecturer on the Law of Torts.
 HON. GEORGE B. YOUNG, LL. B., Lecturer on the Conflict of Laws.
 HON. H. F. STEVENS, Lecturer on the Law of Real Property.
 HON. C. D. O'BRIEN, Lecturer on Criminal Law and Procedure.
 SELDEN BACON, LL. B., Lecturer on Civil Procedure, including Evidence.
 C. B. ELLIOT, PH. D., Lecturer on Corporations and Insurance.
 PERRY H. MILLARD, Professor of Medical Jurisprudence.
 CHARLES W. BUNN, LL. B., Lecturer on Suretyship and Mortgages, Practice in United States Courts.
 T. DWIGHT MERWIN, Lecturer on Patent Law.
 EDWIN A. JAGGARD, LL. B., Lecturer on Taxation.
 JAMES PAIGE, LL. B., Lecturer on Domestic Relations and Quiz Master.

The following is a statement of the receipts and disbursements of this department for the years 1891 and 1892:

| | 1891. | 1892. |
|---------------------|------------|------------|
| Receipts..... | \$4,985.00 | \$7,158.00 |
| Disbursements | 5,604.10 | 7,284.14 |

THE COLLEGE OF ENGINEERING, METALLURGY AND THE
MECHANIC ARTS.

THE FACULTY.

CYRUS NORTHROP, LL. D., President.

CHRISTOPHER W. HALL, M. A., Dean and Professor of Geology and Mineralogy.

WM. A. PIKE, B. S., Lecturer on Mechanical Engineering.

WILLIAM R. HOAG, C. E., Professor of Civil Engineering.

WILLIAM R. APPELBY B. A., Professor of Mining and Metallurgy.

GEORGE D SHEPARDSON, A. M., M. E., Professor of Electrical Engineering.

JOHN C. HUTCHINSON, M. A., Associate Professor of Mathematics.

HENRY T. ARDLEY, Instructor in Free Hand Drawing.

HARRY E. SMITH, M. E., Instructor in Mechanical Engineering.

AMELIA I. BURGESS, Instructor in Free Hand Drawing.

HARRY W. JONES, Instructor in Architecture.

PETER CHRISTIANSON. B. S., Instructor in Assaying.

W. W. GREENWOOD, B. C. E., Instructor in Mechanical Drawing.

JAMES M. TATE, Instructor in Wood Work.

HARRY J. FRAIKEN, Instructor in Iron Work.

J. E. WADSWORTH, Assistant Professor of Civil Engineering.

HARRY W. DIXON, Engineer.

In this College there are seven regular courses of study, viz: Civil Engineering, Mechanical Engineering, Electrical Engineering, Architecture, Mining, Chemistry and Metallurgy, leading to the corresponding baccalaureate degrees.

Special students are admitted to pursue, under the direction of the faculty, one or two distinct lines of study selected from some regular course. Such students must be persons of mature years. "All applicants, as conditional to their admission as special students, shall pass an examination in so many of the subjects known as requisites for entrance to the regular course of study, as properly belong to or are naturally introductory to the line or lines of study they have elected."

The following is a statement of the receipts and disbursements of this department for the years 1891 and 1892.

| | | |
|------|----------------------|------------|
| 1891 | { Receipts..... | \$1,200.00 |
| | { Disbursements..... | 16,650.70 |
| 1892 | { Receipts..... | \$1,400.00 |
| | { Disbursements..... | 18,065.86 |

THE COLLEGE OF MEDICINE AND SURGERY.

THE FACULTY.

- CYRUS NORTHROP, LL. D., President.
GEORGE A. HENDRICKS, M. S., M. D., Professor of Anatomy.
RICHARD O. BEARD, M. D., Professor of Physiology.
C. J. BELL, A. M., Professor of Chemistry.
H. M. BRACKEN, M. D., L. R. C. S. E., Professor of Materia Medica and Therapeutics.
CHARLES H. HUNTER, A. M., M. D., Professor of the Theory and Practice of Medicine.
EVERTON J. ABBOTT, A. B., M. D., Associate Professor of Practice.
PERRY H. MILLARD, M. D., Dean of the College, Professor of the Principles of Surgery and Medical Jurisprudence.
CHARLES A. WHEATON, M. D., Professor of the Practice of Surgery and Clinical Surgery.
FREDERICK A. DUNSMOOR, M. D., Professor of Operative and Clinical Surgery.
ALEX. J. STONE, M. D. LL. D., Professor of Diseases of Women.
AMOS W. ABBOTT, M. D., Clinical Professor of Diseases of Women.
PARKS RITCHIE, M. D., Professor of Obstetrics.
JOHN F. FULTON, PH. D., M. D., Professor of Ophthalmology, Otology and Hygiene.
FRANK ALLPORT, M. D., Clinical Professor of Ophthalmology and Otology.
C. EUGENE RIGGS, A. M., M. D., Professor of Nervous and Mental Diseases.
JAMES H. DUNN, M. D., Professor of Diseases of the Genito-Urinary Organs.
CHAS. L. WELLS, A. M., M. D., Professor of Diseases of Children.
JAMES E. MOORE, M. D., Professor of Orthopædic Surgery.
M. P. VANDERHORCK, M. D., Professor of Diseases of the Skin.
W. S. LATON, M. D., Professor of Diseases of the Throat and Nose.
THOMAS G. LEE, B. S., M. D., Instructor in Histology, Bacteriology and Urinalysis.
J. CLARK STEWART, B. S., M. D., Professor of Pathology.
J. W. BELL, M. D., Professor of Physical Diagnosis and Clinical Medicine.
CHAS. L. GREEN, M. D., Lecturer on Surgical Anatomy.
A. B. CATES, A. M., M. D., Adjunct Professor of Obstetrics.
A. MCLAREN, A. B., M. D., Adjunct Professor of Gynecology.
W. A. JONES, M. D., Adjunct Professor of Diseases of the Nervous System.
FRANK BURTON, M. D., Demonstrator of Anatomy.
H. L. STAPLES, A. M., M. D., Instructor in Medical and Pharmaceutical Latin.

COLLEGE OF HOMŒOPATHIC MEDICINE AND SURGERY.

THE FACULTY.

- CYBUS NORTHROP, LL. D., President.
 WILLIAM E. LEONARD, A. B., M. D.; Professor of *Materia Medica* and
Therapeutics.
 HENRY HUTCHINSON, M. D., Professor of Theory and Practice of Medi-
 cine.
 GEORGE E. RICKER, A. B., M. D., Professor of Clinical Medicine and
 Clinical Diagnosis.
 ROBERT D. MATCHAN, M. D., Professor of the Principles and Practice of
 Surgery.
 WARREN S. BRIGGS, B. S., M. D., Professor of Clinical and Orthopædic
 Surgery.
 HENRY C. LEONARD, B. S., M. D., Professor of Obstetrics.
 B. HARVEY OGDEN, A. M., M. D., Professor of Gynecology and Genito-
 Urinary Diseases.
 ALBERT E. HIGBEE, M. D., Clinical Professor of Gynecology.
 JOHN F. BEAUMONT, M. D., Professor of Ophthalmology.
 HENRY W. BRAZIE, M. D., Dean and Professor of Pædology.
 EUGENE L. MANN, A. B., M. D., Professor of Diseases of the Heart and
 Respiratory Organs.
 D. A. STRICKLER, M. D., Professor of Otology and Rhinology.
 HENRY C. ALDRICH, D. D. S., M. D., Adjunct Professor of *Materia*
Medica and *Therapeutics*.
 A. P. WILLIAMSON, A. M., M. D., Professor of Mental and Nervous Dis-
 eases. Lecturer on Skin and Venereal Diseases.

The instruction in the primary branches is received with the students
of the other colleges in the following chairs :

- GEO. A. HENDRICKS, M. S., M. D., Professor of Anatomy.
 RICHARD O. BEARD, M. D., Professor of Physiology.
 C. J. BELL, A. M., Professor of Chemistry.
 PERRY H. MILLARD, M. D., Professor of Medical Jurisprudence.
 JOHN F. FULTON, M. D., Professor of Hygiene.
 THOMAS G. LEE, A. M., M. D., Instructor in Histology and Bac-
 teriology.

THE COLLEGE OF DENTISTRY.

FACULTY.

- CYRUS NORTHROP, LL. D., President.
 W. XAVIER SUDDUTH, A. M., M. D., D. D. S., Dean and Professor of Pathology and Oral Surgery.
 *THOMAS E. WEEKS, D. D. S., Professor of Operative Technics and Dental Anatomy.
 CHARLES M. BAILEY, D. M. D., Prosthetic Dentistry, Metallurgy and Orthodontia.
 WILLIAM P. DICKINSON, D. D. S., Professor of Operative Dentistry and Dental Therapeutics.
 GEO. A. HENDRICKS, M. S., M. D., Professor of Anatomy.
 RICHARD O. BEARD, M. D., Professor of Physiology.
 C. J. BELL, A. B., Professor of Chemistry.
 H. M. BRACKEN, M. D., L. R. C. S. E., Professor of Materia Medica.
 THOMAS G. LEE, A. M., M. D., Instructor in Histology.

INSTRUCTORS.

- HENRY F. NACHTRIEB, B. S., Lecturer on Comparative Dental Anatomy.
 ————— Demonstrator in Charge of the Prosthetic Clinic.
 *F. E. TWITCHELL, D. M. D., Instructor in Continuous Gum Work.
 *J. D. JEWETT, D. D. S., Instructor in the Administration of Anæsthetics.
 MILAN AUSTIN KNAPP, D. D. S., Instructor in Technics.
 *FORREST HOY ORTON, D. D. S., Instructor in the Treatment of the Cleft Palate.

CLINICAL INSTRUCTORS.

- | | |
|---------------------|-----------------------|
| *DR. F. H. BRIMMER, | *DR. F. A. DUNSMOOR, |
| *DR. E. F. CLARK, | *DR. J. E. MOORE, |
| *DR. A. W. FRENCH, | *DR. J. W. PENBERTHY, |
| *DR. M. G. JENISON, | *DR. C. H. ROBINSON, |
| *DR. C. W. JONES, | *DR. C. A. VAN DUZEE, |

The receipts and disbursements of the three departments have been as follows:

| | | |
|------|-----------------------|-------------|
| 1891 | { Receipts | \$ 7,365.00 |
| | { Disbursements | 17,212.83 |
| 1892 | { Receipts | \$ 9,100.00 |
| | { Disbursements | 20,854.70 |

*There are 32 professors in the medical department who receive no pay.

SCHOOL OF AGRICULTURE.

1892.

CYRUS NORTROP, LL. D., President.
 W. W. PENDERGAST, Principal, Civics, Physical Geography.
 H. W. BREWSTER, A. B., Assistant Principal, Mathematics.
 CLINTON D. SMITH, M. S., Agriculture, Dairying.
 WILLIAM ROBERTSON, B. S., Physics, Language.
 C. R. ALDRICH, Shop-work, Drawing.
 T. L. HAECKER, Breeding and Dairying.
 SAMUEL B. GREEN, B. S., Horticulture and Applied Botany.
 OTTO LUGGER, Ph. D., Zoology and Entomology.
 CHRISTOPHER GRAHAM, B. A., Physiology, Veterinary Science.
 HARRY SNYDER, B. S., Chemist.
 J. A. VYE, Penmanship, Accounts.
 FLORENCE A. BREWSTER, Librarian.

The following is a statement of the receipts and disbursements of this department for the past two years:

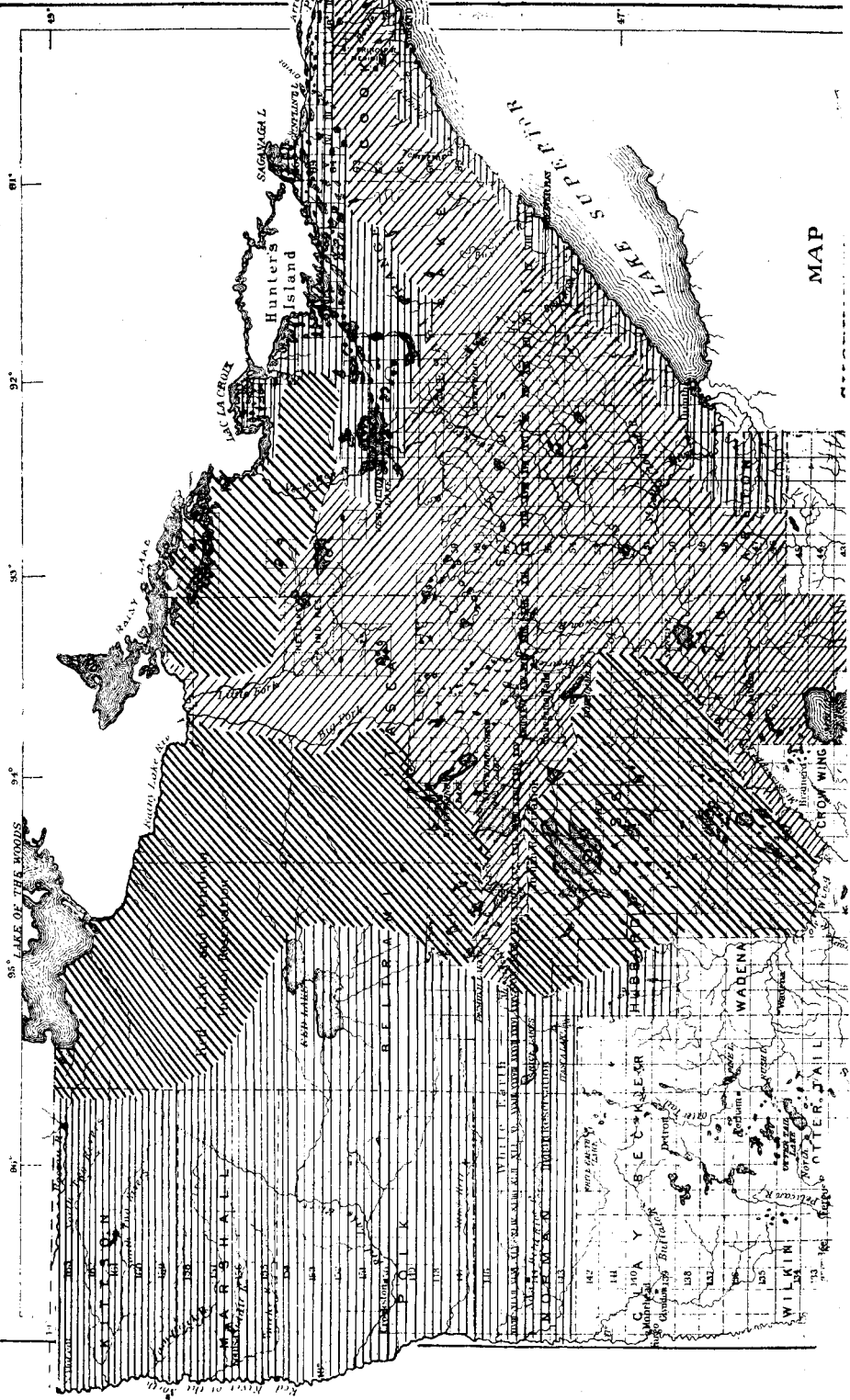
| | 1891. | 1892. |
|--------------------|------------|------------|
| Receipts..... | \$1,739.28 | \$2,452.42 |
| Disbursements..... | 19,425.19 | 23,165.58 |

EXPERIMENTAL STATION.

CLINTON D. SMITH, M. D., Professor of Agriculture and Director of Experimental Station.
 OTTO LUGGER, Ph. D., Professor of Entomology and Botany.
 SAMUEL B. GREEN, B. S., Professor of Horticulture.
 HENRY SNYDER, B. S., Professor of Agricultural Chemistry.
 CHRISTOPHER GRAHAM, Professor of Veterinary Science.
 F. L. HAESCHER, Instructor in Dairying.
 J. A. VYE, Secretary and Accountant.

The receipts and disbursements of the department for the years 1891 and 1892 are as follows:

| | | |
|------|----------------------|-------------|
| 1891 | { Receipts | \$ 3,819.11 |
| | { Disbursements..... | 25,511.23 |
| 1892 | { Receipts..... | \$ 2,941.50 |
| | { Disbursements..... | 22,746.14 |







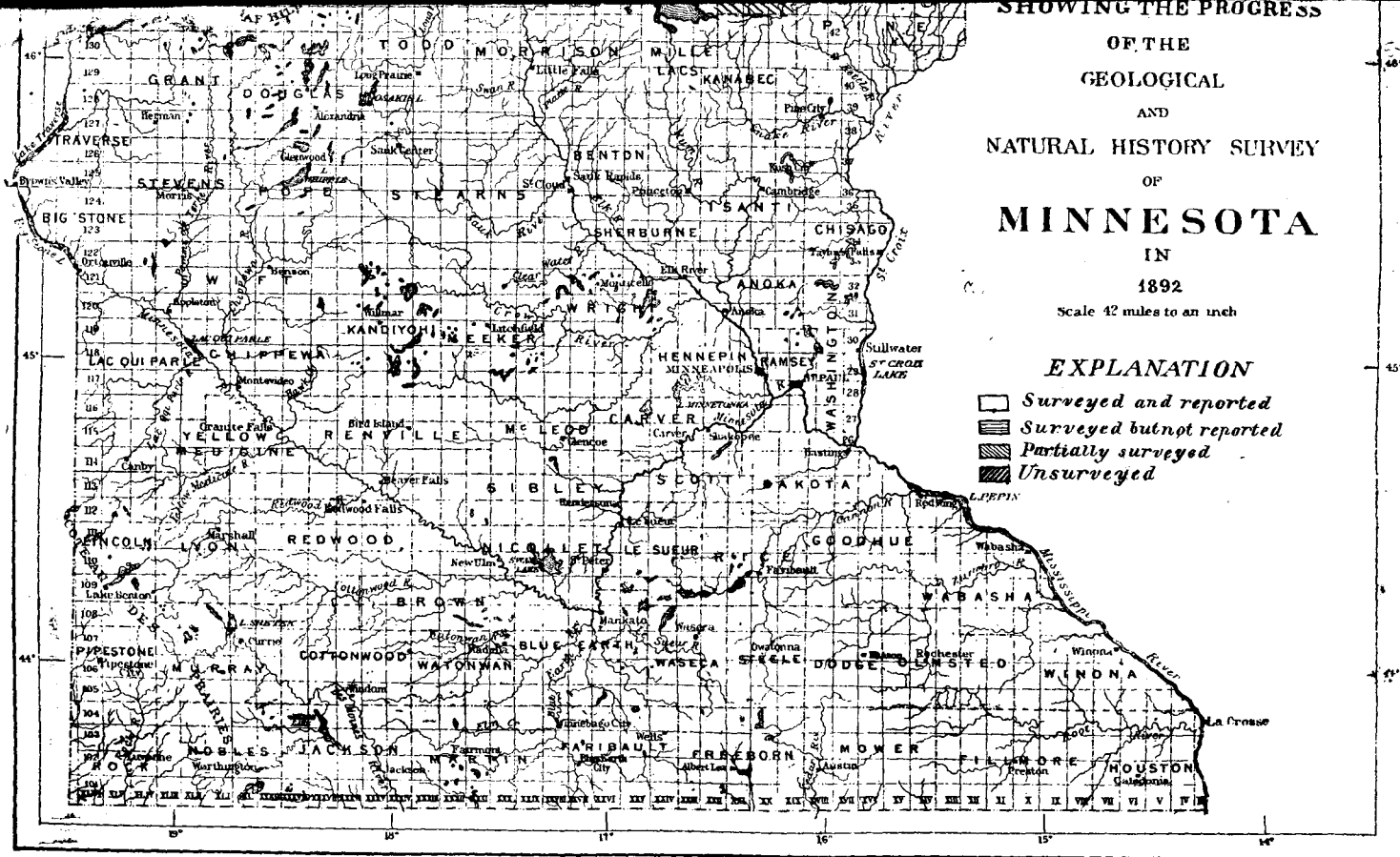
MAP

SHOWING THE PROGRESS
 OF THE
 GEOLOGICAL
 AND
 NATURAL HISTORY SURVEY
 OF
MINNESOTA
 IN
 1892

Scale 42 miles to an inch

EXPLANATION

-  Surveved and reported
-  Surveved but not reported
-  Partially surveved
-  Unsurveved



The following is the enrollment of the University from 1885 to date.

| | |
|------------------------|-------|
| For the year 1885..... | 310 |
| For the year 1886..... | 406 |
| For the year 1887..... | 412 |
| For the year 1888..... | 491 |
| For the year 1889..... | 781 |
| For the year 1890..... | 1,002 |
| For the year 1891..... | 1,183 |
| For the year 1892..... | 1,374 |
| For the year 1893..... | 1,500 |

THE GEOLOGICAL SURVEY.

During the last two years the active work has been prosecuted in the northern part of the State, and in 1892 on the paleontology of the southern part. There have been published the following:

The Iron Ores of Minnesota. Bulletin No. 6.

Their Geology, Discovery, Development, Qualities and Origin and Comparison with those of other Iron Districts.

The Nineteenth Annual Report.

The Mammals of Minnesota. Bulletin No. 7.

A scientific and popular account of their features and habits.

There are in press the following:

The Twentieth Annual Report.

Vol. 3 of the final report, mainly devoted to paleontology.

The following assistants have been at work under Professor Winchell for different lengths of time:

Ulysses Sherman Grant, on the crystalline rocks and iron ores.

Herbert R. Wood, aid to Mr. Grant on the crystalline rocks.

Horace V. Winchell, on the geology of the iron ores.

Charles Schuchert, in paleontology.

Andrew C. Lawson, on the elevated beaches and on certain features of the Animikie of the north shore of Lake Superior.

E. O. Ulrich, in paleontology.

Loufs A. Ogaard, surveyor and draughtsman.

H. A. Elftman, field assistant.

J. E. Todd, pleistocene field geology.

A. W. Chase, aid to Prof. J. E. Todd.

The geological survey pointed out the existence of the Mesabi iron range several years before it was explored and predicted distinctly the discovery of large quantities of iron ore in the region north and northwest from Duluth. The progress of development of this important discovery has been continually under the scrutiny of the State Geologist, and from year to year the changes that took place have been put on record in the reports of the Board of Regents, including also the statistics of the mining of iron in the Vermilion range. Already the direct financial returns to the treasury of the State have been greater than the entire cost of the survey since its commencement.

The present state of progress of the survey is shown by the accompanying sketch map of the State. It is thought that a few more years will bring it to substantial completion, warranting a final report and mapping similar to the reports and maps that have been published of other portions of the State.

The expense of the geological survey for the year 1891 was \$5,531, and for 1892 \$11,291.

The Zoological Division of the Geological and Natural History Survey is under the charge of Prof. H. F. Nachtrieb.

The primary object of this Division is to collect the material and all information necessary for a basis for a reliable report on groups of animals which are of the most economic importance, and to investigate all conditions which influence the quantity and quality of those animals which have a direct economic value. Thus not only the habits, distribution and scientific description of our food fishes, but also their parasites and neighbors, foes and friends, and favorable and unfavorable conditions are being investigated.

At present the field work is largely confined to the fishes of the Mississippi basin. During the past summer about ten weeks were spent by a party of four collecting in Ramsey county and Mille Lacs Lake region.

The material collected is all carefully preserved, labelled and arranged. Specimens of each species have been set aside for the general museum, the rest of the material is systematically stored for future reference, comparison and study.

New specially designed and fitted cases have been placed in the zoölogical museum in Pillsbury Hall, and are now being filled with the best specimens of animals of the State in systematic order, so that when this portion of the museum is completed one will be able not only to see representative specimens of the animals of our State, but will also be able to get at a glance the general family relationship and gather various interesting and important facts of life histories. Special wall cases have been provided for insects in order to make possible a good display of the different orders with selected typical specimens found in the State, and to give as nearly as possible, the whole life histories of the most important of the farmer's insect friends and foes.

Among the valuable things added to the museum are a fine specimen of a the black tailed deer from Kittson county and a large, very fine presentation collection of bird skins from Minnesota and the Northwest.

It is safe to say that if the present plans are carried out the zoological museum will be without its equal among those collections representing state faunas.

The first report of the State Zoologist forms a supplementary part of the Board of Regents, report, and consists almost entirely of Notes on the Birds of Minnesota, by Dr. P. L. Hatch, who for many years has been an enthusiastic ornithologist of this State and contributes these notes without expense to the State.

The Botanical Division of the survey is in charge of Prof. Conway MacMillan. In June, 1891, Messrs. E. P. Sheldon, C. A. Ballard and B. C. Taylor were commissioned to prosecute field-work in different portions of the Minnesota valley. Mr. Ballard spent two months in the vicinity of the mouth of the Minnesota, working through Carver, Scott and Dakota counties. Messrs. Sheldon and Taylor spent three months in the southern and western portions of the valley. Pope and Douglas counties were especially studied by Mr. Taylor, and the valleys of the Cottonwood, Redwood, and Lac qui Parle by Mr. Sheldon, who also spent some time along the northeast slope of the Coteau des Prairies, especially in the vicinity of Lake Benton. Through the intelligent, energetic and expert endeavors of these, some 20,000 specimens of flowering plants vascular cryptogams, mosses, fungi and fresh-water algae were collected, of which number more than 3,000 have been mounted in proper fashion and placed in the herbarium of the survey. The total number includes many exchange plants and duplicates which will be of value in building up weak places in the general herbarium.

In 1892 the field-work was farther prosecuted by Messrs. W. D. Frost, E. P. Sheldon, C. A. Ballard and B. C. Taylor. Mr. Frost spent the entire summer in Meeker and Kandiyohi counties. Mr. Ballard spent two months in Nicollet county, working eastward during August and completing his summer's work in the neighborhood of Zumbrota. Mr. Taylor spent the entire summer in the vicinity of the Chisago lakes, Chisago county. Mr. Sheldon spent June and July studying the Mille Lacs and Rum River drainage basin, and moving westward, completed his summer's work in the Leaf Hill district of Otter Tail and Douglas counties.

This year some 30,000 specimens of flowering-plants, ferns, mosses, liverworts, fungi and fresh water algae were collected.

The identification and arrangement of this material is now being carried on by Messrs. Sheldon, Ballard and Frost.

The collections have been made during this season with especial reference to exchanges, the intention being to obtain as much material as possible in this way for comparison with our Minnesota flora.

In the work of identification of Minnesota plants, the need of comparative material is felt in the herbarium. It is for obtaining this material by exchange that the work has been prosecuted during the season of 1891 and 1892.

The first report of the State Botanist now in the hands of the printer contains not only a critical catalogue of the meta-spermic flowering plants of the Minnesota valley, but also an effort to tabulate the general distributional characteristics of families, genera and species.

The large collections in the herbarium of the Department of Botany, which numbers not far from 62,000 specimens, afforded excellent facilities for comparison when critical forms were under consideration.

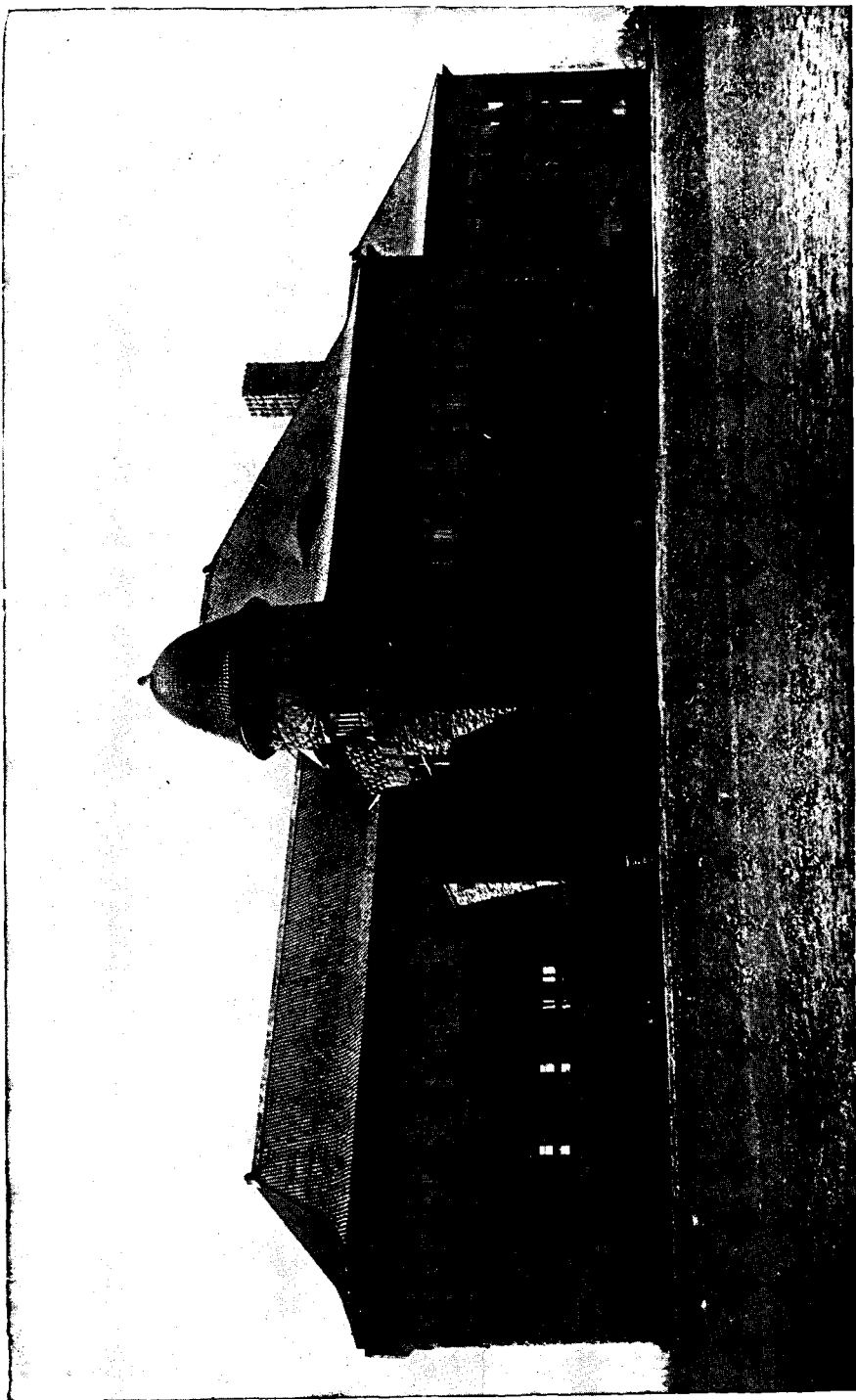
Future Outlook—The work of a survey that is directed to make an examination of all the vegetable productions of a state, must needs pay particular attention to the fungi and algae. The great economic problems of Minnesota are to be solved only by a critical knowledge of the parasitic and saprophytic plants which constitute the major portion of our flora.

The algae, also, which constitute the flora of almost every drop of water in our lakes and streams, need particular study from a combined scientific and economic point of view.

DAIRY BUILDING.

It will be remembered that the board in its last report asked for an appropriation of \$100,000 for the erection of a building for the medical department and \$50,000 for the erection of a building for the agricultural department at the farm school. Owing to the heavy demands made upon the state treasurer for the erection of public hospitals and other state buildings, an appropriation of \$80,000 only was made to the University.

Immediately after the passage of the act making this appropriation, the regents, after a thorough consideration of the immediate necessities of the University, decided to use \$15,000 or more of the appropriation for the erection and equipment of a dairy building for the accomodation of the department of agriculture at the farm school, and to erect a building for the ac-



PILLSBURY HALL—STATE UNIVERSITY.

commodation of the medical department, at a cost not to exceed \$60,000. A building committee consisting of the executive committee with Regent Leggett added was appointed by the board to procure plans for the two structures.

For the dairy building the plans presented by architect Charles Aldrich were accepted and proposals were asked for its erection. The following bids were received:

| | |
|----------------------------------|-------------|
| J. H. Nickel, St. Paul..... | \$13,250.00 |
| Trainor Bros., Minneapolis..... | 15,000.00 |
| R. E. Patterson, St. Paul..... | 12,554.00 |
| Kilroe Bros., Minneapolis..... | 12,370.00 |
| C. P. Wilding, St. Paul..... | 13,593.00 |
| A. J. Sampson, Minneapolis..... | 13,050.00 |
| A. J. Hoban, St. Paul..... | 16,150.00 |
| Erick Lund, Minneapolis..... | 13,000.00 |
| B. M. McMahon, St. Paul..... | 11,823.00 |
| McSherry & White, St. Paul..... | 16,439.00 |
| B. J. Grimshaw, St. Paul..... | 13,969.00 |
| Joseph Congdon, Minneapolis..... | 11,445.00 |

Joseph Congdon being the lowest bidder was awarded the contract. Upon its completion, apparatus of the most modern pattern was purchased and suitable equipment secured for the building at a cost of \$6,155.00, making the total outlay in this department of \$17,600.00. The dairy building is of a commodious size, built of brick in a thoroughly substantial manner, after the most modern plans, with a complete equipment, including apparatus for experiments, handling of milk, and butter and cheese making, as well as machinery and outfit necessary for giving thorough and complete instruction to students in the agricultural department in the latest and best methods of dairy work.

The building is two stories high, thoroughly plumbed and provided with cold storage rooms. There are four office rooms above and one large room for general purposes. It is heated with steam throughout supplied from a 40 horse power boiler. The steam separator is driven by a small engine; on the main floor are two rooms, each 42x30 feet, both well lighted and ventilated and fully equipped for butter and cheese making. There is an abundant supply of hot and cold water. The lecture room is large and arranged so that animals may be taken before students of the agriculture school for illustration in stock raising.

MEDICAL DEPARTMENT.

For this building competitive plans were invited and architects L. P. Buffington, Harry W. Jones, ——— Whitney, Wilber Pardee, and Messrs. Reed & Stem responded. The plans presented by Messrs. Reed & Stem were accepted, as the committee considered the arrangement for ventilating the building the most complete in the plans offered by them, although those presented by the other architects were very satisfactory. Upon the acceptance of the plans, the following bids were received for the erection of the building:

| | |
|-------------------------|-------------|
| F. E. Graves..... | \$59,560.00 |
| E. Brace..... | 57,490.00 |
| Seymour & Hart..... | 59,108.00 |
| Trainor Bros..... | 56,346.00 |
| H. Downs & Son..... | 62,500.00 |
| McSherry & White..... | 54,979.00 |
| A. J. Frodden & Co..... | 59,652.00 |
| S. C. Cutter..... | 58,400.00 |
| A. J. Sampson..... | 58,200.00 |
| H. N. Leighton..... | 62,000.00 |
| Taylor & Craig..... | 55,856.00 |
| H. E. Selden..... | 62,300.00 |
| Folie & Smith..... | 59,478.00 |
| Libby & Libby..... | 66,040.00 |
| E. C. Long & Co..... | 55,145.00 |
| Kilroe Bros..... | 56,000.00 |
| Erick Lund..... | 53,474.00 |

Erick Lund being the lowest bidder was awarded the contract at \$53,474.00; to which must be added the sum of \$11,526 expended in excavating about the building and for fixtures, furniture and general equipment, making a total outlay of \$65,000. The building has been fully completed in accordance with the contract, and was formally opened for occupancy on October 5th, 1892.

This building is three stories and a high basement. The basement and first story is constructed of brown sandstone surmounted with the second and third stories, which are of Roman brick. The general style of architecture is renaissance, and the building is located on a commanding site on the campus. The internal appointments are arranged for the accommodation of the schools of homœopathy and allopathy with adequate apartments for the dental department. The amphitheater lecture room is of sufficient size to seat all students in attendance upon the lectures. In preparing plans for the building much thought and study was given by the committee to have the building in all respects perfect. The system of heating, lighting and ventilating is admirable. It was the aim of the committee to have the building a model of its kind. We believe that there

is no building of its size and cost in the country that excels it in symmetry, completeness of design, and entire adaptation, to the purposes for which it was built. This department is now amply provided with buildings for its present and prospective needs.

CHEMICAL LABORATORY.

It was a part of the original plans of the medical building to place the medical laboratory in the basement. After the construction of the building was far advanced, it was found that its size was not only insufficient to accomplish that purpose, but that it was a mistake to locate the chemical department in the main medical building. To overcome this objection, the committee finally decided to erect a separate building for the laboratory. The needs of the department required that this should be done at once. Accordingly plans were prepared by architect H. W. Jones and proposals were invited for the construction of the building. The bids received were as follows:

| | |
|-------------------------|------------|
| E. Kneeland..... | \$5,885.00 |
| E. Brace..... | 6,989.00 |
| F. G. McMillan..... | 8,551.00 |
| Downs & Co..... | 8,147.00 |
| E. Siskron..... | 8,450.00 |
| E. Lund..... | 6,912.00 |
| Kilroe Bros..... | 6,554.50 |
| Littlefield & Hall..... | 6,987.00 |

E. Kneeland being the lowest bidder was awarded the contract at \$5,885. This structure is now completed in accordance with the contract and equipped with the apparatus and fixtures necessary to conduct the chemical, histological and pharmaceutical work of the medical department.

The cost of excavation, fixtures and equipments amounts to \$3,315, making the total cost of the medical laboratory \$9,200, which is in addition to the costs of the main medical building.

BURNING OF THE CHEMICAL LABORATORY AT THE AGRICULTURAL COLLEGE.

Since the last report of the Regents, the Chemical Laboratory and station building at the Agricultural school with all its contents was, on October 5th, destroyed by fire causing a loss of upwards of \$15,000. There was a partial insurance of \$5,000 on the building and apparatus. The loss of the building just at the opening of the fall term was seriously felt. Many of the experiments under process together with all apparatus were a total loss. The regents upon adjusting the loss, decided to rebuild on another site. The committee was directed

to procure plans for a new building at once. From the plans presented by several architects, those of Mr. Charles Aldrich were accepted and bids for the construction of the building were received. That of Kilroe Bros. was the lowest and to them was awarded the contract. The new building was completed in time for the opening of Autumn term of the Agricultural school and has been fully equipped with the latest and most approved chemical apparatus. The contract price of this building was \$8,000, to which must be added \$7,282 expended for apparatus, fixtures and equipment, making a total cost of \$15,282.

SCHOOL OF AGRICULTURE..

The School of Agriculture, which was opened in 1888, has steadily increased in attendance and grown in the estimation of the people of the State, under the superintendency of Prof Pendergast and his associate professors. This department of the University is especially adapted to give young men a thorough training and knowledge in all branches of learning which pertain to practical agriculture. It encourages them to return after graduation to their rural homes and to engage for life in the various pursuits of agriculture. They become fully qualified to meet intelligently the demands which may be made upon them as useful citizens. The enrollment in this department since the opening of the school is as follows: 1888, 38; 1889, 47; 1890, 78; 1891, 104; 1892, (Spring term) 115; 1892, (Fall term) 135.

The regents have every assurance to believe that the establishment of this school in the curriculum adopted and the general scope of the work supplies all that is required to meet the demands of the agricultural interests of the state. The authorities are constantly in receipt of inquiries from many states seeking information about the so-called Minnesota plan of our agricultural college.

CHANGES IN THE STAFF AT THE EXPERIMENTAL STATION.

In February, 1891, Prof. N. W. McLain, director of the Experimental Station, tendered his resignation. The board found in Clinton D. Smith, a graduate of Cornell University, an educated man and a practical agriculturist, to fill the vacancy.

Dr. Schwarkshoppf, veterinarian, also tendered his resignation in the summer of 1892, and Dr. Christopher Graham, B. S. M. V. D., was appointed. He is a graduate of the University and has taken a special course in veterinary science in the University of Pennsylvania.

Prof. W. M. Hays, Professor of Agriculture, who had been connected with the station for several years, and a most efficient officer, tendered his resignation on the first of July to take the presidency of the North Dakota Agricultural college. The services of Prof. T. L. Haecker have been secured to fill the vacancy, and he has been appointed assistant Professor of Agriculture and placed in charge of the dairy experiments.

A great variety of experiments have been made during the past two years. Over 135,000 bulletins have been issued from the station since the last report. These have been mailed to the people throughout the State. They embrace treatises on flax culture, sugar beets—their culture and process of manufacture, and many other subjects of deep interest to the agriculturist as well as to the general reader who seeks information on all subjects. For a full list of these subjects I refer to the report of the director of the station.

THE DESTRUCTION OF THE CHAPEL BY FIRE ON APRIL 30TH LAST ; NARROW ESCAPE OF THE AUDIENCE.

On April 30th, 1892, while several hundred students and instructors were assembled in the chapel, located on the third story of the main building, a fire broke out near the stage, and in a short time the roof and cupola were enveloped in flames. The audience, very fortunately, escaped without injury. The roof of the building and the assembly room were destroyed before the fire department, which did most noble work, could bring the fire under control. The building was thus left exposed to the heavy rains and winds which were prevailing. During the burning a large number of students and other persons removed the library from the shelves, which were being badly wet with water from the engines. The whole library was thus removed.

This is the second time that the library has been removed during the burning of some portion of the building, and many books have been more or less damaged each time.

Much complaint has been made by patrons of the University against holding chapel exercises on the third story of the building, and the regents, after witnessing the narrow escape of the students and others, did not feel justified, nor would they assume the responsibility of again occupying the third story of the building for assembly purposes.

For these and other reasons they have dispensed with the use of the chapel hall, believing that it is the duty of the State to furnish sufficient funds with which to erect a building in which chapel exercises may be held on the ground floor in perfect safety.

One of the greatest necessities, which has long existed, is a library building where the library, which now numbers upwards of 30,000 volumes, may be safely kept. The rooms now occupied for the library were intended only for temporary use. After many days of calculation, thought and consideration as to what should be done for an assembly hall and safe library building, the regents have concluded that the only proper solution of the problem is to erect a fireproof building of sufficient size to accommodate the library and assembly hall. For this purpose we have prepared plans and have made estimates of the cost of the building, and respectfully ask that an appropriation of \$150,000 be made for that purpose.

It must be remembered that the state of Minnesota has developed marvelously during the past decade. Probably no state in the union has made more material progress in all directions. Our population and wealth have nearly doubled and the natural increase in the future will necessarily be large, as the march of progress is ever onward.

But to be a great commonwealth we must be great in the advancement of our people as well as in the development of our natural resources. This can be done only by furnishing to everyone the most liberal opportunities for education, and for this purpose we must have proper facilities. The University needs the building mentioned. Can the State appropriate money for purposes more wisely than the erection of buildings to suitably accommodate the growth of an institution which is the pride of all its people?

The loss and damage to the main building by fire, referred to in the preceding section, proved to be much larger than was at first expected. All of the upper or third story was damaged to such an extent that it was necessary to rebuild it of new material. The services of F. G. McMillan, an experienced builder, were at once engaged to make the necessary repairs to have the building in readiness for occupancy at the beginning of another year's work. The cost of these repairs amounted to \$8,660.00. This loss was partially covered by an insurance of \$7,300.00. The damage to the library by removal, water and loss of books, was appraised at \$2,250, which was also covered by insurance.

SIDEWALKS AND CAMPUS EMBELLISHMENT.

The University of Minnesota is located in the central portion of the city of Minneapolis and has a campus of forty-five acres, which is bounded on three sides by public streets with one street extending across the campus, making in all some 6,000 square yards of street frontage, subject to pavement. The city of Minneapolis has ordered sidewalks built on street frontage in and about the campus. The cost of these sidewalks, if laid of asbestine stone, which is now generally used, will, at 80 cents per square yard, amount in the aggregate to \$4,800.

The campus, with the exception of that portion improved as a drill ground, lies in a state of nature. As a building site for a public institution it is probably the most picturesque in the Northwest, and should be embellished and beautified and put in keeping with the rapid advancement of the city. The regents, feeling that the time has come when this much needed and long delayed improvement must be made, have employed Mr. Cleveland, a landscape gardener, to lay out the grounds and to give an estimate of the cost of the work. This he estimates at \$6,000.

The regents most respectfully ask the legislature to make an appropriation of \$10,500 to cover the cost of these two improvements.

I am pained to announce that since the last report of the Board of Regents two of its honored members have been removed by death. General Sibley, its honored president, who had served on the board for upwards of twenty years, passed away, after a lingering illness, on the 18th day of February, 1891. In his death not only does the University lose one of its truest friends, but the State loses one of its most respected and valued citizens, and the nation one of its trusted defenders.

General Gordon E. Cole, a jurist of high standing and wide reputation and a member of the board who took great interest in the development and success of the University, especially in the department of law, to the success of which he contributed much, was stricken down by death while traveling in a foreign land in search of health.

CONDITION AND PROGRESS OF THE UNIVERSITY.

Under the able management of President Northrop and his corps of efficient professors and instructors, the past two years have been years of unprecedented progress and success in all

departments of the University. It is a matter of peculiar pleasure to note the large increase of students who come from all parts of the State. We are assured that a deeper interest is being taken in the welfare of the institution, and I am glad to say that it has been fully able to meet all the wants of students, not only in the classical, scientific, literary, engineering and mechanic arts, and agricultural departments, but in the department of medicine and law, so that to-day the University of Minnesota ranks third among the state institutions of learning in the country, Cornell and Michigan alone having a larger attendance. When we consider that the preparatory department of this institution was opened in 1868 with less than 40 students in attendance and practically no facilities with which to do educational work, and find an enrollment to-day of 1,500 students, with ample facilities in all departments for work, we feel that there is good reason for the people of the State to be proud of the success which the institution has attained.



MPLS. ENG. CO.

MEDICAL COLLEGE
COLLEGE OF MECHANIC ARTS.

MAIN BUILDING.

LAW BUILDING.
PILLSBURY HALL.

REPORT OF THE PRESIDENT
OF THE
UNIVERSITY OF MINNESOTA.

To the Hon. J. S. Pillsbury, President Board of Regents :

DEAR SIR—I have the honor to submit the following biennial report of the State University for the academic years ending respectively July 31, 1891, and July 31, 1892.

The University of Minnesota has had a most satisfactory degree of prosperity during the past two years, 1890-92. The administration of its affairs by the Board of Regents has been wise and just; and has met the hearty approval of all who are especially concerned in its work. The instruction has been faithfully given by able and conscientious faculties, thoroughly devoted to their work and in harmony among themselves; and the students in the various departments of the University have manifested a spirit of fidelity to their work, loyalty to the University, and regard for the peace and order of the insitution and of the community in which they live, for which I cannot be too grateful.

The number of students in attendance has increased during the last two years nearly four hundred. The total number in attendance in the year 1889-90 was one thousand one. The number in attendance during the year 1890-91 was eleven hundred eighty-three, and during the year 1891-2 the number in attendance was thirteen hundred seventy-four.

THE COLLEGE OF SCIENCE, LITERATURE AND ARTS.

No portion of the University has had less done for it, during the eight years of my administration, than the classical department. This has been occasioned by the greater and more pressing necessities of other departments. The scientific department has been expanded in a most satisfactory manner, the most ample accommodations and equipment having been provided, the corps of teachers having been greatly enlarged and strengthened, and the course of study having been widened and extended. This was necessary because the provision for teaching the sciences was altogether inadequate. The special apparatus needed for the classical department is a library. I have in a former report pointed out the very great need of more books in order to keep up with the culture of the age. The legislature at its session in 1891 granted an annual appropriation of five thousand dollars for two years for the libraries of the departments of law, medicine, agriculture and the general University. Of this sum four thousand dollars have been appropriated to the

colleges of law and medicine. More than one thousand dollars have been appropriated to the purchase of scientific and technical works, and a like sum for works in history and literature for the University library. The remainder of the appropriation is all needed for enriching the general library and the library of the department of agriculture, without meeting, in any large degree, the special needs of the classical department. A University must have a good library whether it has anything else or not; and the classical department is in special need of increased facilities for study and investigation which only books can supply. I hope, therefore, that the legislature will, at its coming session, make further appropriations for the library, for which there is ample encouragement in the new life and vigor imparted to the University by the former appropriation.

Some additional provisions for instruction in the classical department will be necessary in the near future. It is important that opportunity be afforded the students to take the highest work the department can offer, in larger measure than at present. This can be secured by relieving the professors of some of the more elementary work and assigning this to an instructor to be engaged for the work.

Professor Jabez Brooks, after twenty years of faithful service to the University in the department of Greek, was granted leave of absence in 1890 for one year, and spent the year 1890-91 in Europe, engaged in study for the most part at Athens. Dr. Brooks, on his return, brought with him a considerable collection of material to illustrate the subject of archeology and he has since given most interesting instruction in that subject in connection with his work in Greek. It is desirable that the work in archeology be extended through two terms, but the demands on the department are so great that this cannot be done with the present teaching force.

Professor George E. MacLean, by permission of the board of regents, spent the year 1891-92 in Europe engaged in study. He expected to return to his work in September, 1892, but has been physically disabled by an accident, and will not return to the University till the beginning of the second term. His place was filled during his absence by Mrs. Susannah D. Fry, who has also kindly consented to continue her work during the first term of the coming year.

Professor John G. Moore of the department of German has been granted leave of absence for one year, which he will spend in Europe in study. Fraulein Marie Schön has been engaged as instructor in German, and will aid Assistant Professor Wilkin in carrying forward the work during the absence of Professor Moore.

Professor O. J. Breda, of the department of Scandinavian languages and literatures, has also been granted leave of absence for one year, which he will spend in study in Europe. His place will be filled by Professor J. A. Ness, who has been trained at Johns Hopkins University and at Luther College.

Professor Harry P. Judson, after seven years of most efficient service in the chair of history in this University, accepted in 1892 a position in the Chicago University. Professor Willis M. West, of the University of North Dakota, a graduate of the University of Minnesota and well known throughout State as a very successful teacher, has been called to this University as assistant professor of history, and will be in charge of the

work relinquished by Professor Judson. He will be assisted by Mr. Kendrick C. Babcock, who for several years has been the efficient assistant to Professor Judson in his work in history.

Professor W. W. Fulwell, who has charge of the very important subject of political science, has for some years been the librarian of the University. In view of the importance of his chair and his own special qualifications for teaching, it has seemed best to relieve him of most of his duties as librarian, and to increase his work as a teacher. This has been done accordingly, to the entire acceptance of Professor Fulwell, and he will hereafter give instruction in political science in the Junior class as well as in the Senior. The responsibility for the general management of the library will rest for the most part on Miss Lettie M. Crafts, who for seven years has been the first assistant librarian, and has demonstrated her entire fitness for the work.

In consequence of the large increase in the number of students in the University, nearly all of whom are required to take the course of study in mathematics, the work of Professor John F. Downey, of the chair of mathematics and astronomy, has increased so much as to render it necessary to employ an assistant in addition to the aid heretofore rendered him by Professor Hutchinson, associate professor of Greek and mathematics, and at times by the professor of military science. Professor J. P. Leavenworth, of Haverford College, Pa., has been elected assistant professor of mathematics and astronomy, with the expectation that he will ultimately become professor of astronomy, for which, he is by his training and experience well fitted, and that Professor Downey will then be relieved from the work of instruction in astronomy.

A transit house, a small stone building for the accommodation of a transit circle, astronomical clock, chronograph etc., was erected on the campus in 1891, and has been equipped with new and excellent instruments. A working observatory with an equatorial for instruction in astronomy is still needed, and ought to be provided at an early day. This working observatory can be joined to the transit house, and while not so serviceable for scientific investigation as a larger observatory with corresponding equipment would be, it would meet all our wants for teaching purposes. Should the State at any time desire to add a larger observatory for the special purpose of original observation in the interest of the advancement of knowledge, it would hardly be placed on the campus, but could be advantageously placed on the University farm, near the School of Agriculture.

THE COLLEGE OF ENGINEERING, METALLURGY AND MECHANIC ARTS.

In the spring of 1892, Professor William A. Pike, who had been connected with the College of Mechanic Arts for many years and had rendered valuable service in organizing and building up this college, resigned his chair, at the same time consenting to continue a part of his instruction during the coming year. He had been for several years successively director and dean of the college. In studying the interests of this college for the future, it seemed best to unite with it the school of mining and metallurgy. This has accordingly been done, and the new organization has been named the college of engineering, metallurgy and mechanic arts.

Professor Christopher W. Hall, who has long been most intimately connected with the scientific instruction in the University, has been elected dean of the college, and brings to the discharge of his duties a thorough knowledge of the needs of the institution and much practical wisdom. The courses of study in the college now embrace civil engineering, mechanical engineering, electrical engineering, architecture, mining, chemistry and metallurgy. Besides these there are two courses in practical mechanics, and a school of design, free-hand drawing and wood carving. Aside from the technical work, all regular students in this college are required to take one year in each of the following subjects: German, French, Chemistry and Physics.

Mr. William R. Appleby, of New York, was elected professor of mining and metallurgy in 1891, and entered upon the duties of his office in the autumn of that year. He has proved to be a valuable acquisition to the teaching force of the University. The work in mining and metallurgy has been organized by him in a very satisfactory manner, and has been successfully carried forward during the past year. Specifications have been prepared for an extensive ore-testing works, to contain all the machinery necessary to illustrate the various processes of testing ore, and thus enable the students to become acquainted by personal experience with the machinery used in the leading ore-dressing establishment of the West. The proposed building would cost five thousand dollars, and it has been hoped that this sum would be provided by the liberality of citizens of the State; but it has not yet been received.

The professorship of mechanical engineering was made vacant in 1891 by the resignation of Professor John H. Barr, who had accepted an appointment in Cornell University. The vacancy has not yet been filled, the duties belonging to the chair being divided among various members of the corps of instruction. It is important that a thoroughly competent person should be secured for this place before the opening of the work in the autumn of '93. It will be desirable to have some officer of the college visit some of the institutions of the country in which mechanical engineering is specially prominent as a part of the curriculum, not merely to see personally candidates for the vacant professorship, but also to study the methods of work in these institutions.

Mr. C. E. Wadsworth, a graduate of the class of 1890 in Cornell University, has been engaged as an instructor in civil engineering, with special reference to bridge-building and other structural work.

The work in electrical engineering has become of great importance on account of the new uses of electricity in various departments of human industry, and the probable discovery of many other uses to which it may be applied. Mr. George D. Shepardson, of Cornell University, was called to an instructorship in this University in 1891, and had charge of the instruction in electrical engineering during the following year. In the spring of 1892 he was elected professor of electrical engineering. His work has been very satisfactory, and the course in electrical engineering under his care, with the very excellent instruction in physics by Professor Frederick S. Jones, meets a very great want of the present time and offers excellent opportunity for special study to young men interested in electrical work, either theoretical or practical.

I regard the college of engineering, metallurgy and mechanic arts as destined to render most important service to the state of Minnesota; and I cannot doubt that a very prosperous future awaits it. The two subjects of mining and electricity are enough in themselves, in their present importance in this State, to draw many students to its laboratories; while the other subjects taught are so useful, and in some measure so necessary for the proper comprehension and mastery of mining and electricity, that the result cannot be other than a constantly growing demand for this college of practical science.

THE COLLEGE AND SCHOOL OF AGRICULTURE.

There have been expended most judiciously upon the agricultural department, all the revenues derived from the various grants of the general government for education in agriculture, together with a portion of the funds derived from the State. A new building, called Dairy Hall, was erected at the farm in 1891. It is believed to be unsurpassed in convenience of arrangement and completeness of equipment by any building in the United States erected for a similar purpose. The butter room is large, well-lighted, and supplied with all the necessary apparatus for instruction in butter-making. The cheese room is lighted by windows on three sides and is provided with ten cheese vats with the necessary accompanying utensils. Hot and cold water and steam are supplied to each of the cheese vats and to several convenient points in the butter room.

The building itself is a model in its exterior proportions as well as in its adaption to the purposes for which it was designed. The work done in this building the last year was of the very best character, the products being classified by experts as among the best made anywhere. The instruction given was so thorough and clear as to enable any intelligent student to master the art of butter-making and cheese-making. It was a most interesting sight to watch the progress of the work and note the order, and system which characterized it at all stages. As the dairy interest ought to be one of the most important in Minnesota, and as in years past there has been no greater waste in the State than in the production of poor butter, I regard the dairy work at the farm in connection with the school of agriculture as a most valuable addition to the course of study in the school; and I hope the results will appear, not merely in a large attendance at the school, but in the greatly improved quality of the butter made in the State. The work in butter-making has been and will continue to be in charge of Prof. T. L. Haecker, who has been called to the school of agriculture as an instructor in breeding and dairying, and has done excellent work both at the school and at numerous gatherings of farmers throughout the State during the past year.

The other work of the school of agriculture has been carried forward with increased success. One hundred four students were in attendance in the year 1890-91; and one hundred fifteen in the year 1891-92. The graduates of the school generally and the last year without an exception returned to the farm after their work at the school was completed. The school thus seems to be accomplishing what has long been desired—training for the farm and not away from it. It has undoubtedly set an example which not a few states are making haste to imitate.

Early in 1892 Professor Willet M. Hayes resigned the chair of agriculture to accept a similar position in North Dakota. His resignation was accepted and Professor Clinton D. Smith, the director of the experiment station, was placed in charge of the professorship of agriculture.

Professor Olof Schwartzkopff, of the chair of veterinary medicine and surgery, having asked to be relieved of the work of teaching in school of agriculture, his request was granted. It was further decided to abolish the veterinary department as a special department and to confine the teaching of veterinary science to the course in agriculture, the instruction to be given at the farm. Mr. Christopher Graham, a graduate of the University of Minnesota and of the veterinary department of the University of Pennsylvania, was elected instructor in veterinary science in the school of agriculture in 1892, and will enter upon his duties at the opening of the school in October. He will give or provide instruction also for such former students of the veterinary department as have completed their first year's work satisfactorily, as shown by the certificates of the professors of the medical college with whom work was required to be taken, the regents having voted to provide instruction for such students and to grant them degrees upon the completion of their work.

I am very much gratified with the work in agriculture as it has been carried on the past two years. The work is in charge of an able corps of teachers, and I believe that every one of them is in earnest and disposed to do all in his power for the promotion of agricultural education. Now that the University has each year a large number of young men seeking this education, the work goes forward with some good degree of inspiration and hope.

MILITARY SCIENCE.

The term of service of Lieut. Edwin F. Glenn as professor of military science in the University having expired by limitation, Lieut. George T. Morgan was, at the request of the board of regents, assigned by the war department to this chair in the University, and he has carried on the work in a satisfactory manner during the last year. At present, military science is a required study for all male students in the freshman class, and is open to male students in all classes. It is no longer required of ladies, physical culture having been substituted for it, and the ladies of the freshman class being required to take physical culture three times a week during the year. The change is in many respects a pleasant one for the ladies, and will be found to be advantageous in all respects.

THE EXPERIMENT STATION.

The work of the experiment station has been well managed, and the results have been valuable. A goodly number of bulletins have been issued and several more are ready for publication. The experiments have for the most part been judicious. There have, unfortunately, been some interruptions in experiment work occasioned by changes in the officers of the station. Though the difficulty of completing experiments that had been begun by the retiring officials has been experienced, a large amount of work has been done. Professor David N. Harper, of the chair of chemistry in the agricultural department, resigned in 1891, and was succeeded by Mr. Harry Snyder, of Cornell University. Professor

Harper had carried forward some interesting and valuable experiments, the final results of which are now ready to be published. Professor Snyder has been a most indefatigable and efficient chemist for the station since he entered upon his duties, and he has done a large amount of work in his laboratory in the interest of experiments. I believe that the station is at present wisely managed, that it is doing good work, and that it deserves the confidence of the regents and of the State.

THE DEPARTMENT OF LAW.

Although this department has been in operation only four years, it is already one of the most successful and satisfactory departments of the University. It has ample accommodations. Its library has been much enlarged, through the generous appropriation of the last legislature. Its scope of instruction has been extended, and its instructors and lecturers are more permanent than in the first years of its existence. The requirements for admission have been increased, and candidates who do not bring with them diplomas as evidence of sufficient scholarship are required to pass an entrance examination. The charge for tuition has been increased. Three courses of study are provided—a two years' day course, a three years' evening course, and a graduate course of one year. The officers of the department are willing to have the required course extended to three years whenever the regents see fit to order it. Fifty seven students registered in this college the first year of its existence, one hundred thirty-five the second year, one hundred seventy-six the third year, and two hundred forty-two the fourth year.

All distinctions in the rate of tuition between residents and non-residents of Minnesota have been abolished, residence in Minnesota being so easily acquired by the candidates.

THE MEDICAL DEPARTMENT.

The medical department is in better condition than ever before. Two years ago the course of lectures was lengthened from six months in a year to eight months. It was expected that the immediate effect of this would be to diminish somewhat the number of students. No such effect, however, has been produced. The number of students in the department has increased every year. In 1889-90 the number was one hundred twenty-seven; in 1890-91, one hundred ninety; in 1891-92, two hundred eleven.

Thomas G. Lee, of Harvard University, has been elected instructor in histology, embryology and bacteriology, with the expectation that he will be made a professor in due time.

A new medical college building on the University campus is nearly completed, the last legislature having made an appropriation for that purpose. The building is admirably designed for the work of the department, and is one of the most attractive looking buildings on the campus. It will be ready for use at the opening of the college year, October 5th. As no provision could be made in this building for the work in chemistry, histology and pharmacy, the regents have erected another building of a less permanent character, but large enough to meet the requirements and substantial enough to last at least ten years. This building cost sixty-five hundred dollars. The main medical building with its equipment cost sixty-five thousand dollars. The equipment of the department is now much more extensive than it has been heretofore, and a good

working library has also been secured. A fourth college has been added to the department—the college of pharmacy, for the establishment of which a special appropriation of five thousand dollars was made by the legislature. Professor Frederick J. Wulling, of Brooklyn, N. Y., was elected professor of pharmacy in 1892, and will enter upon his duties at the beginning of the college year in October. A dispensary is to be maintained in the medical building, the exact relation of which to the University is yet to be determined. Heretofore the University has had no responsibility for the dispensary. No special provision has yet been made for hospital privileges, as a means of instruction, except as the faculty may have been able to secure privileges in hospitals, members of whose staff of physicians are also members of the faculty of the University.

SPECIAL COURSE FOR TEACHERS.

Many teachers in the State who are unable to take the full course in the University have felt the need of higher culture for their work. To enable them to get such culture and also to meet the needs of prospective teachers who require some special training in the art of teaching, a two years course of study in the University has been offered to three classes of candidates. 1st. Graduates of State Normal Schools. 2d. Graduates of High Schools who have taught one year and hold a teacher's county certificate or its equivalent. 3d. Students of the University who are candidates for bachelor's degree. A year's work in pedagogy, including elementary psychology as applied to teaching, is combined with the regular studies of the University so as to make a full two-years' course of University work. When this work is completed the student will be entitled to a certificate which it is hoped will be made by law a satisfactory certificate for the teacher in any school in the State except where, as for the principals of high schools, the certificate of the State high school board is required. It is believed that this teachers' course, improved and extended as it doubtless will be when experience shall show the way, will be of great value to the State, and will in no way interfere with the work of the Normal school, but rather be helpful to that work. As nearly all the work of instruction in this course will be done by the regular teachers in the regular classes, but little additional expense will be occasioned by this special course the coming year. Pedagogy is the only subject that is to be extended beyond the limits required by the University curriculum. The regents desire to make the University as useful to the State as possible, and the present arrangement of the teachers course utilizes, in the most satisfactory way, the teaching force and equipment of the University, to supply a want that has been long felt in educational circles. Whatever additional instruction may be necessary in order to make the work in this course effective and adequate will undoubtedly be provided whenever the need shall appear.

THE LIBRARY.

There are in the general library 27,191 bound volumes. This does not include the special libraries of the colleges of law and of medicine, nor the library of the school of agriculture, nor the working libraries of various departments requiring books of a technical character to be constantly at hand for reference. These contain several thousand volumes in the aggregate. The number of volumes added to the general library by

purchase in 1880-91 was 693; in 1891-92, 1,370. The number of volumes received as private gifts in 1890-91 was 31; in 1891-92, 365. The number of public documents received in 1890-91 was 187; in 1891-92, 340. The magazines and reviews which for a few years had remained unbound and therefore practically out of use, have all been bound and are on the shelves for the use of the students. The recent purchases of books have been less strictly to satisfy the pressing needs of some department than former purchases, and the library has been enriched by works which all students need to be familiar with no matter what course of study they are pursuing. Growing in value as the library is, it needs larger as well as safer quarters in which to do the best work for the University.

A NEW BUILDING NEEDED.

On the 30th of April, 1892, in the evening, a fire broke out in the assembly room in the main building, while a company of several hundred students and instructors were assembled in the room. The fire made very rapid progress and in a few moments the platform and cupola of the building were in flames. The audience escaped without panic and without injury. The roof of the building, the whole of the assembly room and other portions of the highest story were destroyed and the ceilings of all the rooms in the main part of the building were either ruined or very much damaged by water. During the fire, the library was rapidly removed to the neighboring buildings but suffered damage to the extent of two thousand dollars, in the removal. The library had been removed in the same manner, at the time of the fire which occurred during the Christmas vacation of 1889. The fire at that time was in the forenoon and the removal of the library was accomplished with less damage than at the latter fire. These successive fires with the danger and loss to the library and the possible danger to life, proved conclusively two things: 1st, That the assembly room for the gathering of the whole body of students, at the top of the main building, could not be used for that purpose with entire safety, and 2d, that a fire proof building for the library was needed and that the present location of the library in the main building was not a safe one.

The regents, therefore, in considering what should be done in the emergency voted unanimously that the old assembly room should not again be used for the purpose of the daily assembly. They instructed the president to use the best room he could find for the purpose. Accordingly the Student's Christian Association building was used during the remainder of the year. Just before commencement two large rooms in the law building were thrown together and were used for the Alumni dinner, for the address by Judge Kerr to the law students, in commencement week. These rooms, now united as one, will be used for the daily assembly during the coming year. They are too small to accommodate half the students, but we can endure the inconvenience and discomfort incident to the situation for a single year, with the hope of relief thereafter. As a matter of administration merely there must be a place where the students as a body can assemble and where the president can meet them and communicate to them his wishes. To meet this necessity the regents at first decided to build an assembly room at once. But difficulties being encountered and the necessity of having a safe place for the library be-

ing strongly felt, it was finally decided to unite the two needs, an assembly room and a library in one building; to procure the necessary plans and specifications for such a building, and then to lay the matter before the legislature for such action as may be required. I cannot doubt that the legislature, feeling a just pride in the University and in the work it is doing for the State, will cheerfully grant whatever may be necessary to meet this most pressing want of the University. I do not dwell upon this subject further than to state the simple facts, presuming that the president of the board of regents will in his report deal more fully with the subject.

DEGREES CONFERRED.

Since the last report degrees have been conferred as follows:

| | 1891 | 1882 |
|------------------------------------------|------|------|
| Bachelors of Arts..... | 15 | 16 |
| Bachelors of Science..... | 14 | 19 |
| Bachelors of Literature..... | 17 | 16 |
| Bachelors of Civil Engineering..... | 3 | 2 |
| Bachelors of Mechanical Engineering..... | 1 | 2 |
| Bachelors of Electrical Engineering..... | 2 | 4 |
| Bachelors of Laws..... | 49 | 56 |
| Doctors of Medicine..... | 23 | 32 |
| Doctors of Dental Surgery..... | 7 | 4 |
| Masters of Arts..... | 1 | 1 |
| Masters of Laws..... | ... | 5 |
| Masters of Science..... | ... | 1 |
| Doctor of Philosophy..... | ... | 1 |
| Total..... | 132 | 161 |

The names and residences of these graduates are given in appendix "A." The enrollment and classification of students during the two years covered by this report, 1890-91 and 1891-92 are given in appendix "B."

The whole number of degrees conferred by the University is 755. No honorary degrees have been conferred.

The expansion of the University, both in the number of colleges and the number of students has been so great in the last few years as necessarily to increase very considerably the expenditure for salaries. The individual salaries have not been largely increased, but the number of individuals drawing salaries has been largely increased. Not only instructors have had to be employed in greater number than formerly, but janitors for the buildings which have sprung up in these years have increased the number of salaried officers, as has also the organization of a full corps at the experiment station. The expense to the State, however, has not kept pace with the total expenditure. The receipts from fees in the colleges of medicine and law are sufficient to meet the requirements for salaries in these colleges, and it is believed that with the increase in the charge for tuition in these colleges the entire expense for law and medicine will be met by the receipts for tuition; in other words that these departments will be self-supporting. The expenses of the experiment station are met to a considerable extent by the \$15,000 received annually from the general government, under the provisions of the "Hatch Bill." The salaries of instructors in the college of agriculture and the college of engineering, metallurgy and mechanic arts are, to a large extent, provided for by the annual appropriation from the general government, under the provisions of the "Morrill Bill." It is, therefore, mainly for the general University

expenses, for the library, and for the college of science, literature and arts, that the state appropriations are required, and the demand upon the State has not kept pace with the increase in the total expenditures, nor has it been in proportion to the increase in the work done. With the completion of the necessary buildings asked for at this time, the necessity for the University's making largely increased demands on the resources of the State will cease, and with the necessity for them the demands will cease.

CYRUS NORTHROP.

APPENDIX "A."

At the Nineteenth Annual Commencement, held June 4, 1891, the following persons received degrees:

COLLEGE OF SCIENCE, LITERATURE AND ARTS.

FOR BACHELOR OF ARTS—15.

| | |
|-----------------------------------------|---------------------------------------------|
| May Bestor, Minneapolis. | John Ernest Merrill, Minneapolis |
| Alden Joseph Blethen, Jr., Minneapolis. | Henry Stephen Morris, Sisseton Agency, S.D. |
| Charles William Bray, Excelsior. | Milton Dwight Purdy, White Hall, Ill. |
| Nora Frye, Elk River. | Theodore Geraldo Soares, Minneapolis. |
| Charles Elise Guthrie, Minneapolis. | Thompson Welliver Stout, Minneapolis. |
| Asa John Hammond, Lake City. | Curtiss Sweigle, Ortonville. |
| William Augustus Jackson, Minneapolis. | Albert Martin Webster, Hamline. |
| Harlan Edward Leach, Spring Valley. | |

FOR BACHELOR OF SCIENCE—14.

| | |
|-----------------------------------------|------------------------------------------|
| Sigurd Johnson Boyum, DeLamere, N. D. | Christian Peterson Lommen, Spring Grove. |
| Charles Lincoln Chase, Hastings. | Frances Montgomery, St. Anthony Park. |
| Albert Arthur Dodge, Farmington. | Margaret Belle Morin, Albert Lea. |
| Edward Brown Gardiner, Minneapolis. | Ernest Arthur Nickerson, Elk River. |
| Dora May Guthrie, Minneapolis. | George Arthur Smith, Brown's Valley. |
| Frank Hanft, Minneapolis. | Albert Wallace Stacy, Washburn. |
| Theodore McFarlane Knappen, Minneapolis | Dodge, A. A. |

FOR BACHELOR OF LITERATURE—17

| | |
|---------------------------------------------|---------------------------------------|
| Martha Virginia Ankeny, Minneapolis. | Joseph Oscar Jorgens, Grand Meadow. |
| Rose Ann Bebb, Minneapolis. | Mary Emma Kemp, Minneapolis. |
| Grace Chapman, Minneapolis. | Lillie May Martin, Minneapolis. |
| Benjamin Phillip Chappie, Beldenville, Wis. | Homer Francis Pierson, Grand Meadow. |
| Arthur Bliss Church, Minneapolis. | Fred William Sardeson, Minneapolis. |
| George Archibald Clark, Minneapolis. | Edgar Daniel Sias, Pueblo, Col. |
| Myrtle Connor, Minneapolis. | Victor Alonzo Stearns, Duluth. |
| Nellie Malura Cross, Minneapolis. | Byron Harvey Timberlake, Minneapolis. |
| William Webb Harmon, Sauk Center. | |

MASTER OF ARTS—1.

Joseph Brown Pike, B. A., U. of M. '90, Minneapolis.

COLLEGE OF MECHANIC ARTS.

FOR BACHELOR OF CIVIL ENGINEERING—3.

| | |
|----------------------------------|---------------------------------|
| Walter Abram Chowen, Chouen. | Fred Maynard Mann, Minneapolis. |
| Fred Luke Douglass, Minneapolis. | |

FOR BACHELOR OF MECHANICAL ENGINEERING—1.

Baxter Martin Aslakson, Willmar.

FOR BACHELOR OF ELECTRICAL ENGINEERING—2.

| | |
|----------------------------------|---------------------------------|
| George Philip Huhn, Minneapolis. | Martin Hugh Gerry, Minneapolis. |
|----------------------------------|---------------------------------|

DEPARTMENT OF LAW.

FOR BACHELOR OF LAWS—49.

Edward Charles Bauman, Duluth. William Augustus Krause, Paynesville.
 George Wilbur Bestor, Minneapolis. John Lindsay, Minneapolis.
 William Compton Brown, Rochester. Frederick Francis Lindsey, Minneapolis.
 Ripley Bernard Brower, Minneapolis. George Wilber Markham, St. Paul.
 William Harrison Carey, Duluth. William Judson Mayer, Manauah.
 Linwood Christopher Carlton, Minneapolis. Theodore Megaarden, Minneapolis.
 Greely E. Carr, Argyle. Albert Randall Moore, St. Paul.
 John Martin Casey, Waverly. Andrew Olson Ofsthum, Glenwood.
 Martin Bradner Davidson, Austin. Martin E. Remmen, Holden.
 James D. Denégre, St. Paul. Horace Randall Robinson, Minneapolis.
 Gilbert Greene Dickerman, St. Paul. Arthur R. Rogers, Minneapolis.
 Douglas Andrews Fiske, Minneapolis. Edward Wesley Ross, Minneapolis.
 John Patrick Galbraith, St. Paul. George Howard Selover, Minneapolis.
 Harry Gilbert Gearhart, Duluth. Siver Scrumgard, Devil's Lake, N. D.
 Edwin Forbes Glenn (Lieut.), St. Paul. Fred Pearson Smith, Le Sueur.
 Eugene Harland Godfrey, Minneapolis. William Snell, Minneapolis.
 Charles Ernest Goodsell, Minneapolis. John Sheppard Stone, St. Paul.
 Charles Devereaux Gould, Minneapolis. Thomas Snowden Tompkins, St. Paul.
 James Edwin Gray, Lake City. Ole John Vaule, Osakis.
 Lawrence Gregerson, Geneva. John Arvid Walgren, Minneapolis.
 Charles Nathaniel Hamblin, Minneapolis. Francis Lincoln Ware, Minneapolis.
 George William Wallace Harden, LeRoy. Thomas Joseph Wheeler, St. Paul.
 John W. Hopp, Preston. Henry George Wyvell, Breckenridge.
 Alva Hunt, Montevideo. George Ellsworth Young, Minneapolis.
 Bjarne Eric Ingwaldson, Buxton, N. D.,

DEPARTMENT OF MEDICINE.

FOR DOCTOR OF MEDICINE—23.

The College of Medicine and Surgery—19.

August Anderson, Center City. Clarence Jennings Miner, Minneapolis.
 Peter Halstensen Bakke, Kenyon. Carl John Ringnell, Minneapolis.
 Ole Kittleson Bergan, Sacred Heart. John Thomas Rogers, St. Anthony Park.
 Fred John Bohland, St. Paul. Prosper Ernest Sheppard, Lake Side.
 Harriet Beecher Conant, Minneapolis. Martha Jane Smith, Yankton, S. D.
 Julius C. Gilbertson, Minneapolis. Allan Blanchard Stewart, Minneapolis.
 Thomas C. Gibbs, Lake City. Charles Alexander Van Slyke, St. Paul.
 Julian Adolph Hellsher, Preston. Hugo Evans Wangellin, Minneapolis.
 Andrew E. Johnson, Glencoe. James Bartholomew White, Belle Plaine.
 Alfred Lind, Winthrop.

The College of Homœopathic Medicine and Surgery—4.

Warren Wesley Drought, St. Paul. Alfonso Adelbert Roberts, Minneapolis.
 Ellsworth Emerson King, Minneapolis. Leon Adelbert Wait, Minneapolis.

FOR DOCTOR OF DENTAL SURGERY—7.

Henry Towne Breck, Minneapolis. Louis Wesley Meckstroth, Minneapolis.
 Ella Z. Chandler, Minneapolis. Edwin George Riddell, Northfield.
 Fred Augustus Lenox, Minneapolis. Frank Chisholm Todd, Minneapolis.
 Edgar Henry Marshall, Plainview.

At the Twentieth Annual Commencement held June 2, 1892, the following persons received degrees:

THE COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

FOR BACHELOR OF ARTS.—16.

Clara Edith Bailey, Minneapolis. Gottfrid Emanuel Hult, Scandia.
 James Everett Bradford, Kedron. George Lenfestey Keefer, St. Paul.
 Benjamin Franklin Clarke, Rich Valley. William Connor Leary, Minneapolis.
 Rupert Carthalo Dewey, Minneapolis. Andrew Nelson, Otisville.
 Frank Herman Dittenhoefer, Minneapolis. James Edward O'Brien, Lake City.
 Ester Friedlander, Minneapolis. Arthur Ranum, La Crosse, Wis.
 John Wesley Graves, Spokane Falls, Wash. Carlton Wilbert Smith, Howard.
 Anna Loraine Guthrie, Minneapolis. Stella Burger Stearns, Duluth.

FOR BACHELOR OF SCIENCE.—19.

George Kimball Belden, Minneapolis. Evertt Buell Kirk, St. Paul.
 Charles Peter Berkey, Farmington. Edwin James Kraft, Minneapolis.
 Eista Nimmons Best, Minneapolis. Sarah Bird Lucy, Minneapolis.
 John Grosvenor Cross, Rochester. James Edward Madigan, Maple Lake.
 Otte Knute Olof Polin, Stillwater. Lyman Love Pierce, Stockton, N. Y.
 George Douglas Head, Minneapolis. George Cushing Sikes, Rugby, N. D.
 Fred Leopold Holtz, Minneapolis. George Tunell, Albert Lea.
 Elon Obed Huntington, Minneapolis. Anthony Zeleny, Minneapolis.
 Bradford Coryelle Hurd, Minneapolis. John Zeleny, Minneapolis.
 Paul Emerson Kenyon, Fargo, N. D.

FOR BACHELOR OF LITERATURE.—16.

Clara Frances Baldwin, St. Paul.
 Charles Loren Chapple, Beldenville, Wis.
 Mary Moulton Cheney, St. Anthony Park.
 Arthur Eugene Cowell, Minneapolis.
 John Albin Dahl, Minneapolis.
 Arthur Hugo Eiftman, Prescott, Wis.
 John Frederick Farmer, Spring Valley.
 Charles Sumner Hale, Minneapolis.

Elizabeth Helen Mathes, Minneapolis.
 Minnie Agnes Rexford, Minneapolis.
 Louise Florence Robinson, Minneapolis.
 Mrs. Effie Ames Rochford, Minneapolis.
 Florence Julia Rose, Minneapolis.
 Ewelline Van Winkle Sammis, Minneapolis.
 Helen Huntington Tombs, Grafton, N. D.
 Madeleine Wallin, Grand Forks, N. D.

FOR MASTER OF ARTE.—1.

Theodore Geraldo Soares, B. A., U. of M., '91, Minneapolis.

FOR MASTER OF SCIENCE.—1.

Fred. William Sardeson, B. S., U. of M., '91, Minneapolis.

FOR DOCTOR OF PHILOSOPHY.—1.

Henry Webb Brewster, B. A., U. of M., '87, St. Anthony Park.

COLLEGE OF ENGINEERING, METALLURGY AND THE MECHANIC ARTS.

FOR BACHELOR OF CIVIL ENGINEERING.—2.

John Jay Hankenson, Glencoe. Elvin Lydiard Higgins, Hutchinson.

FOR MECHANICAL ENGINEERING.—2.

Ralph Potter Felton, Minneapolis. James Herbert Gill, Glyndon.

FOR BACHELOR OF ELECTRICAL ENGINEERING.—4.

Edward Paris Burch, Menomonie, Wis. William Irving Gray, Lake City.
 William Henry Burtis, Oshkosh, Wis. Monroe Sherman Howard, Lake City.

FOR BACHELOR OF ARCHITECTURE.—2.

Leo Goodkind, St. Paul. George Taylor Plowman, Minneapolis.

DEPARTMENT OF LAW.

FOR BACHELOR OF LAWS.—56.

Lester Howard Bentley, Montevideo.
 Eugene Nimmons Best, A. B., U. Mich., '89, Minneapolis.
 William Bennett Bebb, Minneapolis.
 Stillson Josiah Beardslee, Minneapolis.
 Charles Stewart Benson, Anoka.
 Sumner Bookwalter, Minneapolis.
 Charles Edward Broughton, Osage.
 Walter Reynolds Brown, Minneapolis.
 John Brown, New Richmond, Wis.
 Stiles Wilton Burr, St. Paul.
 William Francis Campbell, Richwood.
 Orrin Monroe Corwin, Lake City.
 John Frithof Dahl, Minneapolis.
 Joseph Doerfler, Jr., Minneapolis.
 William Gilbert Drowley, Caledonia.
 George Sanford Eddy, Willmar.
 Calvin Albert Fleming, Lake Crystal.
 Jean A. Flittie, Mankato.
 Charles Rollin Fowler, Minneapolis.
 Harrison Earl Fryberger, A. B., U. M., '90, Minneapolis.
 Herschell Borroughs Fryberger, Duluth.
 Arthur Eugene Giddings, A. B., U. M., '89, Anoka.
 Oluf Gjerset, Montevideo.
 John Dean Goss, A. B., U. Wis., Ph. D., Columbia, '91, Hudson, Wis.
 Joseph Henry Hanlan, Wheeling, W. Va.
 James Lawrence Helm, Luverne.
 John Henry Hintermeister, St. Paul.
 Andrew Lewis Himle, Madison.
 Fred. Ezra Hobbs, B. L., U. M., '88, Minneapolis.

Alfred John Holmes, A. B., Gust. Adolphus, '90, Westedo.
 Edmond B. Kinney, Hudson, Wis.
 Burt Frank Lum, B. S., U. M., '90, Minneapolis.
 Livingston A. Lydiard, Minneapolis.
 Andrew Francis McCormick, Norwood.
 John Francis McLean, Graceville.
 Elvero Lewis McMillan, Minneapolis.
 Lane McGregor, Minneapolis.
 Harry H. Merrick, Minneapolis.
 Harry Moore, Minneapolis.
 Leonard J. Mosness, Minneapolis.
 Frank Pleasant Nantz, Minneapolis.
 Porter Joseph Neff, Bushnell, Ill.
 George Oakes, New Richland, Wis.
 Munro Horace Palmer, Tacoma, Wash.
 Henry Peterson, St. Paul Park.
 William Henry Harrison Pilgram, Minneapolis.
 Milton Dwight Purdy, A. B., U. of M., '91, Whitehall, Ill.
 Herbert Gilman Richardson, B. S., U. M., '90, Minneapolis.
 Volney G. Riefsnyder, Oronoco.
 William Edwin Rheutan, Winona.
 Curtiss Swegle, B. A., U. M., '91, Ortonville.
 Feter Grinde Swenson, Minneapolis.
 Carl Taylor, St. Paul.
 Charles Thompson, B. L., U. M., '88, Minneapolis.
 John Stewart Wangness, Minneapolis.
 Ole Knute Wilson, B. S., U. M., '90, Gilchrist.

FOR MASTER OF LAWS.—5.

George W. Ackard, LL. B., Minneapolis.
 James Dennis Denegre, LL. B., St. Paul.
 John Patrick Galbraith, LL. B., St. Paul.

Charles Nathaniel Hamlin, LL. B., Minneapolis.
 Albert Randall Moore, LL. B., St. Paul.

DEPARTMENT OF MEDICINE.

FOR DOCTOR OF MEDICINE.—32.

College of Medicine and Surgery.—28.

| | |
|----------------------------------------|----------------------------------------|
| Christopher August Anderson, Nicollet. | Elliv Janson, Minneapolis. |
| Peter Andreas Aurnes, Minneapolis. | Ivar Janson, Minneapolis. |
| Peter Bakke, Minneapolis. | Samuel Markel Kirkwood, St. Paul. |
| Arthur Edwin Benjamin, Hutchinson. | Nelson Howard Marshall, Minneapolis. |
| George Alexander Binder, St. Paul. | Martin Lewis Mayland, Aspland. |
| Gustave Arthur Chilgren, St. Peter. | Frederick Voss Mohn, Minneapolis. |
| Harry Lee Darms, Stillwater. | George Wilber Moore, Minneapolis. |
| James Davidson, Minneapolis. | William Phillip Rothwell, Graceville. |
| Emil Alexius Edlen, Minneapolis. | George Easton Senkler, St. Paul. |
| Joseph L. Edsall, Minneapolis. | William Sidney Smith, Waseca. |
| John Gustaf Erickson, Minneapolis. | Frank Chisholm Todd, Minneapolis. |
| Carl Abraham Fjelstad, Norway Lake. | Anders Albert Westeen, Minneapolis. |
| Eric Olonzo Giere, Rock Dell. | Osten Kristenson Winberg, Minneapolis. |
| Ferdinand Hilbert, Minneska. | Henry Edward Wunder, Minneapolis. |

College of Homeopathic Medicine and Surgery.—4.

| | |
|--------------------------------------------|-------------------------------------|
| Charles McHenry Cooper, Marion. | Alma Endora Morrison, Minneapolis. |
| Mary Alice Glidden Dight, M.D., Faribault. | Robert Ralph Rasmussen, Albert Lea. |

FOR DOCTOR OF DENTAL SURGERY.—4.

| | |
|----------------------------------|--------------------------------|
| Frank Wilson Force, Minneapolis. | Miland Austin Knapp, Hastings. |
| James William Paul. | Thomas Falvy Williams. |

UNIVERSITY OF MINNESOTA.

ACCOUNTANT'S REPORT.

D. W. SPRAGUE, ACCOUNTANT.

Showing receipts and disbursements of the University of Minnesota for the fiscal years ending July 31, 1891 and July 31, 1892.

Financial statement of the University of Minnesota for the fiscal year commencing August 1, 1890 and ending July 31, 1891.

CURRENT EXPENSE.

Summary of amounts placed to the credit of the current expense account of the University during the fiscal year ending July 31, 1892.

| | | |
|------------------------------------------------------|-------------|--------------|
| Balance on hand at last report..... | \$12,710.79 | |
| Annual appropriation..... | 65,000.00 | |
| From U. S. treasury—Hatch bill. (*)..... | 22,500.00 | |
| From U. S. Treasury—Morrill bill. (**). | 31,000.00 | |
| Interest on University bonds and land contracts..... | 38,427.20 | |
| Sales of Salt Spring Lands..... | 8,918.77 | |
| Sales—Experiment Station..... | 3,819.11 | |
| Insurance—Losses from fire..... | 5,160.00 | |
| University—Fees, etc..... | 12,518.32 | |
| | | \$200,054.19 |

Amounts received from State Treasurer on Auditor's warrants:

| | BILLS. | PAY ROLL. |
|----------------------|-------------|--------------|
| June..... (***) | | \$8,559.53 |
| July..... | \$1,760.11 | |
| August..... | 2,847.29 | 2,363.21 |
| September..... | 3,819.07 | 10,089.68 |
| October..... | 5,121.69 | 10,285.38 |
| November..... | 3,797.33 | 10,802.17 |
| December..... | 4,843.45 | 11,405.96 |
| January..... | 4,729.73 | 10,699.50 |
| February..... | 4,221.87 | 10,707.13 |
| March..... | 3,933.21 | 11,370.00 |
| April..... | 4,889.76 | 10,726.23 |
| May..... | 9,458.78 | 10,963.66 |
| June..... | 4,799.12 | 10,390.37 |
| July..... | | 2,756.40 |
| | \$54,221.41 | \$121,119.22 |
| Total..... | | \$175,340.63 |
| Balance undrawn..... | | 24,713.56 |
| | | \$200,054.19 |

(*)The annual appropriation on account of "Hatch Bill" is \$15,000, made in quarterly payments of \$3,750 each. The last installment of 1890 and the first installment of 1892 were received during the fiscal year 1891, making an excess of \$7,500 for this year, but a deficiency of \$3,750 for 1890 and 1892.

(**)The annual appropriation on account of the "Morrill Bill" commenced in 1890, and was \$15,000, increasing \$1,000 each year thereafter until it shall amount to \$25,000 per annum. The appropriation for 1890, \$15,000, was not received until the year 1891, which with the appropriation for 1891, \$16,000, made a total of \$31,000 received this year.

(***)There were no funds in the treasury to meet the June pay roll. It was provided for temporarily by Gov. Pillsbury, but paid in August and comes into the fiscal year.

GENERAL UNIVERSITY.

| 1891. | CURRENT EXPENSE. | No. voucher. | |
|-----------|-------------------------------------------------------------------------|--------------|----------|
| June. | General University pay roll..... | 948 | \$830.00 |
| Aug. 1. | E. B. Johnson, petty expenses..... | 1 | 2.20 |
| July 1. | Peter Christianson, work on campus..... | 3 | 38.02 |
| Aug. 1. | N. W. Telephone Exch. Co., telephone service June and July..... | 11 | 6.00 |
| July 30. | Tribune Job Printing Co., bill of printing..... | 13 | 23.50 |
| Aug. 1. | O. C. Gregg, advertising in Institute Annual No. 3..... | 14 | 50.00 |
| Aug. 1. | E. B. Johnson, advertising in State papers..... | 16 | 300.00 |
| Aug. 30. | General university pay roll..... | 53 | 200.00 |
| Aug. 30. | Peter Christianson, labor on campus..... | 58 | 28.13 |
| Aug. 15. | N. W. Telephone Exch. Co., service August and Sept..... | 62 | 6.00 |
| August. | E. B. Johnson, postage, gas and advertising..... | 65 | 159.48 |
| Sept. 30. | General University, September pay roll..... | 110 | 850.00 |
| Sept. 1. | Tribune Job Printing Co., bill of printing..... | 111 | 8.25 |
| Sept. 29. | E. B. Johnson, sundry petty expenses..... | 112 | 21.95 |
| Aug. 28. | Chas. D. Whitall & Co., 1 cash book..... | 113 | 6.00 |
| Sept. 29. | Wm. H. Yattaw, labor and sundry petty expenses..... | 117 | 179.06 |
| Sept. 30. | D. W. Sprague, petty bills..... | 124 | 16.15 |
| Sept. 30. | Lotta L. Black, labor, copying..... | 125 | 5.00 |
| Sept. 30. | Peter Christianson, work on campus..... | 129 | 5.47 |
| Oct. 1. | Maria L. Sanford, 50 lectures given at farmers' insti., 1887-88..... | 170 | 438.76 |
| Oct. 1. | John S. Pillsbury, dinners for board of regents..... | 171 | 21.95 |
| Oct. 31. | General University, October pay roll..... | 189 | 840.00 |
| Oct. 1. | Tribune Job Printing Co., bill of printing..... | 199 | 84.25 |
| Oct. 1. | N. W. Telephone Exchange Co., service..... | 202 | 6.00 |
| Oct. 14. | S. M. Emery, sundry petty expenses..... | 204 | 9.92 |
| Oct. 31. | R. B. Lees, 1 office desk..... | 200 | 27.00 |
| Oct. 31. | John A. Schlener Co., ink, pens and journal..... | 233 | 1.95 |
| Nov. 1. | Harrison & Smith, 2,000 jackets and scrap book..... | 255 | 11.50 |
| Oct. 24. | Minn. Title Insurance and Trust Co., insurance..... | 277 | 102.45 |
| Nov. 30. | General University, November pay roll..... | 304 | 840.00 |
| Nov. 1. | N. W. Telephone Exchange Co., services..... | 309 | 6.00 |
| Nov. 26. | Geo. C. Merrill, abstracts..... | 310 | 14.25 |
| Nov. 28. | Lotta L. Black, 30 hours writing..... | 315 | 7.00 |
| Nov. 29. | E. B. Johnson, gas and pres. Northrop's expenses at conv'n..... | 320 | 108.84 |
| Dec. 1. | B. N. Johnson, services..... | 370 | 66.00 |
| Dec. 31. | General University, December pay roll..... | 399 | 840.00 |
| Dec. 31. | E. B. Johnson, seals and office supplies..... | 400 | 6.80 |
| Jan. 1. | D. W. Sprague, 5 fares to St. Paul and return..... | 402 | 2.50 |
| Dec. 10. | John A. Schlener & Co., 1 pigeon hole case..... | 404 | 6.00 |
| Dec. 26. | Lotta L. Black, copying..... | 424 | 5.50 |
| Dec. 1. | Tribune Job Printing Co., miscellaneous printed matter..... | 427 | 2.75 |
| Jan. 31. | General University, January pay roll..... | 492 | 900.00 |
| Jan. 31. | Tribune Job Printing Co., miscellaneous printing..... | 494 | 154.80 |
| Feb. 2. | E. B. Johnson, taxes..... | 496 | 48.00 |
| Jan. 31. | The "Gopher," advertising..... | 498 | 50.00 |
| Jan. 2. | Wm. H. Yattaw, case for rubber stamps and express..... | 504 | 4.85 |
| Jan. 31. | R. B. Lees, labor and material..... | 512 | 6.35 |
| Jan. 31. | D. W. Sprague, petty bills..... | 558 | 2.50 |
| Feb. 13. | Knute Nelson, expenses at board meeting..... | 560 | 10.70 |
| Feb. 28. | General University, February pay roll..... | 574 | 900.00 |
| Feb. 25. | Wm. W. Folwell, services as librarian..... | 575 | 250.00 |
| Jan. 31. | Harrison & Smith, miscellaneous printing..... | 577 | 2.50 |
| Feb. 28. | J. Winslow, work in preparing expense list..... | 578 | 8.00 |
| Feb. 28. | E. B. Johnson, gas and petty expenses..... | 585 | 56.35 |
| Feb. 28. | D. W. Sprague, petty bills..... | 587 | 3.75 |
| Feb. 28. | Tribune Job Printing Co., miscellaneous printing..... | 611 | 44.50 |
| Feb. 14. | S. M. Emery, expenses to St. Anthony..... | 623 | 4.96 |
| Feb. 23. | S. B. Mattison, legislature to School of Agriculture..... | 624 | 20.00 |
| Feb. 20. | O. P. Stearns, expense attending meeting board of regents..... | 634 | 6.00 |
| Mar. 10. | Knute Nelson, expense attending meeting board of regents..... | 635 | 28.00 |
| Mar. 31. | General university, March pay-roll..... | 643 | 900.00 |
| Mar. 31. | John A. Schlener & Co., paper weight and rubber bands..... | 649 | 1.45 |
| Mar. 30. | E. B. Johnson, electrotypes, stamps and petty expenses..... | 651 | 88.84 |
| Feb. 28. | Harrison & Smith, vouchers and ruled slips..... | 652 | 18.75 |
| Mar. 31. | Gustav E. Stechert, books..... | 658 | 26.25 |
| Mar. 21. | W. F. Porter & Co., labor and material..... | 660 | 3.00 |
| Mar. 28. | S. M. Emery, railway fare and hotel bills..... | 690 | 11.92 |
| April 31. | General university, April pay-roll..... | 702 | 900.00 |
| April 25. | Jennie Winslow, work on expense list..... | 705 | 5.00 |
| April 30. | Tribune Job Printing Co., miscellaneous printing..... | 706 | 49.00 |
| April 30. | R. B. Lees, carpenter work and material..... | 709 | 13.60 |
| April 30. | E. B. Johnson, gas and petty expense..... | 712 | 9.80 |
| April 30. | Wm. W. Folwell, services as librarian..... | 715 | 250.00 |
| April 25. | Board, Dep't of school of agriculture, 100 dinners for legislature..... | 728 | 25.90 |
| May 31. | General university, May pay-roll..... | 785 | 900.00 |
| May 30. | Jennie Winslow, labor on expense list..... | 788 | 7.50 |
| May 28. | Harrington Beard, invitations and env' for commencement..... | 791 | 7.00 |
| April 22. | M. A. Scovell, treasurer, for "Morrill Act"..... | 794 | 25.00 |
| June 1. | E. B. Johnson, printing, office supplies and help..... | 795 | 19.28 |
| June 8. | Stephen Mahoney, tickets for alumni dinner..... | 797 | 19.00 |
| May 28. | Ricard & Gruman, 10 diplomas, filled "High School"..... | 798 | 2.50 |
| May 27. | Tribune Job Printing Co., 9,000 catalogues..... | 799 | 916.98 |

| | | No. voucher. | |
|------------|-----------------------------------------------------------------|--------------|-------------|
| May 5. | Tribune Job Print. Co., 100 reports, Finances of University | 801 | 80.45 |
| May 31. | Tribune Job Printing Co., miscellaneous printing..... | 802 | 55.75 |
| May 31. | D. W. Sprague, petty bills..... | 812 | 5.85 |
| June 1. | The "Gopher," advertising..... | 848 | 25.00 |
| June 1. | J. Wale, jr. & Co., 1 Union flag..... | 849 | 42.50 |
| June 30. | General university, June pay-roll..... | 904 | 900.00 |
| June 9. | E. B. Johnson, stamps, express and labor in office..... | 905 | 157.54 |
| June 20. | Jennie Winslow, work on expense list..... | 907 | 9.75 |
| June 28. | E. B. Johnson, petty sundry expenses..... | 911 | 21.03 |
| June 25. | N. W. Telephone Exc., services..... | 914 | 6.00 |
| June 30. | R. B. Lees, carpenter work..... | 915 | 6.80 |
| June 23. | Wm. H. Yattaw, labor and petty expenses..... | 916 | 7.55 |
| June 30. | Tribune Job Printing Co., miscellaneous printed matter..... | 919 | 33.50 |
| June 5. | Minn. Brush Elec Co., use of 31 arc light, June 4, '91, Colos'm | 923 | 23.25 |
| July 7. | John A. Schlener & Co., paper and pencils..... | 928 | 2.45 |
| June 22. | Danz orchestra, music at commencement..... | 930 | 115.00 |
| July 31. | General university, July pay-roll..... | 982 | 190.00 |
| Total..... | | | \$14,570.77 |

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

| 1891. | CURRENT EXPENSE. | | |
|-----------|---------------------------------------------------------------|-----|------------|
| June | S. L. & A. pay roll..... | 948 | \$3,910.00 |
| July 25. | E. A. Cuzner, plants for greenhouse..... | 4 | 5.25 |
| July 28. | Gust Malmquist, plants for greenhouse..... | 5 | 5.50 |
| July 26. | W. F. Porter & Co., repairs on Pillsbury hall..... | 6 | 42.38 |
| July 1. | Warner Brothers, miscellaneous hardware..... | 7 | 35.11 |
| July 1. | Tribune Job Printing Co., printing blanks and records..... | 8 | 19.00 |
| June 30. | S. C. Vaughan, bill of seeds, bulbs and tools..... | 9 | 5.80 |
| Aug. 1. | T. W. Sardeson, work and expenses 15 days collecting fossils | 10 | 34.85 |
| Aug. 1. | N. W. Tel. Exchange Co., telephone service, June and July | 11 | 6.00 |
| Aug. 1. | C. W. Hall, freight, express and sundries..... | 12 | 42.97 |
| July 30. | Tribune Job Printing Company, bill of printing..... | 13 | 37.75 |
| Aug. 1. | E. B. Johnson, gas bill, postage and sundries..... | 16 | 61.64 |
| July 18. | Kenfel & Easer Co., blackboard dividers and rulers..... | 17 | 31.95 |
| Aug. 30. | College S. L. & A., pay roll..... | 53 | 200.00 |
| Aug. 30. | Wm. H. Yattaw, cleaning building, sundry petty expenses | 54 | 205.06 |
| Aug. 21. | W. F. Porter & Co., plumbing bill..... | 55 | 18.00 |
| June 21. | Minn. Brush Electric Co., lighting colliseum at commcn't | 56 | 126.40 |
| Aug. 24. | W. J. Johnson, wall paper and labor putting on same..... | 57 | 72.20 |
| Sept. 1. | Warner Brothers, paint, oil and glass..... | 59 | 27.32 |
| Sept. 1. | Trainor Brothers, mason work and material..... | 60 | 22.50 |
| Aug. 30. | Edward C. Cauvet, plumbing job and fittings..... | 61 | 327.77 |
| Aug. 15. | N. W. Telephone Exc. Co., service August and September | 62 | 6.00 |
| Sept. 1. | Priscilla C. Gilbert, services as librarian for July and Aug. | 63 | 25.00 |
| Aug. 1. | Warner Brothers, miscellaneous hardware..... | 64 | 14.11 |
| Aug. 1. | E. B. Johnson, postage, gas and petty expenses..... | 65 | 16.68 |
| May 1. | Marla L. Sanford, expenses to Chicago and return..... | 66 | 15.00 |
| Aug 28. | C. F. Sidener, analyses for geological department..... | 67 | 24.50 |
| Aug. 2. | James H. Bishop, deafening felt and cutting same..... | 68 | 10.06 |
| Aug. 4. | J. G. Swahn's & Sons, flower pots..... | 69 | 7.90 |
| Sept. 1. | E. L. Ames, wall paper and hanging same..... | 70 | 10.97 |
| Aug. 30. | R. B. Lees, carpenter work and material..... | 71 | 78.09 |
| Sept. 1. | Gustav E. Stechert, books..... | 76 | 537.33 |
| June 7. | William W. Folwell, petty library expenses..... | 77 | 59.69 |
| Sept. 1. | D. W. Sprague, petty expenses..... | 78 | 9.77 |
| Sept. 30. | College S. L. & A., September pay roll..... | 110 | 4,560.00 |
| Sept. 1. | Tribune Job Printing Co., bill of printing..... | 111 | 34.50 |
| Sept. 29. | E. B. Johnson, sundry petty expenses..... | 112 | 82.13 |
| Sept. 27. | Verdine Truesdell, fuel..... | 114 | 266.00 |
| Sept. 1. | M. Lara & Co., carpets and shades..... | 115 | 77.13 |
| Sept. 12. | Lintges Counells & Co., repairs on boiler and steel tubing. | 116 | 142.94 |
| Sept. 20. | W. F. Porter & Co., 8 Wadham grease cups..... | 118 | 10.00 |
| Sept. 8. | Aid Collins, polocy on boiler..... | 119 | 150.00 |
| Sept. 19. | N. W. Fuel Co., fuel..... | 120 | 22.50 |
| Sept. 26. | Warner Brothers, bill of hardware..... | 121 | 36.42 |
| Sept. 12. | Union School Furniture Co., standard crayons..... | 122 | 12.50 |
| Sept. 25. | James A. Dodge, work in laboratory..... | 123 | 32.25 |
| Oct. 1. | Trainor Brothers, materials and labor..... | 126 | 62.75 |
| Sept. 21. | Morris & Wilson, merchandise..... | 127 | 51.50 |
| Oct. 1. | A. D. Meads, services in department of chemistry..... | 128 | 50.00 |
| Aug. 19. | Marine Biological Laboratory, alcoholic specimens..... | 169 | 30.50 |
| Oct. 31. | College S. L. & A., October pay roll..... | 198 | 4,705.00 |
| Oct. 1. | Tribune Job Printing Co., bill of printing..... | 199 | 13.50 |
| Oct. 3. | Henry H. Shufelt & Co., one barrel alcohol..... | 200 | 28.70 |
| Oct. 29. | Charles D. Whitall & Co., school supplies..... | 201 | 9.42 |
| Oct. 1. | N. W. Telephone Exchange Co., services..... | 202 | 6.00 |
| Oct. 1. | A. C. Bausman, cards..... | 203 | 9.00 |
| Oct. 31. | Lyman Ellet Drug Co., chemicals..... | 205 | 7.80 |
| Oct. 31. | E. B. Johnson, printing outfit, gas, etc..... | 206 | 96.88 |
| Oct. 10. | Glessner & Washburn, furniture..... | 207 | 27.00 |
| Nov. 1. | Edward C. Cauvet, plumbing..... | 208 | 39.83 |
| Oct. 31. | Warner Brothers, bill hardware..... | 219 | 25.27 |

| | | No. voucher. | |
|-------|-----|------------------------------------------------------------------|--------------|
| Oct. | 9. | Peter Christianson, labor in mineralogical laboratory..... | 211 17.20 |
| Oct. | 31. | Wm. H. Yattaw, express labor and materials..... | 212 83.72 |
| Oct. | 25. | Gull River Lumber Co, bill of lumber..... | 213 12.50 |
| Oct. | 31. | W. K. Morrison & Co., carpenter tools..... | 251 5.35 |
| Sept. | 30. | F. S. Martin, chemical supplies..... | 263 22.20 |
| Oct. | 31. | Naylor & Co., plumbing goods..... | 268 12.60 |
| Sept. | 9. | Minn. Office and School Fur. Co., two tables..... | 271 12.00 |
| Oct. | 31. | Fred S. Jones, freight, express and petty expense..... | 272 17.03 |
| Oct. | 10. | F. W. Sardeson, frogs and earth-worms..... | 316 7.75 |
| Nov. | 1. | Gustav E. Stechert, library books and sundry petty exp..... | 276 308.23 |
| Oct. | 31. | N. W. Fuel Co., fuel..... | 278 668.54 |
| Nov. | 1. | D. W. Sprague, sundry petty expenses..... | 279 8.30 |
| Nov. | 30. | College S. L. and A., November pay roll..... | 304 4,755.00 |
| Dec. | 1. | D. W. Sprague, petty bills..... | 305 12.55 |
| Nov. | 1. | J. H. Hagen & Co., painting and material..... | 306 11.10 |
| Nov. | 8. | Northwestern Star Oil Co., paint..... | 307 18.00 |
| Dec. | 1. | Morris & Wilson, 1 case Hoyt Toilet..... | 308 11.00 |
| Nov. | 1. | Northwestern Telephone Exchange Co., services..... | 309 6.00 |
| Nov. | 29. | Wm. H. Yattaw, labor and sundry petty expenses..... | 311 31.97 |
| Nov. | 19. | C. A. Ballard, work in herbarium..... | 312 17.10 |
| Nov. | 8. | E. P. Sheldon, mounting and distributing herb specimens..... | 313 23.00 |
| Nov. | 1. | Littlefield & Moore, labor and material..... | 314 7.61 |
| Nov. | 30. | Northwestern Fuel Co., fuel..... | 317 555.47 |
| Nov. | 14. | Century Oil Co. 2 tanks and oil..... | 319 16.75 |
| Nov. | 29. | E. B. Johnson, stamps, freight and lectures..... | 320 150.93 |
| Nov. | 29. | E. B. Johnson, 2 months' salary..... | 320 147.79 |
| Nov. | 30. | Gustav E. Stechert, subscription for magazines and papers..... | 321 96.40 |
| Oct. | 23. | Warner Brothers, bill of miscellaneous hardware..... | 322 12.14 |
| Nov. | 30. | Chas. D. Whitall & Co., books..... | 326 51.65 |
| Dec. | 11. | J. P. Gray, bill of hardware..... | 374 33.02 |
| Nov. | 12. | F. A. Fisher & Co., lumber and carpenter work..... | 375 67.70 |
| Dec. | 31. | College S. L. and A., December pay roll..... | 399 4,856.00 |
| Dec. | 31. | E. B. Johnson, gas and petty expenses..... | 400 116.49 |
| Dec. | 31. | E. B. Johnson, 1 month's salary, K. C. Babcock..... | 400 55.00 |
| Dec. | 31. | Wm. H. Yattaw, cleaning and gas fitting supplies..... | 401 67.25 |
| Dec. | 1. | Naylor & Co., pipe and fittings..... | 403 29.42 |
| Dec. | 27. | R. B. Lees, 42 clothes cupboards in basement..... | 405 94.45 |
| Sept. | 22. | W. H. Moore, magazines and journals for school..... | 406 424.62 |
| Dec. | 31. | Charles D. Whitall & Co., stationery and supplies..... | 407 217.98 |
| Nov. | 30. | N. W. Fuel Co., fuel..... | 408 874.68 |
| Dec. | 12. | Gustav E. Stechert, books..... | 410 4.25 |
| Nov. | 4. | W. F. Porter & Co., 8 Jenks pump valves..... | 418 6.00 |
| Dec. | 1. | Tribune Job Printing Co., miscellaneous printed matter..... | 427 18.00 |
| Jan. | 1. | C. W. Hall, travelling expenses..... | 428 15.00 |
| Dec. | 31. | D. W. Sprague, petty bills..... | 429 12.66 |
| Sept. | 29. | W. F. Porter & Co., 5 light feed oilers..... | 430 7.05 |
| Nov. | 26. | Warner Bros., hardware..... | 444 20.81 |
| Nov. | 29. | Tribune Job Print. Co. printing 300 lists and 500 envelopes..... | 448 7.50 |
| Nov. | 30. | W. K. Morrison & Co., hardware..... | 454 7.72 |
| Jan. | 31. | College S. L. and A., January pay roll..... | 492 4,826.00 |
| Jan. | 30. | Gustav E. Smith, books for library..... | 493 351.32 |
| Dec. | 30. | Harrison & Smith, binding books for library..... | 495 89.75 |
| Feb. | 2. | E. B. Johnson, water tax, freight tax and labor..... | 496 82.75 |
| Jan. | 26. | Warner Bros., bill of hardware..... | 497 21.83 |
| Jan. | 31. | N. W. Fuel Co., fuel..... | 499 1,720.95 |
| Jan. | 31. | Chas. D. Whitall, books and supplies..... | 500 13.30 |
| Dec. | 30. | C. W. Menelley, oil, chimneys, matches, etc..... | 501 14.13 |
| Dec. | 12. | Trainer Bros., labor and material..... | 503 12.10 |
| Jan. | 2. | Wm. H. Yattaw, gas, postal cards, express..... | 504 24.36 |
| Jan. | 16. | E. P. Sheldon, work in botanical department..... | 505 39.75 |
| Jan. | 13. | C. A. Ballard, work in botanical department..... | 506 23.40 |
| Jan. | 31. | R. B. Lees, carpenter work..... | 507 7.50 |
| Jan. | 30. | Morris & Wilson, 1 case Hoyt toilet..... | 508 11.00 |
| Jan. | 6. | Gustav E. Stechert, work on geology..... | 509 21.00 |
| Jan. | 1. | C. S. Wentworth, valve and fittings..... | 510 38.16 |
| Jan. | 31. | R. B. Lees, weatherstrip and labor putting on..... | 511 18.25 |
| Jan. | 31. | R. B. Lees, labor and material..... | 512 21.45 |
| Jan. | 31. | John A. Schlener & Co., stationery supplies..... | 513 1.40 |
| Jan. | 1. | James W. Day, ice..... | 515 33.82 |
| Jan. | 31. | D. W. Sprague, petty bills..... | 518 9.09 |
| Feb. | 28. | College S. L. and A., February pay roll..... | 574 4,825.00 |
| Feb. | 4. | Torrey Botanical Club, books..... | 576 6.00 |
| Feb. | 6. | W. H. Moore, Bradstreet's Weekly..... | 579 5.00 |
| Feb. | 7. | Wright, Barret & Stillwell, merchandise..... | 581 33.96 |
| Feb. | 28. | Wm. H. Yattaw, labor and petty expenses..... | 581 37.22 |
| Mar. | 1. | Warner Brothers, hardware..... | 581 6.72 |
| Feb. | 1. | M. Lara & Co., matting, webbing, etc..... | 582 14.09 |
| Feb. | 28. | N. W. Fuel Co., fuel..... | 585 1,505.50 |
| Feb. | 28. | R. B. Lees, labor and material..... | 584 28.05 |
| Feb. | 28. | E. B. Johnson, gas and petty expenses..... | 585 77.04 |
| Feb. | 20. | Henry H. Shufeldt & Co., 1 barrel alcohol..... | 586 28.70 |
| Feb. | 28. | D. W. Sprague, petty bills..... | 587 16.18 |
| Feb. | 16. | Milton Bradley, 1 premium card cutter..... | 589 10.00 |
| Feb. | 1. | N. W. Telephone Exchange Co., services..... | 609 12.00 |
| Dec. | 23. | Eimer & Amend, chemical supplies..... | 612 10.00 |
| Mar. | 31. | College S. L. and A., March pay roll..... | 643 4,925.00 |

| | | No. voucher. | |
|------------|-----------------------------------------------------------------|--------------|------------|
| Mar. 14. | Morrison & Wilson, supplies..... | 644 | 10.25 |
| Mar. 31. | Peter Christianson, labor in geo. department..... | 645 | 22.80 |
| Mar. 2. | Glessner & Washburn, furniture..... | 646 | 14.82 |
| Feb. 9. | Westinghouse, Church, Kerr & Co., oil..... | 647 | 7.50 |
| Mar. 31. | N. W. Fuel Co., fuel..... | 648 | 1,455.60 |
| Mar. 30. | Warner Brothers, tools and dusters..... | 650 | 13.93 |
| Mar. 30. | E. B. Johnson, express, print, and advertising..... | 661 | 176.85 |
| Feb. 28. | Harrison & Smith, press register, slips and binding 31 vol..... | 652 | 28.00 |
| Feb. 16. | Barnard Bros. & Cope, 1 doz. arm chairs..... | 653 | 17.75 |
| Mar. 1. | J. P. Gilmore, chemical supplies..... | 654 | 6.45 |
| Mar. 30. | Wm. H. Yattaw, petty sundry expenses..... | 655 | 38.16 |
| Mar. 31. | Tribune Job Printing Co., memo. and letter heads..... | 657 | 11.00 |
| Mar. 31. | D. W. Sprague, petty bills..... | 659 | 59.27 |
| Mar. 21. | W. F. Porter & Co., labor and material..... | 660 | 3.00 |
| Mar. 31. | Chas. D. Whitall & Co., books for library..... | 667 | 26.93 |
| April 30. | College S. L. and A., April pay roll..... | 702 | 4,810.00 |
| April 28. | Warner Brothers, hardware..... | 703 | 5.11 |
| April 30. | Tribune Job Printing Co., miscellaneous printing..... | 706 | 6.00 |
| May 1. | F. W. Sardeson, work in geological laboratory..... | 707 | 18.65 |
| Mar. 30. | W. H. Moore, books for library..... | 708 | 18.95 |
| April 30. | Gustav E. Stechert, text books..... | 710 | 173.13 |
| April 30. | Morris & Wilson, 1 case Hoyt toilet and law book..... | 711 | 13.80 |
| April 30. | E. B. Johnson, printing, transportation..... | 712 | 74.85 |
| April 13. | Elmer & Amend, chemical supplies..... | 713 | 23.25 |
| April 30. | Wm. H. Yattaw, labor around buildings..... | 714 | 53.45 |
| Mar. 31. | Harrison & Smith, binding 126 vol..... | 716 | 63.00 |
| May 1. | Peter Christianson, work in mineral laboratory..... | 718 | 22.35 |
| April 30. | N. W. Fuel Co., Yough coal..... | 719 | 695.18 |
| Dec. 6. | Century Oil Co., ½ barrel oil..... | 720 | 7.50 |
| April 30. | Fred S. Jones, electrical supplies..... | 721 | 12.95 |
| April 30. | D. W. Sprague, petty bills..... | 722 | 6.02 |
| April 30. | Coyes, Bros. & Cutler, chemical supplies..... | 723 | 1.10 |
| May 31. | College S. L. and A., May pay roll..... | 785 | 4,750.00 |
| June 1. | William H. Yattaw, cleaning and petty expenses..... | 786 | 28.28 |
| May 6. | Louis Dreka, diplomas..... | 787 | 83.30 |
| April 30. | Harrison & Smith, binding library books..... | 789 | 48.00 |
| April 30. | Bausch Lomb Optical Co., supplies..... | 790 | 24.70 |
| May 17. | W. W. Folwell, services and petty expenses paid by him..... | 792 | 115.22 |
| Mar. 31. | Louise Montgomery, work in rhetorical department..... | 793 | 15.00 |
| June 1. | E. B. Johnson, gas, etc..... | 795 | 48.40 |
| June 5. | E. B. Johnson, ribbons for diplomas..... | 799 | 7.50 |
| May 28. | Ricard & Gruman, diplomas filled..... | 798 | 2.52 |
| May 31. | Tribune Job Printing Co., 200 admission cards..... | 802 | 22.55 |
| May 29. | Henry F. Nachtrieb, chemical supplies and pocket voucher..... | 803 | 37.62 |
| May 22. | Elmer & Amend, chemical supplies..... | 804 | 56.25 |
| May 31. | Gustav E. Stechert, library books..... | 805 | 84.56 |
| May 30. | R. B. Lees, one cupboard and castors..... | 806 | 15.75 |
| May 31. | William H. Yattaw, janitor work in May..... | 807 | 60.00 |
| May 20. | Conway McMillan, supplies and petty expenses..... | 808 | 30.80 |
| June 1. | Cody & Hineine, lighting platform in chapel, class day ex..... | 809 | 9.64 |
| May 19. | W. S. Nott Co., 100 feet of hose and nozzle..... | 810 | 19.30 |
| May 30. | N. W. Fuel Co., fuel..... | 811 | 97.14 |
| May 31. | D. W. Sprague, petty bills..... | 812 | 5.40 |
| June 30. | College S. L. and A., June pay roll..... | 904 | 4,566.67 |
| June 9. | E. B. Johnson, gas and expenses..... | 905 | 37.62 |
| Dec. 31. | W. W. Folwell, allowance on traveling ex. to Washington..... | 906 | 85.59 |
| June 5. | Edward C. Cauvert, plumber and fittings..... | 908 | 14.11 |
| June 1. | G. Sidney Smith, books for library..... | 909 | 24.00 |
| June 30. | Lintges, Connells & Co., hanging boilers new steam plant..... | 910 | 82.30 |
| June 28. | E. B. Johnson, expenses, cat fare, etc..... | 911 | 20.40 |
| May 28. | Lockwood, Upton & Co., putting up hangings and shafting..... | 912 | 12.70 |
| June 8. | D. Appleton & Co., 1 vol. Annual Cyclo..... | 913 | 6.00 |
| June 25. | N. W. Telephone Exchange Co., services..... | 914 | 6.00 |
| June 23. | Wm. H. Yattaw, labor and petty expenses..... | 916 | 33.80 |
| July 1. | Wm. H. Yattaw, expenses and labor..... | 917 | 44.51 |
| June 25. | Wright, Barrett & Stillwell, bristol paper and dead felt..... | 918 | 9.16 |
| June 30. | Tribune Job Printing Co., miscellaneous printed matter..... | 919 | 64.75 |
| July 1. | Naylor & Co., pipe and fittings..... | 920 | 19.98 |
| June 1. | Gustav E. Stechert, books..... | 921 | 18.52 |
| June 1. | Warner Brothers, hardware..... | 922 | 13.28 |
| June 13. | John Paulson, carpenter work in chemical laboratory..... | 924 | 16.30 |
| June 24. | W. S. Nott & Co., asbestos wicking and packing..... | 926 | 5.05 |
| June 22. | E. B. Gardner, ink, brush and 55½ draughting paper..... | 927 | 11.70 |
| July 1. | C. W. Hall, petty bills..... | 929 | 39.25 |
| June 29. | R. T. Cross, collecting minerals in Colorado..... | 531 | 35.00 |
| July 1. | D. W. Sprague, petty bills..... | 932 | 4.10 |
| July 31. | College S. L. and A., July pay roll..... | 982 | 216.67 |
| Total..... | | | 368,448.54 |

SCHOOL OF AGRICULTURE.

| | | CURRENT EXPENSE. | No. voucher. | |
|-------|-----|------------------------------------------------------------------------|--------------|--------|
| June. | | School of Agriculture, pay roll..... | 948 | 240.00 |
| Aug. | 1. | E. B. Johnson, petty bills..... | 1 | 2.75 |
| July | 23. | N. W. McLain, freight on desk for Agricultural school..... | 22 | 1.89 |
| Aug. | 30. | School of Agriculture, pay roll..... | 53 | 233.31 |
| Aug. | 15. | Gustav E. Stechert, books..... | 72 | 11.00 |
| Jan. | 3. | Janney Brothers, labor and repairs on range..... | 74 | 7.00 |
| Sept. | 1. | D. W. Sprague, petty expenses..... | 78 | 2.80 |
| Sept. | 30. | School of Agriculture, September pay roll..... | 110 | 443.32 |
| Sept. | 30. | D. W. Sprague, petty bills..... | 124 | 6.20 |
| July | 12. | Tribune Job Printing Co., envelopes and letter heads..... | 130 | 6.50 |
| Aug. | 14. | Geo. W. Curtiss, books..... | 131 | 6.60 |
| Sept. | 23. | Gustav E. Stechert, books..... | 132 | 37.72 |
| Aug. | 26. | W. A. Henny, copy "Domestic Animals of British Isles"..... | 133 | 42.00 |
| Sept. | 24. | N. W. McLain, express..... | 134 | 10.51 |
| Sept. | 23. | S. E. Olson & Co., linen..... | 134 | 50.35 |
| Sept. | 22. | Farm, Stock and Home, advertising..... | 136 | 25.00 |
| Sept. | 20. | H. W. Brewster, postage, express and sundries..... | 137 | 26.29 |
| Oct. | 31. | School of Agriculture, October pay roll..... | 198 | 643.32 |
| Oct. | 31. | Lyman Elliot Drug Co., drugs..... | 205 | .90 |
| Oct. | 23. | H. W. Brewster, cleaning building, organ and stool..... | 214 | 128.26 |
| Oct. | 22. | Bovey, DeLaitre Lumber Co., bill of lumber..... | 215 | 27.75 |
| Oct. | 30. | The Emery Manufacturing Co., 32 ft. pat. coal chute..... | 216 | 18.00 |
| Oct. | 18. | Robert Clarke & Co., 36 Ele. Forestry..... | 217 | 54.00 |
| Oct. | 23. | John A. Schlener & Co., stationery..... | 218 | 5.78 |
| Oct. | 24. | A. Resberg, cleaning and repairing cistern at farm school..... | 219 | 7.00 |
| Oct. | 28. | John Le Vescounte, painting and repairing..... | 220 | 21.00 |
| Oct. | 16. | American Book Co., 24 Phys. Geographies..... | 221 | 19.20 |
| Oct. | 11. | R. J. Riekey, wall paper..... | 222 | 53.97 |
| Oct. | 27. | Held & Grunhagen, paint and glass..... | 223 | 13.96 |
| Sept. | 17. | Ginn & Co., school books..... | 224 | 25.60 |
| Oct. | 16. | Orange Judd Co., Fruit Culturist and Manual of Ag'l..... | 225 | 54.00 |
| Oct. | 9. | American Book Co., books..... | 226 | 12.24 |
| Oct. | 14. | Ginn & Co., Intro. 72 Lockwood..... | 227 | 72.58 |
| Nov. | 1. | S. E. Olson & Co., dishes, tools, etc..... | 228 | 199.16 |
| Oct. | 22. | St. Paul Book and Sta. Co., arithmetics..... | 229 | 12.05 |
| Sept. | 27. | Thos. K. Gray, paint..... | 230 | 6.00 |
| Oct. | 9. | Henry Holt, text books..... | 231 | 19.25 |
| Oct. | 28. | Sanford Niles, papers and magazines..... | 232 | 12.50 |
| Oct. | 31. | John A. Schlener & Co., architect tools and materials..... | 233 | 12.19 |
| Oct. | 31. | W. W. Pendergast, subscription for papers..... | 238 | 22.50 |
| Oct. | 27. | W. M. Hays, express, stamps and car fare..... | 253 | 25.47 |
| Oct. | 20. | Peter Nelson, labor, grading..... | 270 | 50.90 |
| Oct. | 16. | Henry E. Alvcrd, contribution in relation to "Morrill Act"..... | 273 | 10.00 |
| Oct. | 31. | John Thompson, labor..... | 274 | .96 |
| Nov. | 1. | Gustav E. Stechert, sundry petty expenses..... | 276 | 3.72 |
| Oct. | 31. | N. W. Fuel Co., fuel..... | 278 | 242.85 |
| Oct. | 29. | W. M. Liggett, 16 cows..... | 275 | 421.50 |
| Nov. | 30. | School agriculture, November pay-roll..... | 304 | 896.81 |
| Dec. | 1. | D. W. Sprague, petty bills..... | 305 | .90 |
| Oct. | 31. | Curtis Print. Co., printing letter and note heads and env..... | 323 | 12.11 |
| Nov. | 24. | H. W. Brewster, express and supplies..... | 324 | 18.94 |
| Nov. | 1. | Fred Shuman, labor in and about farm school..... | 325 | 55.10 |
| Nov. | 30. | Chas. D. Whitall & Co., fixtures..... | 326 | 5.50 |
| Nov. | 11. | Ginn & Co., 12 Gages Elem. Physics..... | 328 | 12.10 |
| Oct. | 31. | James R. Taggart, one historical chat and easel..... | 329 | 11.00 |
| Nov. | 28. | John Le Vescounte, work at school of agriculture..... | 339 | 9.00 |
| Nov. | 1. | N. W. Agriculturist, advertising..... | 331 | 25.00 |
| Oct. | 20. | Geo. W. Curtiss, 39 copies "Cattle, Sheep and Swine"..... | 332 | 78.60 |
| Nov. | 14. | Manufacturers' Syndicate, jump seat buggy and shaft..... | 333 | 98.00 |
| Oct. | 18. | Agricultural College, Mich., 30 copies "Grasses"..... | 334 | 58.10 |
| Nov. | 14. | Dodson, Fisher & Brockman, harness, blankets, etc..... | 335 | 59.53 |
| Nov. | 6. | St. Paul Book and Sta. Co., 12 Cutter's Phys. Pat. I..... | 336 | 6.48 |
| Nov. | 30. | W. K. Morrison & Co., miscellaneous hardware..... | 337 | 20.23 |
| Nov. | 17. | W. Weekworth, 4,000 lbs. bran..... | 342 | 31.00 |
| Nov. | 19. | W. M. Hays, expenses and stamps..... | 358 | 18.77 |
| Nov. | 1. | Tribune Job Co., printing letter heads and envelopes..... | 364 | 6.00 |
| Nov. | 1. | Wyckoff, Seaman & Benedict, 1 No. 1 mimeograph..... | 366 | 15.00 |
| Nov. | 27. | F. A. Davis, 1 Smith's physiology..... | 371 | 5.00 |
| Dec. | 31. | School agriculture, December pay roll..... | 399 | 906.77 |
| Jan. | 1. | D. W. Sprague, 50 fares to and from school of agriculture and exp..... | 402 | 6.65 |
| Dec. | 10. | John A. Schlener & Co., pens and journal..... | 404 | 2.90 |
| Dec. | 30. | Jessie B. Milliman, 3 copies list of farm books..... | 409 | 6.00 |
| Dec. | 12. | Gustav E. Stechert, books..... | 410 | 5.25 |
| Dec. | 15. | H. Weekworth, bran, meal and oil cake..... | 411 | 75.00 |
| Dec. | 23. | W. M. Hays, petty expenses..... | 412 | 6.80 |
| Dec. | 26. | John Thompson, assistance teaching cheese making..... | 413 | 25.00 |
| Dec. | 26. | John Le Vescounte, assistance teaching butter making..... | 414 | 25.00 |
| Nov. | 27. | W. M. Hays, expenses and money paid for use of cows at station..... | 415 | 82.32 |
| Dec. | 26. | August Hummel, labor..... | 416 | 48.66 |
| Nov. | 6. | Cornish, Curtiss & Greene Co., supplies for experimental farm..... | 417 | 63.74 |

| | | No. voucher. | |
|-------|-----|-----------------------------------------------------------------|--------------|
| Dec. | 1. | Harrison & Smith, printing miscellaneous matter | 410 30.00 |
| Dec. | 1. | A. J. Drew, shelled corn and sacks | 420 32.60 |
| Nov. | 26. | Cornish, Curtiss & Greene Co., supplies at agricultural station | 421 18.75 |
| Nov. | 26. | Dept. public instruction, 1 Webster's unabridged dictionary | 422 7.00 |
| Dec. | 23. | A. J. Drew, 4.545 lbs. meal | 423 50.25 |
| Dec. | 26. | Charles Kerr, labor November 21 to December 21 | 425 40.00 |
| Dec. | 22. | P. N. Collins, advertising | 426 25.00 |
| Dec. | 31. | D. W. Sprague, petty bills | 429 1.00 |
| Dec. | 18. | American Book Co., 50 new word analysis | 451 15.75 |
| Nov. | 29. | W. K. Morrison & Co., bill hardware | 452 9.87 |
| Dec. | 31. | John Le Vesconte, work at agricultural school | 453 11.25 |
| Dec. | 31. | W. P. Hemenway, material and carpenter work | 454 28.60 |
| Dec. | 9. | Pioneer Fuel Co., wood for fuel | 435 96.31 |
| Dec. | 16. | Silver, Burdette & Co., readers | 436 32.00 |
| Dec. | 16. | L. A. Ritter, 1 horse | 437 150.00 |
| Dec. | 20. | W. W. Rawson & Co., 24 cop. "Success in Market Gardening" | 438 18.00 |
| Dec. | 2. | The Breeder's Gazette, 2 volumes, bound | 439 57.00 |
| Dec. | 17. | Henry Holt & Co., 50 Packard's Entomology | 440 63.00 |
| Dec. | 29. | Held & Gunnhagen, bill of hardware | 441 40.47 |
| Jan. | 31. | School of Agriculture, January pay roll | 492 977.70 |
| Jan. | 31. | Tribune Job Printing Co., printing mem., letter-heads, etc. | 494 10.75 |
| Jan. | 31. | John A. Schiener & Co., stationery supplies | 513 7.60 |
| Jan. | 6. | J. A. Nye, labor | 514 12.00 |
| Jan. | 28. | H. W. Brewster, freight, postage and sundry petty exp. | 517 20.08 |
| Jan. | 21. | W. W. Pendergast, labor | 518 7.23 |
| Jan. | 14. | St. Paul Book and Stationery Co., 20 civics | 519 22.50 |
| Nov. | 27. | W. J. Burton, 50 Song, Coll. | 520 25.00 |
| Dec. | 24. | Samuel B. Green, labor at farm school | 621 47.00 |
| Jan. | 31. | Chas. Kerr, labor, caring for stock | 522 30.00 |
| Jan. | 31. | John Le Vesconte, labor, assistant in dairy | 523 12.50 |
| Jan. | 31. | John Thompson, labor, assistant in dairy | 524 12.50 |
| Jan. | 27. | W. W. Pendergast, express | 525 17.25 |
| Jan. | 21. | Cornish, Curtiss & Green, supplies in dairy department | 526 39.95 |
| Nov. | 24. | St. Paul Book and stationery Co., text books | 527 178.65 |
| Nov. | 26. | F. S. Martin, repairs on heating apparatus at S. B. | 528 6.16 |
| Jan. | 12. | E. W. Stewart, 21 copies "Feeding animals," | 529 24.00 |
| Jan. | 16. | H. Neckworth, 1,175 lbs. bran | 530 9.98 |
| Jan. | 31. | August Hummel, labor in dairy department | 531 20.00 |
| Jan. | 31. | Held & Gruenhagen, bill of hardware | 532 11.10 |
| Jan. | 23. | North Western Fuel Co., fuel | 536 218.09 |
| Jan. | 31. | D. W. Sprague, petty bills | 558 4.00 |
| Oct. | 18. | St. Anthony Furniture Co., furniture | 559 10.80 |
| Dec. | 18. | Elmer & Ammend, chemical supplies | 561 83.49 |
| Feb. | 28. | School of Agriculture, February pay roll | 574 799.32 |
| Jan. | 31. | Harrison & Smith, printing miscellaneous matter | 577 11.00 |
| Feb. | 28. | North Western Fuel Co., fuel | 583 230.58 |
| Feb. | 28. | D. W. Sprague, petty bills | 587 2.14 |
| Feb. | 28. | W. M. Hays, salt, stamps and freight | 588 9.51 |
| Feb. | 4. | D. H. Roe & Co., 1 Hor. cream separator | 589 180.50 |
| Feb. | 6. | H. Wentworth, 2,000 pounds bran | 590 17.50 |
| Feb. | 20. | A. J. Drew, corn meal and bran | 591 45.84 |
| Feb. | 28. | W. W. Pendergast, 1 globe, postage and stamps | 592 14.00 |
| Feb. | 27. | H. W. Brewster, glass, freight and express | 594 13.34 |
| Feb. | 21. | St. Anthony Park Supply Co., labor about new building | 595 8.25 |
| Jan. | 31. | American Book Co., plant analysis | 596 17.82 |
| Feb. | 14. | J. I. Case Implement Co., 1 two-seat cutter | 597 18.00 |
| Jan. | 26. | Bovey, DeLaitre Lumber Co., lumber | 598 27.30 |
| Jan. | 7. | Gustav E. Stechert, periodicals, magazines | 599 94.44 |
| Mar. | 1. | August Hummel, labor in dairy, instructor 1 month | 600 40.00 |
| Mar. | 1. | John Le Vesconte, labor in dairy, instructor 1 month | 601 12.50 |
| Mar. | 1. | John Thompson, labor | 602 12.50 |
| Mar. | 1. | Charles Kerr, labor as stock man | 603 30.00 |
| Feb. | 28. | Tribune Job Printing Co., miscellaneous printing | 611 9.50 |
| Mar. | 31. | School of Agriculture, March pay roll | 643 1,358.36 |
| Mar. | 31. | North Western Fuel Co., fuel | 648 379.26 |
| Mar. | 31. | John A. Schiener & Co., paper, pen and ink | 649 5.55 |
| Mar. | 14. | Wright, Barrett & Stillwell, supplies | 656 19.26 |
| Mar. | 31. | Tribune Job Print. Co., circulars, letter heads and class tkt | 657 3.60 |
| Mar. | 21. | W. F. Porter & Co., labor and material | 660 10.29 |
| Jan. | 27. | H. W. Brewster, song books, express | 663 14.95 |
| Jan. | 31. | W. K. Morrison & Co., hardware | 662 5.74 |
| Mar. | 9. | D. D. Merrill & Co., books for library | 663 38.22 |
| Feb. | 27. | W. W. Rawson, journals | 664 9.00 |
| Mar. | 4. | Gustav E. Stechert, books and magazines | 665 156.86 |
| Mar. | 14. | Bausch & Lomb Optical Co., tools and supplies | 666 230.53 |
| Mar. | 9. | Samuel B. Green, office work | 688 9.00 |
| April | 30. | School agriculture, April pay roll | 702 622.90 |
| April | 30. | Tribune Job Printing Co., miscellaneous printing | 706 30.00 |
| April | 30. | N. W. Fuel Co., coal | 719 12.00 |
| April | 30. | D. W. Sprague, petty bills | 722 27.21 |
| April | 30. | Noyes Bros. & Cutler, chemical supplies | 723 37.68 |
| April | 15. | Boutell Bros., 1 stove, pipe and zinc | 724 12.00 |
| April | 22. | D. C. Martin, labor | 725 12.25 |
| April | 28. | E. C. Stubbs, 6 Vol. National Draft Horse Registry | 726 5.50 |
| April | 29. | W. H. Brewster, paint, box rent, stamps and express | 727 17.35 |

| | | No. voucher. | |
|-----------|---------------------------------------------------------------|--------------|-------------|
| Mar. 31. | W. K. Morrison & Co., hardware..... | 728 | 10.70 |
| April 29. | Chas. Kerr, labor as herdsman for 1½ months..... | 730 | 50.00 |
| April 27. | A. L. Le Vesconte, labor and sundry petty expenses..... | 731 | 8.19 |
| April 11. | Minneapolis Tubular Well Co., rep'g and pump supplies..... | 732 | 23.20 |
| April 29. | John Thompson, labor, instruction in dairy..... | 733 | 18.75 |
| April 1. | A. J. Drew, meal and ground feed..... | 733½ | 78.78 |
| April 6. | C. H. Congdon, 33 music lessons..... | 734 | 99.00 |
| Feb. 5. | Bausch & Lomb Optical Co., microscopic instruments..... | 735 | 28.05 |
| April 14. | Samuel B. Green, express..... | 736 | 10.85 |
| Mar. 11. | W. S. Nott & Co., balting..... | 737 | 10.44 |
| Mar. 11. | Star Iron Works, engine supplies..... | 738 | 15.80 |
| April 30. | John Le Vesconte, labor and repairing..... | 739 | 33.00 |
| April 29. | Adam Lindig, oats..... | 741 | 7.42 |
| April 27. | D. N. Harper, freight..... | 741 | 75.00 |
| Jan. 15. | Phelps Well and Windmill Co., 1 windmill..... | 742 | 49.50 |
| Jan. 30. | Detroit Heat and Light Co., 1 200 ft. water wheel pump..... | 743 | 205.00 |
| Mar. 27. | D. H. Roe & Co., test for milk..... | 744 | 9.65 |
| Jan. 29. | National Meter Co., 1 gas engine..... | 745 | 452.50 |
| April 23. | Lea Bros. & Co., 2 vol. National Medical Dictionary..... | 746 | 14.00 |
| Mar. 3. | Union Ky. Storage Co., brick and cement..... | 751 | 6.85 |
| April 13. | J. K. Klar, hay..... | 752 | 17.05 |
| Mar. 31. | W. K. Morrison & Co., wire and rope..... | 755 | 3.78 |
| May 31. | School of Agriculture, May pay roll..... | 785 | 559.99 |
| May 6. | Louis Dreka, diplomas..... | 787 | 115.00 |
| June 5. | E. B. Johnson, sundries..... | 796 | 10.00 |
| May 28. | Ricard & Gruman, 18 diplomas filed, "School Agricult'r."..... | 798 | 9.00 |
| June 1. | Tribune Job Printing Co., 5,000 special catalogues..... | 800 | 35.00 |
| May 31. | D. W. Sprague, petty bills..... | 812 | 4.42 |
| May 31. | Gustav E. Stechert, text books..... | 813 | 11.20 |
| May 19. | Geo. Le Vesconte, labor setting gas machine and car fare..... | 814 | 32.80 |
| May 10. | Husby & Skange, 2 cabinets made to order..... | 815 | 260.00 |
| May 25. | Held & Gruenhagen, bill of glass..... | 816 | 5.25 |
| April 15. | J. R. Walker M. D., medical services..... | 817 | 27.35 |
| May 26. | Goodyear Rubber Co., hose and fittings..... | 818 | 11.20 |
| May 1. | August Hummel, labor in dairy..... | 819 | 6.60 |
| April 17. | F. Lamson-Scribner, 180 species grasses..... | 820 | 12.60 |
| May 29. | John Thompson, work in laboratory..... | 821 | 13.25 |
| April 28. | W. M. Hays, sundry petty expenses..... | 822 | 38.40 |
| May 31. | Eimer & Amend, chemical supplies..... | 824 | 536.67 |
| May 8. | J. P. Gribben Lumber Co., bill of lumber..... | 851 | 9.60 |
| May 21. | D. N. Harper, cleaning laboratory, etc..... | 854 | 32.32 |
| April 15. | Noyes Bros. & Cutler, laboratory supplies..... | 855 | 19.41 |
| May 23. | Nels Larson, labor, grading..... | 894 | 344.50 |
| June 30. | School of Agriculture, June pay roll..... | 904 | 772.49 |
| July 1. | D. W. Sprague, petty bills..... | 932 | 8.20 |
| June 29. | H. W. Bawster, postage and express..... | 933 | 9.17 |
| June 3. | M. E. Kelley & Co., elm trees..... | 934 | 5.00 |
| July 7. | John T. Lucas, labor and material..... | 935 | 10.73 |
| June 30. | Eimer & Amend, chemical supplies..... | 936 | 714.74 |
| July 31. | School of Agriculture, July pay roll..... | 982 | 462.49 |
| | Total..... | | \$18,425.19 |

VETERINARY DEPARTMENT.

CURRENT EXPENSE.

| | | | |
|-----------|---------------------------------------------------------------|-----|----------|
| June | Veterinary department pay roll..... | 948 | \$155.00 |
| Aug. 1. | E. B. Johnson, petty bills..... | 1 | 9.53 |
| June 6. | Warren Bros., paint and hardware..... | 18 | 28.27 |
| June 28. | W. P. Hemenway, bill of lumber..... | 34 | 20.00 |
| June 19. | Gustav E. Stechert, books for library..... | 37 | 9.07 |
| July 22. | A. Anderson, carpenter work on hospital..... | 41 | 23.85 |
| Aug. 30. | Veterinary department pay roll..... | 55 | 113.34 |
| Sept. 1. | D. W. Sprague, petty expenses..... | 78 | 2.13 |
| July 24. | W. P. Hemenway, bill of lumber..... | 78 | 54.96 |
| Aug. 20. | Olaf Schwartzkopf, petty expenses..... | 80 | 5.79 |
| Sept. 30. | Veterinary department September pay roll..... | 110 | 66.66 |
| Oct. 31. | Veterinary department October pay roll..... | 198 | 86.66 |
| Oct. 9. | Charles D. Whitall & Co., supplies, etc..... | 201 | 5.20 |
| Nov. 1. | S. B. Loye & Sons, harness, supplies, etc..... | 234 | 24.15 |
| Oct. 1. | Held & Gruenhagen, bill of hardware..... | 235 | 24.65 |
| Oct. 31. | St. Anthony Park Supply Co., grain and labor..... | 236 | 74.24 |
| Oct. 31. | Noyes Bros. & Cutler, chemicals..... | 237 | 48.42 |
| Nov. 1. | D. W. Sprague, sundry petty bills..... | 279 | 4.90 |
| Nov. 30. | Veterinary department, November pay roll..... | 304 | 89.02 |
| Dec. 1. | D. W. Sprague, petty bills..... | 305 | 5.35 |
| Oct. 23. | Warner Bros., miscellaneous hardware..... | 322 | 11.69 |
| Nov. 7. | Noyes Bros. & Cutler, drugs..... | 327 | 1.50 |
| Dec. 31. | Veterinary department, December pay roll..... | 399 | 89.43 |
| Dec. 31. | Charles D. Whitall & Co., papers, pencils and labels..... | 407 | 3.69 |
| Nov. 4. | W. F. Porter & Co., new fire pot and labor..... | 418 | 75.00 |
| Dec. 31. | D. W. Sprague, petty bills..... | 429 | 9.42 |
| Dec. 29. | Held & Gruenhagen, hardware..... | 441 | 5.05 |
| Nov. 20. | Tribune Job Print. Co., veterinary records and envelopes..... | 442 | 7.50 |

| | | No. voucher. | |
|------------|--------------------------------------------------------------|--------------|------------|
| Dec. 31. | Gustav E. Stechert, text books..... | 443 | 25.95 |
| Nov. 23. | Warner Bros., hardware..... | 444 | 7.55 |
| Dec. 15. | Olaf Schwartzkopf, sub. to Journal, stamps and expenses..... | 445 | 9.70 |
| Nov. 3. | G. F. Shaw, glass and oil finish..... | 446 | 16.00 |
| Nov. 13. | W. P. Hemenway, bill of lumber and labor..... | 447 | 30.68 |
| Nov. 26. | St. Anthony Park Supply Co., hay and grain..... | 479 | 25.42 |
| Jan. 30. | Veterinary department, January pay roll..... | 492 | 92.66 |
| Jan. 31. | N. W. Fuel Co., fuel..... | 499 | 12.90 |
| Dec. 25. | St. Anthony Park Supply Co., hay, grain, etc..... | 533 | 49.84 |
| Jan. 31. | Dr. F. Allen, railroad fare and lecture fee..... | 534 | 27.50 |
| Jan. 21. | A. N. Pomeroy, rent of barn..... | 535 | 15.00 |
| Jan. 31. | Pioneer Fuel Co., fuel..... | 537 | 7.75 |
| Jan. 31. | D. W. Sprague, petty bills..... | 558 | 3.75 |
| Feb. 28. | Veterinary department, February pay roll..... | 574 | 86.66 |
| Feb. 28. | D. W. Sprague, petty bills..... | 587 | 4.25 |
| Feb. 28. | Dr. F. Allen, railroad fare and lecture fee..... | 604 | 27.50 |
| Jan. 7. | Nicholas Hermes, 1 load hay..... | 605 | 9.27 |
| Jan. 26. | Adam Lindig, oats..... | 606 | 12.65 |
| Feb. 3. | St. Anthony Park Supply Co., grains and hay..... | 607 | 16.60 |
| Jan. 31. | Warner Bros., tools and rent of stove..... | 608 | 5.44 |
| Mar. 31. | Veterinary department, March pay roll..... | 643 | 78.06 |
| Mar. 31. | C. D. Whitall & Co., 1 hektograph and typewriting paper..... | 687 | 5.00 |
| Mar. 6. | L. Lindig, oats..... | 698 | 10.78 |
| Mar. 13. | Dr. F. Allen, car fare and lecture fee..... | 689 | 27.10 |
| July 26. | W. F. Porter & Co., radiator in veterinary department..... | 670 | 20.00 |
| Mar. 23. | F. W. Fletcher, 1 cow for experimental purposes..... | 686 | 10.00 |
| Apr. 30. | Veterinary department, April pay roll..... | 702 | 101.66 |
| Apr. 7. | Hausmann, McComb & Dunn, surgical instruments..... | 747 | 30.55 |
| Apr. 24. | E. W. Hendrickson, hay and oats..... | 748 | 28.33 |
| Apr. 2. | N. W. Scavenger Co., removing dead animals..... | 749 | 21.00 |
| Apr. 25. | Dr. F. Allen, lecture fee and expense..... | 750 | 27.70 |
| May 31. | Veterinary department, May pay roll..... | 785 | 76.66 |
| May 28. | Nicholas Hermes, hay..... | 825 | 25.52 |
| May 18. | E. W. Hendrickson, hay and oats..... | 826 | 15.78 |
| May 26. | Olaf Schwartzkopf, office and expense..... | 827 | 21.30 |
| June 30. | Veterinary department, June pay roll..... | 904 | 76.66 |
| July 7. | John A. Schlenker Co., pencils and paper..... | 928 | 1.90 |
| June 10. | Noyes Bros. & Cutler, 1 horse skeleton..... | 973 | 100.00 |
| June 25. | Adam Lindig, oats..... | 974 | 13.63 |
| June 23. | E. W. Hendrickson, hay..... | 975 | 13.32 |
| July 31. | Veterinary department, July pay roll..... | 982 | 76.66 |
| Total..... | | | \$2,233.93 |

MILITARY TACTICS.

CURRENT EXPENSE.

| | | | |
|------------|-----------------------------------------------------------|-----|------------|
| June 1. | Military tactics, pay roll..... | 948 | 85.00 |
| July 1. | Warner Brothers, miscellaneous hardware..... | 7 | 10.00 |
| Aug. 1. | Warner Brothers, miscellaneous hardware..... | 64 | 5.18 |
| Sept. 30. | Military tact cs, September pay roll..... | 110 | 85.00 |
| Oct. 31. | Military tactics, October pay roll..... | 198 | 50.60 |
| Oct. 31. | Warner Brothers, hardware..... | 210 | 18.16 |
| Nov. 30. | Military tactics, November pay roll..... | 305 | 120.00 |
| Dec. 31. | Military tactics, December pay roll..... | 399 | 85.00 |
| Dec. 31. | E. B. Johnson, petty expenses..... | 400 | 7.68 |
| Dec. 31. | Wm. H. Yattaw, sundry petty bills..... | 401 | 4.61 |
| Dec. 27. | R. B. Lees, carpenter work and material..... | 405 | 15.00 |
| Jan. 31. | Military tactics, January pay roll..... | 492 | 65.00 |
| Feb. 28. | Military tactics, February pay roll..... | 574 | 65.00 |
| Mar. 31. | Military tactics, March pay roll..... | 643 | 75.00 |
| April 30. | Military tactics, April pay roll..... | 702 | 75.00 |
| April 30. | R. B. Lees, carpenter work and material..... | 709 | 5.30 |
| May 31. | Military tactics, May pay roll..... | 785 | 75.00 |
| June 1. | Wm. H. Yattaw, brooms, towels and scrubbing supplies..... | 786 | 15.75 |
| June 30. | Military tactics, June pay roll..... | 904 | 75.00 |
| June 30. | R. B. Lees, carpenter work and material..... | 917 | 132.25 |
| June 23. | Wm. H. Yattaw, sand paper, sash cord..... | 916 | 2.25 |
| July 22. | R. B. Lees, carpenter work and material..... | 938 | 12.40 |
| July 8. | C. A. Smith & Co., lumber..... | 939 | 20.80 |
| Total..... | | | \$1,104.38 |

MECHANIC ARTS.

CURRENT EXPENSE.

| | | | |
|----------|-----------------------------------------------------------------|-----|----------|
| June 1. | Mechanic Arts, pay roll..... | 948 | \$875.00 |
| Aug. 1. | E. B. Johnson, petty bills..... | 1 | 5.36 |
| July 1. | Tribune Job Printing Co., printing mems, of standing..... | 8 | 3.00 |
| July 9. | Tribune Job Print. Co., envelopes, letter heads and circ's..... | 38 | 15.00 |
| June 24. | Bovey, DeLaitre Lumber Co., bill of lumber..... | 39 | 7.16 |
| July 1. | Lockwood, Upton & Co., 1 hanger and labor on same..... | 40 | 10.25 |
| July 1. | C. H. Whipps, salary for June..... | 42 | 70.00 |
| Aug. 30. | Wm. H. Yattaw, cleaning building, sundry petty expenses..... | 54 | 58.50 |

| | | No. voucher. | |
|-----------|---------------------------------------------------------------|--------------|----------|
| Aug. | E. B. Johnson, petty expenses..... | 85 | .18 |
| Sept. 1. | Minneapolis Stamp Co., brass numbers..... | 91 | 6.00 |
| Aug. 27. | Moffett & Thurston, printing circulars..... | 92 | 14.00 |
| Aug. 30. | John H. Barr, freight, drayage and express..... | 93 | 8.74 |
| May 30. | Browne & Sharp Mfg. Co., 1 No. 3 cutter and Reamer grind..... | 94 | 234.00 |
| Sept. 30. | Mechanic Arts, September pay roll..... | 110 | 1,125.00 |
| Sept. 29. | E. B. Johnson, petty expenses..... | 112 | .36 |
| Sept. 29. | Wm. H. Yattaw, petty expense..... | 117 | 3.00 |
| Sept. 26. | Warner Bros., bill of hardware..... | 121 | 21.65 |
| Sept. 30. | D. W. Sprague, petty bills..... | 124 | 13.08 |
| Sept. 1. | A. C. & C. F. Peters, artist supplies..... | 138 | 16.54 |
| Sept. 29. | N. O. Hill, freight and drayage..... | 139 | 22.40 |
| Sept. 6. | Janney, Semple & Co., bill of iron..... | 140 | 17.34 |
| Aug. 9. | John A. Schliner & Co., 1 calculating inst..... | 141 | 30.00 |
| Aug. 26. | N. E. Furniture Co., 1 desk..... | 142 | 12.50 |
| Sept. 22. | Simonson Bros. Mfg. Co., lumber..... | 143 | 49.50 |
| Sept. 1. | Browne & Sharp Mfg. Co., 1 milling machine and tools..... | 144 | 385.72 |
| Sept. 4. | Bovey De Laittre Lumber Co., bill of lumber..... | 145 | 38.30 |
| Sept. 8. | J. R. Clark Co., bill of lumber..... | 146 | 5.73 |
| Sept. 30. | Frank A. Johnson..... | 147 | 22.24 |
| Sept. 27. | Naylor & Co., 75 lbs. waste..... | 148 | 7.50 |
| Sept. 26. | Wm. Donaldson & Co., 1 case..... | 149 | 14.75 |
| Sept. 1. | A. C. & C. F. Peters, casts, easels and freight..... | 168 | 59.45 |
| Oct. 31. | Mechanic Arts, October pay roll..... | 198 | 1,125.00 |
| Oct. 31. | Lyman Eliel Drug Co., chemicals..... | 205 | 3.10 |
| Oct. 31. | E. B. Johnson, petty expense..... | 206 | .54 |
| Nov. 1. | Edward C. Cauvett, plumbing..... | 208 | 11.98 |
| Oct. 31. | John A. Schliner & Co., architect materials..... | 233 | 6.40 |
| Oct. 31. | W. K. Morrison & Co., carpenter tools..... | 254 | 25.91 |
| Nov. 1. | Harrison & Smith, letter heads, env., reports and slips..... | 255 | 17.50 |
| Sept. 30. | Walgrave & Mather, coal..... | 256 | 14.00 |
| Oct. 3. | Eagle Iron Works, 1 injector..... | 257 | 15.00 |
| Oct. 31. | Naylor & Co., bill of plumbing goods..... | 268 | 6.13 |
| Oct. 2. | N. W. Star Oil Co., oil..... | 269 | 5.76 |
| Nov. 1. | D. W. Sprague, sundry petty bills..... | 279 | 4.75 |
| Nov. 30. | Mechanic Arts, November pay roll..... | 304 | 1,125.00 |
| Nov. 8. | N. W. Star Oil Co., sperm and lard oil..... | 207 | 4.45 |
| Nov. 29. | E. B. Johnson, petty expenses..... | 320 | .72 |
| Nov. 30. | Gustav E. Stechert, binders for journals..... | 321 | 12.15 |
| Nov. 18. | Naylor & Co., tools..... | 338 | 9.69 |
| Nov. 21. | Am. Society of Mechan, Eng., bind. 7 vol. Transactions..... | 339 | 8.75 |
| Nov. 29. | Wm. Donaldson & Co., 1 desk..... | 340 | 31.00 |
| Nov. 10. | Chas. H. Besley & Co., 1 Hawkins register..... | 341 | 10.00 |
| Oct. 31. | W. F. Porter & Co., 1 coil in Mechanic building..... | 343 | 6.00 |
| Nov. 29. | Wm. A. Pike, cover for table in reading room and express..... | 344 | 5.21 |
| Nov. 15. | Machinist's Supply Co., tools..... | 345 | 66.56 |
| Nov. 26. | John H. Barr, postage stamps and express..... | 346 | 7.90 |
| Oct. 29. | Crosby Steam Gauge and Valve Co., indicator and supplies..... | 347 | 50.00 |
| Nov. 1. | Janney Semple & Co., bill of iron..... | 348 | 18.73 |
| Nov. 12. | F. A. Fisher & Co., lumber and carpenter work..... | 375 | 78.30 |
| Dec. 31. | Mechanic Arts, December pay roll..... | 399 | 1,125.00 |
| Dec. 31. | E. B. Johnson, petty expense..... | 400 | .54 |
| Dec. 31. | Wm. E. Yattaw, washing, ironing and blacksmithing..... | 301 | 2.50 |
| Dec. 31. | D. W. Sprague, petty bills..... | 429 | 9.18 |
| Dec. 1. | Bullock & Crenshaw, thermometers..... | 450 | 11.60 |
| Dec. 4. | Crosby Steam Gauge and Valve Co., gauge and valves..... | 451 | 15.40 |
| Dec. 1. | Cedar Lake Fuel Co., one ton coal..... | 452 | 7.00 |
| Dec. 16. | Machinist's Supply Co., tools..... | 453 | 6.85 |
| Nov. 30. | W. K. Morrison & Co., bill of hardware..... | 454 | 18.20 |
| Jan. 31. | Mechanic Arts, January pay roll..... | 492 | 1,125.00 |
| Feb. 2. | E. B. Johnson, petty bills..... | 496 | 1.44 |
| Jan. 2. | Wm. H. Yattaw, packing and ferrules..... | 504 | 2.00 |
| Jan. 23. | Bradstreet Thurber & Co., 38 wood stools..... | 516 | 34.20 |
| Jan. 9. | Naylor & Co., plumbing goods..... | 538 | 8.69 |
| Jan. 2. | A. C. and C. F. Peters, artists' supplies..... | 539 | 37.43 |
| Jan. 31. | W. K. Morrison & Co., bill of hardware..... | 540 | 11.15 |
| Jan. 10. | Moffett & Thurston, letter heads and note heads..... | 541 | 8.60 |
| Jan. 19. | Bovey De Laittre Lumber Co., lumber..... | 543 | 21.50 |
| Jan. 31. | D. W. Sprague, petty bills..... | 558 | 8.50 |
| Dec. 15. | W. K. Morrison & Co., hardware and tools..... | 562 | 73.99 |
| Feb. 28. | Mechanic Arts, February pay roll..... | 574 | 1,125.00 |
| Feb. 28. | Wm. H. Yattaw, petty expense..... | 581 | 1.90 |
| Feb. 28. | E. B. Johnson, gas, petty expenses..... | 585 | 16.96 |
| Feb. 28. | D. W. Sprague, petty bills..... | 587 | 21.97 |
| Feb. 1. | John H. Barr, express, freight and cartage..... | 610 | 8.47 |
| Feb. 16. | John Wiley & Son, chemical supplies..... | 613 | 38.20 |
| Feb. 2. | Littlefield & Moore, labor and material..... | 614 | 5.75 |
| Mar. 31. | Mechanic Arts, March pay roll..... | 643 | 1,125.00 |
| Mar. 30. | E. B. Johnson, express..... | 661 | 2.56 |
| Mar. 1. | J. P. Gilmore, chemical supplies..... | 654 | 2.00 |
| Mar. 31. | Tribune Job Printing Co., miscellaneous printing..... | 657 | 8.00 |
| Mar. 21. | W. F. Porter & Co., plumbing goods..... | 660 | 4.13 |
| Mar. 4. | Gustav E. Stechert, books and magazines..... | 665 | 55.96 |
| Mar. 28. | Trainer Bros., labor and material..... | 671 | 23.00 |
| Mar. 18. | N. W. Fuel Co., coke..... | 674 | 9.00 |
| Mar. 28. | Lyman-Eliel Drug Co., tools and chemicals..... | 676 | 9.40 |

No. voucher.

| | | | |
|------------|-----------------------------------------------------------|-----|-------------|
| April 30. | Mechanic Arts, April pay-roll..... | 702 | \$1,125.00 |
| April 28. | Warner Brothers, bill of hardware..... | 703 | 7.25 |
| April 30. | Tribune Job Printing Co., 200 gum labels..... | 706 | 1.50 |
| April 30. | Gustav E. Stechert, text books..... | 710 | 60.70 |
| April 30. | E. B. Johnson, gas..... | 712 | 2.72 |
| April 30. | D. W. Sprague, petty bills..... | 722 | 8.55 |
| April 20. | Lyman-Eliel Drug Co., 15 lbs mercury..... | 753 | 12.75 |
| Mar. 24. | Lockwood, Upton & Co., shop iron..... | 754 | 44.51 |
| Mar. 31. | W. K. Morrison & Co., door trimmings, iron and nails..... | 755 | 8.55 |
| April 1. | Cook & Hyde Stove Co., labor, cutting material..... | 756 | 10.50 |
| May 31. | Mechanic Arts, May pay-roll..... | 785 | 1,125.00 |
| May 6. | Louis Dreka, diplomas..... | 787 | 9.65 |
| June 1. | E. B. Johnson, gas..... | 795 | 1.28 |
| June 5. | E. B. Johnson, ribbon for diplomas..... | 798 | .90 |
| May 28. | Ricard & Gruman, diplomas filled..... | 798 | 3.00 |
| May 2. | Fimer & Amend, drugs..... | 804 | 4.45 |
| May 31. | D. W. Sprague, petty bills..... | 872 | 13.22 |
| May 30. | Naylor & Co., plumbing fittings..... | 832 | 20.45 |
| May 4. | Harris Bros., 1 steel crank..... | 833 | 14.00 |
| May 1. | G. N. Saegmuller, 1 chronograph, 1 transit circle..... | 834 | 1,597.50 |
| May 5. | J. E. Ingham, 1 solar compass..... | 835 | 65.00 |
| May 5. | W. & L. E. Gurley, electrical supplies..... | 836 | 170.00 |
| March 5. | E. Howard Watch & Clock Co., astronomical regulator..... | 837 | 375.00 |
| June 30. | Mechanic Arts, June pay-roll..... | 904 | 1,110.00 |
| June 9. | E. B. Johnson, type and twine..... | 905 | .64 |
| June 28. | E. B. Johnson, express..... | 911 | .85 |
| July 1. | D. W. Sprague, petty bills..... | 932 | 1.55 |
| June 8. | Technology Archi. Review Journals..... | 940 | 6.40 |
| May 30. | W. R. Hoag, 1 steel tape and protractors..... | 941 | 8.60 |
| June 4. | Twin City Iron Works, labor and material..... | 942 | 33.42 |
| Total..... | | | \$16,650.70 |

GEOLOGICAL SURVEY.

CURRENT EXPENSE.

| | | | |
|------------|-------------------------------------------------------------|-----|------------|
| June.... | Geological survey, pay roll..... | 948 | \$275.00 |
| Aug. 1. | N. H. Winchell, hay, freight, pocket voucher..... | 2 | 30.37 |
| July 30. | Louis A. Ogard, salary for June and July..... | 15 | 50.00 |
| Aug. 30. | Geological survey, pay roll..... | 53 | 275.00 |
| Aug. 29. | N. H. Winchell, paper trays and pocket vouchers..... | 73 | 25.31 |
| Sept. 30. | Geological survey, September pay roll..... | 110 | 315.00 |
| Oct. 31. | Geological survey, October pay roll..... | 198 | 315.00 |
| Oct. 1. | N. H. Winchell, foreign translations, express and dray..... | 266 | 30.29 |
| Aug. 28. | Louis A. Ogard, draughting maps..... | 267 | 90.00 |
| Nov. 30. | Geological survey, November pay roll..... | 304 | 315.00 |
| Dec. 1. | D. W. Sprague, petty bills..... | 305 | 1.67 |
| Dec. 31. | Geological survey, December pay roll..... | 399 | 375.00 |
| Dec. 16. | N. H. Winchell, express pocket voucher, work on survey..... | 455 | 76.71 |
| Jan. 31. | Geological survey, January pay roll..... | 492 | 875.00 |
| Feb. 28. | Geological survey, February pay roll..... | 574 | 375.00 |
| Mar. 31. | Geological survey, March pay roll..... | 643 | 375.00 |
| Mar. 10. | N. H. Winchell, pocket vouchers and express..... | 672 | 66.75 |
| April 30. | Geological survey, April pay roll..... | 702 | 375.00 |
| April 23. | Kennedy Bros., fishing tackle..... | 717 | 39.50 |
| May 2. | N. H. Winchell, pocket vouchers..... | 757 | 49.51 |
| May 31. | Geological survey, May pay roll..... | 785 | 375.00 |
| May 31. | Tribune Job Printing Co., abstracts and briefs..... | 802 | 58.50 |
| May 29. | Henry F. Nachtrieb, chemical supplies..... | 803 | 6.85 |
| May 31. | D. W. Sprague, petty bills..... | 812 | 3.50 |
| May 21. | Houghton, Mifflin & Co., 2 volumes "Butterflies"..... | 828 | 75.00 |
| May 20. | Kennedy Bros., ammunition, etc..... | 829 | 50.20 |
| May 27. | Kennedy Bros., revolver, rifle, boots and coat..... | 830 | 43.70 |
| June 8. | N. H. Winchell, freight, express and pocket voucher..... | 831 | 38.68 |
| June 30. | Geological survey, June pay roll..... | 904 | 400.00 |
| June 5. | Walter S. Booth, supplies for geological department..... | 925 | 6.00 |
| July 1. | D. W. Sprague, petty bills..... | 932 | 7.10 |
| June 22. | Eppling Brothers, services in field party..... | 943 | 79.98 |
| June 1. | Houghton, Mifflin & Co., volume III, "Butterflies"..... | 944 | 24.75 |
| July 1. | N. H. Winchell, stamps, labor and pocket voucher..... | 945 | 37.27 |
| July 13. | N. H. Winchell, postage, express and pocket voucher..... | 972 | 118.30 |
| July 31. | Geological survey, July pay roll..... | 982 | 300.00 |
| Total..... | | | \$5,530.84 |

LAW DEPARTMENT.

CURRENT EXPENSE.

| | | | |
|-----------|---------------------------------------------------------|-----|----------|
| June — | Law Department, pay roll, current expense..... | 948 | \$250.00 |
| July 30. | Tribune Job Printing Co. bill of printing..... | 13 | 6.75 |
| Aug. 30. | Wm. H. Yattaw, cleaning building, sundry petty exp..... | 54 | 10.50 |
| Sept. 30. | Law Department, September pay roll..... | 110 | 460.00 |
| Sept. 29. | E. B. Johnson, petty expenses..... | 112 | .18 |
| Sept. 29. | Wm. H. Yattaw, labor..... | 117 | 3.00 |

| | | No. voucher. | |
|------------|-----|---------------------------------------------------------------|-------------|
| Sept. | 1. | The Boston Book Co., adv. of law school..... | 150 \$18.00 |
| Sept. | 22. | West Publishing Co., books..... | 151 155.10 |
| Oct. | 31. | Law Department, October pay roll..... | 198 490.00 |
| Oct. | 31. | E. B. Johnson, petty expenses..... | 206 7.38 |
| Oct. | 31. | Wm. H. Yattaw, labor and materials..... | 212 1.25 |
| Oct. | 11. | West Publishing Co., books for law library..... | 259 41.25 |
| Sept. | 9. | Minn. Office and School Furniture Co., 1 swing chair..... | 271 5.00 |
| Nov. | 30. | Law Department, November pay roll..... | 304 402.50 |
| Nov. | 29. | E. B. Johnson, setting type and office supplies..... | 320 17.64 |
| Oct. | 29. | West Publishing Co., law books..... | 349 79.00 |
| Dec. | 31. | Law Department, December pay roll..... | 399 451.00 |
| Dec. | 31. | E. B. Johnson, rubber stamps, printing and freight..... | 400 28.26 |
| Dec. | 31. | Wm. H. Yattaw, cleaning law building..... | 401 1.88 |
| Jan. | 31. | Law Department, January pay roll..... | 492 411.00 |
| Jan. | 31. | Tribune Job Print Co., print. let. h'ds, circulars and rec'ts | 494 8.00 |
| Feb. | 2. | E. B. Johnson, gas and sundry petty exp..... | 496 18.72 |
| Jan. | 2. | Wm. H. Yattaw, petty expense..... | 504 .60 |
| Feb. | 28. | Law Department, February pay roll..... | 574 485.50 |
| Feb. | 28. | Wm. H. Yattaw, petty expense..... | 581 .37 |
| Feb. | 28. | E. B. Johnson, printing and material..... | 585 16.96 |
| Oct. | 1. | Little, Brown & Co., books..... | 615 16.75 |
| Oct. | 31. | Lawyers' Co-operative Pub. Co., books..... | 616 5.00 |
| Jan. | 13. | Folds, Griffith and Colver, 16 shades..... | 617 25.60 |
| Mar. | 31. | Law Department, March pay roll..... | 643 492.00 |
| Mar. | 30. | E. B. Johnson, gas and petty expense..... | 651 18.88 |
| April | 30. | Law Department, April pay roll..... | 702 513.50 |
| April | 30. | E. B. Johnson, gas and petty expense..... | 712 16.16 |
| April | 30. | Wm. H. Yattaw, labor and petty expense..... | 714 4.38 |
| May | 34. | Law Department, May pay roll..... | 785 611.50 |
| June | 1. | Wm. H. Yattaw, sundry petty expenses..... | 786 7.00 |
| May | 6. | Louis Orecka, diplomas..... | 787 83.30 |
| June | 1. | E. B. Johnson, gas, etc..... | 795 16.64 |
| June | 5. | E. B. Johnson, ribbon for diplomas..... | 796 7.50 |
| May | 28. | Ricard & Gruman, diplomas filled..... | 798 25.50 |
| June | 30. | Law Department, June pay roll..... | 904 300.00 |
| June | 9. | E. B. Johnson, gas..... | 905 8.80 |
| June | 23. | Wm. H. Yattaw, cleaning law building..... | 916 15.00 |
| July | 1. | Wm. H. Yattaw, dust pans, oil, etc..... | 917 6.00 |
| July | 30. | Tribune Job Printing Co., miscellaneous printed matter..... | 919 49.75 |
| July | 7. | John A. Schlener Co., blotting pad..... | 928 75 |
| July | 2. | Sheldon Bacon, balance for lectures in May..... | 946 10.25 |
| Total..... | | | \$5,604.10 |

MEDICAL DEPARTMENT.

CURRENT EXPENSE.

| | | | |
|-------|-----|-------------------------------------------------------------------------------------------|--------------|
| June | —. | Medical Department, pay roll..... | 948 693.32 |
| Aug. | 1. | N. W. Telephone Co., telephone service, June and July..... | 11 13.65 |
| July | 30. | Tribune Job Printing Co., bill of printing..... | 13 11.00 |
| July | 7. | Bausch Lomb Optical Co., apparatus..... | 13 10.50 |
| July | 20. | P. H. Millard, postage, stationery and sundries..... | 36 32.15 |
| Aug. | 30. | Medical Department, pay roll..... | 53 249.58 |
| Aug. | 30. | Wm. H. Yattaw, cleaning building, sundry petty expense..... | 54 4.00 |
| Sept. | 1. | Warner Brothers, paint, oil and glass..... | 59 24.52 |
| Sept. | 1. | Trainor Brothers, mason work and material..... | 69 15.10 |
| Aug. | 15. | N. W. Telephone Exchange Co., service, Aug. and Sept..... | 62 12.15 |
| Aug. | —. | E. B. Johnson, lighting hall..... | 65 4.14 |
| Aug. | 15. | Minnesota Hospital College, rent for Minnesota Hospital College, four months..... | 75 200.00 |
| Sept. | 30. | Medical Department, September pay roll..... | 110 1,029.58 |
| Sept. | 29. | E. B. Johnson, petty expense..... | 112 8.96 |
| Sept. | 29. | Wm. H. Yattaw, labor and petty expense..... | 117 25.70 |
| Sept. | 26. | Warner Brothers, bill, hardware..... | 121 4.68 |
| Sept. | 22. | F. K. Mann & Son, kalsomining..... | 152 97.00 |
| Oct. | 31. | Medical Department, October pay roll..... | 198 1,034.58 |
| Oct. | 1. | Tribune Job Printing Co., bill of printing memorandum, envelopes and letter heads..... | 199 14.25 |
| Oct. | 1. | N. W. Telephone Exchange Co., service..... | 202 12.15 |
| Oct. | 31. | E. B. Johnson, petty expenses..... | 206 5.58 |
| Oct. | 10. | Glessner & Washburn, furniture..... | 207 8.80 |
| Oct. | 31. | Warner Brothers, hardware..... | 210 5.47 |
| Oct. | 31. | Wm. H. Yattaw, labor and material..... | 212 26.30 |
| Oct. | 31. | Noyes Bros. & Cutler, chemicals..... | 237 8.97 |
| Oct. | 9. | S. N. Alder Furniture Co., chairs..... | 253 20.83 |
| Oct. | 30. | State Board Medical Examiner, advertising..... | 260 25.00 |
| Oct. | 1. | Journal American Medical Association, advertising..... | 262 25.00 |
| Oct. | 23. | P. G. Hanson, bill of groceries..... | 262 10.16 |
| Sept. | 30. | F. S. Martin, chemical supplies and repairs on boiler..... | 263 54.27 |
| Oct. | 23. | C. J. Bell, freight and drayage..... | 264 17.68 |
| Oct. | 1. | Elmer & Amend, chemical supplies..... | 265 263.50 |
| Oct. | 31. | North Western Fuel Co., fuel..... | 278 234.57 |
| Nov. | 1. | D. W. Sprague, sundry petty bills..... | 279 9.10 |
| Nov. | 30. | Medical Department, November pay roll..... | 304 1,134.58 |
| Dec. | 1. | D. W. Sprague, petty bills..... | 305 7.50 |

No. voucher.

| | | | |
|-----------|-------------------------------------------------------------------------|-----|----------|
| Nov. 1. | North Western Telephone Exchange Co., services | 309 | \$12.45 |
| Nov. 29. | Wm. H. Yattaw, plumbing bill | 311 | 12.65 |
| Nov. 30. | North Western Fuel Co., fuel | 317 | 45.70 |
| Nov. 5. | R. B. Lees, bill of lumber and labor | 318 | 11.60 |
| Nov. 29. | E. B. Johnson, water tax and freight | 320 | 50.37 |
| Nov. 7. | Noyes Bros. & Cutler, drugs and oils | 327 | 12.60 |
| Nov. 30. | W. K. Morrison, miscellaneous hardware | 337 | 13.37 |
| Nov. 1. | American Stove Repair Works, stove repairs and labor | 350 | 34.65 |
| Oct. 31. | D. Ramaley & Son, 500 scored cards | 351 | 6.50 |
| Oct. 23. | S. S. White Dental Manufacturing Co., advertising | 352 | 25.00 |
| Oct. 23. | Wilmington Dental Manufacturing Co., advertising | 353 | 10.00 |
| Oct. 27. | Bausch & Lomb Optical Co., supplies | 354 | 58.00 |
| Nov. 1. | North Western Lancet, advertising | 355 | 45.00 |
| Nov. 15. | Minnesota Hospital Col., rent of store in college building | 356 | 150.00 |
| Nov. 1. | Tribune Job Print. Co., 500 applica. and 2,000 analyses slips | 364 | 7.00 |
| Dec. 31. | Medical Department, December pay roll | 399 | 1,607.08 |
| Dec. 31. | E. B. Johnson, printing material, cash box, etc. | 400 | 27.18 |
| Nov. 30. | North Western Fuel Co., fuel | 408 | 164.05 |
| Dec. 1. | Harrison & Smith, printing schedules | 419 | 4.00 |
| Dec. 31. | D. W. Sprague, petty bills | 429 | 13.45 |
| Dec. 1. | P. G. Hanson, supplies | 456 | 6.90 |
| Dec. 5. | Bausch & Lomb Optical Co., supplies in medical dept. | 457 | 35.00 |
| Nov. 1. | H. D. Justl, advertising in Review | 458 | 20.00 |
| Nov. 1. | McIntosh Battery and Optical Co., attachment to lantern | 459 | 10.00 |
| Sept. 29. | International Dent. Pub. Co., adv. 6 mos. in Journal | 460 | 20.00 |
| Nov. 14. | Lyman-Ellel Drug Co., chemical supplies | 461 | 23.97 |
| Nov. 1. | W. H. Sadduth, carpenter work and material | 462 | 9.38 |
| Nov. 1. | Kirk & Johnson | 463 | 47.50 |
| Dec. 31. | Noyes Bros & Cutler, chemical supplies | 464 | 21.90 |
| Nov. 5. | St. Aubin & Dion, labor drawing wood | 465 | 12.50 |
| Jan. 31. | Medical department, January pay roll | 492 | 880.83 |
| Feb. 2. | E. B. Johnson, gas and petty expenses | 496 | 45.73 |
| Jan. 31. | N. W. Fuel Co., fuel | 499 | 65.90 |
| Dec. 29. | Standard Oil Co., 1 60-gallon oil tank | 502 | 5.50 |
| Jan. 2. | Wm. H. Yattaw, cleaning building and petty exp's | 505 | 6.00 |
| Dec. 31. | F. S. Martin, plumbing | 542 | 17.95 |
| Jan. 23. | W. H. Sadduth, incidentals | 544 | 27.65 |
| Dec. 31. | St. Paul Gas Light Co., gas | 545 | 17.14 |
| Jan. 8. | Dr. Stewart, charts | 546 | 10.00 |
| Jan. 31. | D. W. Sprague, petty bills | 558 | 4.00 |
| Feb. 28. | Medical department, February pay roll | 574 | 1,150.83 |
| Feb. 28. | Wm. H. Yattaw, petty expenses | 581 | .80 |
| Feb. 28. | N. W. Fuel Co., fuel | 583 | 70.24 |
| Feb. 28. | E. B. Johnson, gas, cards and labor | 585 | 35.52 |
| Feb. 28. | D. W. Sprague, petty bills | 587 | 7.86 |
| Feb. 1. | N. W. Telephone Exchange Co., services | 609 | 13.26 |
| Dec. 23. | Elmer & Amend, chemical supplies | 612 | 16.06 |
| Dec. 20. | North Star Rubber Works, heavy rubber tubing | 618 | 6.48 |
| Jan. 16. | Noyes Bros. & Cutler, drugs | 619 | 18.55 |
| Jan. 28. | Minnesota Electric Co., 2 brackets | 620 | 7.00 |
| Jan. 12. | McIntosh Bat. and Opt. Co., lamp on vase, 50 volt | 621 | 10.00 |
| Feb. 15. | Minnesota Hospital College, rent of store in college bldg. | 622 | 150.00 |
| Mar. 31. | Medical department, March pay roll | 643 | 1,150.83 |
| Mar. 30. | E. B. Johnson, gas and petty sundry expenses | 651 | 29.12 |
| Mar. 31. | Gustav E. Stechert, books | 658 | 5.00 |
| Mar. 31. | W. F. Porter & Co., plumbing goods | 660 | 7.50 |
| Feb. 28. | N. W. Fuel Co., coal | 573 | 96.75 |
| Mar. 2. | P. G. Hanson, supplies | 671 | 9.60 |
| Mar. 28. | Lyman-Ellel Drug Co., chemical supplies | 676 | 3.30 |
| April 30. | Medical department, April pay roll | 702 | 1,150.83 |
| Feb. 5. | Standard Oil Co., cylinder oil | 704 | 6.00 |
| April 30. | Tribune Job Printing Co., letter heads, cards and pay roll | 706 | 12.00 |
| April 30. | E. B. Lees, carpenter work and material | 709 | 4.75 |
| April 30. | E. B. Johnson, gas and petty expenses | 712 | 32.16 |
| April 13. | Elmer & Amend, chemical supplies | 713 | 47.79 |
| April 30. | Wm. H. Yattaw, labor and petty expenses | 714 | 11.50 |
| April 30. | D. W. Sprague, petty bills | 722 | 2.50 |
| April 30. | Noyes Bros. and Cutler, chemical supplies | 723 | 68.24 |
| April 20. | Lymal-Ellel Drug Co., 6 pound carb. soda | 725 | 1.50 |
| May 31. | Medical department, May pay roll | 785 | 1,150.84 |
| June 1. | Wm. H. Yattaw, cleaning around St. Paul medical college | 786 | 8.50 |
| May 6. | Louis Dreka, diplomas | 787 | 50.00 |
| June 1. | E. B. Johnson, water tax and gas | 795 | 67.77 |
| June 5. | E. B. Johnson, ribbon for diplomas | 796 | 4.00 |
| May 28. | Ricard & Gruman, diplomas filled | 798 | 14.00 |
| May 31. | D. W. Sprague, petty bills | 812 | 19.84 |
| May 31. | G. Gouser & Co., advertising | 838 | 8.00 |
| Feb. 2. | The Medical Era, advertising | 839 | 25.00 |
| Dec. 4. | Minnesota Brush Electric Co., lights in Dr. Hendrick and Sadduth's room | 840 | 20.00 |
| May 15. | Minnesota Hospital College, rent of store in college bldg. | 841 | 27.35 |
| Jan. 10. | N. W. Journal of Homeopathy, advertising | 842 | 150.00 |
| April 27. | Cody & Hineline, pipe and fittings | 843 | 45.00 |
| April 28. | Noyes Bros. & Cutler, chemical supplies | 844 | 6.66 |
| May 29. | McIntosh Battery and Optical Company, 1 lamp, 50 volt | 845 | 21.47 |
| | | 846 | 8.00 |

| | | No | voucher. | |
|----------|-------------------------------------------------------------------|-----|----------|-------------|
| June 1. | American Medical College Association, annual dues | 847 | | \$10.00 |
| April 1. | P. G. Hanson, brooms, soaps, etc | 852 | | 7.33 |
| Mar. 31. | Noyes Bros. & Outler, chemical supplies | 853 | | 17.72 |
| May 31. | Albert E. Senkler, M. D., expense of lectures at Medical College | 856 | | 50.00 |
| May 31. | E. J. Abbott, M. D., expense of lectures at Medical College | 857 | | 25.00 |
| May 31. | Chas. A. Wheaton, M. D., expense of lectures at Med. College | 858 | | 50.00 |
| May 31. | Alex. J. Stone, M. D., expense of lectures at Med. cal College | 859 | | 50.00 |
| May 31. | John F. Fulton, M. D., expense of lectures at Med. College | 860 | | 50.00 |
| May 31. | C. Eugene Riggs, M. D., expense of lectures at Med. College | 861 | | 50.00 |
| May 31. | A. McLaren, M. D., expense of lectures at Medical College | 862 | | 25.00 |
| May 31. | Frederick Dunsmoor, M. D., expense of lectures at Medical College | 863 | | 25.00 |
| May 31. | Henry Hutchinson, M. D., expense of lectures at Medical College | 864 | | 50.00 |
| May 31. | W. S. Briggs, M. D., expense of lectures at Medical College | 865 | | 50.00 |
| May 31. | B. H. Ogden, M. D., expense of lectures at Medical College | 866 | | 50.00 |
| May 21. | Eugene L. Mann, M. D., expense of lectures at Med. College | 867 | | 50.00 |
| May 31. | D. A. Stickler, M. D., expense of lectures at Medical College | 868 | | 50.00 |
| May 31. | E. C. Spencer, M. D., expense of lectures at Medical College | 895 | | 50.00 |
| June 30. | Medical Department, June pay roll | 904 | | 1,145.83 |
| June 9. | E. B. Johnson, gas and setting type | 905 | | 15.84 |
| June 28. | N. W. Telephone Exchange Company, services | 914 | | 14.10 |
| June 23. | Wm. H. Yaitaw, inspecting boilers | 916 | | 3.00 |
| June 30. | Tribune Job Printing Co., printing wrappers and pamphlets | 919 | | 337.50 |
| July 1. | D. W. Sprague, petty bills | 932 | | 2.80 |
| Mar. 20. | Noyes Bros. & Cutler, ammonia | 947 | | 6.06 |
| June 8. | U. G. Upholstery and Repair Co., repairing long table | 948 | | 7.50 |
| July 31. | Medical Department, July pay roll | 982 | | 249.68 |
| Total | | | | \$17,212.83 |

EXPERIMENT STATION.

(General Station Expenses.)

| CURRENT EXPENSE. | | | | |
|------------------|-------------------------------------------------------------|-----|--|----------|
| June. | General Station, pay roll June | 948 | | \$405.93 |
| Aug. 1. | N. W. Telephone Exch. Co. tel. service June and July | 11 | | 14.00 |
| June 30. | W. K. Morrison & Co., refrigerator, paint and sundries | 19 | | 46.43 |
| June 1. | American Veterinary Review, 3 year's subscription of Review | 20 | | 6.00 |
| July 22. | N. W. McLain, freight, express and sundries | 22 | | 11.24 |
| Feb. 4. | Cornish, Curtis & Greene, 6 Cooley cans | 29 | | 6.50 |
| July 2. | Aid Collins, policy on boiler | 30 | | 10.00 |
| July. | Russell, Boynton & Co., bill of plumbing goods | 32 | | 20.36 |
| July 1. | E. H. S. Dart, sundry expenses at Owatonna Station | 33 | | 157.38 |
| Aug. 30. | General Station, pay roll | 53 | | 141.66 |
| Aug. 30. | General Station, pay roll | 51 | | 148.17 |
| Aug. 15. | N. W. Telephone Exchange Co., service Aug. and Sept. | 62 | | 14.00 |
| Sept. 1. | D. W. Sprague, petty bills | 78 | | 13.78 |
| Aug. 23. | W. A. Gould, stamps, postal cards and sundries | 82 | | 10.69 |
| July 31. | N. W. K. Morrison & Co., bill of hardware | 84 | | 14.75 |
| Aug. 23. | N. W. McLain, freight and express | 90 | | 30.88 |
| Sept. 30. | General Station September pay roll | 110 | | 232.66 |
| Sept. 30. | D. W. Sprague, petty bills | 121 | | 17.22 |
| Sept. 15. | Peter Nelson, labor, grading | 153 | | 286.00 |
| Sept. 23. | St. Anthony Park Supply Co., blacksmithing | 156 | | 8.10 |
| July. | Gustav E. Stechert, plants | 157 | | 10.12 |
| Aug. 30. | W. K. Morrison & Co., oil and natis | 161 | | 5.95 |
| Sept. 24. | N. W. McLain, express and petty expenses | 164 | | 186.08 |
| Sept. 1. | Tribune Job Print'g Co., bulletins and portfolio envelopes | 165 | | 63.80 |
| Oct. 31. | General Station, October pay roll | 198 | | 251.67 |
| Oct. 1. | N. W. Telephone Exchange Co., services | 202 | | 14.00 |
| Oct. 14. | S. M. Emery, sundry petty expenses | 204 | | 5.28 |
| Oct. 27. | N. W. McLain, freight and express | 240 | | 138.57 |
| Oct. 16. | Henry E. Alvord, contribution in relation to "Morrill Act" | 273 | | 10.00 |
| Nov. 1. | D. W. Sprague, sundry petty bills | 279 | | 14.77 |
| Nov. 30. | General Station, November pay roll | 304 | | 219.73 |
| Dec. 1. | D. W. Sprague, petty bills | 305 | | 17.40 |
| Nov. 1. | N. W. Telephone Exchange Co., services | 309 | | 14.00 |
| Nov. 30. | Chas. D. Whitall & Co., waste basket, paper and pencils | 326 | | 1.75 |
| Nov. 30. | W. K. Morrison & Co., miscellaneous hardware | 337 | | 27.14 |
| Nov. 27. | W. M. Hays, expenses attending meeting of agr'l colleges | 357 | | 45.51 |
| Sept. 15. | Union Railway Storage Co., pipe | 349 | | 10.08 |
| Oct. 1. | R. S. Goodfellow & Co., toweling, bed'g for farm b'dg house | 361 | | 9.65 |
| Oct. 29. | Held & Gruenhagen, miscellaneous hardware | 362 | | 8.48 |
| Nov. 29. | E. F. Batten, labor, stamps and freight | 363 | | 30.74 |
| Nov. 25. | A. Anderson, 21 days carpenter work | 368 | | 42.50 |
| Oct. 17. | N. W. Fuel Co., coal | 369 | | 236.39 |
| Oct. 13. | Brooks Bros., bill of lumber | 372 | | 10.19 |
| Nov. 26. | Pierce Brothers, 60 sheep | 373 | | 305.10 |
| Dec. 31. | General Station, December pay roll | 399 | | 252.53 |
| Dec. 10. | John A. Schlener & Co., 1 quire mem. paper | 404 | | .75 |
| Dec. 31. | D. W. Sprague, petty bills | 429 | | 19.18 |
| Oct. 4. | Gustav E. Stechert, text book | 449 | | 7.07 |
| Nov. 30. | W. K. Morrison & Co., bill miscellaneous hardware | 454 | | 14.03 |
| Dec. 20. | Cunningham & Haas, 30 lambs | 468 | | 104.25 |

| | No. voucher. | |
|-----------|---------------------------------------------------------------------|------------|
| Sept. 22. | Pioneer Fuel Co., fuel..... | 470 \$8.00 |
| Dec. 23. | W. M. Hays, grinding corn and express..... | 471 7.81 |
| Dec. 24. | Minneapolis Grain and Feed Co., miscellaneous grains..... | 472 235.52 |
| Nov. 27. | W. C. Nichols & Son, 1 registered ram lamb..... | 473 45.00 |
| Dec. 24. | Chas. T. Cherry, 1 registered Poland China sow..... | 474 30.00 |
| Dec. 20. | Enterprise Mize Machine Co., 647 lb. grate bars..... | 476 17.79 |
| Dec. 30. | N. W. McLain, stamps, box rent, trips to St. Paul and S. St. P..... | 477 233.18 |
| Dec. 24. | E. F. Batten, 4 trips to Mpls., St. Paul, stamps and petty ex..... | 478 61.15 |
| Jan. 31. | General Station, pay roll..... | 482 227.48 |
| Jan. 30. | Gustav E. Stechert, books for library..... | 483 6.75 |
| Jan. 31. | Tribune Job Printing Co., bulletin, envelopes and mem..... | 494 53.75 |
| Jan. 31. | Chas. D. Whitall & Co., time books, mem., etc..... | 500 3.00 |
| Jan. 31. | Held & Gruenhagen, lanterns, globes and glass..... | 532 40 |
| Jan. 31. | Pioneer Fuel Co., fuel..... | 537 10.95 |
| Jan. 9. | Naylor & Co., plumbing goods..... | 538 1.08 |
| Jan. 31. | W. K. Morrison & Co., hardware..... | 547 128.31 |
| Nov. 25. | N. W. McLain, sundry expenses..... | 549 7.48 |
| Dec. 6. | E. F. Batten, stamps, and 4 trips to St. Paul..... | 552 6.00 |
| Jan. 30. | Green and Forest Pub. Co., subscription..... | 555 159.70 |
| Jan. 20. | Minneapolis Grain and Feed Co., miscellaneous grains..... | 557 6.50 |
| Jan. 31. | The Manufacturing Syndicate, 1 barrel truck and irons..... | 558 7.15 |
| Jan. 13. | D. W. Sprague, petty bills..... | 560 14.00 |
| Feb. 16. | Knute Nelson, expenses Board meeting..... | 554 8.80 |
| Jan. 28. | McDonald Bros., jars..... | 574 187.66 |
| Feb. 28. | General Station, February pay roll..... | 587 23.85 |
| Feb. 28. | D. W. Sprague, petty bills..... | 609 14.00 |
| Feb. 1. | Northwestern Telephone Exchange Co., services..... | 626 13.28 |
| Feb. 12. | S. M. Emery, exp. to St. Anthony and telegrams..... | 625 19.62 |
| Jan. 31. | Minneapolis Tubular Well Co., well supplies..... | 626 7.10 |
| Jan. 31. | W. K. Morrison & Co., nails and brick lining for stoves..... | 627 6.00 |
| Feb. 10. | Journal of Anal. Chem., subscription to vol. 3 and 4..... | 628 6.60 |
| Feb. 18. | W. F. Porter & Co., 2 globe valves..... | 629 148.35 |
| Feb. 28. | St. Anthony Park Supply Co., repairing..... | 631 142.05 |
| Feb. 28. | Northwestern Fuel Co., coal..... | 632 17.46 |
| Feb. 38. | Tribune Job Printing Co., printing bulletins..... | 633 128.16 |
| Mar. 31. | E. F. Batten, stamps, box rent and petty expenses..... | 643 3.20 |
| Mar. 31. | General Station, March pay roll..... | 660 6.25 |
| Mar. 31. | W. F. Porter & Co., plumbing goods..... | 679 186.15 |
| Feb. 28. | Tribune Job Printing Co., printing bulletins..... | 680 58.53 |
| Feb. 17. | H. M. Leighton, carpenter work..... | 682 15.15 |
| Dec. 27. | G. F. Shaz, labor on green house..... | 683 25.00 |
| Dec. 24. | N. W. McLain, cook stove for men's boarding house..... | 684 37.30 |
| Mar. 1. | E. A. Fletcher & Co., 1 single harness and repairs..... | 685 18.00 |
| Mar. 28. | T. Batten, sundry petty expenses..... | 687 28.50 |
| Mar. 9. | Carl Bohr, cutting and hauling ice..... | 689 9.92 |
| Mar. 28. | S. M. Emery, petty expenses..... | 702 101.40 |
| April 30. | General Station, April pay roll..... | 722 20.35 |
| April 30. | D. W. Sprague, petty bills..... | 722 43.26 |
| April 30. | A. J. Menard, oats and feed..... | 759 61.44 |
| Mar. 7. | N. W. Fuel Co., stove coal..... | 765 40.00 |
| Apr. 25. | Tribune Job Print. Co., miscellaneous printing..... | 766 75.00 |
| Apr. 29. | Clinton D. Smith, traveling exp. to Ark. and return..... | 770 16.00 |
| Apr. 15. | Gustav E. Stechert, books..... | 773 6.90 |
| Apr. 28. | E. F. Batten, sundry petty expenses..... | 774 222.85 |
| Apr. 15. | Pioneer Press Co., reg. blanks..... | 781 5.42 |
| May 31. | General Station, May pay roll..... | 812 122.95 |
| May 29. | D. W. Sprague, petty bills..... | 870 7.50 |
| May 27. | Clinton D. Smith, stamps, expenses, labor, etc..... | 873 7.60 |
| May 25. | E. F. Batten, trips to Minneapolis and expenses..... | 874 10.00 |
| May 14. | Held & Gruenhagen, hardware..... | 877 60.00 |
| May 15. | H. Weckworth, 1000 lbs. shorts..... | 881 40.85 |
| Apr. 28. | E. F. Batten, extra compensation for 2 months..... | 883 31.28 |
| May 25. | Tribune Job Printing Co., letter heads and Bulletins..... | 886 38.25 |
| May 25. | J. H. Kerrick, work and material for repairing boiler..... | 888 5.66 |
| April 1. | Pillsbury-Washburn F. M. Co., bran..... | 889 120.83 |
| April 30. | W. K. Morrison & Co., hardware..... | 904 14.00 |
| June 30. | General Station, June pay roll..... | 914 3.50 |
| June 28. | N. W. Telephone Exchange Co., services..... | 932 36.88 |
| July 1. | D. W. Sprague, petty bills..... | 949 15.04 |
| July 3. | Clinton D. Smith, trips to look over dairy establishments..... | 950 1.50 |
| June 24. | Clinton D. Smith, freight..... | 957 12.00 |
| May 28. | Tribune Job Print. Co., envelopes..... | 958 2.20 |
| June 22. | Jno. Levesconte, cleaning, repairing and surveying..... | 959 8.20 |
| June 12. | Wright, Barrett & Stillwell, paper..... | 969 6.50 |
| June 15. | Nelson, Tenney & Co., lumber..... | 982 204.15 |
| June 2. | N. W. Photo Eng. Co., 2 cuts insects..... | |
| July 31. | General Station, July pay roll..... | |

Total.....

\$7,229.37

EXPERIMENT STATION.

| 1891. | | DIV. OF AGRICULTURE: CURRENT EXPENSE. | No. voucher. | |
|------------|-----|---------------------------------------------------------------|--------------|-----------|
| June. | | Division of Agriculture, pay roll..... | 948 | \$359.46 |
| Aug. | 1. | E. B. Johnson, petty bills..... | 1 | 4.60 |
| July | 22. | W. H. Gentry, stock..... | 21 | 60.00 |
| July | 22. | N. W. McLain, freight, express and sundries..... | 22 | 155.67 |
| July | 11. | Nelson, Tenney & Co., bill of lumber..... | 24 | 44.48 |
| July | 11. | Pillsbury-Washburn Flour Mill Co., bill of bran..... | 25 | 7.60 |
| July | 2. | O. W. Jones, bill of agricultural implements and twine..... | 26 | 53.75 |
| July | 1. | George Edwards, blacksmithing..... | 27 | 6.00 |
| July | 12. | Neill & Pratt Lumber Co., bill of lumber..... | 31 | 6.30 |
| Aug. | 30. | Division of Agriculture, pay roll..... | 53 | 158.83 |
| Aug. | 30. | Division of Agriculture, pay roll..... | 53 | 193.86 |
| Aug. | 4. | Northrup, Braslan & Goodwin Co., bags..... | 81 | 5.25 |
| Aug. | 20. | D. C. Martin, livery..... | 83 | 6.00 |
| Aug. | 23. | Gardner & Firkins, sawed posts..... | 86 | 37.20 |
| Aug. | 7. | S. Huntington, labor on experiment farm..... | 89 | 46.00 |
| Sept. | 30. | Division of Agriculture, September pay roll..... | 110 | 409.50 |
| Aug. | 27. | Mast, Buford & Burwell, feed cutters, knives and express..... | 154 | 9.21 |
| July | | Burns & Gorham, blacksmithing..... | 155 | 5.20 |
| Sept. | 23. | St. Anthony Park Supply Co., labor and blacksmithing..... | 156 | 14.75 |
| Sept. | 22. | Willett M. Hayes, sundry petty expenses..... | 158 | 73.50 |
| Sept. | 22. | James Powers, threshing oats..... | 150 | 17.20 |
| Aug. | 29. | Pillsbury-Washburn Flour Mill Co., 2,000 lbs screenings..... | 161 | 8.00 |
| Sept. | 1. | W. J. Neely, 3 Essex hogs..... | 162 | 79.60 |
| Sept. | 20. | Nelson, Tenney & Co., bill of lumber..... | 167 | 13.25 |
| Oct. | 31. | Division of Agriculture, October pay roll..... | 198 | 359.16 |
| Sept. | 30. | F. A. Fletcher & Co., saddlery..... | 239 | 7.65 |
| Sept. | 25. | Gardner & Firkins, posts..... | 241 | 11.10 |
| Oct. | 24. | Brooks Bros., lumber..... | 242 | 7.83 |
| Oct. | 1. | Held & Gruenhagen, glass and felt..... | 244 | 9.42 |
| Oct. | 22. | E. W. Davis, stock, (hogs)..... | 245 | 40.00 |
| Oct. | 20. | G. W. Plank, 5 Poland-China pigs..... | 246 | 27.32 |
| Oct. | 22. | Brooks Bros., entomological supplies..... | 247 | 19.20 |
| Oct. | 17. | W. F. Wilcox, stock, (pigs)..... | 248 | 47.94 |
| Sept. | 29. | W. F. Porter & Co., 1 round gate..... | 250 | 8.00 |
| Oct. | 17. | W. M. Hays, grass seeds and sundry petty expenses..... | 252 | 59.45 |
| Nov. | 30. | Division of Agriculture, November pay roll..... | 304 | 443.03 |
| Oct. | 29. | E. C. Curtis, 6 pigs and crates..... | 367 | 20.58 |
| Dec. | 31. | Division of Agriculture, December pay roll..... | 399 | 385.37 |
| Dec. | 23. | Northrup, Braslan Co., seeds and bulbs..... | 466 | 25.04 |
| Jan. | 31. | Division of Agriculture, January pay roll..... | 492 | 353.05 |
| Jan. | 1. | H. F. Sanders' service..... | 551 | 5.27 |
| Feb. | 28. | Division of Agriculture, February pay roll..... | 574 | 329.41 |
| Feb. | 27. | Minneapolis Grain & Feed Co., meal and corn..... | 630 | 96.62 |
| Mar. | 31. | Division of Agriculture, March pay roll..... | 643 | 303.80 |
| Apr. | 11. | Genesee Valley Manufacturing Co., 1 grain drill..... | 677 | 78.00 |
| Jan. | 31. | Vilmorin-Andrieux & Cie., beet seeds..... | 691 | 77.10 |
| Apr. | 30. | Division of Agriculture, April pay roll..... | 702 | 342.27 |
| Mar. | 26. | S. Huntington, labor threshing flax, etc..... | 762 | 25.15 |
| Apr. | 19. | Adam Lindig, 86 bushels seed oats..... | 764 | 51.60 |
| Apr. | 25. | Northrup, Braslan, Goodwin Co., seeds..... | 771 | 46.39 |
| Apr. | 8. | L. H. Haynes, 21 bushels wheat and 12 sacks..... | 775 | 29.25 |
| Mar. | 20. | August Røeiker & Sons, chemical supplies..... | 777 | 77.29 |
| Apr. | 6. | Bemis Bros. Bag Co., twine..... | 780 | 54.43 |
| Apr. | 15. | W. M. Hays, wheat, express and freight..... | 782 | 13.63 |
| May | 31. | Division of Agriculture, May pay roll..... | 785 | 423.33 |
| May | 31. | D. W. Sprague, petty bills..... | 812 | 5.89 |
| May | 25. | Northrup, Braslan, Goodwin, seeds..... | 871 | 49.29 |
| May | 18. | M. J. Hoag, seed and sacks..... | 884 | 5.65 |
| June | 30. | Division of Agriculture, June pay roll..... | 904 | 466.58 |
| July | 1. | D. W. Sprague, petty bills..... | 932 | 1.90 |
| June | 24. | Clinton D. Smith, freight..... | 950 | 2.05 |
| June | 16. | North Western Fuel Co., fuel..... | 952 | 12.88 |
| June | 16. | J. G. Bass, 25 days horse hire..... | 953 | 23.40 |
| June | 3. | Adam Lindig, oats..... | 954 | 28.48 |
| June | 22. | Jno. Le Vesconte, cleaning, repairing and surveying..... | 957 | 14.00 |
| June | 8. | Minneapolis Brewing Co., barley..... | 961 | 66.25 |
| June | 9. | Minnesota Linsed Oil Works, 1,000 pounds oil meal..... | 962 | 11.50 |
| June | 1. | Farm, Stock and Home Publishing Co., advertising..... | 963 | 9.30 |
| May | 30. | C. L. Moffat, blacksmithing..... | 967 | 13.75 |
| June | 9. | Stamwitz & Shober, 2,110 pounds shorts..... | 970 | 16.88 |
| June | 9. | City Elevator Co., ground feed and shelled corn..... | 971 | 46.08 |
| July | 31. | Div. of Agriculture, July pay roll..... | 982 | 490.52 |
| Total..... | | | | 86,817.24 |

EXPERIMENT STATION.

| | | DIV. OF CHEMISTRY: CURRENT EXPENSE. | | |
|-------|-----|-----------------------------------------|-----|----------|
| June. | | Div. Chemistry, pay roll..... | 945 | \$125.00 |
| Aug. | 30. | Div. Chemistry, pay roll..... | 53 | 100.00 |
| Aug. | 19. | D. N. Harper, petty expenses..... | 89 | 13.78 |
| Sept. | 30. | Div. Chemistry, September pay roll..... | 110 | 125.00 |
| Aug. | 26. | Miss M. M. Harper, diagrams..... | 166 | 12.60 |
| Oct. | 31. | Div. Chemistry, October pay roll..... | 198 | 75.00 |

| | | No. voucher. | |
|------------|-----------------------------------------------------------------|--------------|------------|
| Oct. 27. | N. W. McLain, freight and express..... | 240 | \$6.45 |
| Aug. 8. | Elmer & Amend, chemical supplies..... | 243 | 22.00 |
| Sept. 11. | Gustav E. Stechert, Lock on sugar..... | 251 | 7.35 |
| Oct. 31. | John Thompson, work in carting for laboratory..... | 274 | 7.50 |
| Nov. 30. | Div. of Chemistry, November pay roll..... | 304 | 100.00 |
| Dec. 31. | Div. of Chemistry, December pay roll..... | 399 | 104.75 |
| Oct. 27. | A. R. Miller, one fruit press..... | 475 | 4.50 |
| Jan. 31. | Div. Chemistry, January pay roll..... | 492 | 143.23 |
| Jan. 31. | Chas. D. Whitehall & Co., tracing cloth and ink stand..... | 500 | 1.90 |
| Jan. 31. | W. K. Morrison, hardware..... | 540 | 9.75 |
| Feb. 28. | Div. Chemistry, February pay roll..... | 574 | 100.00 |
| Mar. 31. | Div. Chemistry, March pay roll..... | 643 | 131.24 |
| Mar. 31. | John A. Schlener & Co., pen, ink and paper..... | 649 | 6.14 |
| Nov. 1. | Tribune Job Printing Co., print letter heads and envelopes..... | 691½ | 6.25 |
| Apr. 30. | Div. Chemistry, April pay roll..... | 702 | 203.84 |
| Apr. 30. | Tribune Job Printing Co., miscellaneous printing..... | 706 | 4.25 |
| Apr. 30. | D. W. Sprague, petty bills..... | 722 | .36 |
| Apr. 27. | D. N. Harper, freight..... | 741 | 67.98 |
| Jan. 30. | Detroit Heating and Lighting Co., regulator..... | 743 | 205.00 |
| Mar. 21. | W. F. Porter & Co., plumbing and material..... | 758 | 17.08 |
| Apr. 25. | Tribune Job Printing Co., miscellaneous printing..... | 766 | 9.25 |
| Apr. 25. | Chas D. Whitall & Co., one hektograph, letter size..... | 769 | 3.75 |
| Apr. 15. | Gustav E. Stechert, reference books..... | 773 | 6.04 |
| Apr. 27. | N. D. Harper, freight, stamps and sundries..... | 778 | 59.28 |
| Dec. 10. | Elmer & Amend, 1 mill C. and petty expenses..... | 779 | 60.75 |
| May 31. | Div. Chemistry, May pay roll..... | 785 | 200.00 |
| May 31. | D. W. Sprague, petty bills..... | 812 | 1.75 |
| May 31. | Elmer & Amend, chemical supplies..... | 824 | 1,055.22 |
| May 31. | N. D. Harper, paper card board..... | 854 | .65 |
| April 15. | Noyes, Bros. & Cutler, museum supplies..... | 855 | 13.40 |
| May 25. | Bemis Bros. Bag Co., supplies..... | 882 | 26.23 |
| Mar. 10. | Standard Oil Co., 8 barrels oil..... | 893 | 60.25 |
| June 30. | Division of Chemistry, June pay roll..... | 904 | 25.00 |
| July 7. | John A. Schlener & Co., 13 quire journal..... | 928 | .42 |
| July 7. | J. F. Lucas, labor and material..... | 935 | 113.00 |
| June 30. | Elmer & Amend, chemical supplies..... | 936 | 1,236.97 |
| June 5. | Husby & Skange, carpenter work and material..... | 937 | 40.92 |
| June 24. | Clinton D. Smith, freight..... | 950 | 19.39 |
| May 30. | Bemis Bros. Bag Co., bags..... | 955 | 10.88 |
| May 26. | Tribune Job Printing Co., envelopes..... | 956 | 10.00 |
| June 8. | Noyes Bros. & Cutler, Chemical supplies..... | 960 | 4.78 |
| May 8. | Utah Sugar Co., beet seed..... | 968 | 66.00 |
| June 25. | Joseph Posca, fire pipe 3¾..... | 976 | 17.10 |
| July 31. | Div. of chemistry, July pay roll..... | 982 | 106.06 |
| Total..... | | | \$4,752.98 |

1891.

EXPERIMENT STATION.

| | | No. voucher. | |
|--------------------------------------|------------------------------------------------------------------------|--------------|-------------|
| DIV. OF ENTOMOLOGY: CURRENT EXPENSE. | | | |
| June | Division Entomology, pay roll..... | 948 | \$166.60 |
| July 22. | W. W. McLain, freight and express..... | 22 | 2.38 |
| July 12. | Tribune Job Printing Company, printing envelopes and letter heads..... | 23 | 10.20 |
| Aug. 30. | Division Entomology, pay roll..... | 53 | 150.00 |
| July 28. | St. Paul School Furniture Co., bug breeders..... | 85 | 8.00 |
| Sept. 30. | Division Entomology, September pay roll..... | 110 | 150.00 |
| Oct. 31. | Division Entomology, October pay roll..... | 198 | 150.00 |
| Nov. 1. | O. Luggar, postage, express and petty expenses..... | 249 | 100.26 |
| Nov. 30. | Division Entomology, November pay roll..... | 304 | 165.97 |
| Nov. 13. | Jas. Keenhotts, painting and finishing frames..... | 365 | 15.00 |
| Dec. 31. | Division Entomology, December pay roll..... | 399 | 154.85 |
| Dec. 23. | Otto Luggar, postage, railroad fare and herbarium paper..... | 467 | 63.84 |
| Dec. 8. | John Schmitt, 100 insect boxes..... | 469 | 115.00 |
| Jan. 31. | Divisi on Entomology, January pay roll..... | 492 | 168.60 |
| Jan. 29. | Otto Luggar, postage, express, herbarium paper..... | 550 | 18.12 |
| Jan. 16. | Graphic Illustrating Company, 5 reproduc..... | 556 | 10.00 |
| Feb. 28. | Division Entomology, February pay roll..... | 574 | 150.00 |
| Mar. 31. | Division Entomology, March pay roll..... | 643 | 173.36 |
| April 30. | Division Entomology, April pay roll..... | 702 | 180.00 |
| April 27. | Otto Luggar, entomological pins, postage, etc..... | 761 | 89.88 |
| April 15. | Noyes Bros. & Cutler, chemical supplies..... | 768 | 35.88 |
| April 25. | Chas. D. Whitall & Co., supplies..... | 769 | 10.02 |
| May 31. | Division Entomology, May pay roll..... | 785 | 195.00 |
| May 31. | Gustav E. Stechert, text books..... | 813 | 11.88 |
| Dec. 10. | Elmer & Amend, chemical supplies..... | 779 | 1.95 |
| May 29. | Clinton D. Smith, stamps and express..... | 870 | 6.48 |
| May 23. | Graphic Company, 9 cuts and 5 reproductions..... | 872 | 17.25 |
| May 31. | Carl T. Thayer, 4 butterfly nets..... | 878 | 6.00 |
| May 27. | Otto Luggar, postage and trips to St. Paul..... | 879 | 5.76 |
| April 30. | W. K. Morrison & Co., hardware..... | 889 | 6.25 |
| May 20. | Gustav E. Stechert, books..... | 891 | 55.10 |
| June 30. | Division Entomology, June pay roll..... | 904 | 195.00 |
| June 12. | Wright, Barrett & Stillwell, paper..... | 958 | 3.05 |
| June 4. | Minneapolis Wire Works Company, 24 wire cloth covers..... | 964 | 14.00 |
| April 25. | Field Force Pump Company, pumps and fixtures..... | 965 | 24.55 |
| July 31. | Division Entomology, July pay roll..... | 982 | 195.00 |
| Total..... | | | \$3,071.443 |

EXPERIMENT STATION.

| DIVISION OF HORTICULTURE.—CURRENT EXPENSE. | | No. voucher. | |
|--------------------------------------------|-----------------------------------------------------------|--------------|----------|
| June. | Division Horticulture, pay roll | 948 | \$239.16 |
| Aug. 1. | E. B. Johnson, petty bills | 1 | 10.75 |
| July 22. | N. W. McLain, 1 bundle shrubs | 22 | .30 |
| July 14. | Lindsay Bros., planet hoe and sweeps | 28 | 8.00 |
| Aug. 30. | Division Horticulture, pay roll | 53 | 100.00 |
| Aug. 30. | Division Horticulture, pay roll | 53 | 99.96 |
| June 24. | The Jewel Nursery Co., trees | 88 | 133.45 |
| Sept. 30. | Division Horticulture, September pay roll | 110 | 234.96 |
| Sept. 22. | S. B. Green, express | 159 | 5.95 |
| Oct. 31. | Division Horticulture, October pay roll | 197 | 160.00 |
| Sept. 30. | F. A. Fletcher & Co., saddlery | 239 | 2.70 |
| Nov. 30. | Division Horticulture, November pay roll | 304 | 195.49 |
| Nov. 11. | Robert Olson, work in horticultural department | 360 | 31.37 |
| Oct. 25. | A. Anderson, carpenter work | 368 | 10.00 |
| Dec. 31. | Division Horticulture, December pay roll | 399 | 169.18 |
| Dec. 29. | Held & Gruenhagen, miscellaneous hardware | 441 | 24.16 |
| Dec. 23. | Northrup, Braslan & Co., seeds and bulbs | 466 | 38.08 |
| Jan. 31. | Division Horticulture, January pay roll | 492 | 154.00 |
| Jan. 31. | Held & Gruenhagen, bill of hardware | 532 | 8.00 |
| Dec. 27. | G. F. Shaw, painting greenhouse | 548 | 14.85 |
| Jan. 29. | Sam'l B. Green, service in nursery, stamps, stationery | 553 | 20.58 |
| Jan. 31. | D. W. Sprague, bills | 558 | 2.00 |
| Feb. 28. | Division Horticulture, February pay roll | 574 | 147.75 |
| Feb. 18. | St. Anthony Park Supply Co., painting and repairing buggy | 629 | 18.50 |
| Feb. 28. | N. W. Fuel Co., coal | 631 | 125.78 |
| Mar. 31. | Division Horticulture, March pay roll | 643 | 154.19 |
| Mar. 31. | Gustav E. Stechert, books | 658 | 6.75 |
| Feb. 10. | J. M. Thorburn & Co., seeds | 678 | 5.88 |
| Mar. 21. | Chas. D. Whitall & Co., paper and supplies | 681 | 10.10 |
| Mar. 9. | Samuel B. Green, petty expenses | 688 | 5.35 |
| Apr. 30. | Division horticulture, April pay roll | 702 | 224.74 |
| Apr. 30. | Tribune Job Printing Co., miscellaneous printing | 706 | 3.00 |
| Apr. 30. | D. W. Sprague, petty bills | 722 | 1.94 |
| Apr. 28. | Samuel B. Green, sundry petty expenses | 760 | 32.60 |
| Apr. 21. | Gabriel J. Lambrigger, 100 buffalo berries | 763 | 10.00 |
| Mar. 7. | N. W. Fuel Co., stove coal | 765 | 61.43 |
| Apr. 13. | Stephen Hoyt Sons, trees | 767 | 12.25 |
| Apr. 14. | T. S. Hubbard & Co., vines | 776 | 12.09 |
| Apr. 24. | Northrup, Braslan & Goodwin, seeds | 771 | 5.57 |
| Mar. 24. | Johnson & Stokes, copper labels and postage | 772 | 8.28 |
| May 31. | Division Horticulture, May pay roll | 785 | 298.50 |
| May 31. | D. W. Sprague, petty bills | 812 | 6.65 |
| May 31. | Northrup Braslan & Co., seeds | 823 | 23.58 |
| May 31. | John McBride, labor in school of agriculture | 850 | 33.75 |
| May 9. | A. Clark Tuttle, apple trees | 869 | 6.60 |
| May 25. | Held & Gruenhagen, hardware | 874 | 31.92 |
| Apr. 6. | J. T. Lovett Co., plants and trees | 875 | 32.16 |
| May 20. | Samuel B. Green, freight and express | 876 | 35.29 |
| Apr. 20. | Ellwanger & Barry, vines, trees and plants | 880 | 78.65 |
| May 25. | Tribune Job Printing Co., tags | 883 | 2.00 |
| May 5. | Frank H. Gibbs, plowing land for new orchard | 885 | 10.00 |
| Apr. 30. | Green's Nursery Co., fruit vines | 887 | 15.60 |
| Mar. 24. | Peter Henderson & Co., garden seeds | 890 | 5.87 |
| Apr. 6. | John Lewis Childs, 50 wine berries | 902 | 12.50 |
| June 30. | Division Horticulture, June pay roll | 904 | 236.31 |
| June 24. | Clinton D. Smith, freight | 950 | 6.23 |
| Apr. 13. | Phil Strubler, fruit trees | 951 | 6.50 |
| May 20. | M. Crawford, plants | 951 | 9.45 |
| July 31. | Division Horticulture, July pay roll | 982 | 266.33 |

Total..... \$3,638.23

CURRENT EXPENSE.

Summary of disbursements for fiscal year ending July 31, 1891.

| | |
|---------------------------------------------|-------------|
| General University | \$14,570.77 |
| College of Science, Literature and the Arts | 68,448.54 |
| School of Agriculture | 18,425.19 |
| Veterinary Department | 2,283.93 |
| Military Department | 1,104.38 |
| Mechanic Arts | 16,650.70 |
| Geological Survey | 5,530.94 |
| Law Department | 5,604.10 |
| Medical Department | 17,212.83 |
| Experiment Station— | |
| General Station | \$7,229.37 |
| Division of Agriculture | 6,817.24 |
| Division of Chemistry | 4,752.98 |
| Division of Entomology | 3,071.43 |
| Division of Horticulture | 3,638.23 |
| | 25,509.25 |

Total..... \$175,340.63

FINANCIAL STATEMENT

of the University of Minnesota for the fiscal year commencing August 1, 1891, and ending July 31, 1892.

CURRENT EXPENSE.

Summary of amounts placed to the credit of the current expense account of the University, during the fiscal year ending July 31, 1892.

| | |
|------------------------------------------------|--------------|
| Balance on August 1, 1891..... | \$24,713.56 |
| Annual appropriation..... | 65,000.00 |
| Interest on University land contracts..... | 24,076.47 |
| Interest on University bonds..... | 18,721.68 |
| From U. S. treasury—Hatch bill..... | 11,250.00 |
| From U. S. treasury—Morrill bill..... | 17,000.00 |
| Insurance—losses from fire..... | 1,457.62 |
| Sales of Salt Spring lands..... | 9,921.15 |
| University—fees, etc..... | 19,458.26 |
| Experiment station—sales..... | 2,941.50 |
| Veterinary hospital—fees..... | 580.15 |
| School of Agriculture—dairy products, etc..... | 2,452.42 |
| Total..... | \$197,572.81 |

AMOUNTS RECEIVED FROM STATE TREASURY ON AUDITOR'S WARRANTS.

| | BILLS. | PAY ROLLS. |
|-------------------------------------------------------|-------------|--------------|
| July..... | \$3,697.35 | |
| August..... | 5,452.46 | \$2,982.61 |
| September..... | 6,072.81 | 11,109.66 |
| October..... | 5,322.80 | 12,079.33 |
| November..... | 9,031.44 | 12,333.20 |
| December..... | 7,997.30 | 12,471.53 |
| January..... | 7,136.41 | 12,323.06 |
| February..... | 8,445.80 | 12,210.78 |
| March..... | 6,962.22 | 12,378.72 |
| April..... | 3,563.18 | 12,062.39 |
| May..... | 5,060.42 | 12,481.73 |
| June..... | 4,473.24 | 11,504.33 |
| July..... | | 3,121.80 |
| | \$73,216.43 | \$127,059.11 |
| Total..... | | \$200,275.57 |
| Less amount paid out for special appropriations*..... | | 15,761.92 |
| | | \$184,513.65 |

BILLS PAID BY AUDITOR.

| | | |
|----------------------------------------|----------|--------------|
| Paid N. H. Winchell—Geol. survey.. | \$110.50 | |
| Outstanding warrant August 1, 1891 | 59.93 | |
| Fees paid Co. treas. for collections.. | 70.76 | |
| Int. on 107 R. R. adjustm't bonds... | 236.25 | \$477.44 |
| | | \$184,991.09 |
| Outstanding warrant July 31, 1892..... | | \$12,581.72 |
| | | 6,799.48 |
| Balance in treasury July 31, 1892..... | | \$19,381.20 |

*For special appropriations see page (....) of this report.

GENERAL UNIVERSITY.

CURRENT EXPENSE—DISBURSEMENTS.

No. voucher.

| | | | |
|-----------|---------------------------------------------------------------|-----|----------|
| Aug. 3. | E. B. Johnson, stamps and gas. | 1 | \$161.19 |
| April 13. | Wright, Barrett & Stillwell, three reams bankers' lin. paper | 2 | 11.04 |
| July 22. | New England Furniture Co., use of 200 K. chairs | 3 | 10.00 |
| July 30. | Trainer Brothers, vault complete | 6 | 385.00 |
| July 23. | Horatio P. Brown, services as treasurer of University | 11 | 400.00 |
| July 31. | D. W. Sprague, petty bills | 16 | 2.75 |
| Aug. 1. | Glessner & Washburn, one desk | 19 | 28.00 |
| July 31. | Tribune Job Printing Co., receipts, letter heads, wrappers. | 21 | 43.25 |
| Aug. 1. | E. B. Johnson, miscellaneous advertising | 49 | 293.45 |
| Aug. 31. | General University, August pay roll | 52 | 208.33 |
| Sept. 2. | E. B. Johnson, stamps, gas and labor | 54 | 183.70 |
| Sept. 1. | E. L. Ames & Co., painting and lettering 4 vault boxes | 60 | 2.00 |
| Sept. 1. | D. W. Sprague, petty bills | 73 | 9.30 |
| Aug. 31. | Tribune Job Printing Co., miscellaneous printing | 79 | 43.75 |
| Sept. 1. | Glessner & Washburn, carpet, shades, chairs and table | 80 | 58.75 |
| May 22. | Horace V. Winchell, traveling expenses, att'y's fees, etc. | 129 | 381.60 |
| Sept. 30. | General University, September pay roll | 136 | 858.33 |
| Sept. 30. | E. B. Johnson, postage, salaries of employes, etc. | 129 | 381.69 |
| Sept. 30. | D. W. Sprague, petty bills | 139 | 7.25 |
| Oct. 1. | N. W. Telephone Exchange Co., telephone service | 143 | 9.50 |
| Sept. 26. | Minneapolis Paper Co., 18 gr. pens and 10 scratch blocks | 145 | 11.40 |
| Sept. 30. | Tribune Job Printing Co., miscellaneous printing | 146 | 26.00 |
| Sept. 30. | John A. Schlener & Co., office supplies | 147 | 3.05 |
| Sept. 1. | W. J. Dyer & Bro., use of piano at commencement | 152 | 7.00 |
| Sept. 15. | O. P. Stearns, traveling expense and incidentals | 158 | 29.50 |
| Oct. 1. | R. B. Lees, carpenter work | 166 | 1.50 |
| Sept. 23. | Charles B. Elliot, services | 179 | 50.00 |
| Oct. 15. | D. W. Sprague, petty bills | 202 | 6.25 |
| Oct. 31. | General University, October pay roll | 203 | 920.83 |
| Oct. 31. | E. B. Johnson, freight, express and gas | 204 | 40.53 |
| Oct. 31. | Tribune Job Printing Co., miscellaneous printed matter | 206 | 26.25 |
| Oct. 30. | John A. Schlener & Co., stationery | 207 | .60 |
| Oct. 31. | D. W. Sprague, petty bills | 211 | 6.65 |
| Oct. 10. | Harry W. Jones, sketches for astronomical building | 219 | 10.00 |
| Nov. 1. | N. W. Telephone Exchange Co., telephone service | 224 | 6.00 |
| Cet. 5. | Littlefield & Moore, 4 galvanized iron boxes | 228 | 6.00 |
| Nov. 30. | Gen. University, November pay roll | 302 | 920.83 |
| Nov. 30. | E. B. Johnson, freight and express | 304 | 47.07 |
| Nov. 17. | Minneapolis Paper Co., office supplies | 313 | 6.73 |
| Nov. 30. | Lotta L. Black, labor on expense list | 318 | 5.75 |
| Nov. 9. | N. W. Lith. & Eng. Co., lithographed certificates | 319 | 35.00 |
| Nov. 28. | The Beard-Hudson Printing Co., advertisements | 327 | 12.50 |
| Nov. 30. | John A. Schlener & Co., office supplies | 320 | 3.45 |
| Nov. 30. | Tribune Job Printing Co., envelopes and show card | 333 | 6.50 |
| Dec. 31. | Gen. University, December pay roll | 409 | 920.83 |
| Dec. 31. | E. B. Johnson, stationery | 410 | 2.98 |
| Dec 14. | Parsons Paper Co., letter and note heads, etc. | 420 | 75.00 |
| Dec. 1. | N. W. Telephone Exchange Co., telephone service | 422 | 3.00 |
| Dec. 31. | D. W. Sprague, petty bills | 427 | 5.20 |
| Dec. 31. | Tribune Job Printing Co., 5,000 library tickets | 429 | 5.00 |
| Dec. 23. | K. Nelson, expense of trips in interest of school | 434 | 20.50 |
| Dec. 31. | John S. Pillsbury, paid for four regents dinners in 1891 | 435 | 40.11 |
| Jan. 13. | John S. Pillsbury, paid assessm't for sidewalk oppo. Block 14 | 436 | 53.21 |
| Jan. 31. | General University, January pay roll | 496 | 920.83 |
| Jan. 30. | E. B. Johnson, salaries of employes, gas | 497 | 79.50 |
| Jan. 30. | D. W. Sprague, ¼ lb. assorted bands and wire | 498 | 1.40 |
| Jan. 29. | Minneapolis Paper Co., 2 doz. brass edge rulers and twine | 500 | 3.68 |
| Jan. 30. | Lotta L. Black, 40 hours writing | 504 | 10.00 |
| Feb. 1. | N. W. Telephone Exchange Co., telephone service | 508 | 6.00 |
| Feb. 1. | Tribune Job Printing Co., fifty pay rolls | 521 | 8.80 |
| Jan. 25. | S. M. Emery, expense of board meeting | 522 | 6.78 |
| Jan. 19. | John Schlener & Co., stationery | 537 | 1.73 |
| Jan. 4. | D. W. Sprague, freight and drayage on paper | 575 | 9.08 |
| Feb. 29. | General University, February pay roll | 578 | 920.83 |
| Feb. 29. | E. B. Johnson, postage and freight | 578 | 63.25 |
| Feb. 29. | Tribune Job Printing Co., postals and circulars | 579 | 28.15 |
| March 1. | N. W. Telephone Exchange Co., telephone service | 580 | 3.00 |
| March 1. | Gene G. Banker, 24 hours writing | 587 | 8.00 |
| Feb. 29. | D. W. Sprague, office supplies | 594 | 1.60 |
| Mar. 31. | General University, March pay roll | 682 | 920.83 |
| Mar. 30. | E. B. Johnson, advertising, gas, express | 683 | 75.25 |
| Mar. 1. | Minneapolis Paper Co., 60 reams examination paper | 684 | 50.40 |
| Mar. 31. | D. W. Sprague, office supplies, rubber stamps | 688 | 5.80 |
| Mar. 23. | Emerson, Low & Barber, envelopes | 689 | 16.35 |
| April 1. | Gene G. Banker, labor on pay roll and ex. list | 691 | 8.00 |
| Mar. 4. | Louis Dreka, altering plate, and 170 diplomas | 692 | 197.00 |
| Mar. 10. | American Soda Works, pulverine | 702 | 2.00 |
| April 2. | Lotta Sweet, services as detective | 710 | 45.00 |
| April 18. | O. Gunnerson, labor on base ball field | 711 | 1.50 |
| Mar. 31. | N. W. Telephone Exchange Co., telephone service | 713 | 1.50 |
| Mar. 28. | The Swinburne Printing Co., letter and note heads | 714 | 18.90 |
| April 30. | General University, April pay roll | 769 | 920.83 |
| April 30. | E. B. Johnson, freight, stamps and gas | 771 | 31.20 |

| | | No. voucher. | |
|------------|-----------------------------------------------------------------------------------------------------|--------------|-------------|
| April 30. | D. W. Sprague, journal, paste, rubber seals..... | 772 | \$1.90 |
| April 30. | The Miller Printing Co., 200 4-page lists Regents..... | 773 | 8.75 |
| April 21. | M. A. Scovel, treas., membership in association, 1891-92.... | 776 | 10.00 |
| Mar. 29. | D. Ramaley & Son, 400 requisitions in duplicate..... | 784 | 5.45 |
| April 1. | Morris & Wilson, 100 song books..... | 788 | 50.00 |
| May 2. | D. W. Sprague, express..... | 789 | 3.95 |
| May 2. | Gene G. Banker, work on expense list..... | 790 | 7.35 |
| May 31. | General University May pay roll..... | 851 | 920.83 |
| June 1. | E. B. Johnson, salaries of employes, postage..... | 852 | 61.70 |
| June 1. | Wm. H. Yattaw, salaries of employes, freight..... | 853 | 19.88 |
| June 1. | D. W. Sprague, stamps, ledger, office supplies..... | 854 | 11.18 |
| June 1. | Gene G. Banker, 2 hours on expense list..... | 855 | 7.35 |
| June 1. | Rickard & Gruman, 194 miscellaneous diplomas..... | 856 | 97.00 |
| May 13. | Louis Dreka, diplomas and altering plate..... | 857 | 30.00 |
| March 1. | D. Ramaley & Sons, printing synopsis..... | 858 | 25.00 |
| May 31. | Tribune Job Printing Co., 9000 catalogues, envelopes, note heads..... | 862 | 995.68 |
| June 1. | The Miller Printing Co., printing programs..... | 863 | 8.50 |
| May 31. | R. B. Lees, carpenter work and material..... | 865 | 51.30 |
| May 17. | Morgan Envelope Co., 4000 envelopes..... | 867 | 14.65 |
| June 2. | J. S. Pillsbury, various dinners to Regents..... | 870 | 46.25 |
| June 1. | N. W. Telephone Exchange Co., telephone service..... | 873 | 3.25 |
| May 31. | Tribune Job Printing Co., 1500 invitations envelopes, fold'g General University, June pay roll..... | 876 | 33.00 |
| June 30. | General University, June pay roll..... | 920 | 920.83 |
| July 1. | D. W. Sprague, etching one seal, supplies, express, paper..... | 921 | 7.68 |
| June 23. | Northwestern Star Oil Co., one-half barrel soap stock..... | 922 | 6.98 |
| June 1. | O. T. Sweet, 10 1/4 yards bunting..... | 923 | 5.21 |
| May 24. | Davis, Kellogg, Severance, retainer and livery bill..... | 925 | 56.25 |
| June 4. | F. A. Fisher & Co., adjusting fire loss, mlan building..... | 926 | 50.00 |
| July 1. | D. W. Sprague, freight and express..... | 927 | 7.79 |
| June 30. | E. B. Johnson, gas, salaries of employes..... | 929 | 693.61 |
| June 30. | Tribune Job Printing Co., note heads, wrappers, stateme'ts..... | 934 | 15.25 |
| June 1. | Minn. Brush Electric Co., running 25 lamps in Col. June 1..... | 936 | 18.75 |
| July 31. | O. C. Merriman, treasurer, services for 1891-92..... | 970 | 400.00 |
| July 1. | N. W. Telephone Exchange Co., telephone service..... | 772 | 3.50 |
| July 31. | General University, July pay roll..... | 378 | 270.83 |
| Total..... | | | \$75,713.22 |

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

| 1892 | | CURRENT EXPENSE. | |
|-----------|-------------------------------------------------------------------------------|------------------|----------|
| Aug. 3 | E. B. Johnson, express, gas and freight..... | 1 | \$43.91 |
| April 13 | Wright, Barrett & Stillwell, 8 reams 24 Dakota folio..... | 2 | 24.96 |
| July 6 | Ed. J. Conroy, 4 1/2 days plastering and material..... | 4 | 24.50 |
| July 30 | Trainor Brothers, work on boiler and cementing floor..... | 6 | 177.87 |
| Aug. 4. | C. W. Meneilley, gold dust, candles, brooms..... | 7 | 10.80 |
| July 25 | Warner Brothers, bill of hardware..... | 8 | 31.07 |
| July 31 | Wm. H. Yattaw, cleaning buildings, work on campus..... | 9 | 214.09 |
| July 10 | Whitall, Tatam & Co., 1 box tubes, 1 box No. 4 checks..... | 10 | 19.11 |
| July 1 | Littlefield & Moore, rep. tin roof and gutters, main build..... | 12 | 36.54 |
| July 24 | Union School Furniture Co., 100 French felt erasers..... | 13 | 8.33 |
| July 14 | E. L. Ames, painting, papering, kalsomining main building..... | 14 | 172.30 |
| July 18 | Nelson, Tenney & Co., 4 ft. wood..... | 17 | 70.00 |
| July 31 | A. H. Andrews & Co., 1 globe..... | 18 | 45.00 |
| Aug. 31 | College S. L. and A., August pay roll..... | 52 | 366.67 |
| Sept. 2 | Wm. H. Yattaw, labor and petty sundries..... | 53 | 160.06 |
| Sept. 2 | E. B. Johnson, gas and express..... | 54 | 9.77 |
| Aug. 15 | Wm. Petzold, equipment..... | 55 | 143.54 |
| Aug. 31 | Fred S. Jones, freight, postage, repairs on hydraulic press..... | 56 | 23.79 |
| Sept. 3 | E. A. Cuzner, freight and express..... | 57 | 6.88 |
| May 26 | James W. Queen & Co., apparatus..... | 58 | 10.00 |
| July 27 | S. S. Eustis, work on campus..... | 59 | 36.00 |
| Sept. 1 | E. L. Ames & Co., mouldings, painting and numbering P.O boxes..... | 60 | 8.72 |
| June 3 | Elliot Brothers, electrical apparatus..... | 62 | 179.70 |
| Aug. 15 | Wright, Barrett & Stillwell, examination paper..... | 63 | 42.00 |
| Aug. 11 | Naylor & Co., plumbers fittings..... | 65 | 25.19 |
| Sept. 1 | Morris & Wilson, toilet paper..... | 66 | 25.50 |
| Aug. 31 | Minneapolis Electric and Construction Co., electrical supplies and labor..... | 67 | 19.60 |
| Aug. 25 | Northwestern Fuel Co., stove coal 4,000 lbs..... | 68 | 17.00 |
| Sept. 1. | Lockwood, Upton & Co., iron and labor..... | 69 | 17.93 |
| Aug. 4. | Ed B. Gardiner, 175 hours draughting..... | 70 | 35.00 |
| Aug. 25. | W. S. Nott Company, 500 feet hose and couplings..... | 71 | 181.50 |
| Sept. 1. | D. W. Sprague, petty bills..... | 73 | 5.85 |
| Aug. 26. | R. B. Lees, labor and material for repairs on buildings..... | 75 | 216.47 |
| Dec. 1. | A. C. Bausman, 4,000 each note heads and envelopes..... | 78 | 22.00 |
| Aug. 31. | Tribune Job Printing Co., miscellaneous printing..... | 79 | 93.75 |
| Sept. 1. | Glessner & Washburn, chairs, carpets, sofas and linoleum..... | 80 | 338.45 |
| July 1. | N. W. Telephone Exch. Co., rent of telephone 1 month..... | 81 | 3.00 |
| Aug. 27. | Warner Brothers, miscellaneous hardware..... | 90 | 36.87 |
| Sept. 30. | College S. L. A., September pay roll..... | 136 | 4,941.67 |
| Sept. 30. | E. B. Johnson, stationery and gas..... | 137 | 16.52 |
| Sept. 30. | Wm. H. Yattaw, salaries of employes and freight..... | 138 | 31.29 |

| | | No. voucher. | |
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| Sept. 30. | D. W. Sprague, petty bills..... | 139 | \$17.88 |
| Aug. 17. | Whitall, Tatum & Co., chemical supplies..... | 140 | 20.00 |
| Aug. 5. | Eimer & Amend, chemical supplies..... | 141 | 608.64 |
| Sept. 19. | James A. Dodge, freight and express..... | 142 | 31.52 |
| Oct. 1. | N. W. Telephone Exchange Co., telephone services..... | 143 | 9.50 |
| Sept. 30. | Tribune Job Printing Co., miscellaneous printing..... | 146 | 16.75 |
| Sept. 26. | Cody & Hineline, repairing, plumbing..... | 150 | 7.17 |
| Sept. 28. | Cody & Hineline, making sewer con'tn and put'g in sink..... | 151 | 45.00 |
| Sept. 10. | Naylor & Co., tools..... | 153 | 11.80 |
| Sept. 26. | Wm. W. Folwell, salaries of employes..... | 154 | 37.65 |
| Sept. 1. | Eimer & Amend, apparatus..... | 155 | 99.38 |
| Aug. 6. | C. A. Smith & Co., bill of lumber..... | 156 | 32.50 |
| Sept. 28. | Ed B. Gardner, 75 hours draughting..... | 157 | 15.00 |
| Sept. 18. | Morris & Wilson, books for library..... | 159 | 21.00 |
| Sept. 26. | Warner Brothers, miscellaneous hardware..... | 160 | 25.50 |
| Sept. 30. | Northwestern Fuel Co., fuel..... | 161 | 166.44 |
| Jan. 26. | W. S. Nott & Co., 2 3/4 feet endless belt..... | 165 | 19.95 |
| Oct. 1. | R. B. Lees, labor and material for repairs..... | 166 | 64.05 |
| July 13. | Mpis. Office and School Furn. Co., furn. for Pillsbury Hall..... | 180 | 100.00 |
| Oct. 31. | College S., L. and A., October pay roll..... | 203 | 4,976.67 |
| Oct. 31. | E. B. Johnson, gas and express..... | 204 | 45.99 |
| Nov. 1. | Wm. H. Yattaw, salaries of employes..... | 205 | 49.61 |
| Oct. 31. | Tribune Job Printing Co., miscellaneous..... | 206 | 43.00 |
| Oct. 29. | James H. Bishop & Co., 10 M cards..... | 208 | 11.70 |
| Oct. 1. | Harrison & Smith, binding magazines..... | 209 | 142.05 |
| Oct. 28. | Morris & Wilson, 1 case Hoyt's toilet..... | 210 | 11.00 |
| Oct. 31. | D. W. Sprague, petty bills..... | 211 | 9.81 |
| Oct. 29. | Chas. D. Whitall & Co., books for library..... | 212 | 27.50 |
| Oct. 30. | Warner Brothers, miscellaneous hardware..... | 214 | 6.22 |
| Nov. 1. | T. L. Moody, water tax..... | 215 | 20.75 |
| Nov. 1. | Glessner & Washburn, shades, repair'g 2 tables, lounge seat..... | 216 | 11.00 |
| Oct. 27. | Pioneer Fuel Co., Yough coal..... | 217 | 341.38 |
| Oct. 21. | Lyman-Eliel Drug Co., chemical supplies..... | 218 | 6.87 |
| Oct. 22. | Cody & Hineline, 2 gate valves..... | 220 | 13.00 |
| Oct. 15. | W. W. Folwell, salaries of employes..... | 221 | 25.00 |
| Oct. 26. | C. S. Wentworth, 1 pressure regulator..... | 222 | 18.00 |
| Aug. 13. | Müller-Köpen, equipment..... | 223 | 5.68 |
| Nov. 1. | N. W. Telephone Exchange Co., telephone service..... | 224 | 6.00 |
| Nov. 1. | John C. Haire, Century Dictionary..... | 226 | 10.00 |
| Nov. 1. | Emerson, Law & Barber Co., stationery..... | 229 | 7.20 |
| Oct. 31. | W. K. Morrison & Co., miscellaneous hardware..... | 252 | 3.57 |
| Oct. 27. | Pioneer Fuel Co., Yough coal..... | 297 | 84.75 |
| Nov. 30. | College, S. L. and A., November pay roll..... | 302 | 4,996.67 |
| Nov. 27. | Pioneer Fuel Co., Yough coal..... | 303 | 863.78 |
| Nov. 30. | E. B. Johnson, gas, postage and freight..... | 304 | 160.02 |
| Nov. 25. | R. B. Lees, carpenter work and material..... | 305 | 37.71 |
| Nov. 30. | Wm. H. Yattaw, salaries of employes..... | 306 | 49.50 |
| Nov. 2. | Moffett, Bushnell & Co., one cabinet and three extra boxes..... | 309 | 12.00 |
| Sept. 30. | Marine Biological Laboratory, supplies..... | 314 | 34.40 |
| Nov. 13. | Rugg, Fuller, and Co., iron pipe and fittings..... | 315 | 59.85 |
| Dec. 1. | C. W. Menelle, gold dust, matches, soap, etc..... | 316 | 13.20 |
| Nov. 2. | Ed. B. Gardner, draughting..... | 317 | 18.80 |
| Nov. 28. | Cody and Hineline, labor done on steam plant..... | 320 | 30.00 |
| Nov. 2. | F. W. Sardeson, collection of fossils..... | 321 | 65.00 |
| Oct. 15. | Henry R. Jung, equipment..... | 323 | 101.16 |
| Sept. 26. | Minneapolis Office and School Furniture Co., one each, mineral and fossil cabinet..... | 325 | 99.00 |
| Nov. 8. | Century Oil Co., cylinder oil, flue cleaners..... | 326 | 20.85 |
| Nov. 30. | D. W. Sprague, petty bills..... | 328 | 6.76 |
| July 21. | L. Golaz, apparatus..... | 329 | 40.00 |
| Nov. 30. | Tribune Job Printing Co., 50 postals and 100 cards..... | 333 | 2.25 |
| Nov. 30. | Minneapolis Fuel Co., egg coal..... | 349 | 30.00 |
| Nov. 28. | Warner Brothers, hardware..... | 355 | 4.10 |
| Oct. 23. | Electric Construction and Supply Co., electrical apparatus..... | 367 | 57.00 |
| Nov. 27. | Geo. D. Shepardson, express..... | 373 | 2.71 |
| Nov. 21. | Frank Heywood & Co., 5,000 trays..... | 381 | 28.75 |
| Oct. 29. | Eimer & Amend, chemical supplies..... | 382 | 42.05 |
| Dec. 31. | College of S. L. and A., December pay roll..... | 409 | 5,056.67 |
| Dec. 31. | E. B. Johnson, gas, freight and express..... | 410 | 43.85 |
| Nov. 30. | Whitall, Tatum & Co., chemical supplies..... | 411 | 17.20 |
| Dec. 23. | Twin City Pavement Co., walks..... | 412 | 30.10 |
| Dec. 1. | Eimer & Amend, chemical supplies..... | 413 | 23.95 |
| Dec. 28. | Cody & Hineline Co., plumbing, labor and material..... | 414 | 1.50 |
| Sept. 4. | Northwestern Fuel Co., Yough coal..... | 415 | 20.00 |
| Dec. 21. | Morris & Wilson, one case toilet paper..... | 416 | 8.00 |
| Dec. 31. | Wm. H. Yattaw, salaries of employes..... | 418 | 69.36 |
| Dec. 5. | E. P. Sheldon, assistance in botanical laboratory..... | 419 | 110.76 |
| Dec. 1. | N. W. Telephone Exchange Co., telephone service..... | 422 | 3.00 |
| Dec. 31. | Pioneer Fuel Company, Yough coal..... | 424 | 1,401.81 |
| Dec. 31. | R. B. Lees, labor and material in boiler house..... | 425 | 21.35 |
| Dec. 29. | Glessner & Washburn, shades, cord and linoleum, main building..... | 426 | 84.81 |
| Dec. 31. | D. W. Sprague, petty bills..... | 427 | 4.83 |
| Dec. 31. | Tribune Job Printing Co., receipts, notices and account books..... | 429 | 23.50 |
| Oct. 29. | The Cambridge Scientf. Inst. Co., apparatus for department animal biology..... | 430 | 73.13 |

| | No. voucher. | |
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| Dec. 22. | Warner Brothers, hardware for coliseum..... | 445 334.83 |
| Dec. 22. | W. S. Nott & Co., white waste and packing..... | 453 16.09 |
| Jan. 31. | College S. L. & A., January pay roll..... | 498 5,236.67 |
| Jan. 30. | E. B. Johnson, gas, stationery..... | 497 161.76 |
| Jan. 30. | D. W. Sprague, team work and express..... | 498 4.60 |
| Jan. 30. | Wm. H. Yattaw, help, express and petty bills..... | 499 54.74 |
| Jan. 29. | Minneapolis paper Co., 10,000 slips, 1/2 doz. mucilage bottles..... | 500 5.85 |
| Jan. 1. | Northwestern Supply Co., painting roof on main building..... | 502 187.00 |
| Jan. 30. | Warner Bros., miscellaneous hardware..... | 503 47.47 |
| Jan. 15. | Cody & Hineline, plumbing work..... | 505 5.99 |
| Jan. 27. | Century Oil Co., engine oil..... | 507 7.50 |
| Feb. 1. | Northwestern Telephone Exchange Co., telephone services..... | 508 6.00 |
| Jan. 4. | Alex P. Anderson, labor in Herbarium room..... | 510 17.80 |
| Jan. 11. | Wm. D. Frost, 140 hours Herbarium work..... | 511 21.10 |
| Jan. 19. | John Kelley, material and labor plastering..... | 518 60.81 |
| Jan. 1. | James W. Day, ice..... | 519 51.21 |
| Jan. 30. | John Kelley, plastering hall ceiling..... | 520 38.00 |
| Feb. 1. | Tribune Job Printing Co., expense books, pay roll, blanks..... | 521 16.50 |
| Jan. 28. | Pioneer Fuel Co., Yough coal..... | 524 1,390.74 |
| Dec. 22. | Wright, Barrett & Stillwell, Dakota folio cut 1/2..... | 525 6.91 |
| Jan. 1. | H. E. Johnson, historical atlas..... | 523 30.00 |
| Jan. 23. | Minneapolis Fuel Co., coal..... | 527 72.00 |
| Feb. 19. | Mrs. Mary Bowen, work in library..... | 528 28.65 |
| Jan. 19. | John Schlener & Co., stationery..... | 537 2.20 |
| Jan. 20. | Lyman Eliel Drug Co., glass tubing, test tubes, nested..... | 547 3.09 |
| Feb. 29. | College S. L. and A., February pay roll..... | 576 5,036.67 |
| Feb. 25. | Pioneer Fuel Co., Yough coal..... | 577 1,188.00 |
| Feb. 29. | E. B. Johnson, gas, salaries of employes..... | 578 145.16 |
| Feb. 29. | Tribune Job Printing Co., 800 cards, 13 kinds and sizes..... | 579 37.00 |
| Mar. 1. | N. W. Telephone Exchange Co., telephone service..... | 580 3.00 |
| Feb. 24. | Minneapolis Fuel Co., stove coal..... | 582 48.00 |
| Feb. 10. | Eimer & Amend, chemical supplies..... | 583 12.69 |
| Feb. 20. | Minn. Slate and Tile Co., 42 slate black-boards complete..... | 588 60.00 |
| Feb. 29. | Morris & Wilson, envelopes, toilet paper..... | 589 8.32 |
| Feb. 17. | Standard Oil Co., 1/2 barrel cylinder oil..... | 592 11.48 |
| Feb. 29. | D. W. Sprague, express, eyelets, shears, etc..... | 594 6.15 |
| Feb. 25. | Warner Bros., miscellaneous hardware..... | 595 11.88 |
| Feb. 27. | R. B. Lees, labor and material for general repairs..... | 598 37.99 |
| Feb. 29. | Wm. H. Yattaw, labor and express, petty expenses..... | 597 45.78 |
| Feb. 19. | W. F. Porter & Co., 2 1/2 pounds metallic packing..... | 604 1.68 |
| Feb. 25. | Trainer Bros., contract astronomical building and extras..... | 605 557.20 |
| Feb. 25. | Glessner & Washburn, repair rocker, seat on sofa..... | 620 9.25 |
| Feb. 1. | Trainer Brothers, mason work and materials..... | 598 47.88 |
| Mar. 31. | College of S. L. and A., March pay roll..... | 682 5,036.67 |
| Mar. 30. | E. B. Johnson, salaries of employes, gas, express..... | 683 118.10 |
| Mar. 1. | Minneapolis Paper Co., writing fluid, paper and erasers..... | 684 7.50 |
| Mar. 17. | Northwestern Fuel Co., coal..... | 685 253.88 |
| Mar. 31. | D. W. Sprague, hardware, express..... | 688 5.52 |
| Mar. 26. | R. B. Lees, carpenter work and material..... | 690 58.45 |
| Mar. 31. | E. P. Sheldon, assistance in botanical department..... | 692 84.00 |
| Mar. 11. | C. A. Smith & Co., bill of lumber..... | 694 122.92 |
| Mar. 10. | American Soda Works, pulverine..... | 702 7.00 |
| April 2. | Meyrowitz Brothers, apparatus..... | 703 5.00 |
| Mar. 24. | Morris & Wilson, case toilet paper..... | 705 11.00 |
| Mar. 28. | Littlefield & Moore, new roof on rear part main building..... | 706 535.00 |
| Mar. 29. | The Cody-Hineline Co., soil pipe and fittings..... | 707 4.50 |
| Oct. 29. | Cambridge Scien. Instru. Co., apparatus..... | 708 287.76 |
| Feb. 29. | Pioneer Fuel Co., Yough..... | 712 724.30 |
| Mar. 31. | N. W. Telephone Exchange Co., telephone service..... | 713 1.00 |
| Mar. 22. | Northwestern Fuel Co., Yough coal..... | 715 362.43 |
| Mar. 31. | Tribune Job Print'g Co., lists of officers, note circ'lrs, report..... | 716 26.65 |
| July 29. | Wm. W. Folwell, extra service teaching Greek and German..... | 768 200.00 |
| Mar. 28. | Warner Brothers, miscellaneous hardware..... | 696 9.72 |
| Mar. 30. | Wm. H. Yattaw, salaries of employes, freight..... | 698 37.64 |
| April 30. | College S. L. and A., April pay roll..... | 769 5,016.67 |
| April 30. | E. B. Johnson, gas, salaries of employes, express..... | 771 94.19 |
| April 30. | D. W. Sprague, bulletin cards, 4 doz. opal watch glasses..... | 772 6.70 |
| May 1. | Wm. H. Yattaw, salaries of employes, repairs..... | 773 69.86 |
| April 30. | The Miller Printing Co., envelopes, registers, 4-page list Regents..... | 775 8.75 |
| April 30. | Northwestern Fuel Co., Yough coal..... | 777 420.17 |
| April 25. | Warner Brothers, tools..... | 778 9.47 |
| April 1. | Leonard & Ellis, one barrel machine oil..... | 779 15.00 |
| April 19. | Maria L. Sanford, books for library..... | 780 7.90 |
| April 9. | Ginn & Co., 2 years subscription to "Political Science"..... | 781 6.00 |
| Jan. 22. | Standard Oil Company, oil..... | 783 6.60 |
| April 23. | Marder, Luse & Co., one Pearl press..... | 786 65.00 |
| April 1. | Morris & Wilson, books and toilet paper..... | 788 10.50 |
| May 2. | D. W. Sprague, express..... | 789 3.95 |
| May 6. | E. E. McDermott, private instruction..... | 792 50.00 |
| March 10. | Eastern Electric Light and Storage Battery Co., chemical apparatus..... | 800 20.00 |
| May 31. | College S. L. and A., May pay roll..... | 851 5,006.67 |
| May 31. | E. B. Johnson, stamps, gas, express, labor..... | 832 94.03 |
| June 1. | Wm. H. Yattaw, labor, cleaning and express..... | 853 70.94 |
| June 1. | D. W. Sprague, map and mounting same, desk pads..... | 854 5.25 |

| | | No. | voucher. | |
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| April | 12. | Elmer & Amend, chemical supplies | 859 | \$87.93 |
| April | 25. | Warner Brothers, miscellaneous hardware | 860 | 9.36 |
| April | 26. | Northwestern Fuel Co, Yough coal | 861 | 660.95 |
| April | 1. | O. W. Menellley, groceries | 864 | 5.80 |
| May | 31. | R. B. Lees, carpenter work and material | 865 | 14.40 |
| June | 1. | James A. Dodge, freight, express, petty expenses | 866 | 74.40 |
| May | 17. | Wright, Barrett & Stillwell, 1,000 sheets manilla paper | 868 | 6.25 |
| April | 4. | Mary Bowen, labor in library | 869 | 12.30 |
| May | 25. | Morris & Wilson, 1 box toilet paper | 872 | 8.00 |
| June | 1. | N. W. Telephone Exchange Co., telephone service | 273 | 3.25 |
| May | 31. | Tribune Job Printing Co., 400 invitations, 6 directory signs | 876 | 7.50 |
| June | 1. | R. Friedlander & Son, equipment | 905 1/2 | 120.19 |
| June | 30. | College S. L. and A., June pay roll | 920 | 4,800.00 |
| July | 1. | D. W. Sprague, slides, laundry, work books | 921 | 8.05 |
| June | 8. | Henry F. Nachtrieb, sundry petty items | 928 | 19.97 |
| June | 30. | E. B. Johnson, gas, postage and stationery | 929 | 81.02 |
| June | 3. | Henry F. Shufeldt & Co., 2 barrels alcohol | 930 | 56.40 |
| June | 30. | Wm. H. Yattaw, salaries of employes, insurance | 931 | 134.73 |
| June | 13. | M. L. Sanford, paid Madame Pote, services as instructor | 932 | 14.80 |
| June | 6. | Glessner & Washburn, mirror, shade, cleaning carpets, rollers | 933 | 44.13 |
| June | 30. | Tribune Job Printing Co., admission cards, circulars | 934 | 9.50 |
| June | 30. | Warner Bros, miscellaneous hardware | 935 | 33.46 |
| June | 6. | D. Appleton & Co., 1 book for library | 937 | 6.00 |
| July | 1. | N. W. Telephone Exchange Co., telephone service | 972 | 3.50 |
| July | 31. | College S. L. A., July pay roll | 978 | 405.00 |
| Total | | | | \$68,931.00 |

SCHOOL OF AGRICULTURE.

CURRENT EXPENSE.

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|-------|-----|-------------------------------------------------------------------------|-----|----------|
| June | 30. | Northwestern Fuel Co., Yough, and stove coal | 15 | \$305.67 |
| July | 31. | Tribune Job Printing Co., mem. slips, letter heads | 21 | 11.75 |
| Aug. | 31. | School of Agriculture, August pay roll | 52 | 544.92 |
| Sept. | 1. | D. W. Sprague, petty bills | 73 | 5.23 |
| Aug. | 6. | Nelson Larson, salaries of employes | 83 | 17.60 |
| Aug. | 25. | C. J. Buell, labor and material for repairs at state farm school | 85 | 53.65 |
| Aug. | 29. | W. M. Hays, freight, postage and express | 86 | 8.80 |
| June | 22. | Northrup, Braslan, Goodwin Co., seeds | 98 | 8.00 |
| Aug. | 19. | Dispatch Printing Co., stationery | 117 | 18.30 |
| Sept. | 30. | School of Agriculture, September pay roll | 136 | 671.67 |
| Sept. | 30. | D. W. Sprague, petty bills | 139 | 2.11 |
| Sept. | 30. | John A. Schlenner & Co., 1 pint red ink | 147 | 1.00 |
| Sept. | 28. | H. W. Brewster, freight and postage | 163 | 13.13 |
| Sept. | 21. | Lynch, Bakeman & Co., mill tools | 164 | 17.55 |
| Sept. | 30. | Clinton D. Smith, petty expenses | 183 | 2.77 |
| Sept. | 29. | Clinton D. Smith, freight and express | 185 | 13.70 |
| Sept. | 9. | James H. Bishop & Co., 15M envelopes | 187 | 48.75 |
| Sept. | 19. | I. Gutzwiller, Jr., 15M diary circulars | 194 | 125.00 |
| Sept. | 2. | Northwestern Photo Engraving Co., 2 etchings of building and floor plan | 200 | 5.00 |
| Oct. | 31. | School of Agriculture, October pay roll | 203 | 978.67 |
| Oct. | 30. | John A. Schlenner & Co., stationery | 207 | 9.25 |
| Oct. | 28. | Morris & Wilson, books for library | 210 | 12.50 |
| Oct. | 31. | D. W. Sprague, petty bills | 211 | 2.50 |
| Oct. | 16. | Boutelle Bros., commodores and bureaus | 231 | 16.50 |
| Oct. | 8. | P. Howard, wagon repairs | 232 | 6.75 |
| Oct. | 8. | D. D. Merrill Company, 50 Curtiss book-keeping. <i>Spectral</i> | 233 | 32.50 |
| Oct. | 1. | Rickard & Gruman, filling in names, dates in diplomas | 234 | 8.00 |
| Oct. | 21. | Lund & Nerli, labor on cess-pool | 235 | 30.82 |
| Oct. | 21. | M. B. Whitney, preparing tree specimens for museum | 236 | 8.00 |
| Oct. | 20. | C. C. Curtiss, 8 1/2 dozen writing books | 237 | 9.16 |
| Oct. | 1. | Farm, Stock and Home, advertising | 238 | 25.00 |
| Oct. | 1. | H. Kelley & Co., general repairs | 239 | 7.72 |
| Oct. | 9. | G. F. Shaw, papering and repairing | 240 | 5.40 |
| Oct. | 27. | H. W. Brewster, freight, postage and repairs | 241 | 55.50 |
| Oct. | 27. | H. W. Brewster, salaries of employes | 241 | 25.00 |
| Oct. | 16. | P. V. Collins, advertising | 242 | 60.51 |
| Oct. | 22. | W. P. Hemenway, carpenter work and material | 243 | 16.75 |
| Oct. | 3. | Nelson Larson, repairing washout on roads | 251 | 16.75 |
| Oct. | 29. | Clinton D. Smith, express | 272 | 1.80 |
| Oct. | 29. | Clinton D. Smith, office work | 273 | 8.00 |
| Oct. | 2. | T. L. Haecker, expense incurred in examining stock | 275 | 15.76 |
| Oct. | 23. | N. W. Photo Engraving Co., original, 15 electrotypes | 282 | 12.50 |
| Oct. | 24. | Jas. J. Hill, stock | 285 | 150.00 |
| Nov. | 30. | School of Agriculture, November pay roll | 302 | 1,069.13 |
| Nov. | 17. | Minneapolis Paper Co., 1 ream Dak. demy | 313 | 3.60 |
| Nov. | 30. | D. W. Sprague, petty bills | 328 | 0.75 |
| Nov. | 30. | John A. Schlenner & Co., stationery | 329 | 11.50 |
| Nov. | 30. | Tribune Job Printing Co., library catalogue, receipts, etc. | 333 | 27.25 |
| Nov. | 28. | S. E. Olson & Co., miscellaneous supplies | 334 | 63.11 |
| Nov. | 8. | W. K. Morrison & Co., hardware | 335 | 8.50 |
| Oct. | 16. | Squires & Todd, bill of lumber | 337 | 40.10 |

| | | No. voucher. | |
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| Nov. | 21. | Samuel B. Green, elm trees around farm school..... | 338 840.10 |
| Oct. | 15. | W. F. Porter & Co., putting radiators in residence at state farm..... | 340 200.00 |
| Nov. | 21. | Held & Gruenhagen, miscellaneous hardware..... | 341 12 85 |
| Oct. | 27. | Pioneer Fuel Co., 14 cords, 4 foot pine slabs..... | 343 49.00 |
| Nov. | 26. | Elliott & Pauly, tools..... | 344 72.00 |
| Nov. | 4. | Sanford Niles, subscription for periodicals..... | 345 27.00 |
| Nov. | 16. | St. Anthony Furniture Co., 8 tables..... | 346 40.00 |
| Dec. | 1. | Northwestern Agriculturist, advertising..... | 348 25.00 |
| Nov. | 30. | Minneapolis Fuel Co., stove coal..... | 349 748.88 |
| Nov. | 1. | E. A. Webb, advertising..... | 350 25.00 |
| Nov. | 30. | Clinton D. Smith, carrying milk, 500 diary columns, express..... | 386 22 10 |
| Nov. | 30. | Clinton D. Smith, stock, freight and transportation..... | 388 1,036.39 |
| Nov. | 2. | C. L. Moffatt, blacksmithing..... | 397 1.25 |
| Nov. | 11. | Minnesota Linseed Oil Works, oil meal..... | 398 23.00 |
| Nov. | 6. | Fairbanks, Morse & Co., scales and grain wagon..... | 399 24.00 |
| Sept. | 26. | T. L. Haecker, freight and transportation..... | 402 20.96 |
| Dec. | 31. | School of Agriculture, December pay roll..... | 409 1,233 10 |
| Dec. | 28. | Morris & Wilson, 14 mailing tubes..... | 416 .50 |
| Dec. | 8. | Minneapolis Fuel Co., stove coal..... | 421 285.38 |
| Dec. | 31. | D. W. Sprague, petty bills..... | 427 2.00 |
| Dec. | 31. | D. W. Sprague, petty bills..... | 427 2.08 |
| Dec. | 31. | Tribune Job Printing Co., lists, reports and slips..... | 429 23.75 |
| Jan. | 1. | Farm, Stock and Home, stamps and printing..... | 439 20.50 |
| Nov. | 27. | W. F. Porter & Co., ventilation in dormitory building..... | 440 729.94 |
| Dec. | 17. | Twin City Supply Co., text books..... | 441 6.24 |
| Dec. | 28. | H. W. Brewster, postage, ink, pens and express..... | 442 16.20 |
| Nov. | 3. | Minneapolis Tubular Well Co., repairing well..... | 443 12.00 |
| Dec. | 2. | Joseph Congdon, repairs in dormitory building..... | 444 127.55 |
| Dec. | 29. | W. K. Morrison & Co., hardware..... | 457 3.62 |
| Dec. | 8. | Clinton D. Smith, milk from creamery..... | 467 83.60 |
| Nov. | 16. | E. S. Kingman, stock..... | 471 55.95 |
| Dec. | 14. | J. H. Cummings, stock—cows..... | 470 150.00 |
| Dec. | 23. | J. S. Lawson, stock—cows..... | 472 53.00 |
| Dec. | 9. | Chas. T. Leonard, shades and cord..... | 476 33.60 |
| Dec. | 18. | Minneapolis Fuel Co., coal..... | 477 79.27 |
| Nov. | 30. | Northwestern Fuel Co., coal..... | 479 17.30 |
| Dec. | 7. | Cornish, Curtiss & Greene, cans and hose..... | 482 36.80 |
| Dec. | 21. | Minnesota Linseed Oil Works, oil meal..... | 486 23.00 |
| Nov. | 10. | H. C. Adams, stock—Jersey cow..... | 487 150.00 |
| Dec. | 16. | Clinton D. Smith, express, freight, soap, lamps, mats..... | 492 115.84 |
| Dec. | 28. | W. M. Hays, money advanced for premiums..... | 495½ 50.00 |
| Jan. | 31. | School of Agriculture, January pay roll..... | 496 1,165.48 |
| Jan. | 30. | D. W. Sprague, sundry petty expenses..... | 498 3.20 |
| Jan. | 29. | Minneapolis Paper Co., 240 blotters..... | 500 3.40 |
| Jan. | 28. | Pioneer Fuel Co., Yough..... | 524 56.90 |
| Jan. | 23. | Minneapolis Fuel Co., stove coal..... | 527 273.00 |
| Jan. | 27. | H. W. Brewster, express, freight, horse-shoeing, stove rep..... | 530 11.02 |
| Dec. | 31. | Salisbury, Rolph & Co., hospital beds, mattresses and casters..... | 531 51.15 |
| Jan. | 12. | Held & Gruenhagen, miscellaneous hardware..... | 532 15.80 |
| Dec. | 16. | Lund & Nerli, labor on cesspool..... | 533 15.00 |
| Jan. | 12. | Kennedy Bros., gymnasium supplies..... | 534 20.65 |
| Jan. | 20. | W. J. Hawkins, general plumbing repairs..... | 535 48.90 |
| Jan. | 1. | Martin Peterson, material and labor plastering cistern..... | 536 19.00 |
| Jan. | 19. | John Schlener & Co., stationery..... | 537 3.55 |
| Dec. | 23. | Pioneer Fuel Co., 4 ft. slabs..... | 538 7.88 |
| Jan. | 28. | Clinton D. Smith, express, freight and sundries..... | 553 46.21 |
| Jan. | 18. | Minnesota Linseed Oil Works, 1½ tons oil meal..... | 554 34.50 |
| Jan. | 28. | Clinton D. Smith, freight, express, telegram..... | 555 12.01 |
| Jan. | 5. | Crescent creamery, milk..... | 556 630.77 |
| Mar. | 24. | R. Douglass & Sons, plants..... | 558 10.50 |
| Dec. | 31. | Harrison & Smith, reports, records, score cards..... | 559 15.00 |
| Jan. | 9. | D. H. Roe & Co., 12 rennet tests..... | 565 12.00 |
| Nov. | 28. | Fairbanks, Morse & Co., time and expense setting dmt. scale and pulleys..... | 567 18.63 |
| Jan. | 2. | J. M. Locke, painting and material..... | 568 17.13 |
| Jan. | 8. | G. F. Shaw, oil finish office in dairy hall..... | 570 16.00 |
| Jan. | 5. | Brooks Brothers, bill of lumber..... | 571 32.68 |
| Feb. | 29. | School of agriculture, February pay roll..... | 576 1,086.24 |
| Feb. | 29. | Tribune Job Printing Co., postals and circulars..... | 579 2.00 |
| Feb. | 24. | Minneapolis Fuel Co., stove coal..... | 582 147.00 |
| Feb. | 24. | Louis Dreka, altering plate and 30 diplomas..... | 586 57.50 |
| Feb. | 29. | D. W. Sprague, petty bills..... | 594 7.50 |
| Feb. | 25. | H. W. Brewster, express, postage and repairs..... | 601 12.20 |
| Jan. | 29. | James H. Bishop & Co., 5,000 blanks to order..... | 602 10.25 |
| Feb. | 19. | W. F. Porter & Co., valves and couplings..... | 604 9.82 |
| Feb. | 25. | Glessner & Washburn, 1 desk..... | 620 28.00 |
| Mar. | 1. | W. H. Phillips, services as cheese instructor 6 weeks..... | 632 500.00 |
| Feb. | 27. | Clinton D. Smith, freight, express, stamps..... | 633 25.68 |
| Feb. | 27. | Clinton D. Smith, freight, express, Jersey cow, labor..... | 636 109.81 |
| Jan. | 30. | Harrison & Smith, work reports..... | 639 3.50 |
| Feb. | 10. | Northwestern Fuel Co., coal..... | 641 8.65 |
| Jan. | 30. | Crescent Creamery Co., milk..... | 642 269.34 |
| Feb. | 26. | J. H. Kerrick, repairing piston to engine..... | 643 5.00 |
| Jan. | 6. | Held & Gruenhagen, miscellaneous hardware..... | 644 7.40 |
| Jan. | 26. | Fairbanks, Morse & Co., pulleys and belt..... | 649 5.19 |

| | | No. voucher. | |
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| Jan. | 23. | Cornish, Curtis & Green, salt, butter color press hoop | 651 89.06 |
| Feb. | 20. | Creamery and Dairy, advertising | 652 8.00 |
| Feb. | 18. | Minnesota Linseed Oil Works, one ton oil meal | 653 21.00 |
| Jan. | 11. | M. B. Whitney, carpenter work and material | 654 58.43 |
| | | D. B. Whitney, labor in cheese room and dairy | 656 39.36 |
| Mar. | 31. | School of Agriculture, March pay roll | 682 1,205.93 |
| Mar. | 4. | Minneapolis Paper Co., three gro. Gillotts pens | 684 2.55 |
| Dec. | 28. | Pioneer Fuel Co., pine slabs | 686 135.00 |
| Mar. | 28. | D. W. Sprague, hardware and chemicals | 687 141.35 |
| Mar. | 30. | Swinburn Printing Co., bill heads and cutting paper | 688 22.02 |
| Mar. | 28. | Tribune Job Printing Co., bill heads and cutting paper | 714 1.90 |
| Mar. | 31. | Tribune Job Printing Co., 300 examinations | 716 2.50 |
| Jan. | 9. | D. D. Merrill & Co., 150 tablets | 717 9.00 |
| Jan. | 25. | Lynch, Bakeman & Co., materials for repairs and labor | 718 25.13 |
| Mar. | 24. | S. E. Olson & Co., linoleum and duck | 719 29.76 |
| Mar. | 12. | Joseph Zesbaugh, moulding and backing | 720 5.50 |
| Dec. | 18. | W. K. Morrison & Co., hardware | 743 1.30 |
| Mar. | 24. | E. J. Graham, service as asst. butter maker | 745 60.00 |
| Mar. | 29. | Clinton D. Smith, advertising | 746 50.40 |
| Mar. | 29. | Clinton D. Smith, freight, hardware and supplies | 747 15.35 |
| Dec. | 29. | Clinton D. Smith, salaries of employes, lamps, freight | 748 56.00 |
| Feb. | 25. | Minneapolis Fuel Co., coal | 751 42.00 |
| Dec. | 31. | Gust Lagerquist, one handpower elevator | 753 200.00 |
| Mar. | 22. | Noyes Bros & Cutler, sulphuric acid | 755 7.02 |
| Dec. | 23. | Cornish, Curtis & Greene, large and small vats and whey strainer | 758 240.00 |
| Feb. | 29. | Cornish, Curtis & Greene, cheese boxes, blanks, thermometer | 749 15.10 |
| Mar. | 12. | Minnesota Linseed Oil Works, one ton oil meal | 763 21.00 |
| Feb. | 20. | Pioneer Fuel Co., coal | 764 8.63 |
| Mar. | 16. | Northwestern Fuel Co., coal | 765 25.87 |
| Nov. | 21. | Fairbanks, Morse & Co., 1,050 scale with double beam | 766 73.00 |
| Jan. | 2. | Joseph Congdon, 1 pair stairs | 767 35.00 |
| April | 30. | School of Agriculture, April pay roll | 789 826.77 |
| April | 30. | D. W. Sprague, artists supplies sub. of "Literary Digest" | 772 4.87 |
| Mar. | 29. | D. Ramaly & Son, invitations, programs, express | 784 6.66 |
| April | 26. | H. W. Brewster, freight, express and postage | 793 19.79 |
| April | 27. | C. L. Moffatt, blaskmith repairs | 794 5.00 |
| April | 7. | G. H. Congdon, 25 music lessons | 795 75.00 |
| April | 8. | Campus Quartette, singing at commencement exercises | 796 15.00 |
| Mar. | 26. | W. K. Morrison & Co., bill of hardware | 797 5.86 |
| Mar. | 30. | Minneapolis Fuel Co., coal | 798 168.75 |
| April | 20. | W. F. Hemenway, bill of lumber | 802 14.65 |
| April | 29. | Clinton D. Smith, labor grading, team and men | 829 38.29 |
| April | 26. | Clinton D. Smith, freight, milk, hardware, groceries | 830 13.98 |
| April | 21. | Pioneer Fuel Co., coal | 833 7.50 |
| April | 26. | Pillsbury-Washburn Co., shorts and bran | 845 26.00 |
| Mar. | 31. | Minnesota Linseed Oil Works, 2 1/2 tons oil meal | 846 52.50 |
| Dec. | 3. | Northwestern Fuel Co., pea coal | 848 32.23 |
| May | 31. | School of Agriculture, May pay roll | 851 865.03 |
| June | 1. | D. W. Sprague, sewer pipe, jars 1 gallon and 5 gallon | 854 10.98 |
| April | 30. | W. K. Morrison & Co., 2 boxes 11 3/4 x 14 3/4, glass | 871 6.38 |
| April | 6. | Joseph Zesbaugh, frames for collection of grasses | 874 11.00 |
| May | 2. | Held & Grenchagen, glass and tacks | 875 7.95 |
| May | 14. | S. E. Olson & Co., 18 yards linoleum | 877 8.00 |
| June | 1. | R. C. Clark, inspecting 2 boilers in school | 878 6.00 |
| May | 28. | Clinton D. Smith, freight, grading, mason work | 885 66.76 |
| May | 5. | Minnesota Linseed Oil Works, 1 ton oil meal | 890 21.00 |
| May | 31. | Pillsbury-Washburn Co., bran | 898 20.00 |
| Oct. | 21. | H. Kelley & Co., plumbing repairs | 900 5.70 |
| May | 30. | Blackman & Post, soil pipe and fittings | 905 252.53 |
| June | 30. | School of Agriculture, June pay roll | 920 831.19 |
| July | 1. | D. W. Sprague, 2 yards manilla drawing paper | 921 .45 |
| June | 27. | Tribune Job Printing Co., 10,000 catalogues, College of Agr | 938 85.00 |
| June | 14. | J. A. Vre, stamps, postal cards, wrappers | 939 11.82 |
| June | 20. | Chas. Hawkinson, trees and shrubs | 940 35.80 |
| May | 31. | Harrison & Smith, milk record No. 8,510 | 948 6.50 |
| June | 28. | Northrup, Braslan & Goodwin, seeds | 949 6.18 |
| June | 1. | Pillsbury-Washburn Co., 3,000 lbs. bran | 953 15.00 |
| June | 10. | Cornish, Curtis & Green, 2 dozen test tubes | 957 8.00 |
| June | 15. | Brooks Bros., screen doors and windows | 961 13.40 |
| June | 10. | Union Railway Storage Co., 100 feet 6 inch s. pipe | 962 10.50 |
| June | 21. | Minnesota Linseed Oil Works, 1,500 lbs. oil meal | 964 16.50 |
| April | 6. | McDonald Bros., jars | 968 8.48 |
| June | 20. | Chas. T. Leonard, 1 awning | 969 3.50 |
| July | 31. | School of Agriculture, July pay roll | 978 526.51 |
| Total | | | \$21,866.82 |

VETERINARY DEPARTMENT.

CURRENT EXPENSE.

| | | | |
|-------|-----|-----------------------------------------------------------|-----------|
| June | 9. | Tribune Job Printing Co., envelopes and note-heads | 22 86.00 |
| April | 2. | Chas D. Whitall & Co., 1 cap hektograph, type-writ. paper | 23 6.40 |
| July | 8. | W. F. Hemenway, repairs on veterinary hospital | 24 60.00 |
| July | 7. | Experiment station, hay | 25 25.56 |
| Aug. | 31. | Veterinary department, August pay roll | 52 135.00 |

| | No. voucher. | |
|-----------|---------------------------------------------------------------|------------|
| Sept. 1. | D. W. Sprague, journals and veterinary reviews..... | 73 \$9.00 |
| Aug. 29. | Noyes Brothers & Cutler, chemical supplies..... | 87 159.62 |
| Aug. 1. | N. W. Scavenger Co., removing dead horses from farm. | 88 5.00 |
| Aug. 27. | Warner Brothers, carriage paint and sash cord..... | 90 3.52 |
| Sept. 1. | Olaf Schwartzkopf, freight, express, postage..... | 91 14.55 |
| Aug. 17. | Held & Gruentagen, paint, brushes and galvanized pipe.. | 92 7.65 |
| Sept. 30. | Veterinary department, September pay roll | 136 135.00 |
| Sept. 30. | D. W. Sprague, petty bills..... | 139 7.00 |
| Sept. 30. | Tribune Job Printing Co., print, labels, prescrip. and cards | 146 7.50 |
| Sept. 7. | Experiment station, feed..... | 182 38.93 |
| Oct. 31. | Veterinary Department, October pay roll..... | 203 329.00 |
| Oct. 31. | Tribune Job Printing Co., miscellaneous..... | 206 5.00 |
| Oct. 30. | John A. Schliener & Co., stationery..... | 207 .54 |
| Oct. 31. | D. W. Sprague, petty bills..... | 211 4.97 |
| Sept. 9. | Noyes Brothers & Cutler, supplies for veterinary dept..... | 244 75.64 |
| Oct. 13. | Adam Lindig, hay..... | 245 9.37 |
| Aug. 31. | James W. Queen & Co., tools and veterinary supplies..... | 246 78.91 |
| Oct. 17. | E. Cooley, oats..... | 247 19.00 |
| Oct. 15. | S. G. McMillan, converting car barn into vet. hospital.... | 248 847.00 |
| Oct. 7. | S. B. Loye & Sons, dusters, brushes, blankets, soap..... | 249 25.00 |
| Oct. 30. | Chas. R. Aldrich, plans, specifications, supt. vet. hospital. | 250 4.00 |
| Nov. 30. | Veterinary department, November pay roll..... | 302 341.00 |
| Nov. 30. | D. W. Sprague, petty bills..... | 328 4.50 |
| Nov. 30. | John A. Schliener & Co., stationery..... | 329 3.71 |
| Nov. 30. | Minneapolis Fuel Co., coal..... | 349 18.75 |
| Nov. 17. | E. Cooley, oats and hay..... | 351 45.48 |
| Nov. 21. | Adam Lindig, hay and straw..... | 352 21.10 |
| Nov. 5. | Experiment station, hay, oats and bran..... | 353 15.70 |
| Oct. 29. | O. C. Gregg, hay, oats and bran..... | 354 14.48 |
| Nov. 28. | Warner Brothers, miscellaneous hardware..... | 355 96.84 |
| Nov. 1. | Glessner & Washburn, desks, office chairs, oilcloth..... | 356 118.00 |
| Nov. 17. | Boutell Brothers, stove, elbows and dampers..... | 357 21.50 |
| Nov. 30. | Noyes Bros. & Cutler, chemical supplies..... | 358 84.05 |
| Dec. 31. | Veterinary department, December pay roll..... | 409 311.00 |
| Dec. 31. | D. W. Sprague, petty bills..... | 427 3.25 |
| Dec. 22. | Warner Brothers, miscellaneous hardware..... | 445 41.93 |
| Oct. 15. | Mpls Office & School Furn. Co., slate crayons and erasers. | 446 7.00 |
| Dec. 26. | Wm. Wheeler & Co., glass, labor, glazing..... | 447 11.91 |
| Nov. 2. | J. H. Hagen & Co., paint, signs..... | 448 10.00 |
| Dec. 1. | Noyes Bros. & Cutler, microscope, case and chem. supplies | 449 193.01 |
| Dec. 26. | Adam Lindig, hay and straw..... | 450 29.25 |
| Dec. 28. | Olaf Schwartzkopf, stamps and express..... | 451 14.32 |
| Jan. 31. | Veterinary department, January pay roll..... | 496 311.00 |
| Jan. 30. | D. W. Sprague, oil and expense removing horses..... | 498 5.05 |
| Jan. 15. | Cody & Hinceline, plumbing repairs..... | 505 1.75 |
| Jan. 23. | Minneapolis Fuel Co., coal..... | 527 45.00 |
| Feb. 29. | Veterinary department, February pay roll..... | 576 311.00 |
| Feb. 24. | Minneapolis Fuel Co., stove coal..... | 582 45.00 |
| Feb. 29. | The Cody-Hinceline Co., repairing iron pipe..... | 590 6.70 |
| Feb. 29. | D. W. Sprague, 500 bill heads..... | 594 2.75 |
| Feb. 18. | E. Cooley, rye straw, bran, hay..... | 606 60.28 |
| Jan. 24. | E. L. Miller, laundry, 1 stove, dogs feed, files..... | 607 6.65 |
| Feb. 18. | John Gillesby, removing dissected horses..... | 608 16.00 |
| Mar. 31. | Veterinary department, March pay roll..... | 682 311.00 |
| Mar. 30. | E. B. Johnson, water tax..... | 683 1.55 |
| Dec. 4. | Minneapolis fuel Co., coal..... | 686 45.00 |
| Mar. 31. | D. W. Sprague, galv. pails, express..... | 688 6.25 |
| April 1. | Minneapolis Street Ry. Co., rent of University barn farm. | 709 180.00 |
| Mar. 1. | Journal of Comparative Med., subscription and adv. | 721 23.00 |
| Jan. 25. | Adam Lindig, hay..... | 722 11.52 |
| Dec. 31. | Noyes Brothers & Cutler, apparatus and supplies..... | 723 21.25 |
| Mar. 31. | Olaf Schwartzkopf, express, repairs and supplies..... | 724 14.49 |
| Feb. 1. | Robinson & Mead, hauling horse..... | 725 8.00 |
| Oct. 29. | Warner Brothers, miscellaneous hardware..... | 726 54.55 |
| Dec. 23. | E. Cooley, hay and rye straw..... | 737 32.31 |
| Feb. 26. | John Gillesby, removing 1 load dissected horses..... | 728 5.00 |
| Jan. 11. | Nichols & Dean, 12 pr. cork pads..... | 729 9.20 |
| Jan. 2. | Joseph Congdon, carpenter work in vet. surg. barn..... | 730 8.90 |
| Nov. 1. | Glessner & Washburn, book-case, desk, tables, matt's., bed | 731 38.40 |
| April 30. | Veterinary department, April pay roll..... | 769 260.00 |
| May 2. | Minneapolis Street Railway Co., rent of University barn. | 785 30.00 |
| Mar. 30. | Minneapolis Fuel Co., coal..... | 798 15.00 |
| May 31. | Veterinary department, May pay roll..... | 851 305.00 |
| June 1. | E. B. Johnson, 2 horses for dissecting..... | 852 4.00 |
| June 1. | D. W. Sprague, oil, hardware, coal, surg. supplies..... | 854 8.75 |
| April 25. | E. Cooley, hay, oats, rye straw..... | 879 22.23 |
| May 31. | Minneapolis Street Railway Co., rent of Union Ave. barn. | 880 30.00 |
| June 1. | G. O. Merritt, labor..... | 881 6.00 |
| June 30. | Veterinary department, June pay roll..... | 920 100.00 |
| July 1. | D. W. Sprague, moving stoves, water tax..... | 921 2.23 |
| June 19. | Noyes, Bros. & Cutler, veterinary supplies..... | 943 41.68 |
| June 30. | Minneapolis Street Ry. Co., rent of University Ave barn.. | 971 30.00 |
| July 31. | Veterinary department, July pay roll..... | 978 100.00 |

Total..... \$5,998.43
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MILITARY TACTICS.

| | | CURRENT EXPENSE. | No. voucher | |
|-------------|-----|-------------------------------------------------------------------------|-------------|----------|
| July | 31. | Wm. H. Yattaw, labor in Colosseum | 9 | \$44.25 |
| June | 30. | Northwestern Fuel Co., stove coal | 15 | 12.90 |
| Sept. | 1. | Glessner & Washburn, 37½ yds carpet, making same, rent of bureaus | 80 | 32.76 |
| Sept. | 30. | Military Tactics, September pay roll | 136 | 65.00 |
| Oct. | 31. | Military Tactics, October pay roll | 203 | 15.00 |
| Oct. | 31. | Tribune Job Printing Co., 100 circulars | 206 | 2.50 |
| Oct. | 30. | John A. Schlener & Co., stationery | 207 | 1.15 |
| Nov. | 30. | Military Tactics, November pay roll | 302 | 115.00 |
| Nov. | 21. | Robert C. Kretschmar, 8 trumpets with "F" slide | 310 | 44.00 |
| Nov. | 20. | Morris & Wilson, Yale padlocks | 324 | 4.78 |
| Dec. | 31. | Military Tactics, December pay roll | 409 | 65.00 |
| Jan. | 31. | Military Tactics, January pay roll | 496 | 95.00 |
| Jan. | 30. | Wm. H. Yattaw, 1½ days carrying coal in Colosseum | 499 | 2.25 |
| Feb. | 29. | Military Tactics, February pay roll | 576 | 95.00 |
| Feb. | 29. | E. B. Johnson, stamps, labor | 578 | 6.10 |
| Feb. | 29. | D. W. Sprague, six copies Drill Regulations | 594 | 2.86 |
| Mar. | 31. | Military Tactics, March pay roll | 682 | 95.00 |
| Mar. | 31. | D. W. Sprague, two copies Regulations | 688 | 1.20 |
| Apr. | 30. | Military Tactics, April pay roll | 769 | 95.00 |
| May | 31. | Military Tactics, May pay roll | 851 | 95.00 |
| June | 30. | Military Tactics, June pay roll | 920 | 95.00 |
| Total | | | | \$984.75 |

MECHANIC ARTS.

| | | CURRENT EXPENSE. | | |
|-------|-----|-----------------------------------------------------------------|-----|----------|
| July | 31. | Wm. H. Yattaw, cleaning and other labor | 9 | \$71.37 |
| July | 18. | Nelson, Tenney & Co., 4 ft. wood | 17 | 22.50 |
| Sept. | 2. | E. B. Johnson, gas | 54 | 9.26 |
| Aug. | 15. | Wright, Barrett & Stillwell, examination paper | 63 | 14.00 |
| Aug. | 31. | Tribune Job Printing Co., printing 700 letter heads | 79 | 3.50 |
| July | 1. | North Western Telephone Exchange Co., telephone service | 81 | 1.50 |
| Aug. | 17. | Tuerk Hydraulic Power Co., 1 motor complete | 94 | 45.00 |
| Aug. | 7. | Henry R. Worthington, one 1½ hot water meter | 95 | 52.00 |
| Aug. | 29. | J. C. Connell, labor and material on furnace | 96 | 18.00 |
| Sept. | 30. | Mechanic Arts, September pay roll | 136 | 1,095.00 |
| Sept. | 30. | E. B. Johnson, freight, express and gas | 137 | 31.11 |
| Sept. | 30. | Wm. H. Yattaw, 4 wrenches | 138 | 2.50 |
| Sept. | 30. | Tribune Job Printing Co., printing cards and slips | 146 | 4.50 |
| Sept. | 30. | John A. Schlener & Co., imp. book, damp bowl and br'sh's | 147 | 2.75 |
| Sept. | 26. | Cody & Hineline, put in urinal and repair closet tanks | 149 | 20.50 |
| Sept. | 30. | Geo. D. Shepardson, freight and postage | 187 | 7.32 |
| Aug. | 28. | R. E. Kidder, 1 sawing machine and flour carrier | 188 | 196.20 |
| Aug. | 21. | Moffet & Thurston, stationery | 189 | 18.75 |
| Sept. | 21. | Thos. H. Reeces, 1 saw and repairs | 170 | 4.50 |
| Oct. | 1. | Wm. Wheeler & Co., making oil shield for engine | 171 | 4.50 |
| Sept. | 29. | W. S. Nott Company, 75 lbs. white waste and belting | 172 | 15.60 |
| Sept. | 12. | Wheeler Condenser and Eng. Wks., 1 pat cond., 1 air pump | 201 | 275.00 |
| Oct. | 15. | D. W. Sprague, petty bills | 202 | 3.65 |
| Oct. | 31. | Mechanic Arts, October pay roll | 203 | 1,115.00 |
| Oct. | 31. | E. B. Johnson, gas, express, etc | 204 | 9.62 |
| Oct. | 31. | Tribune Job Printing Co., miscellaneous work | 206 | 7.00 |
| Oct. | 31. | John A. Schlener & Co., stationery | 207 | .54 |
| Oct. | 31. | D. W. Sprague, petty bills | 211 | 6.65 |
| Oct. | 29. | Chas. D. Whitall & Co., 1 letter hektograph | 212 | 3.50 |
| Nov. | 1. | F. L. Moody, water tax | 215 | 5.00 |
| Oct. | 27. | Pioneer Fuel Co., Cumberland coal, 4,000 pounds | 217 | 4.00 |
| Oct. | 21. | Lyman-Eliel Drug Co., chemical supplies | 218 | 4.20 |
| Oct. | 1. | J. S. Pillsbury, freight on brick for Mech. Arts Building | 225 | 403.81 |
| Oct. | 31. | W. K. Morrison & Co., miscellaneous hardware | 252 | 19.35 |
| Sept. | 18. | C. Hennecke & Co., plaster casts and wire models | 253 | 36.78 |
| Sept. | 19. | Minneapolis Paper Co., 1 roll 36 inch blue print | 254 | 6.00 |
| Oct. | 27. | W. C. Weeks, labor on maps | 255 | 9.30 |
| Oct. | 27. | W. R. Hoax, 1 marine chronometer | 256 | 80.00 |
| Oct. | 1. | Ill. Electric Material Co., electrical supplies | 257 | 48.05 |
| Oct. | 31. | Elliot & Pauly, miscellaneous hardware and tools | 258 | 99.47 |
| Oct. | 21. | American Bell Telephone Co., electrical apparatus | 259 | 7.50 |
| Oct. | 6. | A. C. and C. F. Peters, artist's supplies | 260 | 15.55 |
| Oct. | 27. | W. R. Hoax, apparatus, freight, and postage | 261 | 14.75 |
| Sept. | 26. | Edison Gen. Electric Co., electrica apparatus | 262 | 132.55 |
| Oct. | 29. | Geo. D. Shepardson, freight and express | 263 | 8.62 |
| Aug. | 31. | Young & Sons, repairing and adjusting telescope | 284 | 35.00 |
| Nov. | 30. | Mechanic Arts, November pay roll | 302 | 1,115.00 |
| Nov. | 27. | Pioneer Fuel Co., Yougn, Coal | 303 | 7.00 |
| Nov. | 30. | E. B. Johnson, gas, salaries of employes, stamps | 304 | 10.88 |
| Nov. | 25. | R. B. Lees, fixing sink in Mechanics hall | 305 | 2.65 |
| Nov. | 13. | Rugg, Fuller & Co., pipe, valves and fittings | 315 | 37.72 |
| Nov. | 30. | D. W. Sprague, petty bills | 328 | 9.82 |
| Nov. | 30. | John A. Schlener & Co., office supplies | 329 | 3.25 |
| Nov. | 3. | W. K. Morrison & Co., miscellaneous hardware | 335 | 10.43 |
| Sept. | 12. | W. K. Morrison & Co., miscellaneous hardware | 336 | 5.00 |

No. voucher.

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|-------|-----|---------------------------------------------------------------------------------------------|-----|----------|
| Oct. | 16. | Squires & Todd, bill of lumber..... | 337 | 380.87 |
| Nov. | 26. | Elliott & Pauly, tools..... | 344 | 19.50 |
| Nov. | 27. | W. W. Sykes & Co., run sewer to inside mechanical hall.... | 347 | 18.00 |
| Nov. | 20. | Wm. A. Pike, freight and express..... | 359 | 16.25 |
| Nov. | 27. | Wm. A. Pike, postage and freight..... | 360 | 5.59 |
| Oct. | 8. | W. C. Hill, freight and express..... | 361 | 17.36 |
| Oct. | 15. | Robinson & Cary Co., tools..... | 362 | 16.07 |
| Oct. | 3. | H. L. Day, tools..... | 363 | 39.85 |
| Oct. | 9. | N. W. Star Oil Company, cylinder, lard, linseed oils..... | 364 | 10.89 |
| Nov. | 6. | C. A. Hoffman, apparatus..... | 365 | 7.50 |
| Oct. | 16. | O. H. Peck, apparatus..... | 366 | 11.05 |
| Oct. | 23. | Electric Construction and Supply Co., electrical apparatus | 367 | 51.85 |
| Oct. | 12. | Naylor & Company, plumbing supplies repairs..... | 368 | 58.02 |
| Nov. | 2. | Naylor & Company, plumbing fittings for repairs..... | 369 | 8.57 |
| Oct. | 30. | Andrus & Church, apparatus..... | 370 | 10.99 |
| Nov. | 13. | E. S. Greeley & Co., electrical apparatus..... | 371 | 95.44 |
| Nov. | 7. | Electric Construction Co., carbons..... | 372 | 7.00 |
| Nov. | 27. | Geo. D. Shepardson, freight and express..... | 373 | 8.00 |
| Nov. | 28. | Wm. Marshall, electrical apparatus..... | 375 | 108.00 |
| Nov. | 19. | Evans Friction Cone Co., dynamo belts and license..... | 376 | 16.99 |
| Dec. | 31. | Mechanic arts, December pay roll..... | 409 | 1,115.00 |
| Dec. | 31. | E. B. Johnson, gas, salaries of employes..... | 410 | 27.22 |
| Dec. | 31. | Pioneer Fuel Co., Yough, coal..... | 424 | 175.99 |
| Dec. | 31. | D. W. Sprague, petty bills..... | 427 | 8.85 |
| Dec. | 11. | Fort Wayne Electric Co., electrical apparatus..... | 452 | 622.00 |
| Dec. | 22. | W. S. Nott & Co., leather belt, white waste, sheet packing. | 453 | 8.78 |
| Dec. | 22. | James W. Queen & Co., apparatus..... | 454 | 20.50 |
| Nov. | 9. | Janney, Semple & Co., wire, steel and iron..... | 455 | 54.33 |
| Dec. | 29. | Rugg, Fuller & Co., iron pipe and fittings..... | 456 | 7.84 |
| Dec. | 29. | W. K. Morrison & Co., miscellaneous hardware..... | 457 | 38.14 |
| Jan. | 31. | Mechanic Arts, January pay roll..... | 496 | 1,085.00 |
| Jan. | 30. | E. B. Johnson, express and gas..... | 497 | 1.87 |
| Jan. | 30. | D. W. Sprague, plumbing labor and material..... | 498 | 11.41 |
| Jan. | 1. | James W. Day, ice..... | 519 | 5.24 |
| Jan. | 28. | J. J. Hawkinson, services surveying..... | 539 | 4.50 |
| Jan. | 1. | Joseph Zesbaugh, plaster casts..... | 540 | 50.00 |
| Jan. | 1. | Union Iron Works, pulleys for dynamo and 614 lbs. castings | 541 | 63.52 |
| Dec. | 31. | W. K. Morrison & Co., miscellaneous hardware..... | 543 | 10.13 |
| Jan. | 8. | Western Elec. Instrument Co., two meters..... | 544 | 155.00 |
| Jan. | 28. | W. C. Weeks, services as chairman on surveying..... | 545 | 4.00 |
| Jan. | 28. | Noah Johnson, draughting map of grounds..... | 546 | 6.00 |
| Jan. | 20. | Lyman-Eliel Drug Co., chemical supplies..... | 547 | 4.25 |
| Nov. | 3. | N. W. Thompson-Houston Elec. Co., arc dynamo, lamp, etc.... | 548 | 580.32 |
| Feb. | 29. | Mechanic Arts, February pay roll..... | 576 | 1,085.00 |
| Feb. | 29. | E. B. Johnson, gas and petty expenses..... | 578 | 6.49 |
| Feb. | 29. | Tribune Job Printing Co., 500 circulars..... | 579 | 5.00 |
| Feb. | 29. | Morris & Wilson, stationery..... | 589 | 1.57 |
| Feb. | 29. | D. W. Sprague, stamps, postal cards, clock, paper, scales, takes..... | 594 | 5.94 |
| Feb. | 27. | W. R. Hoag, electrical supplies, felt, oil and stamps..... | 609 | 13.67 |
| Jan. | 27. | Electrical Supply Co., four dynamo brushes..... | 610 | 6.00 |
| Jan. | 1. | J. P. Gilmore, lampblack, sulphur, shellac, glue..... | 611 | 5.05 |
| Jan. | 29. | Charles A. Schieren & Co., 24 1 ⁰ belting..... | 612 | 20.23 |
| Feb. | 1. | Janney, Semple & Co., bar and rod iron and rivets..... | 613 | 12.17 |
| Jan. | 30. | H. L. Day, one tank, labor and boiler plate..... | 614 | 26.97 |
| Feb. | 1. | H. A. Hamlin, 71 lbs. brass castings..... | 615 | 15.98 |
| Feb. | 20. | Rugg, Fuller & Co., pipe, valves and fittings..... | 616 | 17.78 |
| Feb. | 24. | J. H. Gill, four days machine work..... | 617 | 6.00 |
| Feb. | 2. | Gillet-Herzog Manufacturing Co., machinery..... | 618 | 22.40 |
| Feb. | 25. | Glessner & Washburn, two desks..... | 620 | 42.00 |
| Feb. | 6. | The Machinists Supply Co., tools..... | 622 | 9.56 |
| Feb. | 27. | The Mpls. Elec. & Const'n Co., one storage battery, 3 cells.. | 623 | 8.00 |
| Feb. | 26. | W. K. Morrison & Co., miscellaneous hardware..... | 624 | 10.29 |
| Mar. | 31. | Mechanic Arts, March pay roll..... | 682 | 1,085.00 |
| Mar. | 30. | E. B. Johnson, gas..... | 683 | 1.92 |
| Mar. | 17. | Northwestern Fuel Co., coal..... | 685 | 65.79 |
| Mar. | 31. | D. W. Sprague, paint, repairs and supplies..... | 688 | 11.85 |
| Mar. | 26. | K. B. Lees, carpenter work and materials..... | 690 | 55.85 |
| Mar. | 10. | Gillet-Herzog Manufacturing Co., plate, beams, labor..... | 732 | 19.00 |
| Mar. | 18. | Northwestern Fuel Co., Connellsville coke..... | 733 | 13.00 |
| Mar. | 31. | Janney, Semple & Co., lead, tin, copper, antimony..... | 734 | 30.60 |
| Feb. | 1. | Leonard & Ellis, ten gallons cylinder oil..... | 735 | 11.00 |
| Mar. | 24. | Bovey-DeLaitre Lumber Co., bill of lumber..... | 736 | 5.24 |
| Mar. | 15. | N. W. Thompson-Houston Elec. Co., lamp, special globe.... | 737 | 36.00 |
| Mar. | 24. | Wm. Marshall, two adjust. and two non-adj. condensers.... | 738 | 19.20 |
| Mar. | 14. | Bradbury-Stone Stor. Bat. Co., 10 cells 7xglass stor. bat.... | 739 | 52.50 |
| Nov. | 5. | Naylor Company, iron and galvanized pipe and fittings.... | 740 | 9.37 |
| Mar. | 3. | Geo. D. Shepardson, freight, express, hardware..... | 742 | 13.94 |
| Dec. | 18. | W. K. Morrison & Co., machine bolts..... | 743 | .16 |
| April | 30. | Mechanic Arts, April pay roll..... | 769 | 1,085.06 |
| April | 30. | E. B. Johnson, gas and sundry petty expenses..... | 771 | 6.57 |
| Mar. | 26. | W. K. Morrison & Co., miscellaneous hardware..... | 797 | 4.65 |
| Mar. | 18. | Eastern Electric Light and Storage Battery Co., apparatus for elec. eng. department..... | 800 | 80.00 |
| April | 30. | Charles D. P. Gibson, 40 D storage cells in glass jars..... | 801 | 84.38 |
| April | 16. | Gillette-Herzog Manufacturing Co., pig iron..... | 803 | 40.10 |

| | | No. voucher. | |
|------------|------------------------------------------------------------------|--------------|-------------|
| April 1. | Janney, Semple & Co., copper rods, bar tin and slab zinc..... | 804 | \$9.70 |
| Mar. 31. | Edison Light and Power Co., 75 lamps..... | 805 | 33.00 |
| April 19. | Crane Co., plumbing material for repairs..... | 806 | 20.86 |
| April 28. | Geo. D. Shepardson, freight and transportation..... | 807 | 14.13 |
| Mar. 26. | R. B. Lees, carpenter work and material..... | 849 | 10.20 |
| May 31. | Mechanic Arts, May pay roll..... | 851 | 1,085.00 |
| June 1. | E. B. Johnson, gas..... | 852 | 80 |
| June 1. | D. W. Sprague, 1/2x5 eccen. strap, rubber tube, postage..... | 854 | 5.75 |
| April 26. | Northwestern Fuel Co., Yough. coal..... | 861 | 4.75 |
| May 31. | R. B. Lees, 1 glass 28x32 reset..... | 865 | 1.60 |
| April 30. | W. K. Morrison & Co., miscellaneous hardware..... | 871 | 8.72 |
| June 30. | Mechanic Arts, June pay roll..... | 920 | 1,085.00 |
| July 1. | D. W. Sprague, stove pipe, hardware, zinc, mould sand..... | 921 | 18.82 |
| June 30. | E. B. Johnson, gas..... | 929 | 96 |
| June 30. | Wm. H. Yattaw, repairing doors..... | 931 | 2.25 |
| June 27. | Tribune Job Printing Co., 1,000 catalogues Col. of Engineer..... | 938 | 55.00 |
| Feb. 19. | Fairbanks, Morse & Co., 1 300 lb. counter scale..... | 941 | 22.75 |
| Total..... | | | \$16,286.38 |

GEOLOGICAL AND NATURAL HISTORY SURVEY.

| 1892. | | CURRENT EXPENSE. | |
|------------|--------------------------------------------------|------------------|------------|
| Aug. 31. | Geological Survey, August pay roll..... | 52 | \$300.00 |
| Sept. 30. | Geological Survey, September pay roll..... | 136 | 400.00 |
| Oct. 1. | R. B. Lees, carpenter work and materials..... | 166 | 14.00 |
| Oct. 31. | Geological Survey, October pay roll..... | 203 | 425.00 |
| Oct. 31. | D. W. Sprague, petty bills..... | 211 | 3.70 |
| Nov. 30. | Geological Survey, November pay roll..... | 302 | 425.00 |
| Dec. 31. | Geological Survey, December pay roll..... | 409 | 425.00 |
| Dec. 1. | Elmer & Amend, chemical supplies..... | 413 | 16.89 |
| Dec. 11. | Baush, Lomb Optical Co., 1 book for library..... | 417 | 6.50 |
| Jan. 31. | Geological Survey, January pay roll..... | 496 | 387.50 |
| Feb. 29. | Geological Survey, February pay roll..... | 576 | 350.00 |
| Mar. 31. | Geological Survey, March pay roll..... | 682 | 350.00 |
| April 30. | Geological Survey, April pay roll..... | 769 | 350.00 |
| May 32. | Geological Survey, May pay roll..... | 851 | 350.00 |
| June 30. | Geological Survey, June pay roll..... | 920 | 450.00 |
| July 31. | Geological Survey, July pay roll..... | 978 | 350.00 |
| Total..... | | | \$4,571.56 |

LAW DEPARTMENT.

| | | CURRENT EXPENSES. | |
|-----------|---------------------------------------------------------------------------|-------------------|--------|
| Aug. 3. | E. B. Johnson, express..... | 1 | \$.85 |
| July 21. | W. S. Nott & Co., 100 feet hose and 1 mystic pipe..... | 5 | 15.50 |
| July 31. | Wm. H. Yattaw, hauling earth and work on law building.. | 9 | 16.11 |
| July 14. | E. L. Ames, kalsomining law building..... | 14 | 68.00 |
| July 31. | Tribune Job Printing Co., wrappers, registered letters..... | 21 | 9.50 |
| Sept. 2. | Wm. H. Yattaw, sundry petty expenses..... | 53 | 4.00 |
| Sept. 2. | E. B. Johnson, gas..... | 54 | .16 |
| Aug. 15. | Wright, Barrett & Stillwell, examination paper..... | 63 | 14.00 |
| Aug. 4. | C. A. Smith & Co., material for walk to law building..... | 64 | 45.50 |
| July 1. | N. W. Telephone Exchange Co., telephone service..... | 81 | 1.50 |
| Aug. 15. | Bradstreet-Thurber Company, 3 dozen special chairs..... | 101 | 79.50 |
| Aug. 29. | Twin City Sidewalk & Pavement Co., walk, driveway, steps and borders..... | 102 | 235.18 |
| Sept. 30. | Law Department, September pay roll..... | 136 | 457.50 |
| Sept. 30. | E. B. Johnson, gas..... | 137 | .30 |
| Sept. 30. | Wm. H. Yattaw, grading around law building..... | 138 | 5.75 |
| Sept. 30. | Tribune Job Printing Co., 300 law course study..... | 146 | 5.50 |
| Sept. 28. | Cody & Hineline, repairing plumbing..... | 150 | 7.17 |
| Oct. 31. | Law Department, October pay roll..... | 203 | 491.00 |
| Oct. 31. | E. B. Johnson, gas and petty expenses..... | 204 | 9.92 |
| Nov. 1. | Wm. H. Yattaw, labor and petty expense account..... | 205 | 24.75 |
| Nov. 1. | F. L. Moody, water tax..... | 215 | 5.00 |
| Oct. 22. | Cody & Hineline, stone pipe..... | 220 | 3.40 |
| Oct. 21. | Fagan Bros., 1,116 loads of earth hauled to law building..... | 296 | 89.28 |
| Nov. 30. | Law Department, November pay roll..... | 302 | 549.00 |
| Nov. 30. | E. B. Johnson, gas, postage, miscellaneous..... | 304 | 48.48 |
| Nov. 30. | Wm. H. Yattaw, petty bills..... | 306 | 6.88 |
| Nov. 28. | Cody & Hineline, putting washbowl in cloak room..... | 320 | 3.75 |
| Dec. 31. | Law Department, December pay roll..... | 409 | 482.50 |
| Dec. 31. | Wm. H. Yattaw, petty bills..... | 418 | 3.75 |
| Dec. 1. | C. S. Wentworth & Co., repairs for law building..... | 428 | 8.77 |
| Jan. 31. | Law Department, January pay roll..... | 496 | 500.00 |
| Jan. 30. | E. B. Johnson, advertising, express, gas..... | 497 | 22.88 |
| Jan. 15. | The Cody-Hineline Co., plumbing, repairs..... | 505 | 17.50 |
| Feb. 29. | Law Department, February pay roll..... | 576 | 607.50 |
| Feb. 29. | E. B. Johnson, gas, express petty bills..... | 598 | 26.64 |
| Feb. 29. | Wm. H. Yattaw, three days cleaning law building.. | 594 | 1.25 |
| Feb. 25. | Glessner & Washburn, one window shade..... | 630 | .75 |
| Feb. 25. | C. S. Wentworth, radiation in law building, labor..... | 628 | 16.15 |
| Mar. 13. | Law Department, March pay roll..... | 628 | 742.50 |

| | | No. voucher. | |
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| Mar. 30. | E. B. Johnson, express, gas..... | 685 | \$25.07 |
| Mar. 30. | Wm. H. Yattaw, three days cleaning law building..... | 688 | 3.75 |
| Mar. 28. | The Swinburn Printing Co., 2,000 envelopes..... | 714 | 4.00 |
| Mar. 1. | Hall, Black & Co., 500 examination papers..... | 741 | 8.00 |
| April 30. | Law Department, April pay roll..... | 769 | 235.00 |
| April 30. | E. B. Johnson, gas, express and petty bills..... | 771 | 28.00 |
| May 1. | Wm. H. Yattaw, one glass 38x40, D. S. reset..... | 773 | 2.50 |
| May 31. | Law Department, May pay roll..... | 851 | 841.50 |
| June 1. | E. B. Johnson, gas..... | 852 | 22.40 |
| June 1. | Wm. H. Yattaw, cleaning in law building..... | 853 | 10.62 |
| June 30. | Law Department, June pay roll..... | 920 | 325.00 |
| July 1. | D. W. Sprague, 500 questions for review..... | 921 | 3.75 |
| June 30. | E. B. Johnson, postage, gas, express..... | 929 | 16.20 |
| June 30. | Wm. H. Yattaw, cleaning in building..... | 931 | 5.00 |
| June 11. | The Cody-Hineline Co., gas pipe and fixtures..... | 942 | 9.47 |
| Total..... | | | \$6,567.37 |

MEDICAL DEPARTMENT.

CURRENT EXPENSE.

| | | | |
|-----------|------------------------------------------------------------------------------|-----|----------|
| Aug. 31. | E. B. Johnson, gas and express..... | 1 | \$ 5.28 |
| July 31. | D. W. Sprague, petty bills..... | 16 | 1.50 |
| July 31. | Tribune Job Printing Co, letter heads, wrappers, etc..... | 2 | 9.50 |
| July 30. | George H. Hendricks, sundry petty accounts..... | 29 | 80.52 |
| July 1. | Board of Water Commissioners, water permit..... | 30 | 11.00 |
| July 1. | St. Paul Gas Light Co., gas..... | 31 | 18.80 |
| July 31. | P. H. Millard, postage..... | 32 | 18.40 |
| Aug. 8. | Minn. Brush Elec. Co., light and changing switch and socket..... | 48 | 24.12 |
| Aug. 31. | Medical Department, August pay roll..... | 52 | 428.75 |
| Sept. 2. | Wm. H. Yattaw, labor..... | 53 | 1.50 |
| Sept. 2. | E. B. Johnson, gas..... | 54 | 2.72 |
| Aug. 15. | Wright, Barrett & Stillwell, examination paper..... | 63 | 14.00 |
| July 1. | N. W. Telephone Exchange Co., telephone service..... | 81 | 6.30 |
| Aug. 27. | Warner Brothers, paint and oil..... | 90 | 14.44 |
| Sept. 1. | Lintges, Connells & Co., iron rivets and labor on repairs..... | 103 | 26.40 |
| Aug. 15. | Minn. Hospital Cottage, rent..... | 104 | 150.00 |
| Aug. 15. | Treasurer Hennepin County, taxes..... | 105 | 11.44 |
| Sept. 30. | Medical Department, September pay roll..... | 136 | 1,238.75 |
| Sept. 30. | E. B. Johnson, petty expenses..... | 137 | 2.56 |
| Oct. 1. | N. W. Telephone Exchange Co., telephone service..... | 143 | 19.00 |
| Sept. 26. | Warner Brothers, miscellaneous hardware..... | 160 | 11.61 |
| Oct. 1. | R. B. Lees, carpenter work and materials..... | 166 | 7.60 |
| July 15. | Mps. Office & School Furn. Co., 2 tables and apparatus case..... | 180 | 79.00 |
| Oct. 15. | Medical Department, October pay roll..... | 203 | 1,328.75 |
| Oct. 31. | E. B. Johnson, gas..... | 204 | 4.00 |
| Nov. 1. | Wm. H. Yattaw, sundry petty bills..... | 205 | 2.40 |
| Oct. 31. | Tribune Job Printing Co., miscellaneous..... | 206 | 49.50 |
| Oct. 31. | D. W. Sprague, petty bills..... | 211 | 3.60 |
| Oct. 27. | Pioneer Fuel Co., Yough. coal..... | 217 | 73.58 |
| Oct. 21. | Lyman-Eliel Drug Co., chemical supplies..... | 218 | 4.52 |
| Nov. 1. | N. W. Telephone Exchange Co., telephone service..... | 224 | 12.45 |
| Oct. 1. | Pioneer Press Co., advertising proposals for med. col..... | 227 | 9.00 |
| Oct. 25. | Bell Electric Co., Yale locks and keys..... | 238 | 6.25 |
| Oct. 15. | Minneapolis Office and School Furniture Co., 1 oak table, 1 pine bench..... | 259 | 11.50 |
| Oct. 5. | Journal of America Medical Association, advertising..... | 270 | 25.00 |
| Oct. 6. | Northwestern Lancet Co., advertising one year..... | 271 | 60.00 |
| Oct. 31. | Walter S. Pardee, competitive plans for new med. college..... | 298 | 50.00 |
| Oct. 31. | Harry W. Jones, competitive plans for new med. college..... | 299 | 50.00 |
| Oct. 31. | G. W. and F. D. Orf, competitive plans for new med. col..... | 360 | 50.00 |
| Oct. 31. | L. S. Buffington, competitive plans for new med. college..... | 301 | 50.00 |
| Oct. 30. | Medical department, November pay roll..... | 302 | 1,446.67 |
| Nov. 30. | E. B. Johnson, gas petty bills..... | 304 | 10.88 |
| Nov. 25. | R. B. Lees, carpenter work and material..... | 305 | 25.55 |
| Nov. 10. | F. S. Martin, labor and material on heating apparatus..... | 311 | 23.59 |
| Nov. 28. | Cody & Binellne, pipe and fittings at Pillsbury hall..... | 320 | 5.23 |
| Nov. 20. | Morris & Wilson, 1 case toilet paper..... | 324 | 8.50 |
| Nov. 30. | D. W. Sprague, sundry petty expenses..... | 328 | 7.55 |
| Nov. 27. | W. W. Sykes & Co., running pipe from main to steam plant..... | 347 | 200.00 |
| Nov. 30. | Minneapolis Fuel Co., 2 loads dry gang..... | 349 | 3.50 |
| Nov. 30. | Noyes Bros. & Cutler, chemical supplies..... | 358 | 6.18 |
| Oct. 29. | Elmer & Amend, chemical supplies..... | 382 | 536.60 |
| Oct. 26. | Bausch & Lomb Optical Co., apparatus..... | 383 | 12.00 |
| Nov. 19. | P. Gleich & Co., labor and material..... | 384 | 12.30 |
| Oct. 26. | Medical college building association, 2 Morrison chairs and Hays boiler..... | 385 | 95.00 |
| Dec. 31. | Medical department, December pay roll..... | 409 | 1,452.37 |
| Dec. 31. | E. B. Johnson, fuel and lights..... | 410 | 22.40 |
| Dec. 28. | Cody & Hineline Co., repairs..... | 414 | 7.60 |
| Dec. 31. | Wm. H. Yattaw, petty bills..... | 418 | 3.50 |
| Dec. 1. | N. W. Telephone Exchange Co., telephone service..... | 422 | 6.15 |
| Dec. 1. | Bell Electric Company, repairs in dental department..... | 433 | 5.50 |
| Dec. 31. | Pioneer Fuel Company, Yough. coal..... | 424 | 66.92 |
| Dec. 31. | D. W. Sprague, petty bills..... | 427 | 5.50 |
| Dec. 31. | Tribune Job Printing Co., note heads, receipts and slips..... | 429 | 12.25 |

| | | No. voucher. | |
|------------|-----|--------------------------------------------------------------------------|--------------|
| Dec. | 1. | Noyes Bros. & Cutler, 1 crocker badge roller..... | 440 34.00 |
| Dec. | 29. | W. K. Morrison & Co., miscellaneous hardware..... | 457 9.51 |
| Dec. | 10. | Minnesota Hospital College, chairs, cabinets and fixtures. | 461 345.00 |
| Nov. | 23. | L. B. Wilson, 30 plates in India ink and water colors..... | 462 25.00 |
| Nov. | 1. | Dr. C. M. Bailey, 1 Stoddard furnace..... | 463 16.00 |
| Jan. | 1. | Board Water Commissioners, water tax..... | 464 11.00 |
| Oct. | 23. | Minneapolis Dental Manufacturing Company, 1 lathe..... | 465 10.00 |
| Nov. | 30. | Prendergast Frods., repairs and labor on furnace..... | 466 25.00 |
| Nov. | 19. | Henry A. Shufeldt & Co., 1 barrel alcohol..... | 493 28.20 |
| Jan. | 31. | Medical Department, January pay roll..... | 496 1,452.37 |
| Jan. | 30. | E. B. Johnson, freight, gas, advertising..... | 497 39.68 |
| Jan. | 30. | D. W. Sprague, labels..... | 498 1.50 |
| Feb. | 1. | N. W. Telephone Exchange Company, telephone service... | 508 13.20 |
| Jan. | 2. | Eimer & Amend, chemical supplies..... | 516 55.73 |
| Jan. | 28. | Pioneer Fuel Company, Yough. coal..... | 524 69.70 |
| Jan. | 23. | Minneapolis Fuel Company, coal..... | 527 148.25 |
| Jan. | 20. | Lyman Elliot Drug Company, borax, crucibles, sulph. acid. | 547 1.80 |
| Feb. | 15. | Minnesota Brush Electric Company, light..... | 549 9.80 |
| Jan. | 15. | C. J. Bell, freight, express and sundries..... | 550 35.09 |
| Jan. | 27. | S. S. White Dental Mfg. Co., advertising in Dental Cosmos | 573 100.00 |
| Feb. | 29. | Medical Department, February pay roll..... | 576 1,436.12 |
| Feb. | 29. | E. B. Johnson, gas and miscellaneous expense..... | 578 27.04 |
| Mar. | 1. | N. W. Telephone Exchange Company, telephone service... | 580 6.00 |
| Feb. | 24. | Minneapolis Fuel Company, stove coal..... | 582 112.50 |
| Feb. | 29. | The Cody Hineline Co., putting in washbowl, repairing steam pipe..... | 590 7.36 |
| Feb. | 29. | D. W. Sprague, labor, gas, jars, 2 lb. oil cloves..... | 594 11.30 |
| Feb. | 25. | Twin City Calcium Light Company, apparatus and gas.... | 629 69.85 |
| Feb. | 12. | Minn. Hospital College, rent..... | 630 300.00 |
| Feb. | 17. | Noyes Bros. & Cutler, chemical supplies..... | 631 27.05 |
| Mar. | 31. | Medical Department, March pay roll..... | 682 1,436.12 |
| Mar. | 30. | E. B. Johnson, gas, expenses, help..... | 683 34.08 |
| Mar. | 30. | Wm. H. Yattaw, freight, labor and expenses..... | 698 9.09 |
| Feb. | 29. | Pioneer Fuel Company, Yough. coal..... | 712 49.54 |
| Mar. | 31. | N. W. Telephone Exchange Company, telephone service... | 713 6.00 |
| Mar. | 28. | The Swinburn Printing Company, envelopes..... | 714 4.00 |
| April | 30. | Medical Department, April pay roll..... | 769 1,569.45 |
| April | 30. | E. B. Johnson, gas, salaries of employes..... | 771 47.36 |
| April | 30. | D. W. Sprague, gas, taxes, drugs and circulars..... | 772 23.04 |
| May | 1. | Wm. H. Yattaw, labor..... | 773 2.50 |
| April | 30. | Northwestern Fuel Company, Yough. coal..... | 777 49.87 |
| May | 1. | N. W. Telephone Exchange Company, telephone service... | 791 6.50 |
| April | 30. | P. H. Millard, postage and telegraphing..... | 809 10.50 |
| Feb. | 15. | Eimer & Amend, supplies and apparatus..... | 810 86.55 |
| May | 2. | Noyes Bros. & Cutler, chemical supplies..... | 811 41.65 |
| April | 4. | W. K. Mulliken, engraving..... | 812 10.00 |
| April | 1. | Minnesota Brush Electric Company, lights..... | 813 4.50 |
| Feb. | 6. | McDonald Bros., 4 dozen 1/2 gallon Mason jars..... | 814 5.60 |
| Nov. | 15. | R. O. Beard, supplies..... | 815 7.71 |
| April | 30. | W. K. Sudduth, postage..... | 816 5.00 |
| April | 30. | Alexander J. Stone, M. D., expenses connected with lecture | 817 50.00 |
| April | 30. | Chas. A. Wheaton, M. D., expenses connected with lecture. | 818 50.00 |
| April | 30. | John F. Fulton, M. D., expenses connected with lecture.... | 819 50.00 |
| April | 30. | Robt. A. Wheaton, M. D., expenses connected with lecture. | 820 50.00 |
| April | 30. | Chas. L. Green, M. D., trav. exp. in connec. with lectures. | 821 50.00 |
| April | 30. | C. E. Riggs, M. D., trav. exp. in connection with lectures. | 822 50.00 |
| April | 30. | B. Henry Ogden, M. D., trav. exp. in connec. with lectures. | 823 50.00 |
| April | 30. | E. L. Mann, M. D., trav. exp. in connection with lectures. | 824 50.00 |
| April | 30. | Warren S. Briggs, M. D., trav. exp. in connec. with lectures. | 825 50.00 |
| April | 30. | D. A. Strickler, M. D., trav. exp. in connec. with lectures. | 826 50.00 |
| April | 30. | A. P. Williamson, M. D., trav. exp. in connec. with lectures. | 827 50.00 |
| May | 31. | Medical Department, May pay roll..... | 851 1,569.45 |
| June | 1. | E. B. Johnson, gas, salaries of employes..... | 852 36.80 |
| June | 1. | Wm. H. Yattaw, labor in and about medical college..... | 853 9.00 |
| June | 1. | D. W. Sprague, office supplies, telephone service, light... | 854 4.70 |
| April | 26. | Northwestern Fuel Co., Yough coal..... | 861 17.00 |
| June | 1. | N. W. Tel. Exch. Co., telephone service..... | 873 7.55 |
| May | 29. | Dr. C. M. Bailey, lectures delivered..... | 882 50.00 |
| May | 29. | Dr. L. E. Weeks, lectures delivered..... | 883 50.00 |
| Jan. | 20. | T. S. Metcalf, 100 copies of address..... | 884 5.00 |
| June | 30. | Medical Department, June pay roll..... | 920 1,529.45 |
| June | 8. | Harry W. Jones, professional services in chemical lab'ry | 924 150.00 |
| June | 30. | E. B. Johnson, advertising, sub. to "Bulletin"..... | 929 122.14 |
| June | 30. | Wm. H. Yattaw, cleaning in and about medical college.... | 931 14.87 |
| June | 30. | Tribune Job Printing Co., 8,500 wrappers..... | 934 8.50 |
| June | 27. | Trib. Job Print. Co., 9,000 catalogues, col. dent. hom. & med. | 936 303.00 |
| June | 11. | The Cody Hineline Co., taking down pipe-fittings..... | 942 3.87 |
| June | 1. | Globe Publishing Co., advertising cards..... | 944 6.00 |
| June | 15. | Minn. Hospital College, rent..... | 948 200.00 |
| June | 29. | Chas. Bailey, D. M. D., crating chairs, freight and trucking | 948 27.66 |
| July | 31. | Medical Department, July pay roll..... | 978 435.42 |
| Total..... | | | \$20,854.70 |

EXPERIMENT STATION.

| 1892. | | GENERAL STATION.—CURRENT EXPENSE. | No. voucher. | |
|-----------|---------------------------------------------------------------------|-----------------------------------|--------------|--|
| July 18. | E. H. S. Dart, expenses of Owatonna Experiment Station.. | 20 | \$199.97 | |
| July 27. | Clinton D. Smith, miscellaneous..... | 33 | 29.97 | |
| July 27. | Tribune Job Printing Co., letter heads and memorandums.. | 34 | 8.25 | |
| May 14. | H. Kelley & Co., plumbing work and material..... | 38 | 8.95 | |
| July 16. | Miss E. C. Smith, six and one half days typewriting..... | 40 | 13.00 | |
| July 8. | Jno. A. Schlener & Co., journals and ledgers..... | 42 | 9.80 | |
| Aug. 31. | Experiment Station Gen., August pay roll..... | 52 | 175.00 | |
| July 1. | N. W. Telephone Exch Co., telephone service..... | 81 | 7.00 | |
| Aug. 31. | Clinton D. Smith, freight, postage and express..... | 106 | 32.98 | |
| Aug. 27. | R. L. Polk & Co., books for library..... | 107 | 5.00 | |
| Aug. '72. | Jas. H. Bishop & Co., 15,000 envelopes..... | 120 | 48.75 | |
| July 3. | E. F. Batten, salaries of employes..... | 121 | 17.40 | |
| July 30. | Harrison & Smith, letter heads and envelopes..... | 122 | 44.75 | |
| Aug. 31. | Clinton D. Smith, freight and transportation..... | 126 | 72.81 | |
| Aug. 29. | I. Gutzwiller Jr., 15,000 bulletins each No 17 and 18..... | 128 | 225.00 | |
| Sept. 30. | General Station Exp., September pay roll..... | 136 | 174.99 | |
| Sept. 30. | E. B. Johnson, postage and express..... | 137 | 75.00 | |
| Oct. 1. | N. W. Telephone Exch. Co., telephone service..... | 143 | 19.00 | |
| Sept. 30. | Clinton D. Smith, freight and express..... | 183 | 18.72 | |
| Oct. 15. | D. W. Sprague, petty bills..... | 202 | 4.00 | |
| Oct. 31. | General Station, October pay roll..... | 203 | 174.99 | |
| Nov. 1. | N. W. Telephone Exch. Co., telephone service..... | 224 | 14.00 | |
| Oct. 29. | Clinton D. Smith, postage, office work and supplies..... | 272 | 13.30 | |
| Oct. 29. | Clinton D. Smith, freight and express..... | 273 | 4.30 | |
| Oct. 9. | Mrs. Viola Roberts, labor..... | 288 | 6.06 | |
| Nov. 30. | General Station, November pay roll..... | 302 | 190.05 | |
| Nov. 30. | Clinton D. Smith, stamps, oil and matches..... | 386 | 15.80 | |
| Nov. 30. | Clinton D. Smith, house cleaning, petty supplies..... | 387 | 25.04 | |
| Nov. 21. | E. H. S. Dart, carpenter work, plow, express..... | 390 | 42.54 | |
| Nov. 11. | Hedderly & McCracken, one pair shafts..... | 392 | 5.00 | |
| Dec. 31. | General station, December pay roll..... | 409 | 191.50 | |
| Dec. 1. | N. W. Telephone Exchange Co., telephone service..... | 422 | 7.00 | |
| Dec. 31. | D. W. Sprague, petty bills..... | 427 | 6.75 | |
| Dec. 14. | New England Furniture Co., one cherry desk..... | 473 | 16.00 | |
| Nov. 1. | Held & Gruenhagen, miscellaneous hardware..... | 478 | 6.14 | |
| Dec. 2. | James Congdon, mason work and material..... | 480 | 8.25 | |
| Dec. 16. | Clinton D. Smith, housecleaning, oil, paper, pencils..... | 492 | 15.86 | |
| Dec. 7. | Fairbanks, Morse & Co., pulleys, leather belt, iron collars..... | 494 | 35.94 | |
| Jan. 31. | General station expenses, January pay roll..... | 496 | 186.61 | |
| Jan. 30. | D. W. Sprague, filter paper, flasks..... | 498 | 7.50 | |
| Feb. 1. | N. W. Telephone Exchange Co., telephone service..... | 508 | 14.00 | |
| Jan. 25. | S. M. Emery, expenses of board meeting..... | 522 | 3.46 | |
| Jan. 28. | Clinton D. Smith, journal, postage and supplies..... | 553 | 24.88 | |
| Jan. 28. | Clinton D. Smith, miscellaneous bills..... | 555 | 41.16 | |
| Dec. 31. | W. K. Morrison & Co., miscellaneous hardware..... | 557 | 16.62 | |
| Dec. 31. | Harrison & Smith, 5,000 envelopes..... | 559 | 11.25 | |
| Nov. 18. | Pioneer Fuel Co., Hocking coal..... | 569 | 64.63 | |
| Nov. 1. | Held & Gruenhagen, miscellaneous hardware..... | 563 | 23.17 | |
| Jan. 12. | Pioneer Fuel Co., pine slabs and stove coal..... | 564 | 34.40 | |
| Dec. 29. | Rugg, Fuller & Co., pipe, fittings and gate valves..... | 560 | 24.72 | |
| Feb. 29. | General station expense, February pay roll..... | 576 | 189.75 | |
| March 1. | N. W. Telephone Exchange Co., telephone service..... | 580 | 7.00 | |
| Feb. 29. | D. W. Sprague, flower pots, plants, seeds, labor, book sup'ts..... | 594 | 20.48 | |
| Feb. 27. | Clinton D. Smith, freight, express, petty bills..... | 633 | 10.71 | |
| Feb. 27. | Clinton D. Smith, membership association, pipe, pumping..... | 636 | 42.75 | |
| Jan. 30. | Harrison & Smith, 300 D. S. cheese work, 500 work reports..... | 639 | 3.50 | |
| Jan. 6. | Held & Gruenhagen, shelf brackets, repairs waste pipe..... | 644 | 2.00 | |
| Nov. 24. | Fairbanks, Morse & Co., water tower as per contract..... | 648 | 2,000.00 | |
| Feb. 5. | E. G. Wallof, machine work..... | 650 | 12.70 | |
| Mar. 31. | General station, March pay roll..... | 682 | 1,777.71 | |
| Mar. 31. | D. W. Sprague, hardware, drugs, blacksmithing..... | 688 | 21.93 | |
| Mar. 31. | N. W. Telephone Exchange Co., telephone service..... | 713 | 7.00 | |
| Dec. 18. | W. K. Morrison & Co., hardware..... | 743 | 4.69 | |
| Mar. 29. | Clinton D. Smith, R.R. fare, office work and telegram..... | 746 | 2.13 | |
| Mar. 29. | Clinton D. Smith, stamps, expense, petty expenses..... | 747 | 18.92 | |
| Mar. 29. | Clinton D. Smith, stamps..... | 748 | 10.00 | |
| Feb. 25. | Minneapolis Fuel Co., coal..... | 751 | 312.37 | |
| Mar. 26. | I. Gutzwiller, Jr., 15,000 copies of Bulletins No. 19 and extr..... | 752 | 179.10 | |
| Feb. 26. | C. A. Smith & Co., bill of lumber..... | 760 | 17.92 | |
| April 30. | General station, April pay roll..... | 769 | 213.52 | |
| May 1. | N. W. Telephone Exchange Co., telephone service..... | 791 | 6.50 | |
| April 4. | E. H. S. Dart, miscellaneous supplies..... | 828 | 56.88 | |
| April 26. | Clinton D. Smith, express, drugs, oil, labor..... | 830 | 8.62 | |
| April 2. | R. E. Howell & Co., galvanized pipe and fittings..... | 843 | 11.30 | |
| April 7. | Thos. K. Gray, oils, brushes, varnish, dressing..... | 844 | 4.18 | |
| May 31. | General station, May pay roll..... | 851 | 216.00 | |
| June 1. | D. W. Sprague, 100 No. 1 red pipe trees..... | 854 | 4.00 | |
| June 1. | N. W. Telephone Exchange Co., telephone service..... | 873 | 7.50 | |
| May 28. | Clinton D. Smith, stamps, express, boarding girls..... | 885 | 20.45 | |
| May 12. | Marion Hays, drawing and engraving calf..... | 888 | 15.50 | |
| April 30. | F. A. Fletcher & Co., straps and repairing harness..... | 889 | 8.60 | |
| May 2. | Jas. H. Bishop & Co., 19,500 manilla envelopes..... | 891 | 2.40 | |
| May 12. | J. H. Harper, photo engraving..... | 896 | 21.00 | |

| | | | No. voucher. | |
|------------|-----|-------------------------------------------------------------|--------------|-----------|
| Oct. | 21. | H. Kelly & Co., plumbing repairs..... | 907 | \$19.35 |
| April | 21. | M. A. Scovel, membership fee..... | 904 | 10.00 |
| June | 30. | General station, June pay roll..... | 929 | 216.00 |
| July | 1. | D. W. Sprague, plumbing goods, lumber..... | 921 | 9.09 |
| May | 31. | Harrison & Smith, tags and distribution of acct. books..... | 945 | 12.75 |
| Oct. | 8. | E. G. Clark, inspecting boiler..... | 955 | 5.00 |
| Feb. | 19. | Held & Gruenhagen, hardware..... | 996 | 4.63 |
| June | 30. | I. Gutzwiller, Jr., printing Bulletins..... | 967 | 478.80 |
| July | 1. | N. W. Telephone Exchange Co., telephone service..... | 972 | 7.00 |
| July | 31. | General station, July pay roll..... | 978 | 216.00 |
| Total..... | | | | 87,094.99 |

EXPERIMENT STATION.

DIVISION OF AGRICULTURE—CURRENT EXPENSE.

| | | | | |
|-------|-----|---------------------------------------------------------------------|-----|---------|
| July | 27. | Clinton D. Smith, freight and express..... | 33 | \$21.06 |
| April | 30. | Northrup, Braslan & Goodwin, seeds..... | 35 | 12.65 |
| July | 15. | T. A. Hovestad, nine days surveying..... | 18 | 36.00 |
| July | 25. | Pioneer Fuel Co., coal..... | 40 | 7.43 |
| July | 18. | City Elevator Co., shelled corn and sacks..... | 41 | 23.22 |
| June | 18. | Held & Gruenhagen, bill of hardware..... | 42 | 2.75 |
| July | 14. | Woodburn Farm Fence Co., 42 rods farm fence..... | 44 | 21.00 |
| July | 17. | Stamwitz & Shober, 2,080 pounds feed..... | 46 | 17.68 |
| Aug. | 31. | Division of Agriculture, August pay roll..... | 52 | 414.19 |
| Sept. | 1. | D. W. Sprague, petty bills..... | 73 | 3.25 |
| Aug. | 31. | Clinton D. Smith, miscellaneous expenses..... | 106 | 23.80 |
| Aug. | 26. | Pillsbury & Washburn Co., feed..... | 108 | 73.35 |
| Aug. | 4. | Northwestern Fuel Co., charcoal, etc..... | 110 | 88.98 |
| Aug. | 4. | Northrup, Braslan, Goodwin Co., seeds and plauts..... | 111 | 16.44 |
| July | 27. | Adam Lindig, oats..... | 115 | 50.88 |
| Aug. | 20. | City Elevator Co., shelled corn..... | 116 | 42.68 |
| Aug. | 26. | J. A. Vye, barley..... | 118 | 29.63 |
| Aug. | 4. | Pioneer Fuel Co., fuel..... | 119 | 6.75 |
| Aug. | 8. | Moline, Milburn, Stoddard Co., binding twine..... | 123 | 14.63 |
| Aug. | 29. | W. M. Hays, salaries of employes and freight..... | 124 | 24.25 |
| Aug. | 5. | Alf. Scott, one span mares..... | 125 | 477.12 |
| Sept. | 30. | Division of Agriculture, September pay roll..... | 136 | 442.17 |
| Sept. | 30. | Clinton D. Smith, miscellaneous..... | 183 | 27.58 |
| Sept. | 21. | City Elevator Co., shelled corn..... | 184 | 22.85 |
| Aug. | 28. | C. L. Moffatt, blacksmithing..... | 188 | 22.00 |
| Sept. | 21. | Minnesota Linseed Oil Works, 500 pounds oil meal..... | 190 | 5.75 |
| Sept. | 29. | W. M. Hays, freight, stamps and passenger fare..... | 191 | 20.90 |
| Sept. | 7. | Farm, Stock and Home, advertising..... | 192 | 6.60 |
| Sept. | 11. | Pillsbury-Washburn Co., 2,000 pounds shorts..... | 195 | 16.00 |
| Sept. | 2. | James Powers, oats and wheat..... | 196 | 37.84 |
| Sept. | 5. | N. Forest, salaries of employes..... | 198 | 5.25 |
| Oct. | 31. | Division of Agriculture, October pay roll..... | 203 | 544.00 |
| Oct. | 31. | D. W. Sprague, petty bills..... | 211 | 2.50 |
| Oct. | 29. | Clinton D. Smith, pasteboard boxes and labor on farm..... | 212 | 22.54 |
| Oct. | 29. | Clinton D. Smith, freight and express..... | 273 | 28.98 |
| Oct. | 29. | City Elevator Co., 490 lbs. barley..... | 274 | 15.02 |
| Oct. | 14. | Phelps, Well and Wind Mill Co., labor and material for repairs..... | 276 | 7.60 |
| Oct. | 7. | Nelson, Tenney & Co., bill of lumber..... | 280 | 5.81 |
| Oct. | 31. | N. W. Fuel Co., charcoal..... | 283 | 5.00 |
| Oct. | 31. | De Cou & Co., wire netting..... | 284 | 17.86 |
| Oct. | 16. | Minneapolis Grain and Feed Co., barley..... | 285 | 23.33 |
| Oct. | 22. | Pillsbury-Washburn Co., bran and screenings..... | 286 | 180.10 |
| Oct. | 30. | Wm. M. Liggett, 1 Poland China sow..... | 287 | 20.00 |
| Sept. | 28. | Lindsay Bros., 1 plow..... | 289 | 16.00 |
| Aug. | 31. | W. H. Konantz & Co., 1 set heavy harness and pads..... | 290 | 46.30 |
| Oct. | 12. | Minn. Linseed Oil Works, oil meal..... | 291 | 11.00 |
| Oct. | 28. | J. I. Case Implement Co., 1 scraper..... | 294 | 6.00 |
| Nov. | 30. | Division of Agriculture, November pay roll..... | 302 | 414.41 |
| Nov. | 30. | D. W. Sprague, petty bills..... | 328 | 3.13 |
| Nov. | 23. | Twin City Packing Co., sheep..... | 374 | 44.10 |
| Nov. | 30. | Clinton D. Smith, salaries of employes, telegrams, supplies..... | 386 | 49.44 |
| Nov. | 30. | Clinton D. Smith, 598 bu. barley, freight, etc..... | 387 | 277.53 |
| Nov. | 1. | George Harding, stock..... | 389 | 225.00 |
| Nov. | 11. | S. B. Loye & Sons, blankets, snaps and cockeyes..... | 393 | 6.30 |
| Nov. | 6. | Pioneer Fuel Co., coal..... | 394 | 9.00 |
| Nov. | 10. | Pillsbury-Washburn Co., 3,000 lbs. shorts..... | 395 | 21.00 |
| Nov. | 13. | Northwestern Fuel Co., coal..... | 396 | 9.20 |
| Nov. | 2. | C. L. Moffatt, blacksmithing..... | 397 | 32.00 |
| Oct. | 19. | Minneapolis Grain and Feed Co., corn and barley..... | 410 | 52.51 |
| Oct. | 28. | R. S. Houston, stock..... | 407 | 225.00 |
| Dec. | 21. | Division agriculture, December pay roll..... | 409 | 374.82 |
| Dec. | 19. | Minneapolis Grain and Feed Co., corn and screenings..... | 469 | 67.69 |
| Dec. | 31. | Minn. Linseed Oil Works, screenings, 2 tons..... | 486 | 16.00 |
| Dec. | 21. | Louis Duensing, screenings and sacks..... | 488 | 5.36 |
| Dec. | 28. | City Elevator Company, screenings and cockle..... | 490 | 45.69 |
| Dec. | 28. | W. M. Hays, freight, express and postage..... | 491 | 11.90 |
| Dec. | 16. | Clinton D. Smith, salaries of employes, washing, etc..... | 492 | 23.01 |
| Jan. | 31. | Division of agriculture, January pay roll..... | 496 | 452.51 |

| | No. voucher. | | |
|-----------|------------------------------------------------------------|-----|------------|
| Oct. 21. | Minneapolis Brewing Co., 1,000 lbs. barley | 552 | \$13.55 |
| Jan. 28. | Clinton D. Smith, hardware, R. R. fare, freight | 553 | 4 66 |
| Feb. 29. | Division of agriculture, February pay roll | 576 | 368.68 |
| Feb. 27. | Clinton D. Smith, sundry petty expenses | 633 | 6.02 |
| Feb. 1. | Midway supply Co., hauling coal | 634 | 14.63 |
| Feb. 18. | Pioneer Fuel Co., hock coal | 635 | 60.53 |
| Feb. 27. | Clinton D. Smith, Peter Paulson, labor | 636 | 2.77 |
| Sept. 28. | Pillsbury-Washburn Co., 3,000 lbs. shorts | 640 | 24.00 |
| Feb. 10. | Northwestern Fuel Co., coal | 641 | 29.63 |
| Feb. 18. | A. R. Miller & Sons, 2 kegs nails | 645 | 5.40 |
| Jan. 20. | W. K. Morrison & Co., tools | 647 | 9.75 |
| Feb. 20. | Fred Luckinger, stock | 658 | 20.00 |
| Feb. 12. | W. F. Porter & Co., fittings | 659 | 1.83 |
| Mar. 31. | Division of agriculture, March pay roll | 682 | 282.32 |
| Mar. 29. | Clinton D. Smith, labor, freight and one meal | 746 | 13.30 |
| Mar. 29. | Clinton D. Smith, express and freight | 747 | 14.57 |
| Feb. 25. | C. H. Searle, stock | 761 | 40.00 |
| Mar. 10. | W. S. Cole & Son, stock | 762 | 25.00 |
| April 30. | Division of agriculture, April pay roll | 769 | 284.35 |
| Apr. 26. | Clinton D. Smith, express, labor and sundry petty expenses | 830 | 28.72 |
| Apr. 18. | A. V. Cleland, expert grain cleaner, 18 sieves | 832 | 29.00 |
| Mar. 31. | Moline, Millburn, Stoddard Co., 1 steel harrow | 834 | 12.00 |
| Apr. 21. | E. W. Henderickson, 35 bushels barley | 836 | 17.50 |
| Mar. 31. | C. L. Moffatt, repairs, horse shoes and setting same | 838 | 18 65 |
| Apr. 6. | L. E. Mahan, stock | 839 | 30.00 |
| Apr. 14. | Minneapolis Grain and Feed Co., corn | 842 | 21.43 |
| Sept. 24. | Northrup, Braslan, Goodwin Co., seeds and plants | 847 | 24.98 |
| May 31. | Division of Agriculture, May pay roll | 851 | 385.32 |
| May 28. | Clinton D. Smith, corn, freight and drugs | 885 | 2.60 |
| May 6. | Crane Co., gate valves, fittings and gauge glasses | 897 | 5.32 |
| May 23. | Northrup, Braslan, Goodwin, seeds | 901 | 8.35 |
| June 30. | Division of Agriculture, June pay roll | 920 | 309.79 |
| July 1. | D. W. Sprague, lumber | 921 | 2.08 |
| May 28. | Northrup, Braslan, Goodwin Co., seeds | 949 | 4.32 |
| June 3. | Twin City Packing Co., 2,000 pounds fertilizer | 651 | 12.00 |
| June 1. | Pillsbury-Washburn Co., 3,000 pounds shorts | 953 | 16.50 |
| Oct. 8. | R. G. Clark, inspecting boiler | 955 | 3.00 |
| June 28. | C. L. Moffatt, blacksmithing | 958 | 11.00 |
| June 6. | Warder, Bushnell & Glessner, repairs for machinery | 959 | 9.27 |
| June 15. | Brooks Bros., bill of lumber | 961 | 11.24 |
| July 31. | Division of Agriculture, July pay roll | 978 | 301.71 |
| Total | | | \$7,800.07 |

EXPERIMENT STATION.

| 1892. DIVISION OF CHEMISTRY.—CURRENT EXPENSE. | | | |
|-----------------------------------------------|-------------------------------------------------------------|-----|---------|
| July 27. | Clinton D. Smith, postage, sundry expenses | 33 | \$10.05 |
| June 27. | Tribune Job Printing Co., 1,000 postal cards, printed | 34 | 11.50 |
| June 24. | W. K. Morrison & Co., hardware | 37 | 2.40 |
| June 11. | D. N. Harper, freight and express | 43 | 27.70 |
| Aug. 31. | Division of Chemistry, August pay roll | 52 | 123.33 |
| Aug. 31. | Clinton D. Smith, miscellaneous expenses | 106 | 17.30 |
| May 20. | Northwestern Envelope Co., 1,000 envelopes | 112 | 10.50 |
| July 30. | Henry Troemer, chemical apparatus | 114 | 25.93 |
| July 30. | Harrison & Smith, tags, envelopes, letter circulars | 122 | 8.50 |
| Sept. 30. | Division of Chemistry, September pay roll | 136 | 123.33 |
| Sept. 30. | Clinton D. Smith, freight, express and expense of 2 trips | 183 | 67.52 |
| Mar. 2. | August Rolker & Sons, seeds and plants | 189 | 77.29 |
| Aug. 28. | C. L. Moffatt, repairs for steam pump | 188 | .75 |
| Sept. 29. | W. M. Hayes, express | 191 | 2.22 |
| July 14. | Geo. L. Squier Mfg. Co., 1 No. 2 Pioneer mill, hand power | 197 | 28.00 |
| Sept. 21. | Standard Oil Co., oil | 199 | 45.89 |
| Oct. 31. | Division of Chemistry, October pay roll | 203 | 123.33 |
| Oct. 30. | John A. Schlener & Co., stationery | 207 | 4.00 |
| Oct. 31. | D. W. Sprague, petty bills | 211 | 7.17 |
| Oct. 31. | W. K. Morrison & Co., poultry netting, staples and lub. oil | 252 | 1.05 |
| Oct. 29. | Clinton D. Smith, freight and express | 272 | 18.94 |
| Oct. 29. | Clinton D. Smith, freight and express | 273 | 16.45 |
| July 31. | Henry Troemer, 1 No. 4 balance | 278 | 40.75 |
| Oct. 7. | Jessie B. Milliman, type-writing | 292 | 8.55 |
| July 23. | Noyes Bros. & Cutler, bottles | 293 | 8.76 |
| Nov. 30. | Division of Chemistry, November pay roll | 302 | 135.07 |
| Nov. 30. | Clinton D. Smith, transportation, postage and express | 386 | 17.52 |
| Nov. 30. | Clinton D. Smith, freight and transportation | 387 | 14.60 |
| Oct. 27. | Thos K. Gray, 3 gross bottles | 403 | 10.50 |
| Oct. 31. | Harrison & Smith, circulars, envelopes, tags | 404 | 24.25 |
| July 2. | Elmer & Amend, chemical supplies | 405 | 472.73 |
| Oct. 28. | Elmer & Amend, chemical supplies | 408 | 16.82 |
| Dec. 31. | Division of Chemistry, December pay roll | 409 | 230.17 |
| Dec. 31. | D. W. Sprague, petty bills | 427 | 4.85 |
| Dec. 14. | D. N. Harper, freight and transportation | 468 | 53.33 |
| Oct. 29. | Cooley & Vater, patent pulleys | 481 | 7.68 |
| Nov. 23. | Noyes Bros & Cutler, chemical supplies | 483 | 23.96 |
| Dec. 3. | Thomas K. Gray, 2 gro. bottles and corks | 484 | 7.32 |
| Dec. 16. | Clinton Smith, express, drayage and freight | 492 | 25.65 |

| | | No. voucher. | |
|-------------|---------------------------------------------------------|--------------|-----------|
| Dec. 14. | D. N. Harper, freight, transportation and express | 495 | \$51.85 |
| Jan. 31. | Division Chemistry, January pay roll | 496 | 135.25 |
| Jan. 28. | Clinton D. Smith, freight on beets and corn | 553 | 1.40 |
| Jan. 28. | Clinton D. Smith, express and freight | 555 | .82 |
| Feb. 29. | Division of Chemistry, February pay roll | 576 | 131.33 |
| Feb. 27. | Clinton D. Smith, freight, express, petty expense | 633 | 8.80 |
| Feb. 27. | Clinton D. Smith, freight | 636 | .25 |
| Jan. 28. | C. L. Moffatt, blacksmithing and repairs | 638 | 47.70 |
| Oct. 30. | Kelso Farm, wheat | 646 | 70.50 |
| Mar. 31. | Division of Chemistry, March pay roll | 682 | 136.65 |
| Mar. 29. | Clinton D. Smith, freight | 746 | 1.12 |
| Mar. 29. | Clinton D. Smith, freight | 747 | .50 |
| Nov. 20. | Mrs. Ella J. Henderson, wheat and sacks | 749 | 25.50 |
| Feb. 25. | Minneapolis Fuel Co. coal | 751 | 226.89 |
| Oct. 30. | James Holes, wheat, 25 bu. and sacks | 756 | 22.90 |
| April 30. | Division of Chemistry, April pay roll | 669 | 129.33 |
| April 26. | Clinton D. Smith, labor | 830 | .50 |
| May 31. | Division Chemistry, May pay roll | 851 | 145.00 |
| May 28. | Clinton D. Smith, express, freight | 885 | 2.06 |
| April 30. | Harrison & Smith, reports, chem. lab | 893 | 6.00 |
| May 5. | Lyman, Eliel Drug Co., chemical supplies | 894 | 10.65 |
| June 30. | Division of Chemistry, June pay roll | 920 | 145.00 |
| Mar. 23. | Standard Oil Co., 5 barrels gasoline | 947 | 25.63 |
| Oct. 8. | R. G. Clark, inspecting boiler | 955 | 3.00 |
| June 15. | Brooks Bros., screen doors | 961 | 3.60 |
| July 31. | Division of Chemistry, July pay roll | 978 | 136.54 |
| Total | | | 33,354.43 |

1892

DIVISION OF ENTOMOLOGY—CURRENT EXPENSE.

| | | | |
|-------------|--------------------------------------------------------|-----|------------|
| June 24 | W K. Morrison & Co, hardware | 37 | \$ 3.42 |
| June 18 | Held & Gruenhagen, hardware | 42 | 2.75 |
| Aug. 31 | Division Entomology, August pay roll | 52 | 128.33 |
| Sept. 1 | D. W. Sprague, petty bills | 73 | 4.50 |
| Sept. 1 | Otto Luggler, postage, freight and express | 127 | 15.25 |
| Sept. 30 | Division Entomology, September pay roll | 136 | 128.33 |
| Oct 31 | Division Entomology, October pay roll | 203 | 93.76 |
| Oct. 29 | Clinton D. Smith, book | 272 | 1.32 |
| Oct. 25 | Dr. Otto Luggler, heating stove, books, paper | 279 | 22.90 |
| Nov. 30 | Division Entomology, November pay roll | 302 | 91.65 |
| Nov. 24 | Otto Luggler, freight, express and postage | 391 | 11.85 |
| Oct. 31 | Harrison & Smith, paper ruled for labels | 404 | 2.00 |
| April 18 | Nixon Nozzle Machine Co., apparatus | 406 | 44.00 |
| Dec. 31 | Division Entomology, December pay roll | 409 | 89.70 |
| Dec. 19 | Husby & Skauge, 5 breeding cases | 475 | 55.00 |
| Jan. 31 | Division Entomology, January pay roll | 496 | 97.81 |
| Feb. 29 | Division Entomology, February pay roll | 576 | 93.38 |
| Feb. 22 | H. N. Patterson, labels and check lists | 657 | 5.80 |
| Mar. 31 | Division Entomology, March pay roll | 682 | 98.93 |
| Mar. 25 | Otto Luggler, express, postage, lumber and paint | 759 | 16.39 |
| April 30 | Division Entomology, April pay roll | 769 | 108.33 |
| April 26 | Clinton D. Smith, botanical books, express | 880 | 14.65 |
| April 15 | James M. Thorburn, seeds of grasses and fodder | 835 | 18.00 |
| May 31 | Division Entomology, May pay roll | 851 | 108.33 |
| May 28 | Clinton D. Smith, freight | 885 | .95 |
| June 30 | Division Entomology, June pay roll | 920 | 128.33 |
| July 1 | D. W. Sprague, 5 lbs. London purple | 921 | .75 |
| July 31 | Division of Entomology, July pay roll | 978 | 121.79 |
| Total | | | \$1,508.20 |

DIVISION OF HORTICULTURE—CURRENT EXPENSE.

| | | | |
|-----------|----------------------------------------------------------|-----|---------|
| July 27. | Clinton D. Smith, express and paper | 33 | \$ 4.65 |
| June 18. | Held & Gruenhagen, hardware | 42 | 3.80 |
| Nov. 15. | Northwestern Fuel Co., stove coal | 47 | 100.40 |
| Aug. 31. | Division Horticulture, August pay roll | 52 | 158.09 |
| Sept. 1. | D. W. Sprague, petty bills | 73 | 4.57 |
| Aug. 31. | Clinton D. Smith, miscellaneous expenses | 106 | 22.60 |
| Apr. 16. | Pike Co. Nurseries, seeds and plants | 109 | 20.40 |
| Aug. 14. | Samuel E. Green, freight and express | 113 | 10.82 |
| Sept. 30. | Division Horticulture, September pay roll | 136 | 227.92 |
| Sept. 1. | Lyman-Eliel Drug Co., two gross bottles and corks | 189 | 7.40 |
| Sept. 1. | F. A. Fletcher & Co., breast collar and traces | 193 | 6.50 |
| Sept. 30. | Clinton D. Smith, express | 183 | .65 |
| Oct. 31. | Division Horticulture, October pay roll | 203 | 215.33 |
| Oct 31. | D. W. Sprague, petty bills | 211 | 9.78 |
| Oct. 29. | Clinton D. Smith, freight, postage and express | 272 | 19.70 |
| Oct. 1. | F. G. Gould, 75 carnations | 277 | 6.00 |
| Oct. 28. | Phil Strubler, fruit plants | 281 | 5.00 |
| Nov. 30. | Division Horticulture, November pay roll | 302 | 173.72 |
| Nov. 30. | Clinton D. Smith, salaries of employes and express | 386 | 11.98 |
| Apr. 30. | Iowa Agr'l College, apple, cherry and plum trees | 400 | 20.50 |
| Dec. 31. | Division of Horticulture, December pay roll | 409 | 143.87 |
| Dec. 31. | D. W. Sprague, petty bills | 427 | 4.50 |
| Dec. 28. | Franklin Academy Nursery, seeds | 474 | 11.25 |

| | | No. voucher. | |
|------------|-----|---------------------------------------------------------------------------------|------------|
| Dec. | 28. | Iowa Agricultural College, plants and shrubs..... | 489 10 80 |
| Jan. | 31. | Division of Horticulture, January pay roll..... | 406 147.03 |
| Jan. | 28. | Clinton D. Smith, express, oil, etc..... | 553 4.00 |
| Dec. | 31. | W. K. Morrison & Co., hardware, looks, knobs, butts..... | 557 4.70 |
| Dec. | 18. | Pike County Nurseries, 100 Japan pear stocks, 1 yr..... | 561 6.50 |
| May | 1. | C. G. Patten, plum and pear roots..... | 562 14.25 |
| Nov. | 1. | Held & Gruenhagen, glass, white lead and oil..... | 563 5.05 |
| Nov. | 23. | James Keenholts, work on green house..... | 564 5.00 |
| Feb. | 29. | Division of horticulture, February pay roll..... | 576 149.28 |
| Feb. | 27. | Clinton D. Smith, sundry petty expenses..... | 633 15.18 |
| Feb. | 8. | Minneapolis Elect. and Const. Co., eight gravity batteries and office wire..... | 637 6.62 |
| Jan. | 20. | W. K. Morrison & Co., saw, Grant pruner, shoe knives..... | 647 1.80 |
| April | 9. | A. H. Grills, raspberry vines..... | 655 5.06 |
| Feb. | 12. | W. F. Porter & Co., one cylinder for pump..... | 659 4.00 |
| Mar. | 31. | Division of Horticulture, March pay roll..... | 682 150.06 |
| Mar. | 29. | Clinton D. Smith, drugs, express, freight, stamps..... | 747 22.01 |
| Mar. | 23. | F. S. Hubbard Co., fruit vines..... | 754 5.31 |
| Mar. | 14. | T. V. Munson, fruit vines..... | 757 11.70 |
| April | 30. | Division of Horticulture, April pay roll..... | 769 218.14 |
| Mar. | 26. | W. K. Morrison & Co., Hardware..... | 797 3.17 |
| April | 26. | Division of Horticulture, express, postage, strawberry plants..... | 830 26.92 |
| April | 25. | R. P. Spear & Co., 34 apple trees..... | 831 6.80 |
| April | 23. | Bemis Bros. Bag Co., 104 yards, 45-inch 8-ounce burlap..... | 837 7.28 |
| April | 15. | H. J. Ludlow, six plum trees..... | 840 6.00 |
| April | 11. | Goodyear rubber Co., 55 feet hose..... | 841 9.90 |
| Sept. | 24. | Northrup, Braslan, Goodwin Co., seeds..... | 847 .31 |
| May | 31. | Division of Horticulture, May pay roll..... | 851 237.60 |
| May | 28. | Clinton D. Smith, stamps, express and freight..... | 885 19.26 |
| April | 28. | Experiment Farm, 500 Biga pines..... | 886 6.00 |
| April | 12. | Jas. M. Thorburn, seeds, peas and corn..... | 887 5.10 |
| April | 25. | Stark Bros., plum trees..... | 892 7.36 |
| April | 30. | Harrison & Smith, reports and blanks..... | 893 6.50 |
| April | 28. | Elwanger & Barry, plants..... | 895 23.35 |
| April | 25. | Thomas Meehan & Sons, seeds..... | 899 0.00 |
| April | 5. | J. T. Lovett, berry plants..... | 902 21.25 |
| May | 19. | Coe & Converse, plants and trees..... | 903 7.00 |
| June | 30. | Division of Horticulture, June pay roll..... | 920 218.74 |
| July | 1. | D. W. Sprague, 500 strawberry plants..... | 921 2.50 |
| June | 20. | Ohas. Hawkinson, elm and crab trees..... | 950 6.00 |
| June | 14. | C. G. Patten, plants..... | 952 32.64 |
| June | 20. | C. S. Harrison, trees..... | 954 17.75 |
| May | 23. | M. A. Thayer, plants..... | 956 9.95 |
| June | 23. | O. L. Moffatt, blacksmithing..... | 958 5.00 |
| May | 14. | S. Troger, one each of 30 varieties of potatoes..... | 960 5.00 |
| May | 31. | Iowa Agricultural College, apricots, plum, cherry and apple trees..... | 963 32.65 |
| April | 25. | M. Crawford, plants..... | 965 8.65 |
| Feb. | 19. | Held & Gruenhagen, hardware..... | 966 3.58 |
| July | 31. | Division of Horticulture, July pay roll..... | 878 283.00 |
| Total..... | | | \$2,981.27 |

SPECIAL APPROPRIATIONS.

FOR LIBRARY.

For the fiscal year ending July 31, 1892..... \$5,000.00

| | | DISBURSEMENTS. | No. voucher. | |
|----------------------|-----------------------------------------------------|----------------|--------------|------------|
| August. | McMillan & Co., books..... | 61 | | \$30.32 |
| " | Theode & Co., books..... | 72 | | 44.30 |
| " | Gustav E. Stechert, books..... | 74 | | 131.98 |
| " | Chas. D. Whitall & Co., books..... | 77 | | 37.50 |
| " | Gustav E. Stechert, books..... | 82 | | 10.92 |
| " | Mrs. Chas. Le Vesconte, books..... | 84 | | 10.00 |
| " | Gustav E. Stechert, books..... | 89 | | 38.99 |
| " | B. Westman, books..... | 93 | | 10.00 |
| " | Estes & Lauriat, books..... | 97 | | 25.00 |
| Sept. | Gustav E. Stechert, books..... | 144 | | 70.01 |
| " | Houghton, Mifflin & Co., books..... | 148 | | 25.00 |
| October. | Chas. D. Raymer, books..... | 213 | | 7.05 |
| " | Gustav E. Stechert, books..... | 230 | | 142.61 |
| Nov. | T. C. McClure, books..... | 312 | | 16.00 |
| " | Gustav E. Stechert, books..... | 330 | | 189.78 |
| " | Chas. D. Whitall, books..... | 331 | | 18.10 |
| " | Library Bureau, books..... | 339 | | 5.00 |
| " | D. D. Miller & Co., books..... | 342 | | 68.65 |
| Dec. | W. H. Moore, magazines and papers..... | 432 | | 443.75 |
| " | Gustav E. Stechert, books..... | 433 | | 28.81 |
| " | Gustav E. Stechert, books..... | 437 | | 54.90 |
| " | Gustav E. Stechert, books..... | 438 | | 115.69 |
| " | Little, Brown & Co., books..... | 460 | | 53.02 |
| " | A. B. Seymour, books..... | 485 | | 7.22 |
| January | W. H. Moore, magazines and papers..... | 501 | | 10.10 |
| " | Gustav E. Stechert, books..... | 506 | | 147.07 |
| January | Houghton, Mifflin & Co., books..... | 512 | | 25.00 |
| " | A. S. Clark, books..... | 517 | | 91.00 |
| " | Chas. D. Whitall & Co., books..... | 523 | | 6.10 |
| " | The Century Dictionary Co., 1 vol. Cen. Dic..... | 529 | | 10.00 |
| " | Chas. D. Whitall & Co., books..... | 542 | | 28.60 |
| " | G. Sidney Smith, books..... | 574 | | 24.50 |
| Feb. | Wm. P. Letchworth, books..... | 581 | | 10.00 |
| " | Wm. H. Moore, magazines and papers..... | 591 | | 7.75 |
| " | American Book Company, books..... | 599 | | 5.94 |
| " | W. J. Beal, books..... | 600 | | 22.44 |
| " | American Devon Cattle Club, books..... | 603 | | 10.00 |
| " | American Institute Electrical Engineers, books..... | 619 | | 27.25 |
| " | Gustav E. Stechert, books..... | 621 | | 28.43 |
| " | Hall, Black & Co., books..... | 627 | | 8.25 |
| " | West Publishing Co., books..... | 650 | | 655.00 |
| March | Chas. D. Whitall & Co., books..... | 695 | | 74.91 |
| " | Chas. D. Whitall & Co., books..... | 697 | | 19.76 |
| " | Harrison & Smith, books..... | 700 | | 151.95 |
| " | DeLaw & Co., books..... | 704 | | 22.42 |
| August | Harrison & Smith, binding books..... | 76 | | 112.00 |
| Nov. | Harrison & Smith, binding books..... | 307 | | 88.00 |
| " | Harrison & Smith, binding books..... | 308 | | 39.35 |
| " | Harrison & Smith, binding books..... | 431 | | 60.85 |
| April 16. | Gustav E. Stechert, books..... | 774 | | 141.09 |
| Mar. 23. | Chas. D. Whitall & Co., books..... | 782 | | 26.57 |
| April 18. | American Society of Civil Engineers, books..... | 789 | | 87.75 |
| May 30. | H. P. Judson, books, charts..... | 906 | | 200.73 |
| May 12. | Ginn & Company, books..... | 907 | | 21.17 |
| May 25. | Morris & Whitson, books..... | 108 | | 2.40 |
| May 24. | Chas. D. Whitall & Co., books..... | 909 | | 25.42 |
| April 14. | Gustav E. Stechert, books..... | 910 | | 150.72 |
| Total expended..... | | | | \$3,936.19 |
| Balance undrawn..... | | | | 1,063.81 |
| | | | | \$5,000.00 |

FOR THE GEOLOGICAL SURVEY.

| | |
|-------------------------------------------------|------------|
| For the fiscal year ending July 31, 1892..... | \$7,500.00 |
| Balance undrawn from appropriation of 1888..... | 359.50 |
| Total..... | \$7,859.50 |

DISBURSEMENTS.

| | | No. voucher. | |
|----------------------|------------------------------------------------------------------------------|--------------|------------|
| July 7. | Minneapolis Office and School Furniture Co., 1 antique oak office table..... | 26 | \$28.00 |
| July 22. | N. H. Winchell, stationery supplies and freight..... | 27 | 33.35 |
| July 3. | N. H. Winchell, canvas bags and freight..... | 28 | 16.90 |
| Aug. 17. | N. H. Winchell, miscellaneous..... | 99 | 92.15 |
| Aug. 26. | R. B. Lees, labor and material..... | 100 | 23.25 |
| Sept. 28. | Henry F. Nachtrieb, expense of geology and natural history survey..... | 162 | 470.78 |
| Sept. 24. | N. H. Winchell, salaries of employes, miscellaneous..... | 173 | 400.40 |
| Sept. 11. | N. H. Winchell, pocket vouchers, freight and labor..... | 174 | 206.76 |
| Sept. 11. | N. H. Winchell, salaries of employes..... | 175 | 610.00 |
| Oct. 1. | N. H. Winchell, salaries of employes..... | 176 | 468.00 |
| Sept. 27. | Conway McMillan, salaries of employes, freight..... | 177 | 504.68 |
| Sept. 1. | Clark & McCarthy, books..... | 178 | 14.50 |
| Sept. 28. | N. H. Winchell, miscellaneous expenses..... | 181 | 163.23 |
| Nov. 2. | N. H. Winchell, salaries of officers, freight, postage..... | 265 | 188.82 |
| Oct. 31. | N. H. Winchell, apparatus for petrographic lab..... | 266 | 130.00 |
| Oct. 3. | Henry H. Shufield & Co., 2 bbls. alcohol..... | 267 | 57.90 |
| Sept. 4. | K. F. Koehlers', antiquarium equipment..... | 322 | 32.03 |
| Nov. 28. | N. H. Winchell, salaries of employes, miscellaneous..... | 377 | 173.20 |
| Sept. 28. | N. H. Winchell, freight, express, hardware..... | 378 | 35.37 |
| Dec. 1. | Holms & Johnson, 1 geological case..... | 379 | 22.00 |
| Oct. 13. | James W. Queen & Co., slides..... | 380 | 21.90 |
| Dec. 31. | N. H. Winchell, salaries, postage and express..... | 458 | 214.35 |
| Dec. 31. | Holms & Johnson, 1 case..... | 459 | 14.00 |
| Feb. 27. | N. H. Winchell, salaries, freight, apparatus..... | 625 | 200.81 |
| Jan. 27. | N. H. Winchell, pocket vouchers, salaries..... | 551 | 190.15 |
| Mar. 31. | N. H. Winchell, salaries of employes..... | 626 | 195.75 |
| Mar. 26. | N. H. Winchell, salaries, express and freight..... | 744 | 149.44 |
| April 25. | Conway McMillan, books for library..... | 787 | 129.00 |
| April 27. | N. H. Winchell, salaries, freight, feed..... | 808 | 177.57 |
| June 4. | N. H. Winchell, salaries of employes, freight..... | 911 | 247.98 |
| June 1. | N. H. Winchell, pocket vouchers, salaries..... | 912 | 307.23 |
| May 14. | James Fullerton, skeleton of wolf and deer skin..... | 913 | 21.00 |
| June 1. | R. Friedländer & Son, equipment..... | 914 | 184.00 |
| Mar. 15. | K. F. Koehlers, antiquarium equipment..... | 915 | 130.78 |
| Mar. 26. | Bausch & Lomb Optical Co., apparatus..... | 916 | 63.15 |
| June 27. | N. H. Winchell, pocket vouchers, freight, postage..... | 973 | 93.99 |
| May 19. | Elmer & Amund, chemical supplies..... | 974 | 240.68 |
| June 8. | Henry F. Nachtrieb, sundry petty accounts..... | 975 | 75.59 |
| July 15. | N. H. Winchell, salaries of employes..... | 976 | 385.00 |
| | N. H. Winchell, bill paid by state auditor..... | | 110.50 |
| Total..... | | | \$6,829.61 |
| Balance undrawn..... | | | 1,029.89 |
| | | | \$7,859.50 |

FOR THE SCHOOL OF MINES.

| | |
|-----------------------------------------------------------------------------------------|------------|
| For opening and equipping the school of mines, available on and after Aug. 1, 1891..... | \$6,000.00 |
|-----------------------------------------------------------------------------------------|------------|

DISBURSEMENTS.

| | | | |
|-------------------------|--------------------------------------------------------------|-----|------------|
| Jan. 9. | E. H. Sargent & Co., furnaces, pighead, rolls..... | 513 | \$155.00 |
| Jan. 30. | R. B. Lees, carpenter work and material..... | 514 | 98.82 |
| Dec. 15. | Becker Bros., assay balances and weights..... | 515 | 346.35 |
| Jan. 2. | Elmer & Amund, chemical supplies..... | 516 | 397.88 |
| Feb. 23. | Wm. R. Appleby, freight, express, bottles, brushes..... | 584 | 38.94 |
| Feb. 12. | Mary E. Mackintosh, books..... | 585 | 39.60 |
| Mar. 20. | Peter Christianson, service in assaying department..... | 699 | 40.00 |
| Feb. 9. | E. H. Sargent & Co., chemical apparatus..... | 701 | 33.80 |
| Dec. 23. | Twin City Pavement Co., sidewalks..... | 412 | 223.00 |
| Dec. 28. | The Cody-Hineline Co., plumbing work and material..... | 414 | 26.95 |
| Feb. 19. | W. F. Porter & Co., labor, pipe and fittings..... | 593 | 50.00 |
| Jan. 25. | Littlefield & Moore, setting pipes for 10 furnaces, etc..... | 509 | 47.20 |
| Dec. 31. | R. B. Lees, labor and material in boilerhouse..... | 425 | 48.05 |
| May 30. | Wm. R. Appleby, freight, expense, petty bills..... | 917 | 31.76 |
| Mar. 29. | E. H. Sargent & Co., apparatus..... | 918 | 70.77 |
| Total..... | | | \$1,606.12 |
| Balance unexpended..... | | | \$4,393.88 |
| | | | \$6,000.00 |

**SPECIAL ANNUAL APPROPRIATION FOR SALARIES OF INSTRUCTORS IN
THE SCHOOL OF MINES AND FOR ELECTRICAL ENGINEERING.**

Annual appropriation..... \$4,500.00

DISBURSEMENTS.

| | | |
|--------|---------------------------------|------------|
| Sept. | Geo. D. Shepardson, salary..... | \$150.00 |
| Oct. | Wm. R. Appleby, salary..... | 200.00 |
| Oct. | Geo. D. Shepardson, salary..... | 150.00 |
| Nov. | Wm. R. Appleby, salary..... | 200.00 |
| Nov. | Geo. D. Shepardson, salary..... | 150.00 |
| Dec. | Wm. R. Appleby, salary..... | 200.00 |
| Dec. | Geo. D. Shepardson, salary..... | 150.00 |
| Jan. | Wm. R. Appleby, salary..... | 200.00 |
| Jan. | Geo. D. Shepardson, salary..... | 150.00 |
| Feb. | Wm. R. Appleby, salary..... | 200.00 |
| Feb. | Geo. D. Shepardson, salary..... | 150.00 |
| March. | Wm. R. Appleby, salary..... | 200.00 |
| March. | Geo. D. Shepardson, salary..... | 150.00 |
| April. | Wm. R. Appleby, salary..... | 200.00 |
| April. | Geo. D. Shepardson, salary..... | 150.00 |
| May. | Wm. R. Appleby, salary..... | 200.00 |
| May. | Geo. D. Shepardson, salary..... | 150.00 |
| June. | Wm. R. Appleby, salary..... | 200.00 |
| June. | Geo. D. Shepardson, salary..... | 150.00 |
| | Total..... | \$3,300.00 |
| | Balance unexpended..... | \$1,200.00 |
| | | <hr/> |
| | | \$4,500.00 |

**SUMMARY OF DISBURSEMENTS BY DEPARTMENTS FOR THE FISCAL YEAR
ENDING JULY 31, 1892.**

| DEPARTMENTS. | From current expense. | Special appro- priation. | Totals. |
|--------------------------------------------------|--------------------------|-----------------------------|--------------|
| General University..... | \$15,713.22 | | \$15,713.22 |
| College of Science, Literature and the Arts..... | 63,931.00 | \$6,043.77 | 74,974.77 |
| School of Agriculture..... | 21,866.82 | 298.76 | 22,165.58 |
| Veterinary Department..... | 5,998.43 | 86.81 | 6,085.24 |
| Military Tactics..... | 984.75 | | 984.75 |
| Mechanic Arts..... | 16,286.38 | 1,779.48 | 18,065.86 |
| Geological Survey..... | 4,571.56 | 6,839.61 | 11,401.17 |
| Department of Law..... | 6,587.87 | 716.27 | 7,284.14 |
| Department of Medicine..... | 20,854.70 | | 20,854.70 |
| Experiment Station— | | | |
| General Station..... | \$7,094.99 | | |
| Division of Agriculture..... | 7,800.07 | | |
| Division of Chemistry..... | 3,354.43 | | |
| Division of Entomology..... | 1,508.20 | | |
| Division of Horticulture..... | 2,981.13 | | |
| | 22,738.02 | 7.22 | 22,746.14 |
| Totals..... | \$184,513.65 | \$15,761.02 | \$200,275.57 |

BUILDING AND EQUIPMENT FUND.

Statement of receipts and disbursements for the fiscal year commencing August 1, 1890 and ending July 31, 1891.

Summary of amounts placed to the credit of the building and equipment fund of the University during the fiscal year ending July 31, 1891.

| | | |
|--------------------------------------------------------|------------|-------------|
| Balance on hand August 1, 1890..... | \$6,372.37 | |
| Appropriation available on and after Aug. 1, 1890..... | 75,000 00 | |
| | | \$81,372.37 |

RECEIPTS.

Amounts received from state treasurer on auditor's warrants:

| | |
|-----------------------------|--------------|
| June expense list..... | *\$12,157.05 |
| July expense list..... | 5,493.60 |
| August expense list..... | 5,044.15 |
| September expense list..... | 12,516.29 |
| October expense list..... | 4,560.77 |
| November expense list..... | 18,667.18 |
| December expense list..... | 1,949.88 |
| January expense list..... | 4,429.17 |
| February expense list..... | 1,167.65 |
| March expense list..... | 3,318.54 |
| April expense list..... | 759.43 |
| May expense list..... | 2,714.10 |
| June expense list..... | 710.22 |

| | |
|----------------------|-------------|
| Total..... | \$73,488 03 |
| Balance undrawn..... | 7,884.34 |

\$81,372.37

*Not sufficient funds in treasury to meet June expense list—was paid in August.

DISBURSEMENTS.

| 1891 | COLLEGE OF SCIENCE, LITERATURE AND THE ARTS. | No. voucher. | |
|-----------|--------------------------------------------------------------------------------------------|--------------|----------|
| June 19. | Buffalo Dental Mfg. Co., 3 water heaters..... | 1,012 | \$35.10 |
| June 27. | F. A. Fisher & Co., lab. and material to construct phys. lab. | 1,015 | 8,000.00 |
| May 19. | V. Fric, equipment for department Biology..... | 1,016 | 403.41 |
| June 24. | Haxton Steam Heating Co., heat, chem. and phys. labora. | 1,017 | 3,000.00 |
| May 20. | James W. Queen & Co., supplies for chem. laboratory..... | 1,018 | 212.30 |
| May 30. | Morris & Wilson, equip. Biolog. laboratory..... | 1,019 | 13.58 |
| June 24. | Alex. A. Bates, labor around Pillsbury Hall..... | 1,020 | 19.80 |
| June 24. | John Beckman, 108 loads gravel around Pillsbury Hall.... | 1,021 | 41.20 |
| March 26. | W. Oehmke, equipment biology..... | 1,023 | 84.60 |
| June 21. | Geo. L. English, equip. phys. and chemical laboratory.... | 43 | 51.75 |
| Feb. 6. | Mpls. Office and school Furn. Co., equip. Pillsbury Hall.... | 45 | 3,061.42 |
| June 20. | Gustav E. Stechert, equip. department of Botany..... | 46 | 9.94 |
| June 16. | Warmbrum, Quiltz & Co., equip. department Biology..... | 48 | 963.05 |
| June 23. | A. Montadon, equip. department Biology..... | 51 | 279.82 |
| May 9. | James W. Queen & Co., equip. department Physics..... | 95 | 513.80 |
| July 7. | James W. Queen & Co., equip. department Physics..... | 96 | 189.08 |
| Aug. 15. | James W. Queen & Co., equip. department Physics..... | 97 | 244.30 |
| Aug. 1. | Mpls. Gas Light Co., pipe and fittings in phys. & chem. lab. | 98 | 30.85 |
| Aug. 8. | Hensel, Bruckman & Lorbach, equip. for phys. & chem. lab. | 99 | 10.94 |
| Aug. 26. | James A. Dodge, freight and cartage for chem. laboratory | 100 | 18.29 |
| Aug. 22. | Haxton Steam Heat. Co., heat. appar'ts in chem. phys. lab. | 101 | 1,831.82 |
| Aug. 26. | Noyes Bros. & Cutler, chemical supplies..... | 102 | 15.82 |
| July 14. | Whitall, Tatum & Co., chemical supplies..... | 103 | 398.16 |
| Sept. 1. | Fred S. Jones, freight, cartage and supplies..... | 104 | 31.98 |
| July 11. | G. Leuthold, equip. for phys. laboratory..... | 105 | 385.90 |
| July 10. | R. Yung, equip. for department of Biology..... | 106 | 738.29 |
| Aug. 9. | Elmer & Amend, chemical supplies..... | 107 | 386.53 |
| Aug. 2. | Herr A. Kräss, equip. for department of Phys..... | 108 | 91.12 |
| July 22. | Warmbrum Quiltz & Co., equip. for department of Phys.... | 109 | 159.47 |
| Sept. 25. | W. S. Nott Company, hose, reels and nozzles..... | 172 | 190.00 |
| Sept. 30. | Joseph R. Hoffin & Co., bottles..... | 173 | 13.80 |
| Sept. 13. | Walter Orhmke, equipment for department Biology..... | 174 | 118.02 |
| Sept. 5. | Bullock & Crenshaw, chemical supplies..... | 175 | 16.35 |
| Sept. 2. | Elmer & Amend, equipment for department of Botany.... | 176 | 125.56 |
| Sept. 19. | Elmer & Amend, equipment for department of Chemistry | 177 | 695.70 |
| Sept. 1. | Elmer & Amend, equipment for department of Chemistry | 178 | 1,645.86 |
| Sept. 29. | James W. Queen & Co., apparatus for dept. of Chemistry | 179 | 473.60 |
| Aug. 1. | James W. Queen & Co., apparatus for dept. of Chemistry | 180 | 320.00 |
| Aug. 30. | Edward O. Cauvett, sewer and soil pipe..... | 181 | 131.10 |
| Aug. 16. | Littlefield & Moore, galvanized iron piping in chemical and physical laboratory attic..... | 182 | 130.00 |

| | | No. voucher. | | |
|-------|-----|--------------------------------------------------------------------------------------------------|------|-----------|
| Sept. | 19. | Rand, McNally & Co., equipment for department of Mineralogy and Geology..... | 183 | \$11.70 |
| Sept. | 13. | W. H. Wahnsley, equipment for department of Chemistry..... | 184 | 96.90 |
| Sept. | 25. | James A. Dodge, labor in and around chemical laboratory..... | 185 | 110.69 |
| Sept. | 26. | James A. Dodge, freight and cartage for chem. laboratory..... | 186 | 27.52 |
| Sept. | 26. | Warner Brothers, hardware in chemical department..... | 187 | 9.05 |
| Sept. | 26. | F. A. Fisher & Co., materials and labor used to construct physical and chemical laboratory..... | 188 | 7,000.00 |
| Sept. | 11. | Lyman-Eitel Drug Co., supplies for physical laboratory..... | 189 | 12.75 |
| Sept. | 29. | E. B. Johnson, freight on equipment..... | 190 | 600.07 |
| Sept. | 1. | Warner Bros., hardware supplies for chemical laboratory..... | 191 | 101.15 |
| Sept. | 26. | Minneapolis Office and School Furniture Co., 1 cabinet in department of Biology..... | 193 | 100.00 |
| Sept. | 1. | Elmer & Amend, equipment in physical laboratory..... | 194 | 85.00 |
| Aug. | 29. | Westinghouse, Church, Kerr & Co., equipment in physical laboratory..... | 195 | 250.00 |
| Sept. | 13. | North Star Boiler Works, equipment in chemical laboratory..... | 196 | 26.55 |
| Aug. | 18. | Gustav E. Stechert, equipment for chemical laboratory..... | 197 | 110.92 |
| Oct. | 31. | Elmer & Amend, equipment for chemical laboratory..... | 280 | 223.87 |
| Aug. | 28. | James W. Queen & Co., equipment for physical laboratory..... | 281 | 94.00 |
| Sept. | 13. | North Star Boiler Works, tank for chemical laboratory..... | 282 | 26.55 |
| Sept. | 25. | Noyes Bros. & Cutler, equipment for department of Mineralogy and geology..... | 283 | 11.53 |
| Oct. | 20. | F. A. Fisher & Co., on contract for b'ld'g chem. laboratory..... | 284 | 2,371.03 |
| Oct. | 1. | Edward C. Cauvett, plumbing Pillsbury Hall..... | 285 | 40.00 |
| Oct. | 26. | Houghton-Mifflin Co., equipment for dept. of Botany..... | 286 | 25.00 |
| Mar. | 20. | J. P. Gray, equipment for department of Biology..... | 288 | 54.40 |
| Oct. | 18. | Wales & Co., equipment for department of Botany..... | 289 | 11.42 |
| Oct. | 17. | Thos. H. Gardiner, equipment for department of Botany..... | 290 | 13.80 |
| Oct. | 10. | Geo. L. English, specimens for chemical laboratory..... | 291 | 21.50 |
| Sept. | 25. | S. Kixmoller, grading around chem. and phys. laboratory..... | 293 | 54.00 |
| Oct. | 27. | New England Furniture Co., desk in physicians laboratory..... | 294 | 24.75 |
| Oct. | 6. | Whitall, Tatum & Co., equipment chemical laboratory..... | 295 | 24.88 |
| Oct. | 17. | Deacon & Co., equipment department of Botany..... | 296 | 10.50 |
| Oct. | 20. | Elmer & Amend, equipment department of Physics..... | 297 | 31.27 |
| Sept. | 29. | Julius Blen & Co., equipment dept of Geol. and Mineralogy..... | 298 | 50.00 |
| Oct. | 16. | Morris & Wilson, equipment department of Biology..... | 399 | 18.78 |
| Nov. | 1. | Gustav E. Stechert, equipment department of Botany..... | 301 | 69.62 |
| Oct. | 21. | L. S. Buffington, architect's fees..... | 302 | 679.33 |
| Sept. | 16. | Siemens & Halske, equipment..... | 303 | 465.66 |
| Dec. | 1. | L. S. Buffington, services as architect in construction of chemical and physical laboratory..... | 377 | 420.67 |
| Nov. | 12. | Elmer & Amend, equipment for chemical laboratory..... | 380 | 99.45 |
| Nov. | 10. | A. E. Foot, equipment for chemical laboratory..... | 381 | 28.86 |
| Nov. | 14. | Twin City Sidewalk and Paving Co., 422 yards walk..... | 384 | 492.00 |
| Nov. | 30. | H. Downs & Son, dirt delivered to University grounds..... | 385 | 180.00 |
| Nov. | 6. | Meyrowitz Brothers, wire covers for department of Botany..... | 386 | 4.50 |
| Nov. | 5. | The Educational Supply Co., equipment for dept of Botany..... | 388 | 40.00 |
| Nov. | 22. | James A. Dodge, freight for chemical laboratory..... | 289 | 48.53 |
| Nov. | 18. | C. P. Willmott & Co., equipment of new laboratory..... | 390 | 17.50 |
| Nov. | 19. | Barnard Bros & Cope, chairs..... | 391 | 97.63 |
| July | 7. | Elisha T. Jenks, racks and brackets..... | 393 | 5.24 |
| Nov. | 25. | F. A. Fisher & Co., labor and material for Pillsbury Hall..... | 396 | 2,139.46 |
| Nov. | 25. | F. A. Fisher & Co., labor and material for chem. laboratory..... | 397 | 10,370.65 |
| Nov. | 25. | E. F. Comstock & Co., grading around chemical laboratory..... | 398 | 1,616.52 |
| Nov. | 21. | Elmer & Amend, equip. for Co. S. L. and A..... | 480 | 48.52 |
| Nov. | 7. | Folds Griffith & Colver, equip. for dept. Botany and Geol..... | 481 | 109.80 |
| Jan. | 2. | C. W. Hall, equip. for dept. Geol. and Mineralogy..... | 482 | 40.98 |
| Dec. | 15. | Frank Heywood & Co., equip. for dept. Geol. and Mineralogy..... | 483 | 10.50 |
| Dec. | 16. | Edward C. Canvet, plumbing..... | 454 | 9.50 |
| Dec. | 31. | Gustav E. Stechert, equip. for Botanical dept..... | 485 | 383.20 |
| Nov. | 1. | Edward O. Canvet, equip. for chem. and phys. laboratory..... | 490 | 162.22 |
| Jan. | 1. | C. S. Wentworth & Co., equip. for chemical laboratory..... | 566 | 42.45 |
| Oct. | 20. | Carl Zells, equip. for physical laboratory..... | 568 | 177.40 |
| Nov. | 24. | Elliott Brothers, equip. for physical laboratory..... | 569 | 177.27 |
| Dec. | 17. | Elmer & Amend, equip. for department of Botany..... | 570 | 105.48 |
| Jan. | 1. | Lockwood, Upton & Co., equip. for physical laboratory..... | 571 | 48.40 |
| Jan. | 10. | F. A. Fisher & Co., build. Pillsbury hall, chem. and phys. laboratory..... | 572 | 247.85 |
| Jan. | 27. | Fred. S. Jones, freight on equip. physical laboratory..... | 573 | 30.82 |
| Feb. | 28. | Gustav E. Stechert, books on Botany, Geol., Eng. literature..... | 636 | 353.00 |
| Feb. | 1. | C. S. Wentworth, equip. phys. and chemical laboratory..... | 637 | 67.84 |
| Nov. | 22. | Eng. Albrecht, equip. of dept. of Botany..... | 638 | 126.17 |
| Feb. | 27. | Fred. S. Jones, equip. for physical laboratory..... | 639 | 5.55 |
| Feb. | 20. | S. H. Chadbourne, equip. for dept. of Biology..... | 640 | 17.25 |
| Jan. | 29. | K. F. Koehlen, equip. for dept. of Biology..... | 641 | 69.84 |
| Mar. | 1. | F. A. Fisher & Co., labor and material for main building..... | 842½ | 309.39 |
| Mar. | 25. | M. Lara & C., equip. dept. biology..... | 693 | 4.67 |
| Mar. | 7. | Morris & Wilson, equip. dept. Biology..... | 695 | 35.00 |
| Mar. | 31. | Gustav E. Stechert, equip. dept. Botany..... | 698 | 43.76 |
| Feb. | 24. | S. H. Chadbourne, equip. dept. Biology..... | 699 | 7.50 |
| Mar. | 7. | Wales & Co., equip. dept. Biology..... | 700 | 5.85 |
| Mar. | 1. | Middlemist & Erie, equip. dept. S. L. and Arts..... | 701 | 2.25 |
| Mar. | 7. | Walter S. Pardee, services as Architect..... | 896 | 103.60 |
| May | 31. | Mpls. Office and School Fire Co., equip. Pillsbury hall and chemical laboratory..... | 897 | 98.40 |

| | | No. voucher. | |
|-------------|-----|-------------------------------------------------------------|-------------|
| May | 20. | Bradstreet, Thurber & Co., equip. for Geological Survey.... | 899 \$16.00 |
| June | 8. | Holm Johnson, equip. for Geological Survey..... | 900 50.00 |
| May | 9. | Warmbrum Quiltz & Co., equip. for dept. Biology..... | 901 214.50 |
| June | 1. | M. Lara & Co., equip. for dept. Biology..... | 980 23.18 |
| Total | | | \$57,327.94 |

SCHOOL OF AGRICULTURE.

| | | | |
|-------------|-----|-----------------------------------------------------------------------------------------|---------------|
| June | 1. | Samuel B. Green, labor..... | 1,013 \$12.37 |
| May | 13. | D. C. Martin, grading about farm school building..... | 1,014 255.34 |
| July | 1. | Samuel B. Green, labor at farm school..... | 1,022 27.60 |
| July | 17. | Samuel B. Green, labor at farm school..... | 1,024 51.75 |
| July | 18. | D. C. Martin, team work at farm school..... | 47 109.53 |
| July | 19. | A. Reesberg, stone work at school of agriculture..... | 50 190.00 |
| July | 19. | Samuel B. Green, labor around grounds..... | 52 78.09 |
| Sept. | 6. | Fairbanks, Morse & Co., tank in school building..... | 192 105.00 |
| Sept. | 2. | W. P. Hemenway, lumber used in school building..... | 287 37.71 |
| Oct. | 27. | Salisbury, Rolph & Co., equipm't for school of agriculture..... | 800 98.25 |
| Oct. | 18. | Globe Furniture Co., desks for school of agriculture..... | 376 350.00 |
| Nov. | 1. | D. C. Martin, excavating..... | 378 198.71 |
| Nov. | 11. | Robert Olson, labor in and about school building..... | 382 21.00 |
| Dec. | 8. | Kilroe Bros., material and labor in laboratory building..... | 383 2,000.00 |
| Nov. | 25. | St. Anthony Furniture Co., tables..... | 383 62.25 |
| Nov. | 26. | Boutelle Bros., furniture for school of agriculture..... | 392 136.55 |
| Oct. | 15. | George Marsh, labor of grading, etc..... | 394 22.00 |
| Nov. | 1. | W. H. Hemenway, bill of lumber..... | 395 390.49 |
| Nov. | 28. | Russell, Boynton & Co., pipe and labor at state farm school..... | 486 44.96 |
| Nov. | 28. | W. F. Porter & Co., equipment for chemical laboratory.... | 488 400.00 |
| Dec. | 26. | Boutell Bros., furniture, etc., at school of agriculture..... | 489 53.50 |
| Dec. | 23. | Tralnor Bros., labor and material for chemical laboratory at school of agriculture..... | 491 600.00 |
| Jan. | 23. | H. Kelly & Co., equipment chemical laboratory..... | 563 500.00 |
| Dec. | 23. | W. F. Porter & Co., heating plant in laboratory building.. | 564 1,087.50 |
| Jan. | 21. | Kilroe Bros., labor and material at laboratory building..... | 565 2,000.00 |
| Dec. | 26. | James Kenholtz, equipment for school of agriculture..... | 567 12.00 |
| April | 1. | W. F. Porter & Co., equipment for school of agriculture..... | 642 139.92 |
| Jan. | 31. | W. F. Porter & Co., heating chemical laboratory..... | 692 362.50 |
| Feb. | 17. | Henry Troemner, equipment chemical laboratory..... | 694 122.98 |
| Mch. | 16. | Kilroe Bros., labor and material chemical laboratory..... | 696 1,500.00 |
| Jan. | 31. | Tralnor Bros., labor and material chemical laboratory.... | 697 1,200.00 |
| Mch. | 1. | Middlemist & Earl, equipment chemical laboratory at school of agriculture..... | 701 34.03 |
| Sept. | 18. | R. Fuess, equipment departm't of Geology and Mineralogy..... | 783 686.28 |
| Feb. | 5. | Elmer & Amend, equipment department of Geology and Mineralogy..... | 784 73.15 |
| May | 7. | Charles R. Aldrich, services as architect..... | 898 279.50 |
| May | 31. | Kilroe Bros., labor and material chemical laboratory..... | 902 1,380.70 |
| May | 1. | H. Kelly & Co., equipment new chemical laboratory..... | 903 575.00 |
| Dec. | 1. | H. Kelly & Co., slab and bowls at school of agriculture.... | 977 50.00 |
| July | 1. | H. Kelly & Co., plumbing, labor and material..... | 978 400.00 |
| June | 26. | N. Larson, equipment for school of agriculture..... | 979 190.95 |
| Total | | | \$15,752.62 |

VETERINARY DEPARTMENT.

| | | | |
|------|-----|------------------------------------------------------------|-----------|
| July | 26. | W. F. Porter & Co., changing boiler in Veterinary dept.... | 49 150.00 |
|------|-----|------------------------------------------------------------|-----------|

LAW DEPARTMENT.

| | | | |
|-------------|-----|-----------------------------------------------------|--------------|
| Mar. | 1. | F. A. Fisher & Co., labor and material..... | 642 1/2 9.60 |
| June | 30. | J. L. Sprague, earth hauled around law library..... | 981 46.08 |
| Total | | | \$55.68 |

EXPERIMENT STATION.

| | | | |
|-------------|-----|------------------------------------------------------------|------------|
| Nov. | 25. | W. P. Hemenway, lumber for hog house..... | 379 15.17 |
| Dec. | 12. | F. G. McMillan, carp'r work on lib'y and greenhouses, etc. | 487 83.70 |
| Oct. | 6. | Nelson, Tenney & Co., lumber..... | 292 102.92 |
| Total | | | \$201.79 |

BUILDING AND EQUIPMENT FUND.

Statement of receipts and disbursements for the year commencing August 1, 1891 and ending July 31, 1892.

Summary of amounts placed to the credit of the building and equipment fund of the University during the fiscal year ending July 31, 1892.

| | | |
|----------------------------------------------------------------------|------------|--------------------|
| Balance on hand August 1, 1891 | \$7,884.34 | |
| Amount of appropriation available on and after March 1, 1892..... | 40,000.00 | |
| Total..... | | \$47,884.34 |

RECEIPTS.

Amounts received from state treasurer on auditor's warrants:

| | | |
|------------------------------------|--------------------|--------------------|
| July expense list..... | \$344.38 | |
| August expense list..... | 7,539.96 | |
| March expense list..... | 16,153.11 | |
| April expense list..... | 7,700.00 | |
| May expense list..... | 1,275.00 | |
| June expense list..... | 9,775.00 | |
| July expense list..... | 1,000.00 | |
| Total..... | \$43,787.45 | |
| Balance on hand July 31, 1892..... | 4,096.89 | |
| | | \$47,884.34 |

DISBURSEMENTS.

GENERAL UNIVERSITY.

| | | |
|-------------------------------------------------------------------------------------|-----|-------------------|
| Aug. 1. Wheaton & Reynolds, cases for zoological department..... | 130 | 1,990.00 |
| COLLEGE SCIENCE, LITERATURE AND ART. | | |
| Aug. 3. A. Ziegler, equipment for department Biology..... | 50 | \$89.13 |
| Nov. 13. James W. Queen & Co., induct coil with vibrat coil and interrupter..... | 51 | 255.25 |
| July 15. Warmbrum, Quilltz & Co., equipment for department Biology..... | 131 | 7.84 |
| July 29. K. F. Koshler, equipment for department Biology..... | 133 | 346.25 |
| July 25. R. Treidländer & Son, equipment for dept. Biology..... | 134 | 1,008.46 |
| Total..... | | \$1,706.93 |

SCHOOL OF AGRICULTURE.

| | | |
|------------------------------------------------------------------------|-----|--------------------|
| Aug. 24. Jos. Congdon, labor and materials on dairy hall..... | 135 | \$4,091.66 |
| Oct. 30. Jos. Congdon, on building dairy hall..... | 661 | 405.50 |
| Sept. 24. Jos. Congdon, second estimate..... | 662 | 3,000.00 |
| Dec. 11. Robinson & Cary, one engine..... | 663 | 575.00 |
| Nov. 25. Archambo & Morse, heating and power plant..... | 664 | 1,375.00 |
| Dec. 2. Joseph Congdon, completion of contract..... | 665 | 4,156.84 |
| Nov. 23. Crockett, Siman and Fitch Bros., 80 sheep..... | 666 | 270.00 |
| Jan. 23. Archambo & Morse, balance on heating contract..... | 667 | 650.00 |
| Dec. 8. W. J. Hawkins, plumbing in dairy hall..... | 668 | 605.00 |
| Jan. 1. W. J. Hawkins, extending hot and cold water pipes..... | 669 | 23.74 |
| Jan. 21. W. P. Hemenway, bill of lumber..... | 670 | 39.06 |
| Nov. 11. Cornish, Burtis & Green Co., equipment for dairy dep't..... | 671 | 345.66 |
| Dec. 26. Robinson & Cary Co., plumbing in dairy..... | 672 | 54.37 |
| Dec. 12. Archamba & Morse, coil in basement of dairy..... | 673 | 20.00 |
| Dec. 21. Chas R. Aldrich, plans and specifications for dairy hall..... | 674 | 754.20 |
| Nov. 30. Creamery Package Mfg. Co., equipment for dairy..... | 675 | 355.36 |
| Dec. 22. Vermont Farm Machine Co., equipment for dairy..... | 676 | 22.88 |
| Total..... | | \$16,744.27 |

LAW DEPARTMENT.

| | | |
|-----------------------------------------------------------------|-----|---------|
| Aug. 12. S. Kixmoller, sodding and laying walk at law bldg..... | 122 | \$86.75 |
|-----------------------------------------------------------------|-----|---------|

MEDICAL DEPARTMENT.

| | | | |
|-------------------|--------------------------------------------------------|-----|--------------------|
| 1892. | | | |
| Oct. 30 | Fagan Brothers, excavating for medical college..... | 677 | \$258.85 |
| Nov. 3 | Reed & Stem, services as architects..... | 678 | 741.65 |
| Jan. 1 | Erick Lund, work and material on medical college..... | 679 | 400.00 |
| Feb. 1 | Erick Lund, work and material second estimate..... | 680 | 570.00 |
| Dec. 1 | Erick Lund, work and material third estimate..... | 681 | 1,530.00 |
| May 2 | Erick Lund, work and material fourth estimate..... | 770 | 7,700.00 |
| June 1 | Erick Lund, work and material fifth estimate..... | 850 | 1,275.00 |
| July 1 | Erick Lund, work and material sixth estimate..... | 919 | 9,975.00 |
| July 15 | E. Kneeland, work on chemical laboratory building..... | 977 | 1,000.00 |
| Total..... | | | \$23,250.50 |

SUMMARY OF BUILDING AND EQUIPMENT ACCOUNT FOR THE YEAR
ENDING JULY 31, 1891.

| | |
|--------------------------------------------------|-------------------|
| College of Science Literature and the Arts | \$57,327.94 |
| School of Agriculture | 15,752.62 |
| Veterinary Department | 150.00 |
| Law Department | 55.68 |
| Experiment Station | 201.79 |
| Total | <hr/> \$73,488.03 |

SUMMARY FOR THE YEAR ENDING JULY 31, 1892.

| | |
|--------------------------------------------------|-------------------|
| General University | \$1,999.00 |
| College of Science Literature and the Arts | 1,706.93 |
| School of Agriculture | 16,744.27 |
| Law Department | 86.75 |
| Medical Department | 23,250.50 |
| Total | <hr/> \$43,787.45 |

REPORT OF EXPERIMENT STATION,

ST. ANTHONY PARK.

To the Board of Regents of the University of Minnesota:

I have the honor to transmit herewith the biennial report of the Experiment Station for the period beginning December 1st, 1890, and ending November 30th, 1892. This report includes the report of the director and the reports of the heads of the different divisions of the station, a tabulated statement of the transactions in live stock and grain raising, with a financial statement showing the receipts and all the expenditures, except the salaries of the members of the staff; all of which is respectfully submitted.

CLINTON D. SMITH, Director.

St. Anthony Park, Minn., Dec. 1, 1892.

ADDITIONS TO EQUIPMENT.

The State of Minnesota with its seven million acres of improved land under cultivation, embracing the wheat fields of the Red River valley on the north, the fruit farms of the Park region and the farms of the diversified crops of the central and southwestern part, and the dairy farms of the southeastern section of the State, presents to the Experiment Station that attempts to aid her in developing her still new industries, a set of questions of so great importance and of such widely varying character that, to answer them at all helpfully, the station must be most thoroughly manned and equipped. The growth of the State the past two years has been marvelous. Agricultural industries that were, at the beginning of this period, still in their infancy, have grown to importance and now demand the attention of all interested in the welfare of the farmer and his prosperity. Prior to the year 1891 the demand for experiments along dairy lines had not made itself manifest; but the high price of dairy goods since then and that increase in the density of population in the southern part of the State which made the starting of creameries over a considerable extent of territory both possible and profitable, gave a strong impetus to the dairy business that has placed it next in rank to wheat raising in value of products exported. Taking into account the home consumption, this industry has risen almost to a level with wheat raising in value of total products. Recognizing the importance of accurate knowl-

edge to the dairy industry at this growing and formative period of its history, the Regents wisely and generously provided for the carrying on of experiments in dairy lines by erecting on the site of the former station building a commodious dairy hall with an equipment including apparatus, for experiments in the handling of milk both for cheese and butter making, as well as the machinery and outfit necessary for giving thorough and complete instruction to the students in agriculture at the school and college, in the latest and best methods of dairy work. The total cost of building and equipment is not far from \$17,000. In the second story of this building are located four offices and a mailing room for the use of the station corps. On the main floor besides the entrance hall, dressing room, wash room and cold storage rooms, there are two rooms 42x30 feet, both abundantly lighted and well ventilated. One of these rooms is used in butter making, the other is equipped for cheese making. The building is heated by steam supplied by a 40-horse power boiler in the basement, which also furnishes power for a 26 H. P. engine used in driving the steam separators, churns and butter workers. All of the shafting in the building is kept below the main floor and the machinery is driven by belts going up through the floor. The light and view of the butter room is thus left unobstructed by shafting or belting, and the danger from loose belts hanging on a revolving shaft is thus entirely obviated. The plumbing of the rooms is so arranged that while the cheese and butter rooms are provided with cold and hot water and with steam at convenient points, the pipes obstruct neither the light nor free passage in any direction across either room. In the basement, besides the engine and fuel rooms and experimental curing rooms, there is a large lecture room into which animals are led for illustration in the breeding classes.

The equipment of the dairy hall for purposes of experiment in dairy work is very complete. The thanks of the station authorities are due the DeLaval Separator Company, of 74 Cortlandt street, New York; P. M. Sharples, of West Chester, Penn.; Davis & Rankin, of Chicago, Ill.; Vermont Farm Machine Company, of Bellows Falls, Vt., and Cornish, Curtis & Greene Company, of St. Paul, Minn., for their generosity in loaning the station the use of the separators which they respectively make or handle, for testing and for use in the factorymen's course at the dairy school.

A herd of cows comprising the best obtainable specimens of Guernseys, Jerseys, Holsteins, Shorthorn and Polled Angus breeds and grades, has been purchased as types for study by the scholars of the agricultural school, and for use in the various experiments heretofore reported and in progress. The milk of these cows is used in instructing the students in butter and cheese making as well as for experimental purposes. A full report of the amount eaten by each individual of this herd, and the amount of milk and butter fat yielded will be reported in a future bulletin. These additions to the equipment of the station make possible experimentation that can not fail to be one of great advantage to the farmers of the State.

At the date of the last biennial report a chemical laboratory was in process of erection. This building has been completed. The chemist reports that the equipment of the laboratory is unusually full and complete

in lines relating to higher organic work, and the sugar producing plants, and for soil work. The chemical laboratory is also used by the School of Agriculture for instruction in agricultural chemistry.

The insufficiency of the water supply has heretofore been a constant source of annoyance to the school and station. At the first session of the dairy school in January, 1892, the well was pumped dry and it became necessary to haul water from the St. Paul city water supply at Merriam Park. At various other times during the winter serious inconvenience was caused by the supply becoming exhausted at critical periods. To remedy this chronic difficulty the well has been deepened during the summer of 1892 from 187 to 226 feet, and the water is now derived from a stratum of St. Peter sandstone lying immediately below a layer of limestone forty feet in thickness. This source seems to be inexhaustible. A tank holding over 1,800 barrels and elevated sixty feet above the ground has been erected at a cost of \$2,000 on the hill west of the dwelling house. The height of this tank is sufficient to throw water to the topmost story of any building on the grounds. A sewer, built to give suitable drainage to the school buildings, serves also as a drain for the chemical laboratory, obviating the necessity of cesspools heretofore used.

CHANGES IN STATION STAFF.

This biennial period has been characterized by a number of changes in the working force of the station. In February, 1891, the resignation of Prof. N. W. McLain, the former director, was accepted, and on the first of the following May the appointment of the present director went into effect. Dr. Olaf Schwartzkopff, veterinarian, on account of the pressing duties occasioned by the inauguration of the college of veterinary medicine of the university, was obliged to withdraw from the station staff early in the summer of 1891. His successor, Dr. Christopher Graham, B. S., M. V. D., was appointed in August, 1892, and began his connection with the station the first day of September, 1892. The connection of Mr. E. F. Batten, the accountant of the station ceased on the first day of June 1891, and his successor, the present secretary of the station staff, Mr. J. A. Vye, whose appointment dates from that time, began his work with the station. On the first day of December, 1891, Prof. D. N. Harper, the chemist, resigned his position here to take up another line of work. He was succeeded by Prof. Harry Snyder, the former assistant in chemistry in the experiment station of the Cornell University at Ithaca, New York. Prof. W. M. Hays, the efficient agriculturist, severed his connection with the station on the first of January, 1892, to accept a position with the North Dakota Agricultural College.

In June of the present year, Prof. T. L. Haecker was appointed assistant in agriculture and placed in charge of the dairy experiments relating to butter making.

The time of the station workers has been divided between experimental work and teaching. The sessions of the farm school begin in October and end in April. During that period a large share of the instruction in all of the branches of practical agriculture, horticulture, veterinary and entomology, is given by the members of the staff. This involves, for some members of the staff, three exercises a day. The preparation for the kind of teaching given in the school is a matter of no small importance. The students are bright, anxious to learn, and thoroughly progressive, and to

give them helpful instruction in the various lines in which they are interested requires careful and accurate preparation of both material for illustration and lectures. On the part, therefore, of the whole station staff but little time can be given during the winter to experimental work. A considerable share of the time of each member of the staff is rightfully taken up in answering questions, either for publication in the great agricultural weeklies or directly to the farmers interested.

To bring the station into more intimate relation with the farmers of the State and to draw the attention and interest of the agricultural communities to our work, the members of the staff have improved their opportunities to address meetings of the farmers whenever invited so to do. Many of the county fairs were visited and practical addresses given. During the summer of 1892 the time of Professor Haecker was occupied in visiting the creameries to give instruction where needed and to call the attention of the people employed in dairy work to the advantages offered by the school, and to the work done at the station. In this connection I must not fail to record the gratitude of the station staff to the railroads who have shown their kindness to the station and their appreciation of our work by granting free transportation to the director and other members of the staff when called to distant parts of the State on experimental work. This aid has been of invaluable service to the station. Our thanks are especially due to the officers of the Great Northern, the Chicago, Milwaukee & St. Paul, the Chicago, Minneapolis, St. Paul & Omaha, the Chicago & Great Western, St. Paul & Duluth, Minneapolis, St. Paul & Sault Ste. Marie, Northern Pacific and the Eastern Minnesota railroads. These railroads have also extended their courtesy to the station by transporting, free of charge, in many cases both to and from the station, the material used in our co-operative experiments when conducted by farmers along their respective lines.

In the spring of 1891, Mr. Chas. A. Pillsbury donated to the station 500 bushels of thoroughly cleaned, well selected superior Scotch fife wheat grading No. 1 hard, for the purpose of undertaking in a broad and comprehensive way an experiment to test the influences of variations of soil and climate on the yield and character of wheat. This wheat was scattered over typical areas in all the different sections of the State. From most of the farmers receiving the seed, reports were returned. The results were published in bulletin No. 23, and go to show that great care in selecting and cleaning seed wheat is rewarded by a larger crop, and that the grade of the wheat is largely determined by the character of the soil and climate of the place where the crop was raised. The thanks of the station are due Mr. Pillsbury for his philanthropy in donating this large amount of wheat.

The station farm comprises about 150 acres of land under cultivation, exclusive of pasture. This entire area is used annually in plot experiments, and in the production of the fodder and grain for the stock. To cultivate this thoroughly and keep it in proper shape for the inspection of visitors requires the employment of a large force of men, the management of which is no small task.

In field experiments during the year 1891, 155 plots have been used; during 1892, 181.

The management of the farm help, the care of these plots and the general execution of the experiments in the agricultural division of the station have been entrusted to Mr. Andrew Boss, the foreman of the farm. Besides skillfully managing the farm hands and the farm work generally, Mr. Boss has observed the progress of the experiments and kept notes concerning the plots and animals in detail, with painstaking fidelity. The director has thus been relieved entirely of the necessity of observing the details of the experiments.

The amount of property belonging to the university placed in the hands of the director has grown to be very large, and to manage it economically and skillfully a large amount of routine business is involved and absorbs a large share of the director's time. The office work, keeping accounts, the stenographic work and duties of secretary to the staff have been most efficiently performed by Mr. J. A. Vye, whose accurate business judgment and good sense have made his services invaluable.

The following bulletins have been issued during the biennial period :

Bulletin No. 13—A treatise on flax culture.

Bulletin No. 14—Swine, feeding for profit. Swine breeding. Sugar beets, their cultivation, the process of manufacture.

Bulletin No. 15—Wheat, a comparison of foreign and native varieties the selection and changing of seed.

Bulletin No. 16—Sheep scab, and how to cure it.

Bulletin No. 17—Migratory locusts in Minnesota in 1891.

Bulletin No. 18—Notes on strawberries and raspberries, 1891. Notes on sand cherries, buffalo berry and Russian mulberry. Evergreens from seed. Summer propagation of hardy plants.

Bulletin No. 19—Dehorning experiment. Cream raising by cold, deep setting. Experiments in cheese making—Incorporating cream into cheese. The Babcock test and churn.

Bulletin No. 20—Fertilizers. Improvement of timothy. Rape in Minnesota. Peas and oats. Field peas.

Bulletin No. 21—I. Sugar beets. II. Sorghum.

Bulletin No. 22—I. Comparison of corn, barley, corn and shorts, barley and shorts, corn, shorts and oil meal, and barley, shorts and oil meal in the ration of growing pigs. II. Corn vs. barley for fattening hogs. III. Corn meal, barley meal and a mixture of barley meal and oil meal compared. IV. Wet vs. dry food.

Bulletin No. 23.—WHEAT. I. Milling and baking tests. II. Co-operative tests with selected seed wheat. III. The frit fly. Preliminary report upon an insect injurious to wheat.

Bulletin No. 24.—Ornamental and timber trees, shrubs and herbaceous plants in Minnesota. Notes on their hardness and desirability.

Bulletin No. 25.—Notes on small fruit in 1892.

The best evidence of the value of the experiments is found in the fact that although the bulletins are issued in editions of 15,000, this number is inadequate to supply our present mailing list and at the same time furnish copies to be sent to new names which are constantly coming in.

The full reports of the heads of the different divisions which are appended and form a part of this report, need but little comment from me. It is the aim of the director and staff to make the station useful to as many of the important industries of the State as our means and equipment will warrant. The wheat raiser receives valuable information in the bulletins

of the entomologist on the means of fighting the locusts and the frit fly, and of the chemist in his work on fertilizers, milling and baking tests and co-operative tests with selected seed wheat. The fruit culturist has in bulletin number 24 a compendium of all the trees which he can with safety plant in his wind break or forestry plantation; and in bulletin 25 and 18 the reports on small fruits, grapes and apples as to their behavior on the station farm, with suggestions as to the best varieties for planting and as to methods of cultivation. The stock raiser is interested in the bulletins on swine feeding for profit; sheep scab, and how to cure it; in the dehorning experiments, and in the comparison of corn and barley alone or combined with other foods in the ration of growing pigs. The dairy division has offered to the farmers but one bulletin, largely treating of the effects of dehorning on quality and quantity of milk, and reporting experiments in butter and cheese making. The general farmer, in addition, will be interested in the treatise on flax culture, and on sugar beets and sorghum. Also in bulletin No. 20, on fertilizers, improvement in timothy and field crops, including rape in Minnesota, peas and oats and field peas.

The reorganization of the veterinary division of the station opens another wide field for profitable investigation. In New York, it is said, that every eighth death in the human family results from tuberculosis, and that this dread disease is taken into the system very often in the milk and flesh of affected animals. It is not believed that tuberculosis is proportionately as frequent in Minnesota, owing to climatic differences, but it still exists, and cases occur with alarming frequency. The communicability of the germs from cows to man through the medium of the milk, is well established, and it therefore becomes of vital importance to investigate the new means of diagnosis, like tuberculine, and then, if that is found satisfactory, test the question of the frequency of the disease among cattle in the State. Among horses there also exists a disease communicable to man, yet very difficult to diagnose, viz: glanders. Lately a new diagnostic agent has been suggested. The disease is supposed to be common among our horses, but the characteristic lesions are so obscure that certainty of diagnosis is well-nigh impossible.

These are given as but two instances of the kind of work that the veterinarian finds ready at hand as he begins his work. Fortunately, the general health of the animals of the State is most excellent, still occasional unusual outbreaks of contagious or epidemic disease call for the exercise of his skill in combatting them, and offer fields of useful research.

CLINTON D. SMITH, Director.

REPORT OF THE AGRICULTURAL DIVISION.

I. Animal Industry. No apology is needed for the fact that a large share of the time and means of the agricultural division has been expended in experimenting in lines of animal industry. As the State grows older and the adaptability of the land to wheat growing decreases, every farmer will become from necessity more or less a breeder of farm stock. He will find a great variety of foods produced in his own state and will not have to go out of its boundaries to import any by-products wherewith

to supplement his home grown fodder to form a perfect ration. Our experiments in live stock have therefore been directed to obtaining a better knowledge of the feeding stuffs of the State and to encourage their utilization at home and to prevent their exportation in the crude form.

The large number of cross bred pigs on the farm in the spring of 1891 offered the material for somewhat extended experiments in swine feeding. The report of the results of part of these experiments is found in bulletin No. 22. These tests were directed towards finding the value of barley as compared to that of corn in the ration of growing pigs and of fattening hogs. Thirty-four hogs were used in one experiment which led to the conclusion that when both grains were fed to pigs weighing 50 pounds, 100 pounds barley meal was found to produce as much gain as 119.5 pounds corn meal, and that even when mixed with shorts, barley meal was slightly superior to corn, but when the pigs had attained a weight of 125 pounds or more the relative value of the two grains for feeding purposes was reversed and 100 pounds of corn meal and shorts produced as great a gain as 119 pounds of barley meal and shorts mixed in equal proportions. Another experiment on two groups of hogs demonstrated that pigs could distinguish between good and poor barley and that they gained very much faster on the former than on the latter, but that in no case did these fattening hogs make as great gain from a given amount of barley as from a given amount of corn. It was also demonstrated that with young pigs the same feed when fed wet produced a greater gain than when fed dry because the animals would eat more of it, but that the gain per hundred pounds consumed was almost identical in the pens fed wet and those fed dry. Other experiments in pig feeding have been conducted the results of which are not yet reported.

A large amount of digestion work has been performed, the results of which are reported by the chemist.

With sheep, an experiment was conducted in the winter of 1891-2, to test the value of feeding pigeon grass seed, wild buckwheat, various grades of screenings, shrunken wheat, corn and barley, as food for fattening lambs. The results, while not conclusive, tend to show that pigeon grass seed has an appreciable value as a sheep food, though not so great as the poorest wheat screenings. The results of this experiment will be reported in connection with an experiment now under way, partly to test the same question.

A variety of experiments have been performed and are now in progress on the feeding of dairy cattle, the results of which will be reported in a future bulletin. A comparison of the feeding value of a quantity of corn put in the silo and an equal quantity field cured showed that the advantages of the silo in this dry climate where usually the fodder can be cured in the field with but very little rain, are not so great as in moister climates. The whole question of whether silos are to be recommended to the farmers or not has been taken out of the field of chemistry and experiment, and now rests for its decision on another question—Which of the two methods involves the less expense in handling the corn? Other comparisons of grain foods for dairy cattle have been conducted, the results of which go to show that barley compares very favorably with corn in a ration, that bran and oil meal are very profitable, if not indispensable factors in the ration where ensilage is used.

A very careful and complete record of the feed and yield of the dairy herd for the year has been kept, in order that we might study the individuality of the cows and the effect of the lapse of the period of lactation and the proximity to calving, not only upon the total yield of milk and butter fat, but upon the richness of the milk. This account with the cows necessarily cannot be closed until the date of this report. It is being worked up as rapidly as possible and will be ready for publication soon. It cannot fail to be a vast treasure house of information for the dairymen and will give them the ground work for a host of valuable lessons.

Experiments now in progress in animal industry are the comparison of cut and uncut clover in the ration of all kinds of farm stock, to test the question whether it will pay the farmer to cut his hay and mix his grain feed with it; a study with sheep as to the increased expense of fattening the animals out of doors as compared with the same animals in a barn, and whether it is possible in this climate to successfully fatten sheep without barn protection; and finally a comparison of the value of screenings and corn and barley in the ration of fattening lambs and a repetition of the former experiment, comparing the same field area of ensilage and field cured corn.

II. Plot experiments in 1891. Raising field peas for forage and for threshed grain has justly attracted the attention of the progressive stock raisers of the State. Peas offer another source of the protein in the supplementary foods. To test questions relating to quantity of seed per acre, methods of sowing, alone or mixed with oats, shallow or deep, 38 plots were sown to peas in 1891. The results are reported in bulletin 20, and how that although no great advantage seems to lie with either one of the four classes of field peas, improvement ought to be made by selection of plants of more erect habits. The seed may be sown with a shoe drill or plowed under to a depth of three or four inches, using from two to three bushels per acre.

A trial was made of rape as a forage for sheep. The result went to show that it is a valuable fodder for carrying the flock through the fall when the pastures are dried up and feed is short. Care should be exercised in obtaining the seed to get the kind that grows a succulent fodder and not bird seed rape. Experiments were also conducted to test the relative merit of sowing grains alone or mixed, which showed that where wheat and oats were sown together a marked improvement was noted in the quality of both grains though the quantity was not perceptibly increased.

Different methods of sowing oats were tried; sowing broadcast on stubble and working in with cultivators; sowing broadcast and plowing under, and broadcasting on spring plowed ground. Nine plots were used in this experiment, the results of which will appear in connection with similar work of this year in a subsequent bulletin.

Of the experiments of rolling oats after they had attained considerable height, the results seem to show that on over-rich fields, if they be rolled when twelve inches high, the luxuriance of the plant may be somewhat checked, and the oats will stand up better at harvest, and may yield a somewhat larger amount.

Eighteen varieties of corn were tested and various cultural experiments carried on, the results of which await publication.

The results of the experiments in sugar beet raising are reported in bulletin 21. It is shown that beets with a high per cent. of sugar and a high degree of purity can be raised in profitable quantities with reasonable care. The advisability of establishing beet sugar factories does not rest, however, upon this fact, but upon other considerations not within the scope of our experiments.

At Glyndon, Minn., a test of 75 varieties of imported Russian seed wheat was conducted.

III. Plot experiments in 1892. PROF. CLINTON D. SMITH. *Dear Sir:* In accordance with your request I submit the report of plot work done at the Station since December 1, 1891: ANDREW BOSS, Foreman.

Owing to the unusually wet and stormy season, the results of the field experiments are inconclusive and misleading, and at least a part of them should have another trial before being published.

WHEAT. Three experiments were started with wheat in the spring, as follows: I. Early and late seeding. II. A comparison of the broadcast seeder, the hoe and press drills. III. A variety test of sixty-six varieties of Russian wheat.

In the case of early vs. late seeding, four plots six rods long and one rod wide were used, containing in all nine-tenths of one acre. The results of this experiment were unfitted for publication by a severe rain and wind storm at the time of ripening, but are strongly in favor of early seeding.

The comparison of the seeder, hoe drill and press drill is in favor of the press drill. The plot sown with that implement ripening a week earlier than the one sown with the seeder and three days earlier than the one sown with the hoe drill.

The variety test is unfinished but bids fair to be complete, and will doubtless develop some good varieties of wheat. In addition to the above experiments there were eight acres of wheat raised on the farm which yielded 184 bushels, or twenty-three bushels to the acre.

OATS. The experiments with oats were as follows: Early vs. late seeding; light vs. heavy seed; fall vs. spring plowing.

Early vs. late seeding of oats is parallel with experiment No. 1 of wheat with the same general results.

The comparison of the broadcast seeder, the hoe and press drills in oats was performed on a much larger scale than the one in wheat, each plot containing one and one-third acres. The results are again in favor of the press drill as the straw stood up better, filled better and yielded more for the same amount of seed.

The variety tests, light vs. heavy seed, thick vs. thin seeding, and fall vs. spring plowing are not yet finished, but the results will not be very satisfactory owing to the conditions previously mentioned.

There was raised on the farm this season 24 acres of oats which yielded 1,287 bushels, or 53 5-8 bushels per acre.

BARLEY—The experiments with barley were confined to a test of four varieties which with the varieties of oats remain to be threshed when a full report of the results will be made. There was also raised a field of 15 acres of barley yielding 575 bushels, or 38 1-3 bushels per acre.

PEAS AND PEAS AND OATS—Two acres of peas were sown in order to obtain the grain for feeding experiments during the winter, and two more sown broadcast and plowed under three inches deep, divided into equal plots,

and oats drilled in two inches deep in different proportions, the object being to ascertain the most profitable proportion for a feeding ration. The results show that when over one-half bushel of oats per acre was sown with two bushels of peas, the peas were smothered out.

VETCHES—An acre of vetches was sown and cut and cured for hay for the purposes of testing it as a fodder for sheep. One-half acre was sown at the rate of three bushels per acre and the other half acre at the rate of two bushels of seed per acre. The results show that in a wet season at least, two bushels is better than three.

MILLET—Two acres of millet yielding 7,560 pounds were raised and stored in the barn to be used in a feeding experiment against oat hay during the coming winter.

POTATOES—One and one-half acres of potatoes were planted in furrows forty-two inches apart and plowed under fifteen inches apart in the furrow. One-fourth of an acre was drowned out by June frost and the balance of the field yielded 190 bushels.

RAPE—As there has been considerable controversy over rape as a cheap food for fattening lambs, one-half acre was drilled with a Mathew's seed drill in drills 18 inches apart at the rate of two pounds per acre, and one-half acre broadcast and covered with a Breed's Weeder, at the rate of five pounds per acre. The half acre that was drilled was hoed once and was far ahead of that sown broadcast, growing five or six inches higher and so thick that one could hardly walk through it. To test its efficiency for fattening sheep, twenty lambs were purchased and turned into the field of rape, Sept. 21st. The weight of the lambs at the time was 1,170 pounds. They were left in the field till Oct. 27, when they weighed 1,285 pounds. While one test is not enough to determine the value of rape, the result of this one goes to show that its chief value is in producing a cheap growing ration when pasture is short.

FLAX—Experiments are now under way to aid in determining the quantity of seed that should be sown per acre to produce the best fibre; and also some variety tests. One acre of land has been devoted to this purpose during the past year.

SUGAR BEETS—Two acres of land have been devoted to raising sugar beets, on which was raised 36,919 pounds of beets, 10,570 pounds of which are to be used for feed and 26,340 pounds have been shipped to Norfolk, Neb., to be worked into sugar. There was also raised 14,880 pounds of mangel wurzels to be used as feed.

CORN—A field of thirty-eight acres of corn was planted, five acres of which were cut up into ensilage and three acres drowned out. The corn on the remaining thirty acres has been husked and cribbed and amounts to 1,200 bushels by weight with thirty tons of fodder, all of which is still on hand.

A part of the field was used to test the value of ensilage as compared with dry fodder and the feeding experiment in furtherance of this test will be soon put under way. A test of the merits of corn drilled in very thick, over check rowed corn, both for ensilage and dry fodder is also to be finished as soon as the animals can be had to perform the feeding experiment. Eighteen varieties of corn have also been tried and the report will be ready in a few days.

The above report covers all crops raised on the farm except hay, of which there was raised thirty and three-fourths tons of timothy and thirty-eight and one-fourth tons of clover; and all experiments undertaken since Dec. 1st, 1891, excepting the ones with live stock, of which there has been one with sheep, seven with hogs and three with cattle, the reports of which are already in your possession.

CLINTON D. SMITH,

Agriculturist.

DAIRY DIVISION.

ST. ANTHONY PARK, Minn., Dec. 1, 1892.

CLINTON D. SMITH, *Director Minnesota Experiment Station*: In compliance with your directions I submit an outline of work done since the first day of October, 1891. The first half of the month was spent in selecting and shipping to the station a number of dairy cows to be used in connection with the experiment station and dairy school. As these cows were to represent distinctive types and be used for specific purposes, great care was taken in their selection. The cows purchased by me were Tricksey and Champion Sweetbrier 3rd, two registered Guernseys; Pride of Evergreen, a registered Jersey, and Marie, Pottie, Gertie and Beckley, four high grade Jerseys, also Houston a cross-bred Jersey-Guernsey; Rossie, a half-blood Jersey, and the yearling bull, Silver Pogis, registered Jersey. These with others bought within the State constitute the station dairy herd.

For purposes of experimentation and for use as object lessons in the class room, it is desirable to have the animals models of their kind; these must be of a type that will not lay on flesh under high feeding, but respond freely in milk and butter fat. The typical dairy cow is a machine for converting feed stuffs into dairy products, and one that will fail to do this or does not convert all food over and above that needed for the support of the body, into milk, is not the kind of beast needed for our purpose. The degree of success which has attended our efforts in making our selections will appear in the tables of live weights, yield of milk and per cent. of fat. Much of the work done has necessarily been of a preliminary character. On the first of December, 1891, a regular daily record of the herd was begun, each cow's milk is weighed and tested by the Babcock test for per cent. of fat thus affording an opportunity to note the variations in quantity and quality of milk of every cow and to study into the causes which produced them, and also to observe the conformation of the cows, to ascertain which is best suited for dairy purposes.

This line of work has been pursued during the year with great care and with gratifying results. As it would take too much labor to churn the cream of each cow separately to find her butter product, an experiment was made to ascertain the accuracy of the Babcock test in measuring the butter value of milk. For this purpose eight cows were selected, representing four different breeds, each cow's milk was weighed and tested morning and evening for one week and from this test the butter value was computed. The cream of each cow for the week was churned separately and by adding the total amount of butter fat lost in the skim and

butter milk it was found that the amount recovered by the churn was within 2.3 ounces of the total amount indicated by the test; this small difference could easily be accounted for by the mechanical loss in the making, so that, for all practical purposes, the Babcock test is a correct measure of the butter value of milk. In this experiment it was incidentally shown that the time required to do the several churnings and the churnability of the cream from cows of different breeds, as shown by the per cent of fat left in the butter milk, does not depend upon the breed, but that exhaustive churning is dependent upon the proper ripening and temperature of the cream.

During the winter several problems presented themselves for solution, and after the close of the school year general routine work was resumed in the dairy hall and at the same time some experiments were made in creaming and churning to solve, as far as possible, some of these problems. Numerous complaints were made in the agricultural press of cream not churning, and inquiries made as to the cause and remedy, the answer uniformly being "too many strippers in the herd." The term "strippers" has reference to cows well advanced in the period of lactation. To test the correctness of this theory, the cream from cows in the herd that had been in milk from nine to twelve months, and the cream from comparatively fresh cows was similarly treated. It was found that when the proper acidity was developed in the cream there was no material difference in the time required to do the churning.

There were also numerous complaints that by the gravity process there was great loss of fat in the skim milk; several trials were made with the Cooley process, and it was found that often as high as 25 per cent. of the fat was left in the skim milk. and upon further investigation it was ascertained that the milk from strippers was the cause of the heavy loss. Several methods were tried, and it was found that by churning this milk at a high temperature—70 degrees—satisfactory results were obtained.

There are so many conditions which prevent exhaustive churning that at times it is very difficult to discover the cause in cases reported, and in order to study this question more carefully numerous churnings were made with cream under varying conditions, the range of loss being from one-tenth of one per cent. to two and eight-tenths per cent., and in every instance of heavy loss it could have been prevented by observing a few simple rules which will be formulated in a forthcoming bulletin on this subject.

The station herd of dairy cows which is kept for purposes of experimentation in milk and feed stuffs numbered twenty-nine head; of these four have been sold and two have died, leaving twenty-three now in the herd. Three are full registered Guernseys; two are cross-bred Jersey-Guernseys; three are registered Jerseys; one registered Holstein; two grade Holsteins; eight grade Jerseys; two grade Shorthorns and two grade Guernseys. The four sold were Frank, Gran, Lucy and Ray; their performance as dairy cows was not such as would warrant their being retained in the herd, as will appear in the tabulated statement of yield of milk and per cent. of fat. The two that died, Marie and Pottie, were high grade Jerseys of great merit. Nearly all of the cows remaining in the dairy herd are of approved type and do excellent service as dairy animals, yet of these, two or three could be dispensed with, and would leave a herd which would do credit to the school and station.

As the record of the station dairy herd for the year did not close until the first of December, and since it will require about fifteen thousand computations to ascertain the total yield of milk and fat during the year, it will be impossible to furnish the tables in time for this report. They will be the subject of a bulletin to be published at an early day.

All of which is respectfully submitted.

T. L. HAECKER.

HORTICULTURAL DIVISION OF THE EXPERIMENT STATION.

ST. ANTHONY PARK, Minn., Nov. 30, 1892.

PROF. CLINTON D. SMITH, *Director Experiment Station*. Sir: I have the honor to herewith submit the report of the work in the horticultural division, for the biennial period ending Dec. 1st, 1892.

Yours respectfully,

SAMUEL B. GREEN,
Horticulturist.

HORTICULTURAL DIVISION.

Since taking charge of the work of this division it has been my object to keep the work in touch with the thought and work of the most progressive horticulturists, and so far as possible to aid in advancing a helpful, general knowledge of horticulture among the citizens of the State. The one fact that impressed itself most clearly on my mind while attending to my duties is that there are far greater possibilities for horticulture in this State than are generally supposed, and that many of the failures which have attended horticultural efforts heretofore, are due to the blindly following out of methods that, however well they may make for success elsewhere, can not obtain in successful horticulture here. In a report of this nature I can no more than outline in the briefest possible way the most important work undertaken by this division. An important part of my work has been the attention given to the answering of questions on various matters connected with horticulture and forestry, which I have received directly or through the agricultural publications of the State. This work has largely increased since my last report and now requires a considerable part of my time.

PUBLICATIONS.

The publications of this division of the time covered by this report are as follows: Bulletin No. 18, issued in September, 1891, consists of twenty-four pages devoted to a report on small fruits; the raising of coniferous evergreens, seedlings and on the summer propagation of plants. Bulletin No. 24, issued in October, 1892, consists of sixty-four pages and is a report on the behavior of the ornamental and timber trees, shrubs and herbaceous plants offered by the most progressive nurserymen, that have been tried in this State. This bulletin contains a table of hardiness, in which the different plants mentioned are, so far as possible, criticised by reliable observers in various parts of the State. It is designed especially as a guide to planters in this State, and furnishes a satisfactory answer to

the many requests this division has received for information of this character. Bulletin No. 25, issued in December, 1892, consists of a report on varieties of strawberries, raspberries, blackberries, dewberries and grapes, fruited at the station the past year; a report on the preliminary experiment in shading strawberry plants to increase their fruitfulness; on renewing old strawberry beds and on the details of a very successful experiment in spraying of grape vines to prevent downy mildew.

SCHOOL GROUNDS.

The laying out and planting of the grounds about the Farm School has required considerable attention. Since my last report the ground about the laboratory building has been graded and several new drives put in where needed. The main entrance to the Station has been improved by seeding down the boulevards and the appearance of the whole of the grounds greatly improved by the planting out of trees and shrubs along the borders of the drives and about the buildings in accordance with the plan suggested in my last annual report. There have been planted on the school grounds in the past two years 109 deciduous trees, mostly white elm and white maple; 360 coniferous evergreens, embracing seventeen species and varieties; and 170 shrubs and vines, embracing forty-six species and varieties. The typical specimens of these species should be plainly marked with their botanical, scientific and common names, and so treated will add much to the value of the grounds for purposes of instruction and pleasure.

APPLES.

Much interest is manifest throughout the State in the growing of apples. This is largely due to the very general planting of the hardiest, and exercising better care than formerly in their culture, which has resulted in the very heavy crops the past few years. The crop in 1892 was so large that many car loads were shipped out of the State and some growers sold as many as one thousand barrels of number one apples. There can be no doubt in the minds of careful observers but that there is a large amount of land in this State that can be far more profitably devoted to the growing of this fruit than to any other crop.

The experiment orchards at the station are in excellent condition and produced a small amount of very excellent fruit the past season for the first time, but they are not yet old enough to warrant me in drawing conclusions from the results. The number of varieties on trial has been increased by the addition of promising seedlings and Russian, Swedish and North German apples, until now we have about 300 varieties. It is my object to thin out this large list and reduce it to reasonable proportions as soon as may be. As fast as a variety exhibits any serious weakness it is discarded.

The varieties that are doing best aside from the Duchess, which is well and favorably known, are: Lieby, Anissein, Buskovka, Borovinka, Charlomoff and Red Wine.

NEW ORCHARD.

In the fall of 1890 about one acre of woodland on the north slope of the hill at the experiment station was grubbed out and planted to a variety of fruit trees as follows: 16 varieties of Russian cherries; 2 varieties of peaches; 4 varieties of plums; 1 variety of Russian apricot and 139 varie-

ties of apples, in all 360 trees. The advantages of this orchard lie in the northern slope and high altitude. It supplies us with what has been long needed by furnishing us with a favorable trial ground for varieties that only do their best on elevated land.

TOP WORKING APPLES.

The subject of top working somewhat tender varieties of apples on hardy stocks is one that is exciting among orchardists, in this State, much interest, and some results already achieved in this line seem to indicate that by this plan varieties of no greater hardiness than the Wealthy may be grown much farther north than at present seems practicable. One of the best stocks for top working is the Virginia crab, and last spring I planted fifty of them for this purpose. In my report last year I referred to the importance of experimenting with seedlings from one of the best varieties of apples. I have grown the season just past 900 plants from seed of the most hardy desirable known varieties of apples. While this is a promising field for experiment yet with these seedlings we know only the maternal parent and of course the work is made more a matter of chance than it would be did we know both parents. With the object of doing better work, I last spring made hand crosses of the following hardy kinds of apples with the Lieby, using the latter as the mother plant; Duchess of Oldenburgh, Christmas, Good Peasant, Borovinka and Charlamoff. This work may be compared to the systematic, intelligent breeding of domestic animals, and from these crossed seeds I expect much better results than from ordinary seedlings.

SMALL FRUIT.

In bulletins numbered 18 and 24 I have made an extended report of the behavior of the small fruits, so that any farther mention of them would be unnecessary and out of place here, except to add in a general way that among the newer strawberries and grapes especially, there are several varieties that are undoubtedly an improvement on the old kinds. There is much interest taken in this subject by our fruit growers, and the reports bearing on it are widely sought after.

PLUMS.

The outlook for improvement in this fruit is very encouraging. We have now forty-seven named varieties on trial, and are making a specialty of raising seedlings from the best kinds and have now over four thousand plums from which we expect to select at least two hundred promising plants for fruiting. We have fruited seven varieties. The large trees in the orchard have borne regularly very heavy crops of fruit until this year when they blossomed profusely, but the pollen was washed away by heavy rains and the crop was a total failure.

FORESTRY.

In my last biennial report I referred to the planting out of two and one-half acres to forest trees. This plantation has been extended and now embraces about three acres. It is laid out in rows eight rods long and set with the following economic plants: European larch, white ash, black ash, green ash, box elder, wild black cherry, yellow birch, European white birch, canoe birch, American bass wood, European bass wood, five kinds

of timber willow, six kinds of timber poplar, catalpa, butternut, black walnut, soft maple, hard maple, hemlock, red cedar, red pine, Norway spruce, black spruce, Douglas spruce and white cedar. The special value of this plantation is for an object lesson to our students and others in forestry, for which its value is an increasing one. It will also furnish valuable data as to the comparative hardiness, rapidity and habits of growth, and the value for different purposes of newly introduced forest trees.

CONIFEROUS EVERGREENS FROM SEED.

The introduction of coniferous evergreens on our wind-swept prairies is a matter of much interest and importance. I have carried on experiments the past three years in raising seedlings of these trees, and some of the results obtained are of much interest and are reported on at length in bulletin No. 18. These results seem to show the great value of a few simple precautions which, if followed, will enable any careful man to raise these plants successfully.

ROCKY MOUNTAIN EVERGREENS.

After a careful study of these very beautiful and useful evergreens I have commenced raising the following kinds from seed obtained from high altitudes on the eastern slopes of the Rocky Mountains:

Heavy wooded or bull pine (*Pinus ponderosa*); Colorado blue spruce, (*Picea pungens*); Engleman's spruce (*Picea Englemanii*); (*Abies concolor*); Douglas spruce (*Pseudotsuga taxifolia*) and mountain balsam (*Abies sub-Alpina*).

Experiments of minor importance which have been completed or in progress are:

Variety tests with 21 kinds of tomatoes; variety tests with 50 kinds of potatoes; variety tests with 26 kinds of sweet corn; variety tests with 20 kinds of garden peas; experiments in grafting grapes; experiments to demonstrate the effect, if any, of electricity on plant growth when applied to the soil; experiments in shading of strawberry beds to increase the certainty and amount of the crop; experiments with raising sand cherries from seed with the object of producing improved fruit; (In conducting this work over 4,000 seedlings have been raised and I consider the work of great promise), experiments with raspberry, strawberry, grape and gooseberry seedlings, the object being to produce kinds of these fruits that are better adapted to our condition than any we now have. (In conducting this work over 500 seedlings have been raised.)

I have been called upon during the past year to investigate the work of the downy mildew in vineyards around lake Minnetonka, where the treatment I have recommended has given nearly entire immunity from the disease and this at a cost sufficiently small to permit of its being used on a large scale. By request an investigation has also been made into the adaptability for cranberry raising of some large marshes in Otter Tail county.

SAMUEL B. GREEN,
Horticulturist.

CHEMICAL DIVISION.

ST. ANTHONY PARK, MINN., Dec. 1, 1892.

CLINTON D. SMITH, *Director Experiment Station, University of Minnesota*:
The work of the chemical division for the period, December 1, 1890, to December 1, 1892, has been of the following nature:

I. WHEAT.

1. A test of varieties, both foreign and native. 2. Co-operative test with selected seed wheat. 3. Comparative milling and baking tests. 4. The composition of different grades of wheat and the milled products. 5. The composition of the wheat plant in the different stages of its growth. Topics one, two and three have been published in bulletins number 15 and 23 and are the result of the wheat work conducted by Professor Harper. Topics three and four are at present under investigation. The testing of the varieties of wheat has been carried on by the agricultural division during the past year, inasmuch as this work is more agricultural in nature than chemical. The analyses of the milled products (unpublished) show that the wheat germ is a very valuable food product and is richer in nitrogenous compounds than the wheat itself or any of the other products. The good results from selected seed wheat are clearly shown in bulletin No. 23.

II. SUGAR BEETS AND SORGHUM.

During the year 1891 extensive investigations were carried on with sugar beets and the results are published in bulletin No. 21. In all about 400 analyses were made of sugar beets grown in different parts of the State. The analyses were made by Mr. Thompson, assistant in the laboratory. The results show that sugar beets of a high per cent. of sugar and purity can be raised in nearly every part of the State.

In the spring of 1892 about one hundred samples of seed were sent out in order to continue the work of the previous year, and obtain results from another season. For the past three years these investigations have been carried on and the sugar beet has been subjected to the most extreme tests as to climate, section and season. The question is now a financial one. The station has shown that beets with as high a percentage of sugar and purity can be raised in this State as in any State in the Union. Chemical analyses and a laboratory experiment can do nothing further to decide this question. Over two hundred analyses of sugar beets have been made during the present year.

SORGHUM. In bulletin 21 the work that has been done by the station with sorghum is recorded. During the past year this work has been continued, particular attention being paid to the selection of seed from early ripening and thrifty heads. The results of this year's work with beets and sorghum have been completed and await publication.

III. DIGESTION EXPERIMENTS.

A bulletin on the digestibility of some of the typical grains of the State has been submitted. The results show in general what becomes of the food that is fed to pigs and milch cows and the amount required to supply the body with fuel for heat and other general mechanical purposes. In the case of milch cows the amount of food that is returned in the milk is determined. In all of these experiments analyses are made of the food

consumed by the animal as well as the dung, urine and milk. The results also show what becomes of the valuable fertilizer materials that are in the food eaten. A series of digestion experiments is the most laborious work that can be carried on in the laboratory.

In the case of pigs the results show that all of the gains in flesh come from the small amount of food eaten that is in excess of what is required for the mechanical purposes of running the machinery of the body and hence it is economical to feed well.

IV. MILK.

MILK—Complete analyses have been made of individual cow's milks. From January 8th to November 15th of the present year, Mr. John Thompson, assistant in the laboratory, determined the per cent. of fat in both the morning's and evening's milk from each individual cow of the whole herd; quite frequently this work involved more than fifty determinations of fat in one day.

BUTTER—The composition of butter made from individual cow's milk, from sweet cream, sour cream, and the cream from various centrifugal machines, including the extractor product, has been studied mainly during the session of the dairy school in the winter of 1892.

CHEESE—The losses of fat in cheese making were reported in bulletin No. 19 and the results show that milks rich in fat can be made into cheese with no greater loss of fat in the whey than with poorer milks. Analyses have been made of cheese at different stages of their ripening. The relation between the composition of milk and the cheese produced, the development of acid in cheese making, and the digestibility of skim cheese, full cream and cream cheese determined. This work has been done during the present year and awaits publication.

MISCELLANEOUS WORK.

In addition to the work already reported various other lines of work have been carried on. A collection has been made of some of the typical soils of the State, analyses made of the soils of the farm, of fodders used in various feeding experiments, and of samples of milk and of water sent by the farmers of the State to us.

The generous policy of the Board of Regents in the equipment of the new station laboratory with modern and improved apparatus, including power and special rooms for various investigations, has made it possible to accomplish much more than otherwise could have been done. For the special lines of the agricultural work of the State, the chemical laboratory of the Station is well provided.

Very respectfully submitted,
HARRY SNYDER, Chemist.

DIVISION OF ENTOMOLOGY.

At the request of many farmers interested in sheep husbandry, bulletin No. 16 was prepared and issued in April, 1891. It contains an illustrated description of the common scab of sheep. The publication of this bulletin became necessary because sheep husbandry was at that time, and is even now, a new enterprise to most of our farmers, and notwith-

standing the fact that large portions of our State are exceedingly well adapted to it, but little real progress was made. This was mainly owing to the fact that too many animals were kept by individuals who were unable to give them the care so important to success, and also because animals infested with the scab were introduced from other States. No great pains were taken to prevent, by a very careful investigation of the animals, the introduction of this disease. As the scab is easily communicated from animal to animal, the disease once introduced spreads rapidly; moreover, not having a clear understanding of the case, some farmers permitted their healthy sheep to graze with infested ones, and great losses had to follow.

Though the cause of this disease is not a true insect, a mite, in a practical sense the difference is but slight, the bulletin was prepared by the entomologist and not by the veterinarian. The bulletin gives an illustrated description of the scab mites, describes their life history, their method of attacking animals, and gives the different methods employed to destroy them. A large number of remedies were given which had proven successful and that are more or less inexpensive. Kerosene emulsion was only mentioned as a very promising and cheap remedy. Since that time many experiments have been made, both in Minnesota and elsewhere, and it is now a prominent fact that kerosene emulsion is by far the best, safest, cheapest and quickest remedy known against skin insects and scab mites. It has none of the disadvantages of other dips, does not discolor the wool, and presents, moreover, a humane way of treating a diseased domesticated animal. Other skin diseases caused by parasitic insects are equally well and quickly cured by an application of this cheap insecticide. One application to the skin of cattle belonging to the experiment station, which were infested with such external parasites, proved enough to rid the animals from such vermin.

In bulletin No. 17, issued August, 1891, a full account was given of a new invasion of migratory locusts in the Red River valley and adjoining regions. Swarms of these insects were seen on August 4, 1890, passing over Crookston, flying in a southeasterly direction. The gravid females dropped to the ground wherever conditions were favorable and deposited large numbers of eggs. Later inquiries proved that these insects had migrated from the mountainous parts of Manitoba; they had been seen by many eye witnesses crossing the boundary line near Pembina, N. D., and elsewhere. In the last biennial report, page 17, attention was directed to the danger of another locust trouble. The deductions from the observed facts proved only too true, as early in June, 1891, a number of newspapers published complaints that locusts were doing considerable damage in many fields. The infested region included many parts of Polk, Marshall, Kittson and Hubbard counties. At the request of His Excellency, Governor Merriam, and with the permission of the Board of Regents, the entomologist made a number of trips to the infested region, and advised the county commissioners in regard to remedies. These officers were also instructed by the governor to exert all possible energy to fight and reduce the common enemy, and to spend all the necessary funds for this purpose. In the worst infested regions in Polk county, Mr. Kirsh, of Crookston, waged war in a very telling way. But generally speaking less work was done in most parts of the infested region than ought to have been done.

As shown in bulletin No. 17, three distinct species of migratory locusts invaded the Red River valley. Besides the "larger and lesser migratory locusts" farmers had to deal with the "pellucid locust," an insect not observed before in Minnesota.

The bulletin gave in a condensed form descriptions and illustrations of the three species; described the manner in which eggs are deposited; the best method to destroy the enemy, and expressed the fear that the year 1892 would see an alarming increase in the number of locusts, provided natural remedies did not come to our assistance. Owing to the very wet autumn of 1891 and the still wetter spring of 1892, the bulk of the locusts in the Red River valley have been destroyed.

The entomologist would like to be permitted to again call attention to the fact that the State of Minnesota needs some laws to protect the educated farmers against injurious insects raised by the uneducated ones. Locusts and some other injurious insects should be classed with certain contagious diseases, like the small-pox for instance, and similar laws ought to be framed to suppress these insects as such diseases.

While investigating locusts in the suspected localities the attention of the entomologist was directed to the study of a very destructive insect that had found a home in some portions the Red River valley and had caused considerable injury to the crop of wheat, already badly damaged by unfavorable weather and rust. This insect is called the frit fly, from the fact that Swedish farmers call the worthless grain resulting from such injury "frits."

To give timely warning to farmers troubled by this insect a "preliminary report upon an insect injurious to wheat" was published in bulletin No. 23. In this bulletin a partial life history of this insect is given, and a simple method to combat the same. As the insect has to be bred to maturity, it is at present impossible to give the scientific name to this fly. Similar flies have spread destruction near and far, both in Europe and North America, and it is wise to prepare in time to meet this foe.

Considerable attention has been paid to the study of insects injurious to trees planted for wind-breaks, to insects injurious to shade trees, the small fruit, vegetables and other plants, the results of which will be published in a future bulletin. It was intended to pay special attention to cut worms, but the copious rains of spring made any effort in this direction useless, as the cut-worms had been so decimated that but very little injury was caused by them. Yet in some places especially favorable to cut-worms considerable injury was caused. A number of experiments were carried out in these localities, mainly against a cut-worm, very destructive to onions.

Considerable attention was paid to the forest tent-caterpillar which again denuded many fine trees in the vicinity of our lakes. Besides forest trees and shade trees some of the small fruit suffered greatly. At the time of their appearance a number of illustrated articles were prepared by the entomologist. They were published in a number of daily, weekly and agricultural papers.

The last autumn was a very peculiar one on account of the long continued wet weather. This condition caused a number of insects to attempt to produce an additional brood. In most cases this attempt was a failure, but of considerable interest and, moreover, of some value to us. For instance, the last brood of Colorado potato beetles instead of

remaining as usual in the ground were misled by the warm weather and left their wintering quarters. They fled about in vain to find food; only in cases where the potato tubers were left above the ground they succeeded in causing some injury by disfiguring them. But the great majority have perished on account of their mistake in the seasons, and thus potato growers start next spring with only a few of these enemies instead of a large number of them.

During the last two years some time was devoted to bring together a collection of Minnesota insects, both of the injurious and of the beneficial kinds. A collection accessible to all those suffering from losses by the multitude of insects found in our State is a necessity, as remedies can only be recommended with any degree of certainty if the depredators are known and identified. Of course it will take many years to make such a collection fairly complete.

The entomologist was invited to prepare for the Columbian Exhibition as complete a collection of Minnesota insects as it was possible to make. Two large cabinets each with twenty-six drawers have been partly filled and when finished will be exhibited with the state collection in Chicago.

The correspondence with farmers in regard to injurious insects is gradually increasing, and requires a great amount of time, as it is not always best to advise without studying the question most thoroughly. The local newspapers have been of great assistance in securing information about any insect and the proper remedies against it.

The Great Northern, Northern Pacific and the St. Paul, Minneapolis & Omaha railroads have always gladly furnished free transportation to the Entomologist, and deserve thanks, as without their liberality it would have been impossible to visit infested regions as soon as an occasion arose.

Respectfully yours,

OTTO LUGGER, Entomologist.

BOTANY.

During the past two summers the formation of an herbarium, chiefly composed of such plants, as are either beneficial or injurious to the farmer, was the principal work of the botanist. A very good collection of the wild and cultivated grasses and forage plants of Minnesota has been brought together. The most common and injurious weeds are also well represented. Both groups of plants have been collected and preserved in sufficiently large numbers to furnish students of the Agricultural School material for study and dissection. To familiarize the students with the appearance of our native grasses, a majority of them (about 120 species) have been framed and are arranged in the general assembly room where they can always be studied. The remaining species of grasses not yet represented in this collection will be added to it during this winter. Each specimen is labelled both with its common English names and its scientific one. Early in the spring of 1892 the work of growing different species of grasses and forage plants in plots was put in charge of the botanist. The most suitable space for this purpose and the one most accessible to students and visitors seemed to be the little valley beyond the chemical laboratory and consequently one half of it was devoted to this purpose. Owing to the very backward season, and to the large amount of rain, operations could not be commenced as early as would have been best.

About 200 species of grasses and fifty species of other forage plants such as clover, vetches, spurry and others were added, and the majority grew well. It would have been impossible to obtain so many different kinds of seed in time, if Professor T. M. Tracy, of the Mississippi Experiment Station had not kindly donated to the botanist a large amount of valuable seed. Many grasses were from foreign countries, and proved so very promising that, after another season, they may be found of sufficient value to warrant a trial upon a larger scale. These plots are chiefly intended for instruction, not alone to the students of the Agricultural School and College, but also to the numerous visitors that come to the station. Arrangements have been made so that in another year the number of these plots will be largely increased. Of primary importance is a growing collection of all our native grasses, and of a barely secondary one is the trial with foreign species. For this purpose large numbers of seed of our native grasses were collected by the botanist during the past summer. Other plants of the native species have been marked in their native homes and will be transplanted at the proper time.

Considerable correspondence has been had with the botanists in foreign countries, and some of them have promised to aid by sending seeds. Thus many grasses from Norway, Sweden, Germany, Russia, France, South America, Australia and other countries will be received and propagated. If of no value to Minnesota they will be discarded. If promising they will be handed over to the agriculturist for future trial upon a larger scale. At the same time the chemist of the station will ascertain the food value of all the species, so that promising grasses without real value for fodder, can be discarded.

Of all the species of grasses and of other forage plants a large set of specimens has been pressed, so as to be of use in the class room. There can be no doubt that these plot experiments will be of great value, not simply for scientific purposes, but for practical ones as well.

Experience gained last summer has shown that the space selected for this purpose is not the best that might have been chosen, and it will, perhaps, be best to utilize another part of the farm for this purpose. Considerable trouble was caused by different kinds of rusts, mainly due to the poor ventilation in the valley, but as similar diseases were prevailing elsewhere, the choice of locality alone was not wholly to blame.

As the State will have at the Columbian Exhibition a display of its agricultural resources, the authorities in charge of these matters requested the botanist to prepare for this purpose as full a collection as possible. With the permission of the Board of Regents this work has been performed. As a result over 200 species of grasses and forage plants, nicely framed, have been prepared. Also over 300 large bundles of grasses, showing the average size and the appearance of these important plants as found in Minnesota.

Besides the above collection another one was prepared on behalf of the exhibit, showing the work of the station botanists at the Columbian Exhibition. This collection consists of 150 species of native and cultivated grasses. It will be exhibited with others in a special building devoted to agricultural experiment stations.

Yours very respectfully,
OTTO LUGGER.

ST. ANTHONY PARK, Minn., Dec. 1, 1892.

DIRECTOR CLINTON D. SMITH, *Experiment Station*. DEAR SIR:—Below I submit to you a statement of the receipts and expenditures at the Experiment Station, exclusive of salaries paid to officers, as shown on my books for the year beginning December 1st, 1891, and ending November 30th, 1892, inclusive:

| | Receipts. | Expenditures. |
|-------------------|-------------------|--------------------|
| Agriculture..... | \$1,521.76 | \$4,623.44 |
| Horticulture..... | 572.48 | 2,102.48 |
| Chemistry..... | 28.84 | 1,390.77 |
| Entomology..... | | 404.59 |
| Station..... | 62.00 | 4,784.71 |
| Dairy..... | 2,552.74 | 3,655.64 |
| | <u>\$4,737.82</u> | <u>\$16,961.63</u> |

There is in addition to the above a charge of \$10,495.32 against the dairy department, which was expended for building and apparatus.

Respectfully yours,

J. A. VYE, Accountant.