

EIGHTH BIENNIAL REPORT

[No. 19 IN SERIES.]

OF

THE BOARD OF REGENTS

OF THE

UNIVERSITY OF MINNESOTA

TO THE GOVERNOR,

FOR THE

FISCAL YEARS 1893 AND 1894 ENDING JULY 31ST.

*Transmitted to the Legislature at the Twenty-Ninth
(Eighth Biennial) Session, 1895.*

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1895.

ADMINISTRATIVE OFFICERS.

BOARD OF REGENTS.

The HON. STEPHEN MAHONEY, B. A., Minneapolis.	- - - - -	1895
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The State Superintendent of Public Instruction.		
CYRUS NORTHPROP, LL. D., Minneapolis	- - - - -	Ex Officio
The President of the University.		

OFFICERS OF THE BOARD.

The HON. JOHN S. PILLSBURY,	- - - - -	President
The HON. DAVID L. KIEHLE,	- - - - -	Recording Secretary
PRESIDENT CYRUS NORTHPROP,	- - - - -	Corresponding Secretary
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STANDING COMMITTEES.

EXECUTIVE—Regents Pillsbury, Northrop and Liggett.
AGRICULTURE—Regents Liggett, Yale, Owen, Pillsbury and Pendergast.
COURSE OF STUDY—Regents Northrop, Heatwole and Pendergast.
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MEDICAL DEPARTMENT—Regents Mahoney, Heatwole and Nelson.
AUDITING ACCOUNTS—Regents Owen and Pendergast.
SALARIES—Regents Yale, Mahoney and Clark.
LEGISLATIVE—Heatwole, Owen and Yale.

EXECUTIVE OFFICERS.

CYRUS NORTHPROP, LL. D., President.
CHRISTOPHER W. HALL, M. A., Dean of the College of Engineering, Metallurgy and the Mechanic Arts; Assistant Curator of the Museum.
WILLIAM S. PATTEE, LL. D., Dean of the Department of Law.
PERRY H. MILLARD, M. D., Dean of the College of Medicine and Surgery.
ALONZO P. WILLIAMSON, M. D., Dean of the College of Homeopathic Medicine and Surgery.

THE UNIVERSITY OF MINNESOTA,
OFFICE OF THE BOARD OF REGENTS,
December 21, 1894. }

To His Excellency Knute Nelson, 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 year of 1893 and 1894 ending July 31st.

Very Respectfully,

Your obedient servant,

JOHN S. PILLSBURY,

President.

REPORT OF BOARD OF REGENTS
OF THE
UNIVERSITY OF MINNESOTA.

To His Excellency Knute Nelson, Governor of Minnesota:

The organic act incorporating the University of Minnesota provides that the Board of Regents, through their president, shall make a report in detail to the governor, showing the progress, condition and wants of the university, and recording any improvements and experiments made, with their costs and results; the number of professors and students; the amounts of receipts and disbursements, together with the nature, costs and results of all important investigations and experiments and such other matters, including state industrial and economic statistics, as may be deemed important and useful.

The progress and success which have been made in all departments of the University of Minnesota, since our last report, have exceeded the most sanguine expectations of its friends. In fact, the growth of this institution, since its opening in 1870, has been one of much satisfaction, when we consider that the attendance in 1873 was but 202, that being the year that the first commencement exercises were held, at which time two young men graduated; that the institution has steadily developed with a healthy growth in its several departments, until to-day we have an attendance numbering upwards of 2,000 students, being the second state institution in point of attendance and standing in our country. Surely the people of this commonwealth have reason to be grateful for the rapid advancement which has been made during these years, and to feel proud of the position which this institution now occupies among the first educational institutions of our country.

The following is the enrollment of the university from 1873:

1873-74	202
1874-75	237
1875-76	267
1876-77	304

1877-78	371
1878-79	386
1879-80	308
1880-81	271
1881-82	253
1882-83	223
1883-84	288
1884-85	310
1885-86	406
1886-87	412
1887-88	491
1888-89	781
1889-90	1,002
1890-91	1,183
1891-92	1,374
1892-93	1,620
1893-94	1,828
1894-95 (estimated)	2,050

PERMANENT UNIVERSITY FUND.

The permanent university fund is derived from the sale of lands granted by acts of congress for the endowment of the university, and from the sale of minerals found on these lands. These grants are appraised and sold by the state land commissioner on the same terms as the public school lands are sold.

Whole number acres granted under the several acts of congress	186,518
Acres sold to pay old indebtedness of the university	15,411
Acres sold for permanent fund	128,967
	<hr/>
	144,378
Acres remaining unsold	42,120

The amount of permanent funds at interest, on Aug. 31, 1894, was \$1,034,067.05. It is expected that this fund will be increased to about \$1,500,000 when all the lands shall have been sold.

GENERAL UNIVERSITY FUND.

The general university fund is derived from the interest on the permanent university fund, from appropriations made by acts of congress through the so-called Hatch and Morrill bills, together with appropriations made by the state legislature, and fees from the law and medical departments. This fund is applied for the payment only of the current expenses of the university.

A statement of receipts and disbursements under current expense for the fiscal years ending July, 1893 and 1894:

EIGHTH BIENNIAL REPORT

RECEIPTS.

	1893.	1894.
Balance on hand Aug. 1, 1892.....	\$19,381.20	\$12,634.41
Appropriation by legislature.....	65,000.00	65,000.00
Interest on university bonds and land contracts....	34,946.33	35,589.58
U. S. government, on account of Morrill bill.....	37,000.00	27,000.00
U. S. government, on account of Hatch bill.....	18,750.00	11,250.00
15-100 of one-mill tax levy.....		50,504.64
Fees	26,092.68	41,828.84
Sales school of agriculture and the experiment station	4,677.22	5,906.55
Insurance	7,854.26	
Sale of salt spring lands.....	8,318.33	3,461.60
Miscellaneous		616.11
	<u>\$222,020.02</u>	<u>\$246,791.73</u>

DISBURSEMENTS.

	1893.	1894.
Salaries of professors and instructors	\$118,607.51	\$135,822.96
Salaries of employes	20,330.90	24,736.03
Fuel and lights	17,036.80	14,326.55
Library	*3,809.69	4,645.12
Stationery and printing	4,366.47	5,062.90
Furniture and apparatus and instruments.....	4,441.16	6,864.40
Repairs	1,478.26	4,795.46
Tools and machinery	1,466.16	1,614.40
Postage	801.63	1,113.84
Supplies	6,920.77	10,761.89
Miscellaneous	23,326.78	13,943.90
Balance on hand	12,634.41	8,717.13
Outstanding warrant	6,799.48	14,387.15
	<u>\$222,020.02</u>	<u>\$246,791.73</u>

A statement of the expenses of the several departments of the university for the fiscal years ending July 31, 1893, and July 31, 1894:

	1893.	1894.
General University	\$36,994.58	\$33,121.04
College of Science, Literature and the Arts.....	66,530.39	69,158.35
Military Tactics	740.62	804.54
College of Mining, Metallurgy and the Mechanic Arts	18,881.70	20,608.00
Geological and Natural History Survey.....	7,812.20	11,373.14
College of Law	8,099.67	9,030.11
College of Medicine	25,534.77	23,571.27
School of Agriculture	19,462.04	23,437.71
Experiment Station	18,530.17	27,583.29
	<u>\$202,586.14</u>	<u>\$223,687.45</u>

AMOUNT RECEIVED FROM FEES.

	1893.	1894.
From College of Science, Literature and the Arts...	\$4,895.00	\$6,107.00
From College of Engineering, Metallurgy and the Mechanic Arts	1,711.50	1,744.00
From College of Law	11,042.00	12,480.00
From College of Medicine and Surgery	9,702.40	11,148.13
From College of Dentistry	3,356.00	2,428.00
From College of Homeopathic Medicine and Surgery.	1,320.00	955.00
From College of Pharmacy	715.00	1,407.00
	<u>\$32,741.90</u>	<u>\$36,269.13</u>

*In addition to the above there was expended for the library a special appropriation amounting to \$6,163.11 during 1893 and 1894.

See appendix for treasurer's report in detail.

The following is the staff of professors in the several departments of the university:

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.
 CHARLES N. HEWITT, M. D., Professor of Sanitary Science.
 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.
 JOHN S. CLARK, B. A., Professor of Latin.
 MARIA L. SANFORD, Professor of Rhetoric and Elocution.
 JOHN F. DOWNEY, M. A., C. E., Professor of Mathematics and Astronomy.
 CHARLES W. BENTON, B. A., Professor of French and Semitic.
 O. J. BREDA, Professor of Scandinavian.
 HENRY F. NACHTRIEB, B. S., Professor of Animal Biology.
 GEORGE EDWIN MacLEAN, Ph. D., Professor of English.
 FREDERICK S. JONES, B. A., Professor of Physics.
 CONWAY MacMILLAN, M. A., Professor of Botany.
 WILLISTON S. HOUGH, Ph. M., Professor of Philosophy.
 GEORGE H. MORGAN, Lieut. U. S. A., Professor of Military Science and Tactics.
 DAVID L. KIEHLE, LL. D., Professor of Pedagogy.
 GEORGE B. FRANKFORTER, M. A., Ph. D., Professor of Chemistry.
 MATILDA J. WILKIN, M. L., Assistant Professor of English and German.
 CHARLES F. SIDENER, B. S., Assistant Professor of Chemistry.
 WILLIS M. WEST, M. A., Assistant Professor of History.
 FRANCIS P. LEAVENWORTH, M. A., Assistant Professor of Astronomy.
 ARTHUR EDWIN HAYNES, M. S., M. Ph., Assistant Professor of Mathematics.
 SAMUEL G. SMITH, D. D., Lecturer on Sociology.
 HENRY T. ARDLEY, Instructor in Freehand Drawing.
 KENDRICK C. BABCOCK, B. L., Instructor in English.
 JOSEPH BROWN PIKE, M. A., Instructor in Latin.
 E. EUGENE McDERMOTT, B. S., Instructor in Elocution.
 AMELIA I. BURGESS, Instructor in Freehand Drawing.
 A. D. MEEDS, B. S., Instructor in Chemistry.
 MARIE SCHÖN, Instructor in German.
 EMMA BERTIN, Instructor in French.
 JOHN ZELENY, B. S., Instructor in Physics.
 LOUISE G. KIEHLE, Instructor in Physical Culture.
 JAMES R. ANGELL, M. A., Instructor in Philosophy.
 FREDERICK KLAEBER, Ph. D., Instructor in English.

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	\$4,895.06
Disbursements	66,530.39
1894—Receipts	6,107.00
Disbursements	69,158.35

EIGHTH BIENNIAL REPORT

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.
 JOHN G. MOORE, B. A., Professor of German.
 JOHN F. DOWNEY, M. A., C. E., Professor of Mathematics and Astronomy.
 CHARLES W. BENTON, B. A., Professor of French.
 FREDERICK S. JONES, B. A., Professor of Physics.
 WILLIAM R. HOAG, C. E., Professor of Civil Engineering, in charge of Road and Sanitary Engineering and Geodesy.
 WILLIAM R. APPLEBY, B. A., Professor of Mining and Metallurgy.
 GEORGE D. SHEPARDSON, A. M., M. E., Professor of Electrical Engineering.
 GEORGE B. FRANKFORTER, M. A., Ph. D., Professor of Chemistry.
 CHARLES F. SIDENER, B. S., Assistant Professor of Chemistry.
 HARRY E. SMITH, M. E., Assistant Professor of Mechanical Engineering.
 FRANCIS P. LEAVENWORTH, M. A., Assistant Professor of Astronomy.
 JOEL E. WADSWORTH, C. E., Assistant Professor of Civil Engineering, in charge of Mechanics and Structural Engineering.
 WILLIAM H. KIRSCHNER, B. S., Assistant Professor of Drawing.
 WILLIAM S. PATTEE, LL. B., Lecturer on Mining Law.
 HENRY T. ARDLEY, Principal of the School of Design.
 AMELIA I. BURGESS, Instructor in Freehand Drawing.
 PETER CHRISTIANSON, B. S., Instructor in Assaying.
 JAMES M. TATE, Instructor in Carpentry, Pattern and Foundry Practice.
 JAMES H. GILL, B. M. E., Instructor in Iron Work.
 FREDERICK W. SARDESON, M. S., Instructor in Geology.
 CHARLES P. BERKEY, M. S., Instructor in Mineralogy.
 LAURA MAY DENNISON, Instructor in Freehand Drawing.
 BIRNEY E. TRASK, B. C. E., Scholar in Civil Engineering.
 GEORGE H. MORSE, B. E. E., Scholar in Electrical Engineering.

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	\$1,711.50
Disbursements	18,881.70
1894—Receipts	1,744.00
Disbursements	20,608.00

THE COLLEGE OF AGRICULTURE.

THE FACULTY.

CYRUS NORTHROP, LL. D., President.
 SAMUEL B. GREEN, B. S., Professor of Horticulture.
 OTTO LUGGER, Ph. D., Professor of Entomology and Botany.
 HARRY SNYDER, B. S., Professor of Agricultural Chemistry.
 M. H. REYNOLDS, V. M. D., M. D., Professor of Veterinary Medicine and Surgery.
 THOMAS SHAW, Professor of Animal Husbandry.
 WILLET M. HAYS, B. Agl., Professor of Agriculture.
 HENRY W. BREWSTER, Ph. D., Assistant Professor of Mathematics.
 T. L. HAECCKER, Instructor in Dairying.

The instruction not given by the faculty of the agricultural college is given by the faculty of the college of science, literature and the arts.

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	\$3,328.86
Disbursements	19,462.04
1894—Receipts	3,575.86
Disbursements	23,437.71

THE COLLEGE OF LAW.

THE FACULTY.

- CYRUS NORTHROP, LL. D., President.
 WILLIAM S. PATTEE, LL. D., Dean, Department of Contracts and Equity Jurisprudence.
 CHARLES B. ELLIOTT, LL. B., Ph. D., (Judge of District Court for Hennepin County, Minn.) Department of Corporations and International Law.
 JAMES PAIGE, A. M., LL. M., Department of Domestic Relations, Partnership and Agency.
 EDWIN A. JAGGARD, A. M., LL. B., Department of Torts and Criminal Law.
 A. C. HICKMAN, A. M., LL. B., Department of Pleading and Practice.
 *..... Department of Property.

LECTURERS.

- GEORGE B. YOUNG, LL. B., St. Paul, Minn., (Ex-Associate Justice of the Supreme Court of Minnesota), Conflict of Laws.
 CHARLES A. WILLARD, LL. B., Minneapolis, Minn., Bailments.
 HON. JAMES O. PIERCE, Minneapolis, Minn., (Ex-Judge of the Circuit Court at Memphis, Tenn.), Constitutional Jurisprudence and History.
 HON. C. D. O'BRIEN, St. Paul, Minn., Criminal Procedure.
 CHARLES W. BUNN, LL. B., St. Paul, Minn., Mortgages and Suretyship.
 HON. JOHN DAY SMITH, LL. M., Minneapolis, Minn., American Constitutional Law.
 HON. HIRAM F. STEVENS, St. Paul, Minn., Law of Real Property.
 T. DWIGHT MERWIN, A. B., St. Paul, Minn., Law of Patents.
 HON. W. D. CORNISH, St. Paul, Minn., (Ex-Judge of the District Court for Ramsey County, Minnesota), Insurance.
 HON. ROBERT JAMISON, Minneapolis, Minn., (Judge of the District Court for Hennepin County, Minnesota), Public Corporations.
 ROBERT D. RUSSELL, A. M., Minneapolis, Minn., (Judge of the District Court of Hennepin County, Minnesota), Common Law Pleading and Practice.
 HERBERT R. SPENCER, Duluth, Minn., Admiralty Law

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	\$11,042.00
Disbursements	8,099.67
1894—Receipts	12,480.00
Disbursements	9,030.11

*To be filled.

THE COLLEGE OF MEDICINE AND SURGERY.

THE FACULTY.

- CYRUS NORTHROP, LL. D., President.
 PERRY H. MILLARD, Dean and Professor of the Principles and Practice of Surgery and of Medical Jurisprudence.
 THOMAS G. LEE, B. S., M. D., Professor of Histology, Embryology, Bacteriology and Clinical Microscopy.
 GEORGE A. HENDRICKS, M. S., M. D., Professor of Anatomy.
 RICHARD O. BEARD, M. D., Professor of Physiology.
 CHARLES J. BELL, A. M., Professor of Chemistry.
 H. M. BRACKEN, M. D., 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 the Practice of Medicine.
 J. W. BELL, M. D., Professor of Physical Diagnosis and Clinical Medicine.
 *CHARLES A. WHEATON, M. D., Professor of Clinical Surgery.
 *FREDERICK A. DUNSMOOR, M. D., Professor of Operative and Clinical Surgery.
 *CHARLES L. GREEN, M. D., Professor of Applied Anatomy.
 PARKS RITCHIE, M. D., Professor of Obstetrics.
 *A. B. CATES, A. M., M. D., Clinical Professor of Obstetrics.
 J. CLARK STEWART, B. S., M. D., Professor of Pathology.
 *ALEX. J. STONE, M. D., LL. D., Professor of Diseases of Women.
 *AMOS W. ABBOTT, M. D., Clinical Professor of Disease of Women.
 *A. McLAREN, A. B., M. D., Clinical Professor of Gynecology.
 *JOHN F. FULTON, Ph. D., M. D., Professor of Ophthalmology, Otolaryngology and Hygiene.
 *FRANK ALLPORT, M. D., Clinical Professor of Ophthalmology and Otolaryngology.
 *C. EUGENE RIGGS, A. M., M. D., Professor of Nervous and Mental Diseases.
 *W. A. JONES, M. D., Clinical Professor of the Diseases of the Nervous System.
 *JAMES H. DUNN, M. D., Professor of the Genito-Urinary Organs.
 CHARLES L. WELLS, A. M., M. D., Professor of Diseases of Children.
 *JAMES E. MOORE, M. D., Professor of Orthopædic Surgery.
 *MAX P. VANDERHORCK, M. D., Professor of Diseases of the Skin.
 *W. S. LATON, M. D., Professor of Diseases of the Nose and Throat.
 CHARLES A. ERDMAN, M. D., Demonstrator of Anatomy.
 H. L. STAPLES, M. D., Instructor in Medical and Pharmaceutical Latin.

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	9,702.40
Disbursements	19,150.00
1894—Receipts	9,072.40
Disbursements	20,829.01

*Note.—Sixteen members of the medical faculty receive no compensation.

COLLEGE OF HOMEOPATHIC MEDICINE AND SURGERY.

THE FACULTY.

- CYRUS NORTHROP, LL. D., President.
 ALONZO P. WILLIAMSON, A. M., M. D., Dean, and Professor of Mental and Nervous Diseases.
 WILLIAM E. LEONARD, A. B., M. D., Professor of Materia Medica and Therapeutics.
 GEORGE E. RICKER, A. B., M. D., Professor of Clinical Medicine and Physical Diagnosis.
 ROBERT D. MATCHAN, M. D., Professor of Principles and Practice of Surgery.
 WARREN S. BRIGGS, B. S., M. D., Professor of Clinical and Orthopaedic Surgery.
 B. HARVEY OGDEN, A. M., M. D., Professor of Gynecology.
 EUGENE L. MANN, A. B., M. D., Professor of the Diseases of the Heart and Respiratory Organs.
 DAVID A. STRICKLER, M. D., Professor of Otology, Ophthalmology and Rhinology.
 GEORGE E. CLARK, Ph. B., M. D., Professor of Theory and Practice of Medicine.
 ASA WILCOX, M. D., Professor of Obstetrics.
 HENRY H. LEAVITT, A. M., M. D., Professor of Paedology.
 LINCOLN E. PENNY, M. D., Professor of Skin and Genito-Urinary Diseases.
 JOHN E. SAWYER, M. D., Professor of History and Methodology of Medicine.
 Professor of Clinical Gynecology.

Instruction in the primary branches is received in common with the students of other colleges in the following departments:

- GEORGE A. HENDRICKS, M. S., M. D., Professor of Anatomy.
 RICHARD O. BEARD, M. D., Professor of Physiology.
 CHARLES J. BELL, M. A., Professor of Chemistry.
 PERRY H. MILLARD, M. D., Professor of Medical Jurisprudence.
 JOHN F. FULTON, Ph. D., Professor of Hygiene.
 W. XAVIER SUDDUTH, A. M., M. D., D. D. S., Professor of Oral Surgery.
 THOMAS G. LEE, A. M., M. D., Professor of Histology and Bacteriology.
 J. CLARK STEWART, B. S., M. D., Professor of Pathology
 H. L. STAPLES, M. D., Instructor in Medical and Pharmaceutical Latin.

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	\$1,320.00
Disbursements	1,824.33
1894—Receipts	955.00
Disbursements	2,232.26

THE COLLEGE OF DENTISTRY.

THE FACULTY.

CYRUS NORTHROP, LL. D., President.
 W. XAVIER SUDDUTH, A. M., M. D., D. D. S., Dean and Professor of Embryology, Pathology and Oral Surgery.
 THOMAS E. WEEKS, D. D. S., Professor of Operative Dentistry and Dental Anatomy.
 CHARLES M. BAILEY, D. M. D., Professor of Prosthetic Dentistry, Metallurgy and Orthodontia.
 WILLIAM P. DICKINSON, D. D. S., Professor of Therapeutics and Clinical Professor of Operative Dentistry.

INSTRUCTORS.

GEO. A. HENDRICKS, M. S., M. D., Professor of Anatomy.
 RICHARD O. BEARD, M. D., Professor of Physiology.
 CHARLES J. BELL, A. B., Professor of Chemistry.
 HENRY M. BRACKEN, M. D., Professor of Materia Medica.
 THOMAS G. LEE, A. M., M. D., Professor of Histology and Embryology, Bacteriology and Clinical Microscopy.
 FREDERICK B. KREMER, D. D. S., Clinical Instructor in Prosthetic Dentistry and Crown and Bridge Work.
 J. DUDLEY JEWETT, D. D. S., Lecturer on Anæsthesia and Chief of the Anæsthetic Clinic.
 THOMAS B. HARTZELL, D. M. D., Instructor in Comparative Dental Anatomy, Physical Diagnosis, and Assistant in Oral Surgery Clinic.
 GEO. S. MONSON, D. M. D., Instructor in Prosthetic Technics and Orthodontia.
 HENRY L. STAPLES, A. M., M. D., Instructor in Medical and Pharmaceutical Latin.
 OSCAR A. WEISS, D. M. D., Assistant in Operative Technics.
 CAROLINE B. EDGAR, D. M. D., Assistant in Operative Clinic.
 MARY V. HARTZELL, D. M. D., Assistant in Operative Clinic.
 JAMES M. WALLS, Assistant in Crown Technics.
 ALFRED OWRE, Assistant in Operative Technics.

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	\$3,356.00
Disbursements	4,560.40
1894—Receipts	2,428.00
Disbursements	5,510.00

THE COLLEGE OF PHARMACY.

THE FACULTY.

CYRUS NORTHROP, LL. D., President.
 FREDERICK J. WULLING, Ph. G., Dean; Professor of the Theory and Practice of Pharmacy and Pharmaceutical Chemistry.
 PERRY H. MILLARD, M. D., Professor of Medical Jurisprudence.
 HENRY M. BRACKEN, M. D., Professor of Materia Medica.
 Professor of Pharmacognosy.
 CHARLES J. BELL, A. M., Professor of Chemistry (General and Medical).
 GEORGE B. FRANKFORTER, Ph. D., Professor of Chemistry (Organic).
 CHARLES F. SIDENER, B. S., Assistant Professor of Chemistry.
 CONWAY MacMILLAN, M. A., Professor of Botany.
 CASWELL A. BALLARD, Instructor in Botany.
 THOMAS G. LEE, B. S., M. D., Professor of Bacteriology.
 GEORGE D. HEAD, B. S., Assistant in Bacteriology.
 RICHARD O. BEARD, M. D., Professor of Physiology.
 JOHN F. FULTON, Ph. D., M. D., Professor of Hygiene.
 H. L. STAPLES, A. M., M. D., Instructor in Medical and Pharmaceutical Latin
 Instructor in Mineralogy.

A statement showing the receipts and the disbursements of this college for the years 1893 and 1894:

1893—Receipts	\$715.00
Disbursements	3,338.55
1894—Receipts	1,407.00
Disbursements	3,900.45

THE SCHOOL OF AGRICULTURE.

FACULTY.

CYRUS NORTHROP, LL. D., President.
 HENRY WEBB BREWSTER, Ph. D., Assistant Principal, in charge of the School of Mathematics.
 SAMUEL B. GREEN, B. S., Horticulture and Applied Botany.
 OTTO LUGGER, Ph. D., Zoology and Entomology.
 CHARLES R. ALDRICH, Carpentry and Drawing.
 FLORENCE A. BREWSTER, Librarian.
 WILLIAM ROBERTSON, B. S., Physics, Language.
 J. A. VYE, Penmanship, Accounts.
 HARRY SNYDER, B. S., Chemistry.
 T. L. HAEBCKER, Dairy Husbandry.
 M. H. REYNOLDS, V. M. D., M. D., Physiology, Veterinary Science.
 GEORGE H. MORGAN, Lieutenant U. S. A., Military Tactics
 WILLET M HAYS, B. S. A., Agriculture.
 THOMAS SHAW, Animal Husbandry.
 J. M. DREW, Arithmetic and Blacksmithing.
 ANDREW BOSS, Instruction in Killing, Dressing and Curing Meats.

THE EXPERIMENT STATION.

OFFICERS OF THE STATION.

WM. M. LIGGETT, Chairman.
 WILLET M. HAYS, B. S. A., Vice Chairman and Agriculturist.
 SAMUEL B. GREEN, B. S., Horticulturist.
 OTTO LUGGER, Ph. D., Entomologist and Botanist.
 HARRY SNYDER, B. S., Chemist.
 T. L. HAECKER, Dairy Husbandry.
 M. H. REYNOLDS, M. D., V. M., Veterinarian.
 THOMAS SHAW, Animal Husbandry.
 J. A. VYE, Secretary.
 ANDREW BOSS, Farm Foreman.

A statement showing the receipts and the disbursements of the experiment station for the years 1893 and 1894:

1893—Receipts	\$1,347.56
Disbursements	18,530.17
1894—Receipts	2,330.69
Disbursements	27,583.29

EXPERIMENT STATION.

The experiment station is making splendid progress; better method each year being used in experiment work. One hundred and sixty thousand copies of bulletins and annual reports have been issued to the farmers of the state since the last biennial report. Instead of issuing a special biennial report, the experiment station issues a large annual report, containing all its experimental work and financial transactions for each year. Our experiment station bulletins are now eagerly sought by our farmers, and the many subjects being investigated at the experiment farms are creating a wide interest. A full list of the subjects treated of in these bulletins will be found in the report of the station.

The experiment station is recognized as of very great value to the students in the school of agriculture, and to those taking a higher college course, as well as to those taking special dairy and other courses at the university farm.

The officers of the station are gaining for that institution popular favor among the practical farmers of the state.

The following changes have been made in the staff: Dr. Christopher Graham resigned the position of veterinarian in the experiment station in the spring of 1893. Dr. M. H. Reynolds, who has been for a year with the Minnesota Farmers' Institute, was elected to the vacancy.

In the summer of 1893 Prof. C. D. Smith resigned the directorship and the experiment station was reorganized without a director. Regent William M. Liggett was made chairman of the station staff.

Prof. W. M. Hays was asked to return from North Dakota experiment station, and was made vice chairman and agriculturist of the staff, as well as professor of agriculture in the university. T. L. Haecker was promoted to the position of professor of dairy husbandry, and in charge of dairy stock and dairy manufacturing experiments of the station. Prof. Thomas Shaw, formerly professor of agriculture in the Ontario agricultural college, was appointed professor of animal industry, in charge of that work in the station.

The change in organization, by which Regent Liggett was made chairman of the staff, has given very general satisfaction; and the board now feel sure that this change in the management of the station with Regent Liggett as chairman and business manager, is by far the most economical and efficient mode by which to conduct the affairs of the station.

EFFECTS OF THE CYCLONE.

Early on the morning of May 6th last, a cyclone swept over the farm; fortunately, however, the damage from its effect was but small to what might have been expected. One wing of the barn was completely destroyed, and swept away. No persons were injured. The stock about the premises at the time escaped without loss of life or injury. It was necessary to rebuild this wing of the barn at once; the cost of which amounted to about \$3,000. The money, for the time being, was borrowed from the current expense fund, and should be returned by an appropriation to cover this amount, by the legislature.

WATER SUPPLY AT STATION.

In order to obtain a sufficient supply of water for the station there has been laid, since last report, some 2,300 feet of four and six inch iron pipe, at a cost of \$2,500, which is connected with the large reservoir located on the hill in front of the Dairy hall. The water is forced through this line of pipe from the wells, by means of a steam pump, into this reservoir, from which all the buildings receive a full supply of water.

DAIRY HALL.

The dairy hall, which was constructed in 1891, although perfect in all its appointments, is found to be inadequate in size for the increased demands which are being made upon it through the students and dairying interests generally.

Perhaps no one factor connected with agriculture has awakened so much interest among the agriculturists of the state as has the practical work that is being done in this branch of the agricultural school.

Accommodations can be supplied by putting an extension to the present structure sufficient in size to afford the additional space required, at a nominally small expense. The regents feel the necessity of supplying this additional facility to meet the growing wants, and hope that the legislature will provide means for the construction of the proposed extension to dairy hall.

DRILL HALL AND MANUAL TRAINING BUILDING.

The legislature, at its last session, made an appropriation of \$30,000 for the erection of a drill hall and manual training building at the experiment station. Very soon after this appropriation was made the regents appointed a building committee consisting of Regents Ligget, Lind, Owen and Pillsbury, and directed this committee to procure plans for this structure. Several plans were offered. Those, however, presented by F. G. Corser and C. R. Aldrich were accepted. Proposals were immediately advertised for the erection of the proposed structure. The following bids were received.

Bids for the erection of "drill hall and manual training building" at school of agriculture were as follows:

Littlefield & Hall	\$24,584.00
Lick & McLeod	24,806.00
B. F. Abbott	27,190.00
Minnesota Stone Co.	24,868.00
Trainer Brothers	26,741.00
Emil Bruce	26,405.00
Brick Lund	26,488.00
A. J. Sampson, accepted	24,005.00
H. N. Leighton & Co.	27,701.70
Frank Raidt	25,990.00
Pike & Cook	26,377.00
J. A. Nordeen	25,219.75
Downs Brothers	27,503.72
Butler Brothers	29,950.00

A. J. Sampson's bid of \$24,005 was accepted.

HEATING.

Bids for heating drill and manual training building at school of agriculture were as follows:

Archambo & Morse (accepted)	\$1,947.00
Junstead & Moore	2,465.00
W. F. Porter & Co.	2,542.00
F. S. Martin	2,800.00

Messrs. Archimbo & Morse being the lowest bidders, the contract for heating was awarded to them.

DRILL HALL.

The building is of red pressed Minnesota-made brick, and brown sandstone trimmings, with 16 and 20 inch walls. It is 102x76 feet in size, with an elevated roof in which there are four rooms of sufficient size to accommodate eight students. It contains a room 40x70 for a drill and gymnasium, two class rooms 28x30 feet each, two students' work rooms 16x30 each, two office rooms 10x12 connecting with same, a store room 10x12 feet, a room for carpenter shop 30x50, a room for blacksmith shop 30x50, with two storage rooms connecting same; a students' draughting room 30x36, a room for museum 30x36, a work room in connection with museum 14x18 feet, a room for military arms 16x20, with basement rooms for fuel, furnace, wash rooms and closets.

This building has a slate roof, and is nearly fireproof; is complete in all its appointments, and is a permanent well-finished and imposing structure.

SCHOOL OF AGRICULTURE.

We are pleased to report that this department of the university has continued very prosperous during the last two years; the attendance has largely increased; new lines of practical work have been developed.

In September, 1893, Hon. W. W. Pendergast, who has been connected with this school since its opening, resigned from the principalship, to assume the duties of state superintendent of public instruction. About the same time two other changes were made in the faculty. Prof. Clinton D. Smith and Dr. Christopher Graham tendered their resignations to accept positions elsewhere. In place of these retiring members of the faculty, Dr. H. W. Brewster assumed the duties of principal, Prof. Willet M. Hays was elected professor of agriculture, and Dr. M. H. Reynolds, professor of veterinary science. In addition to these changes, Prof. Thomas Shaw has been made professor of animal industry; Mr. J. M. Drew, instructor in blacksmithing, and Mr. Andrew Boss, instructor in killing, dressing, cutting and curing meats.

Each line of practical work is now in the hands of an instructor, and the results of each successive year's work show marked improvement on the preceding. The character of the student body, especially, is worthy of highest praise. With very few exceptions, they are all young, practical farmers, full of enthusiasm for the farm and of respect for the school. Very much is due to them for the progress of the school.

The summer school for girls was held during the month of June, 1894, with gratifying success. The enrollment was fifty-nine. The

character of the school was all that could be asked. The term being short, time was given to lectures on horticulture, hygiene, chemistry, entomology and practical lectures in cooking and dairying. It is believed that practical work may be added in sewing next summer.

The attendance in the regular course of the school of agriculture for the present term to December, 1894, is 172, representing forty-two different counties of the state. Seventy-five have already registered for the factory dairy course, which will necessitate having two courses, January and February, as fifty will be the limit.

The following is the enrollment in this department since the opening of the school in 1888: Attendance 1888, 47; 1889, 78; 1890, 104; 1891, 113; 1892, 144; 1893, 203; 1894, 300.

The most gratifying feature of all in connection with the school of agriculture is perhaps the fact that the work is highly appreciated throughout the state, and that words of grateful recognition continually come in from all parts of the state for the work that has been accomplished, showing that the people are now fully realizing and appreciating the great advantages which this department is offering to the agriculturists of our commonwealth who wish to give their sons a liberal education. The curriculum which has been adopted at this school is particularly suited to give the young man a most thorough knowledge of all branches of learning pertaining to the science of agriculture, in a most practical manner, and to fit them, as well, to meet the demands which may be made upon them in the management of the affairs of town, county and state, in a most thorough and intelligent manner, and to give them an opportunity of development in manhood and character which by their influence, will, on their return to the farm, raise the standard of citizenship in any community.

This school is also already creating much favorable comment in other states, and many inquiries are continually received as to the success which has been attained. There is no school in our country where the students, after acquiring an education, so generally return to the farm to follow the pursuits for which they are so well prepared. Out of the whole number who have attended this school, one only has failed to return to the farm after graduation. This is as it should be; for there is no more honorable calling than that of farming; and we are proud that this department of the university is fulfilling the expectations of those by whom it was established.

STUDENTS' ROOMS.

The maximum of accommodations has been reached for the rooming and the boarding of students who desire to attend this school. The present culinary facilities which we are obliged to furnish the students are altogether inadequate, and it is only for the fact that

rooms could be rented at St. Anthony Park that the number of students in attendance this term could be accommodated. It is believed that an increased attendance will follow annually, for several years to come. Additional quarters must be provided for rooming, and the culinary department must be enlarged. The regents, after considering this question, recommend the erection of a new building sufficient in size to accommodate an attendance of 350 to 400 students. The cost of such building would be something like \$40,000.

THE GEOLOGICAL SURVEY.

The progress of this work has been considerable since the last biennial statement, although but one season of field work has been devoted to it. The large area in the northern part of the state which was represented on the outline map of the state accompanying the last report as partially surveyed, and much of that reported as unsurveyed, have been visited by members of the survey corps, and will be mapped on the plan pursued in former reports. The plan of the state geologist provided for so far completing the field work during the season of 1893 as to warrant the preparation of the last volume of the final report, which is intended to cover the northern one-third of the state, with the exception of some isolated localities and others which are specially complicated and important, the field work, on the plan hitherto pursued, may be considered nearly finished, and the most of the remaining geological work on this enterprise will be involved in the preparation and publication of the final report. The natural history and topographical work of the survey yet largely remains to be done. It will still be necessary to re-examine some critical localities, but this will be at little expense, and can be done as occasion arises.

During the season of 1893 the following parties were engaged in the field work, and Dr. Grant and Mr. Upham have been constantly employed since then, in connection with the survey, under the direction of Professor Winchell:

Prof. J. E. Todd, in the northwestern portion of the state, north and east of Red Lake.

Prof. G. E. Culver, in Itasca county.

Mr. Warren Upham, in Aitkin and Cass counties.

Mr. J. E. Spurr, on the Mesabi range and southward in St. Louis county.

Mr. A. D. Meeds, on the Mesabi range and southward in St. Louis county.

Mr. A. H. Elftman, on the Mesabi range and southward in Lake county.

Dr. U. S. Grant, on the Mesabi range and southward in Cook county.

Mr. C. P. Berkey, from Grand Marais northward in Cook county, and in co-operation with Dr. Grant.

The rapid development of the iron ores of the Mesabi iron range has furnished many valuable opportunities for geological observation. It is at the same time a remarkable instance of the practical utility

of the maps and reports that have been published. It was a fortunate circumstance, by which the state has profited largely, that through the agency of the survey the iron-bearing lands were known and their value appreciated before they had been entirely sold to private parties. The returns to the treasury of the state from the royalties on state mines and the tariff on ore shipped from other mines, during the years 1893 and 1894, aggregate \$189,154.57.

During the last two years the publications of the surveyor have been as follows:

The twentieth annual report.

The twenty-first annual report.

The twenty-second annual report.

The twenty-third annual report is in press.

Bulletin No. VIII. The Anorthosytes of the Minnesota coast of Lake Superior, and the Laccolitic sills of the northwest coast of Lake Superior, with an introduction on the Norian of the Northwest.

Bulletin No. X. The iron-bearing rocks of the Mesabi iron range.

Some portions of Vol III. of the final report have also been issued as separates.

BOTANICAL DIVISION OF NATURAL HISTORY SURVEY.

During the biennium, collections to the number of 18,000 specimens have been made by the state botanist and his assistants in various parts of Minnesota. Four thousand two hundred specimens of Minnesota plants from previous collections have been entered in the herbarium. By exchange and purchase 39,311 specimens have been added, but not all of these have yet been entered. About 1,100 memoirs and papers have been received in exchange for the survey publications. Nearly 1,100 pages concerning the plants of Minnesota have been published by the survey and about 96 papers have appeared in various home and foreign journals from the laboratories of the department and of the survey.

DRILL AND ASSEMBLY HALL.

Owing to the destruction of the assembly and drill hall by fire in August last, the university is without accommodations for the military department. All colleges of this country that have accepted the congressional grants of 1862 are obliged, as the condition of that grant, to furnish buildings and accommodations for military tactics and drill, and for the storage of arms during the winter months. The university is also without gymnasium accommodations, for that physical training which is now furnished in all educational institutions of the country. In fact, no college of any considerable reputation is without this important attachment. With the culture of the mind should also go the physical culture, which is so necessary

to the best and most complete development of the man. Especially is this the case with the student who is so closely confined to his studies while pursuing his college course. The university has been without any accommodations for physical training since its opening. The students are now a unit for the equipment of a department where physical training and culture should be taught. In fact, they are not only a unit in this respect, but all, without exception, demand that facilities both for ladies and gentlemen shall be offered. There are now some 400 students in the military department. It is proposed to erect one building which shall embrace accommodations both for the military department and for a gymnasium, with rooms for physical culture for ladies, as well as for gentlemen. By combining the two departments in one building in this way, a building can be erected for both at but a little greater cost than a building for the military department alone. This should be a building constructed of brick or stone, reasonably fireproof. The regents now have some \$18,000 on hand, received from the insurance on the assembly and drill hall recently destroyed by fire, which can be applied toward the erection of a new building. Plans have been prepared for such a building as will answer the purpose, the estimated cost of which is \$100,000, a sum which will be required in order to give the necessary room and equipments. The regents would most respectfully ask the legislature to make an appropriation for this amount, at its coming session.

ORE TESTING BUILDING.

The legislature in 1891 made an appropriation of \$6,000 for the opening of a school of mines in the university and for furnishing the same with suitable apparatus. Prof. Wm. R. Appleby, a graduate of Williams college, who had prepared himself for the work of this department in the Columbian College school of mines, was called to fill the chair. The school was opened the following year. This department, which is now embraced in the college of engineering, metallurgy and the mechanic arts, rapidly increased in attendance and in popularity. The work has developed so fast that the professor has felt the pressing need of more extended quarters, in order to meet the demands made on this department. The extensive mining operations which are now being carried on in this state, and from present prospects must continue to increase in importance, to say nothing of the enormous mining operations which are being conducted in Montana, Washington, Dakota, Wisconsin and Michigan, that are now obliged to take their ores to St. Louis and New York City for analysis, make it a necessity for the university to provide facilities for making analyses and tests of ores in carload lots, giving

the value thereof. The university being without funds with which to supply enlarged quarters for testing these ores, the public-spirited citizens of Minneapolis generously contributed the necessary funds with which to erect a building for this purpose. The plans for a building were prepared and presented by Architect Harry W. Jones, the cost of which was estimated to be \$5,000, which was raised from the contributions of our citizens before the work was commenced.

On the tenth day of July bids were asked for the erection of this building.

The following are the bids received:

H. Downs & Son	\$5,218.00
Littlefield & Hall	5,675.00
R. McMullen & Co.	5,585.00
Pike & Cook	5,430.60
Trainer Bros.	6,200.00

The bids made by Messrs. H. Downs & Sons were accepted, and contract executed with them for the erection of the building. The building at this date is nearly completed and ready for occupancy. This department is now well equipped for present needs, and the work of ore testing in large quantities, and of making correct analyses can now be done at the university as well as in New York or St. Louis. The students of the university in this department are now afforded as good or better facilities for practical work in mining as can be offered by any other institution in the country.

The expense of introducing water supply and sewerage to this building, also for plumbing and gas fitting and for grading about the building, estimated to cost \$3,000, will have to be provided by the university.

The regents desire to take this occasion to tender their hearty thanks to those gentlemen who have so liberally contributed to the erection of this building.

LIBRARY AND ASSEMBLY HALL.

Under an act of the legislature approved April 20, 1893, the sum of \$175,000 was appropriated for the erection of a library and assembly hall. The regents had given much thought to the design of such buildings before this appropriation was made; and after the loss by fire of the chapel located in the main building, the previous year. They, however, proceeded at once to consider how best to utilize this money. After many meetings of the executive committee, and of the full board, in which the question of size and cost, style of design and space, in all their bearings, were considered, they finally concluded to ask the architects of the state to present sketches

for the construction of such building. Sixteen sketches were presented by this number of first-class architects. After a full day's time spent in their consideration, all the sketches were rejected, although all sketches were of good design, but failed to satisfy in the utilization of space, cost, etc. There were, however, two plans, those of Architects Sedgwick and Buffington, which favorably impressed the board. An arrangement was finally made with these gentlemen to adopt the plans presented by them. A building committee was appointed on April 25, 1893, consisting of Regents Pillsbury, Lind, Liggett and Kiehle, who were instructed to procure bids for erection of this building. On the first day of September proposals were advertised for the erection of this structure, in accordance with the plans and specifications of the above named architects. The following are the names of the bidders and prices for the work. The bid of Messrs. Pike & Cook, for the erection of a fireproof building at the price of \$133,522 was accepted.

Following were bids for the erection of library and assembly hall:

	Danville Stone.	Buff Bedford.	Blue Ohio.	Kasota.	Buff Ohio.
John Wunder	\$127,800.00	\$133,800.00	\$122,800.00	.....	\$139,000.00
P. H. Donovan & Son	123,533.00	135,133.00	135,133.00	.....	*135,130.00
Trainor Brothers .....	.....	.....	.....	\$129,000.00	.....
Pike & Cook	127,522.00	133,522.00	133,522.00	.....	138,701.00
Lafayette Shaw	134,370.00	.....	.....	.....	.....
Emil Bruce .....	.....	140,920.00	137,700.00	.....	144,600.00
Leck & McLeod	134,000.00	139,000.00	139,000.00	.....	144,000.00
Foster & Smith	136,974.00	149,974.00	149,974.00	.....	.....
C. F. Haglin	136,763.00	142,763.00	142,763.00	.....	147,763.00
James Carlisle & Son .....	.....	144,700.00	141,480.00	.....	148,380.00
Leck & Leck .....	.....	141,300.00	141,300.00	.....	.....
H. M. Leighton & Co	138,430.00	.....	145,430.00	137,249.00	145,430.00
A. J. Sampson .....	.....	145,520.00	142,300.00	.....	149,200.00
De Lancey & Cook	133,586.00	139,586.00	139,586.00	.....	.....
Taylor-Craig Corp.	140,500.00	152,294.00	158,669.00	.....	158,669.00
Erick Lund	139,400.00	146,473.00	143,690.00	.....	150,600.00
D. D. Smith & Co. ....	.....	165,598.00	152,487.50	.....	.....
H. E. Seldon	139,920.00	145,520.00	.....	.....	160,173.50

*NOTE:—The bid of P. H. Donovan & Son not conforming to the specifications, the matter was referred to arbitrators, who decided Pike & Cook's bid to be the lower.

The contract was awarded to Messrs. Pike & Cook and contract executed for the erection of this building.

Bids for heating and ventilating library and assembly hall:

W. F. Porter & Co.	\$7,438
C. S. Wentworth	7,870
Kelly & Lamb (accepted)	6,275
Lunstead & Moore	8,833
Archambo, Martin & Morse Co.	8,500

Messrs. Kelly & Lamb's bid was accepted and contract executed for the heating and ventilating of this building.

Bids for electric wiring of the library and assembly hall:

W. I. Gray & Co.—complete	\$705.20
W. I. Gray & Co.—partial	573.00
Burtis & Howard—complete	1,250.00
Burtis & Howard—partial	875.00
Minneapolis Electric Co.—complete	1,170.00
Minneapolis Electric Co.—partial	864.00
Electric Engineering Co.—complete	2,400.00
Electric Engineering Co.—partial	1,975.00

The bid of Messrs. W. I. Gray & Co. being the lowest was accepted.

Bids for plumbing and gas fitting, library and assembly hall:

Stewart & Johnson	\$4,152
H. Kelley & Company	3,950
W. W. Sykes & Co.	3,922
Chas. Wilkins & Co.	3,900
Hobart & Willis	4,000
J. G. Beattie & Co. (accepted)	3,410

The bid of J. G. Beattie & Co. was accepted and contract executed with them for doing the plumbing and gas fitting for this building.

The building is of the Doric style of architecture, two stories and 135x182 feet in size; is constructed from an excellent quality of buff sandstone. There is located on the ground floor a large sized chapel, 76x86, with a seating capacity for 800 persons, a room each for president, the registrar and the accountant, two good sized lecture rooms, two study rooms, a packing room and a locker room, with periodical and janitor's rooms; also, ladies' and gentlemen's toilet rooms.

Second story—A reading room, 44x107; six seminar rooms, 15x23; two seminar rooms, 21x38; four lecture rooms, 25x35; a library room, 15x23; two stack rooms, 38x44; four study rooms, 13x17; with two cloak rooms, each 12x30, and ladies' and gentlemen's toilet rooms.

The contract provides that the building shall be completed and ready for occupancy by the first day of January, 1895. As soon as the regents have possession of the building, the furniture, fixtures and apparatus will be put in place, which will doubtless consume the month of January, or until the middle of February, after which time the regents cordially invite the people of our state to visit and inspect this, one of the most imposing, well built public structures in this commonwealth, for its cost.

CITY OF MINNEAPOLIS.

During the past summer the city council of Minneapolis have laid an asbestine sidewalk and granite curbing along University avenue, and abutting the university campus from Fourteenth to

Seventeenth avenues, a distance of some 1,000 feet. The city has also laid a sidewalk, with granite curbing, on both sides of Seventeenth avenue, across the campus for some 800 feet; also have laid across the campus on the east side of Pleasant avenue a sidewalk with granite curbing on both sides of the street, at a cost of upwards of \$7,000; the same has been generously furnished at the expense of the city. Proper recognition has been made by the board of regents by the passage of a resolution, and spreading same upon the records of the board, returning the thanks of the board for this most generous act of the city.

The board of regents are under obligations to a graduate of the university, who represents the second ward in the city council, for his able and untiring advocacy in securing the passage of a resolution by the city council, ordering this improvement to be made by the city.

The park board have made Pleasant street a parkway, and have taken this avenue into the park system of the city. They have commenced to beautify this street by the planting of shrubbery and trees, and embellished by a lawn which is embraced within their limits. The board intends to make this avenue one of the finest in the city.

The university, in the past, has been much annoyed by the levying of special assessments by the city for the building of sewers, and laying of sidewalks and water mains abutting the lots in Regents' addition and campus. The regents, after having paid some assessments, concluded that, the university being a state institution, was not subject legally to the payments of such assessments, and to test the legality of the same have taken the case to the courts. A recent decision has been rendered by the judge favorable to the university. Thus an expense of many thousand dollars has been saved to this institution by the cancellation of all special assessments.

CAMPUS IMPROVEMENT.

The improvement of the campus, which has remained almost as nature left it, since the erection of the first building upon it, in 1857, was commenced in a small way in 1894. There is probably no more beautiful location for public buildings to be found than that selected for the location of the university. The site is high on the banks of the Mississippi river, overlooking the city of Minneapolis. The scenery and views which are presented to the eye from this spot are truly magnificent. The regents have been severely criticized by the public for having seemingly neglected to make such improvements about the grounds as will certainly present at least a pleasant appearance to the students and public. This institution is visited

daily not only by people from different parts of the state, but from all sections of the country. The grounds were laid out by Mr. W. S. Cleveland, a distinguished landscape gardner, some years since, but no improvements have been made until this year for want of funds. The improvements made since our last report have been only such as were actually necessary, such as opening of driveways and laying of sidewalks, etc., etc. This system of improvements now commenced under the survey of Mr. Cleveland, should be carried forward to completion during the coming summer; and we most respectfully request the legislature to make an appropriation of \$12,500 for this purpose.

DESTRUCTION OF ASSEMBLY HALL.

On the evening of August 9th, the assembly and drill hall, through some unknown cause, caught fire, and was entirely destroyed before the flames could be extinguished. The city fire department responded quickly after the alarm was given, and the whole force was on the ground before the fire had made much headway. The department rendered most valiant service. The building being a wood structure, the fire made such rapid progress that it was impossible to save the building from entire destruction. The loss was not only of the building and furniture, which cost some \$40,000, but also of the valuable state educational exhibit at the World's fair, which was stored in the building, valued at upwards of \$10,000, together with the new ore testing machinery, which had been purchased for the school of mines, valued at \$1,000, and which was stored there for the time being, on which there was no insurance. The arms for the military department, belonging to the United States government, were also kept in this building, on which policies of insurance were held in an amount sufficient to cover full loss on these arms.

An insurance of \$19,000 was placed on the drill hall. In adjusting the loss under the conditions of the policies of insurance—although the building was a total loss—the adjusters only allowed some \$17,500, which has been paid by the several insurance companies. We take pleasure, however, in reporting that the Hartford paid their full proportion of the full insurance on the building. The insurance on the military arms is in process of adjustment and will soon be paid, as the policies are issued by responsible companies.

The following insurance companies have paid the full amounts of the policies held in them by the university: Hartford Fire Ins. Co.; Phoenix Ins. Co.; Liverpool, London & Globe Ins. Co.; Rockford Ins. Co.; Ætna Ins. Co.; Atlas Ins. Co.; American Central Ins. Co.; Franklin Ins. Co.; Manufacturers & Builders Ins. Co.

MEDICAL.

The department of medicine was thought to be equipped with buildings fully adequate at least for a series of years, but the rapid increase of students which has exceeded the expectation of the faculty calls for more space to meet these demands. The dean of the department of medicine and surgery makes the following request for additional quarters, in which request the regents heartily concur:

There is needed a laboratory of hygiene for the use of this college in its work in histology, embryology, bacteriology, and pathology. Such a building would likewise meet existing needs of more laboratory room for the state board of health. It is estimated that a suitable building can be erected for \$50,000, that being the cost of a similar building erected on the campus of the University of Michigan. The total number of students in the medical department is 368.

ALBERT HOWARD SCHOLARSHIP FUND.

Mr. James T. Howard, a resident of St. Johnsbury, Vt., recently deceased, in his last will and testament made a bequest of \$10,000 to the University of Minnesota, for the establishment of a scholarship, to be known as the Albert Howard Scholarship Fund. In the final settlement of his estate, his property did not realize what was expected, so that upon the final division there was but \$4,500 which Howard intended our institution should have. After deducting the premium of \$400 paid on the purchase of bonds, and the university's proportion of expenses incurred in the settlement of Mr. Howard's estate, there are four \$1,000 United States Government 4 per cent bonds in the custody of the regents, from this bequest, the interest of which will be strictly applied in accordance with the terms of his bequest. The regents take this occasion to acknowledge their obligations to Hon. H. C. Belden, for legal services rendered to the university in the settlement of Mr. Howard's estate, free of charge.

THE MOSES MARSTON SCHOLARSHIP FUND.

The friends and pupils of the late Prof. Moses Marston have raised the sum of \$1,000, as a memorial fund, to be called the Moses Marston Scholarship Fund. The annual interest from this fund to be used to help students in the English course—an estimable act on the part of the friends of this most worthy man, who held the professorship of English for many years in the institution he so ably served.

LIBRARY.

Before closing this report, I must not fail to refer to the condition of the university library. All institutions of learning that give a college education are expected to have a well-selected library, that students can consult, through the years of their college course. The university is grossly deficient in this respect. It has received but \$10,000 direct appropriation for replenishing the library for the past ten years. Consequently, there are but few volumes on the shelves, compared with what it should have, of standard works which are up to the requirements of the day. No institution with the number of professors and students which the university has, should fail to keep the library liberally supplied with at least all the new and necessary works required in each department of study, so that both professors and students can always have recourse to the volumes which will enable them to prepare for the best work in their classes. The regents have long been aware of the pressing wants of the institution in this respect but have been unable to place more books upon the shelves, for want of funds with which to make the purchases. It is apparent to the regents that the institution must suffer much in reputation if not allowed sufficient means with which to replenish the library with such books as are actually required.

DEFICIENCY.

The very marked progress and success which our institution has attained, especially during the past six years, with the large increase in attendance from the different parts of our state, carries with it a corresponding increase in the current expenses; additional professors and instructors have been required; new apparatus; furniture and fixtures; increase in cost of printing, fuel, lighting and repairs in all departments; additional janitor help for the care of buildings; and the thousand small items of expense continually arising, makes the aggregate expense much larger than heretofore.

Attention was called to this fact in our last report, and an appropriation of \$50,000 was made by the last legislature to cover this accumulated expense; this, however, failed to become a law, which has caused a deficiency for the first time in the history of the university. The regents again ask for this appropriation, in order that all demands against the university can be promptly met; and, as heretofore, the expenses of the university be rigidly kept within means furnished for this purpose.

WANTS.

Most of the buildings which have been erected upon the campus of the university are but little above the size to accommodate the

attendance at the time of their erection. Of course, an allowance was then made for a gradual increase of attendance; but the legislature was unable to grant but small appropriations for building purposes, and, too, no thought was then entertained of the rapid progress which has been made during the past ten years, as will be observed by a comparative statement of the attendance since 1884. In that year the attendance was 310. In 1885-6, 406. In 1886-7, 412. In 1887-8, 491. In 1888-9, 781.

In the last named year, Pillsbury Hall and Chemical and Physical Laboratory were built; the last building erected is the library, now being completed. There was at that time an attendance of 781 students. The buildings then erected were thought to be of sufficient size to accommodate the attendance for at least the next fifteen years; but now, only six years have passed, and there is an attendance of over 2,100 students, and we very much doubt if these buildings are of sufficient size to accommodate the increase which may be expected within the ten years from the time of their erection. In 1885, when the Mechanic Art building was erected, at which time the university attendance was 310, it was supposed that this building would accommodate all the students who might enter this department for the next ten years. But the facts are, that to-day there are more students in this department than the whole university attendance numbered in the collegiate course when that building was erected. This department must have more room, new and larger buildings must be furnished, of sufficient size to accommodate the demands which may be expected, for at least the next decade; or we must turn away the youth of our commonwealth who are seeking an education. The regents feel the importance of providing accommodations for this department, as it now embraces engineering, metallurgy, the mechanic arts and electrical engineering, and is doing a most important work, as are all of the colleges of our country in this branch of education. Must the university call a halt for want of money, as it will have to, unless an appropriation shall be made, to supply the increased facilities required? We hope and trust that the legislature will certainly grant an appropriation of \$100,000, the estimated cost of this building, with which to keep pace with the march of progress being made in this branch of educational work in our country, and which will be required (after having had a careful estimate made) for the cost of this improvement.

CONCLUSION.

The University of Minnesota now ranks high among the state institutions of learning in the country. This is largely due to President Northrop and his efficient corps of professors and assistants. There has never been a time in the history of the institution when the prospects for the future were brighter. The high school system is having a most beneficial effect upon the student body of the state. Students who now enter the university are much better prepared than heretofore, and the morale generally is better. There is being aroused also among the people of the state a keener realization of the greatness of the institution and the importance of giving the youth a full college education. Such an education fits men for the active duties of life, and makes good citizens of them.

A state becomes great in direct proportion to the intelligence of its people and the general dissemination of knowledge. The tremendous influence of this institution upon the greatness of our state cannot be measured to-day. Many earnest, intelligent, skilled men have gone from it, to take part in the affairs of our commonwealth. Their influence is already felt on every hand and will become greater and greater as the years roll by.

The wants of the university are large; they cannot be otherwise; at the same time, in arriving at the just demands of our institution, we should look to neighboring states and see what they have done for like institutions. In the past ten years Missouri has appropriated to her state university more than \$1,300,000—\$550,000 of which was for buildings since 1891. In Illinois \$800,000 is asked this year for her university.

The University of California has less than two-thirds the attendance at our university, yet, with a fixed annual income for its current expenses of \$325,000, it asks an appropriation of \$500,000 for building purposes this year in addition to the very great sums heretofore granted.

Wisconsin has spent \$573,000 for buildings since 1891 for her university, and has spent in the past ten years upon that institution \$1,375,000. Over and against all these, we place the appropriations which have been made for buildings to our institution. In ten years the total amount has been less than \$450,000. The wants of our university are probably greater at this time than they will be for some years to come. Very likely the maximum attendance for some years has been nearly reached. It is not probable that there will

be more than 2,500 or 3,000 students in attendance ten years hence. So that the great need for money is now, in order that the present large attendance may be cared for. The demands of the institution for money with which to meet the increased necessities are never ended. Not because of any discouragement or lack of progress, but because the wonderful success with which our institution has been blessed must be met with an open purse-string, otherwise the great work in which it is engaged will suffer. Mark the rapid material progress which our state has made and the increase of prosperity on every hand. Mineral lands which recently were considered almost worthless are now yielding abundant returns. Our soil is supplying the markets of the world with the best cereals; and yet, less than one-seventh of it is tilled. The cutting of our forests employs vast amounts of capital and gives employment to an innumerable number of citizens. The state grows rich. The taxable property in 1864 was \$42,000,000, and in 1894 \$635,000,000.

The burdens of a large appropriation for this institution to-day would bear much lighter in the way of taxation than did the small appropriation of \$50,000 made in 1872.

When we observe the most wonderful career of our institution, and fully realize that its success in the future is assured, we should all rejoice at beholding the University of Minnesota well to the foreground in the ranks of the great colleges of the land.

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 University of Minnesota for the academic years ending respectively July 31, 1893, and July 31, 1894.

With the year 1894 the University of Minnesota completes its first quarter century of existence as an institution of collegiate grade. Established for the education of the sons and daughters of Minnesota, it has been faithful to the trust assigned to it; and while, with a wise liberality, students from other states have been admitted to the University on the same generous terms as students who live in Minnesota, more than nine-tenths of those pursuing studies in the University are residents of Minnesota, and of those who reside elsewhere the larger number are members of the professional schools, and therefore obliged to pay for their tuition. With nearly two thousand students in the University, and most of them residents of Minnesota, the promise for the future educational condition of the people of this state is a matter for general congratulation. Most of these students would never gain a collegiate education if there were no University here, established and supported by the state for free education. The wisdom of those who in the early days of Minnesota foresaw the need of such an institution in the coming years, and who in the day of small things devised liberally for a future that they had faith to believe would be grand, is now clearly seen. The University is now doing for Minnesota a work of incalculable value. While entirely loyal to the higher education and cherishing all the courses of study and the processes of education which in the history of the world have been found effective for mental discipline and growth, it gladly takes up any work of an educational character which it believes to be of importance to the interests of Minnesota,

and which no other educational institution is prepared to undertake. It has thus been able to do much for the state besides training its students in the usual collegiate studies. While fitting men for the professions, for teaching especially, for business, for the farm, it has still further extended its influence by means of the summer school for teachers, by means of the farmers' institutes which it originated, by the work of university extension, and by the valuable services of its well-organized experiment station. But whatever the University is or is doing, it belongs to the State of Minnesota. Its buildings, its apparatus, its books, its land, its equipment of every kind belong to Minnesota. Its products,—educated young men and women,—in like manner belong to Minnesota. In providing for the University the state gives nothing away, and for the money it invests it receives, in the increased intelligence and culture and loyalty and usefulness of the rising generation, a rate of interest with which the most grasping political economist ought to be satisfied.

The faculty of the University at the close of the college year 1893-94 numbered 154, distributed as follows:

College of Science, Literature and Arts.....	53
College of Engineering, Metallurgy and Mechanic Arts.....	28
College and School of Agriculture.....	15
College of Law.....	18
College of Medicine and Surgery.....	30
College of Homeopathic Medicine and Surgery.....	23
College of Dentistry.....	20
College of Pharmacy.....	16
Total.....	203
Duplicates.....	49
Total of Instructors.....	154
Professors, of whom 45 are in the Medical Colleges.....	79
Assistant Professors.....	8
Instructors.....	52
Lecturers.....	15
Total of all grades.....	154

The registration of students at the University during the year 1892-93 was as follows:

Graduate Students.....	88
College of Science, Literature and Arts.....	631
College of Engineering, Metallurgy and Mechanic Arts.....	223
College and School of Agriculture.....	151
College of Law.....	277
Colleges of Medicine.....	271
Total.....	1,641
Duplicates.....	21
Total excluding duplicates.....	1,620

The registration of students at the University during the year 1893-94 was as follows:

Graduate Students.....	91
College of Science, Literature and Arts.....	679
College of Engineering, Metallurgy and Mechanic Arts.....	189
College and School of Agriculture.....	210
College of Law.....	310
Colleges of Medicine.....	284
University Section of Summer School.....	148
Total.....	1,911
Duplicates.....	83
Total, excluding duplicates.....	1,828

As the total registration in the year 1891-92 was 1,374, it will be seen that the registration, during the two years covered by this report, has increased 454.

DEGREES CONFERRED.

Since the last report degrees have been conferred as follows:

	1893	1894
Bachelor of Arts.....	26	17
Bachelor of Science.....	21	36
Bachelor of Literature.....	26	19
Bachelor of Agriculture.....	...	1
Bachelor of Civil Engineering.....	4	4
Bachelor of Mechanical Engineering.....	2	1
Bachelor of Electrical Engineering.....	6	1
Bachelor of Architecture.....	1	...
Bachelor of Mining Engineering.....	...	2
Bachelor of Laws.....	87	92
Doctor of Medicine.....	45	41
Doctor of Dental Medicine.....	13	6
Doctor of Pharmacy.....	...	6
Master of Arts.....	4	4
Master of Science.....	4	2
Master of Literature.....	1	...
Master of Laws.....	7	13
Civil Engineer.....	...	1
Mechanical Engineer.....	...	1
Doctor of Philosophy.....	2	2
Totals.....	249	249

CHANGES IN THE FACULTY OF ACADEMIC COLLEGES.

The resignation of Prof. James A. Dodge of the chair of Chemistry, which he had so long and ably filled, was accepted in the summer of 1893. Dr. George B. Frankforter of the University of Nebraska was elected by the Regents to the chair of Chemistry in October, 1893, and he at once entered upon the duties of his office. Doctor Frankforter has brought to his work, in addition to knowledge of his subject, a most progressive spirit and an enthusiasm which will be most helpful in developing the department of Chemistry and in aiding the work in other departments closely related to Chemistry.

Prof. Arthur E. Haynes of the School of Mines at Houghton, Mich., was elected assistant professor of Mathematics in 1893, and has been an efficient instructor during the last year.

Dr. David L. Kiehle, for many years the superintendent of Public Instruction in Minnesota was elected professor of Pedagogy in 1893, and has most satisfactorily discharged the duties of his office since his appointment.

Madame Emma Bertin, a native of France, and Charles M. Andrist, a graduate of the University, have been added to the corps of instructors in French, the former in 1893 and the latter in 1894.

Miss Louise G. Kiehle was appointed instructor in Physical Culture in 1893, and the success attending her work and the thoroughness and skill with which the work is done are worthy of all praise.

Frederick Klaeber, Ph. D., a student from Berlin, Germany, was appointed instructor in English in 1893, and has proved an able assistant to Doctor MacLean in the scientific study of the language.

Mr. James R. Angell was appointed instructor in Philosophy in 1893, and during the following year he had charge of the work in Experimental Psychology. He proved to be a very successful teacher, and it was with much regret that his resignation was received at the close of the year. He accepted an appointment in Chicago University.

Assistant Prof. Willis M. West was, in 1894, elected professor of History.

Joel E. Wadsworth, assistant professor of Civil Engineering, was, in 1894, elected professor of Structural Engineering.

Mr. H. T. Ardley, the principal of the School of Design, resigned at the close of the year 1893-94 to accept a position in the University of California. Mr. Ardley had been associated with the work in designing from the time of its introduction into the University, and he had been very helpful in training students and in developing the work.

Mr. William H. Kirschner was appointed assistant professor of Drawing early in the year 1893-94, and soon after entered upon his duties, having specially in charge the Mechanical Drawing of the College of Engineering. He has now been placed in charge of the School of Design, taking much of the work formerly attended to by Mr. Ardley, some additional assistance having been given him in his own special work in the College of Engineering.

Mr. K. C. Babcock, instructor in History, having resigned after several years of successful work, Prof. Charles L. Wells, Ph. D., was, in the summer of 1894, elected assistant professor of History, to take the work formerly done by Mr. Babcock. Professor Wells was for

several years a professor in Seabury Divinity School, and has more recently been a student in the Graduate department of Harvard University.

Samuel G. Smith, D. D., has been employed as lecturer in Sociology during both the years covered by this report.

In addition to the regular faculty for instruction in the colleges, nineteen "scholars" have assisted in giving instruction, mostly in laboratory work, though, in a few cases, work in the class-room has been conducted by these "scholars"

The faculty of the College of Engineering, Metallurgy and the Mechanic Arts was strengthened by the election, in the summer of 1894, of Dr. Henry T. Eddy of Terre Haute, president of Rose Polytechnic Institute, to the chair of Engineering and Mechanics. Doctor Eddy will enter on his work at the beginning of the year 1894-95, and will give instruction in Thermo-Dynamics and Mechanics. He will also give instruction in Mathematics in the Graduate Department.

Professor Hough of the department of Philosophy having leave of absence for the year 1894-95, Mr. Frederick J. E. Woodbridge, a graduate of Amherst College, has been appointed to give instruction in Philosophy during the year; and Mr. Harlow S. Gale, a graduate of Yale University, has been appointed to fill the place vacated by Mr. Angell in Experimental Psychology. Both of the gentlemen have studied in Germany, and in their hands the work of the department will be well cared for.

COLLEGE OF SCIENCE, LITERATURE AND ARTS.

The work in this college has been as satisfactory as usual, and the growth in the number and quality of students has been most gratifying. I repeat what I have heretofore said, that the pressing need of this college is a generous addition to the library. We have about thirty thousand volumes, many of them being of little value. Harvard University has more than four hundred thousand volumes; Yale has more than two hundred thousand; and not a few colleges and state universities have from fifty to ninety thousand volumes. The University of Minnesota needs at the present time an addition of twenty thousand volumes to the library, books without which very little original work can be done by students and very little encouragement can be given for undertaking graduate work in some of the most interesting and important lines of study. It is imperatively necessary for the life and growth and usefulness of the University that a generous provision be at once made for enriching the library.

I may be permitted to quote the words of the lamented William

Frederick Poole, librarian of the Newberry Library, in an address delivered in 1893: "The popularity of a university once depended wholly upon the professional reputation of its instructors. Now, the leading questions relate to the size, character and value of its library. The presence of a large body of post-graduate students is an inspiring feature of university life, and to the public a guaranty of the high scholarship and superior educational advantages of the institution. These students cannot be secured and retained unless they have access to a large and well-furnished library."

The new library building, for which a generous appropriation was made by the last legislature, is approaching completion. The building will be as nearly fireproof as it can be made, and will furnish an assembly room for the daily meeting of faculty and students, lecture and seminary rooms for Political Science, English Literature, History and Psychology (thus bringing these four departments into the closest relations to the library), stack rooms for one hundred thousand volumes, and a very large and well-lighted reading room. The building in its material and design is very satisfactory, and it will, when finished, relieve the difficulty at present felt in supplying rooms for all the classes. It will also make available to all the students for reading and study whatever supply of new books the liberality of the state may furnish in addition to those now in the library. It will be most appropriate to equip this beautiful building with the needed supply of books, in order that it may properly fulfill its mission as a library building.

The College of Science, Literature and Arts is the only one which women might naturally be expected to enter as freely as men. The other colleges—of Law, Medicine, Agriculture, Engineering, Metallurgy and Mechanic Arts—do not offer to most women the same attractions as they offer to men. It is interesting to note that in the College of Science, Literature and Arts the number of women in attendance the past two years has been almost the same as the number of men. In 1892-93 there were 321 men and 310 women; in 1893-94 there were 341 men and 338 women. So far as I can judge there does not appear to be any superiority in intellectual endowments of one sex over the other. That women have ceased to be satisfied with an education less thorough than that acquired by men is an evident and a gratifying fact.

THE COLLEGE OF ENGINEERING, METALLURGY AND MECHANIC ARTS.

This college, with an enrollment of 114 students in its four regular classes, presents a pleasant contrast to what it was eight years ago, when the building known as the Mechanic Arts building was

erected. At that time most of the students were of too low grade of preparation for the regular University work, and they were enrolled in the Artisans' Training School. In the regular classes as candidates for degrees there were about twenty students. The Artisans' Training School was abolished several years ago, and no students are now admitted to this college with the inferior preparation required by that school. The number of students has however largely increased, the total number in 1893-94 being 189, of whom 114 were candidates for degrees, 31 were special students, and 44 were in the School of Design. The building, which was entirely adequate for the work of the college at the time when it was erected, is now painfully and ridiculously inadequate. If the college is to grow and to become a thorough technological school, capable of meeting the needs of the Northwest in the development of mining, metallurgy, electricity, and the various uses of engineering, it is manifest that larger quarters must at once be provided for its accommodation. The special need is for larger shops for wood and metal working, with which the plant for heat, light and power for the University should be connected. The necessity for larger shops is stated forcibly by the executive board of this college, as follows:

"First—The present shops are too small for the classes entering the college. When the engineering building was erected an average of four to six freshmen came together with classes of artisans. The average number of freshmen for the last two years is fifty-six per year. The size of the shops makes it possible for only twelve to eighteen men to work at one time in them. Since sections of that size are not necessary in all other studies of the terms when shop practice is required, sectioning for shop practice makes trouble in every department instructing these same students.

"Second—Sectioning will hereafter require the shop to be running at least three-quarters of the day. The din of machinery will thus be introduced into the morning hours and cause great distraction and other disturbance throughout the whole building in hours now tolerably quiet for recitations and lectures.

"Third—More tools and machines are needed. In the present shops there is room for neither, as there is room for no more students to work in a single section.

"The hoped-for development of steam engineering in the near future will require great additions to our present space and equipment.

"Fourth—A testing laboratory in Mechanics is one of the necessities of the near future to bring the college into touch with the commercial and manufacturing world.

"Fifth—It is believed that it is in the interest of economy and efficiency to consolidate all the power for use on the campus. Since it appears that considerable additions must be made in the near future in the heating, steam-engine, dynamo and electric lighting plants, we desire to call attention to the desirability of keeping this point in view in considering the question of the expansion of shop-room and shop practice."

SCHOOL OF MINES.

A very important part of the College of Engineering, to which increased public attention is likely to be drawn in the near future by reason of its admirable equipment and its benefit to public interests, is the School of Mining and Metallurgy. This was formally opened

in January, 1892, Prof. William R. Appleby of New York having been elected professor of Mining and Metallurgy and placed at the head of the school. The work in Modern Languages, Mathematics, Drawing, Physics, Civil, Mechanical and Electrical Engineering, Chemistry, Mineralogy and Geology was already provided for in the University, and needed only to be adjusted to the new courses in assaying, ore-testing, metallurgy, etc., in order to furnish a complete curriculum for a School of Mines. The expense incurred for the establishment of this school was trifling compared with what the expense would have been to erect new buildings and provide all needed courses apart from the University. The special work of this school may be classified as assaying, mining engineering, ore-testing, ore-dressing, and metallurgy.

The legislature having made, in 1891, an appropriation sufficient to purchase some of the needed machinery but not enough to erect a building for the ore-testing works, an appeal was made by Dean Hall and Professor Appleby to the business men of Minneapolis for money, and as a consequence five thousand dollars were subscribed for the erection of the building desired. The building is now under construction on the bank of the Mississippi river, and when completed and equipped according to the plans already approved it will be, according to the statement of an expert in ore-testing works, "the finest ore-testing plant in the United States."

This plant will prove of great service to the citizens of this state, and it will be of but little cost to the state—a cost especially small when compared with the cost of Schools of Mines established in some other states as independent institutions.

AN OBSERVATORY.

The University needs an observatory for purposes of instruction. It already has an astronomical clock and a chronograph that are in every respect first-class. It also has a transit circle which, though smaller than is desirable, is of excellent workmanship and large enough for practical instruction. These have proved of great service to the classes in Astronomy. The University now needs an equatorial telescope of about ten inches objective, with photographing lens and spectroscope. With these, and the necessary addition to the transit circle house for the accommodation of the telescope, we should have a complete practice observatory for the use of students. It is as necessary to have this equipment for the study of Astronomy as to have laboratories for biological sciences. The estimated cost of the required instruments and a suitable building is nine thousand dollars. The University having waited twenty-five years for a tele-

scope, I now recommend that the Regents make application to the next legislature for an appropriation of nine thousand dollars for the purposes indicated.

SUMMER SCHOOL FOR TEACHERS.

During the last two years a summer school for teachers has been conducted at the University, at which the attendance has been phenomenal, reaching, in 1894, the number of 1,008. This school has been divided into two sections, one of which has pursued University work under the instructors of the University, and the number of students in this section was, in 1894, 250. The laboratories, with their ample equipments, the library, the abundance of rooms, and all the other facilities for successfully conducting such a school which are furnished by the University, make it a most desirable place for holding such an institute for teachers. I have been delighted at the eagerness shown by teachers for increased knowledge, and at the earnestness with which work has been pursued by them in the various classes; and I am sure that the Board of Regents will rejoice, as I do, at this new opportunity afforded the University to aid the work of education in the state and to show its readiness to do whatever may seem to be for the public good.

THE DEPARTMENT OF AGRICULTURE.

The School of Agriculture has prospered beyond all previous experience. The number of students in attendance in the year 1890-91, was 104; in 1891-92, 115; in 1892-93, 144; in 1893-94, 203. This regular and wholesome increase is proof of a growing interest in the work of the school and a proper appreciation of its merits. The results of the school work, as shown in the attainments of the students, in their interest in the subject relating to practical agriculture, in their growth in general knowledge and culture, and in their readiness at the completion of their course to return to the farm and engage in farm work with new zest, have been all that the Board or the farmers of the state could either expect or desire. Military drill has been introduced into the school with good results. The students have taken the drill with pleasure, and its effect upon them has been apparent in their more erect posture and manly bearing. The new building erected as a drill hall is admirably fitted for its main purpose, while it also meets many other wants, furnishing rooms for instructors and classes, by adding to the supply of dormitories, and affording accommodations for the new work in Blacksmithing and for the increased work in Carpentry. The thirty thousand dollars appropriated by the last legislature for this building has been most

judiciously expended, and the amount of increased facilities for the school furnished by this building is very large for the cost.

It was with sincere regret that the Board of Regents accepted the resignation of the principal of the School of Agriculture, Prof. W. W. Pendergast, who resigned in 1893 to accept another position in the educational work of the state. Mr. Pendergast had been particularly happy in his management of the school. The boys liked him. His associates in teaching respected and esteemed him. He created at the school a manly and self-respecting spirit, and inspired his pupils with an earnest desire to make the most of themselves. When Mr. Pendergast resigned the Board felt that it would be hard to fill his place. But the school has continued to prosper under the wise management of Dr. H. W. Brewster, who from the first has been associated as assistant principal with Mr. Pendergast. Dr. Brewster has done so well, has shown himself so thoroughly competent for the work, as to warrant the recommendation which I now make with great pleasure, that he be appointed principal of the School of Agriculture.

In 1893 Dr. Christopher Graham, the veterinarian at the experiment station, resigned, and Dr. M. H. Reynolds was elected in his place as professor of Veterinary Medicine and Surgery. Mr. T. L. Haecker, instructor in Dairying, was elected professor of Dairying. Prof. Thomas Shaw of the Agricultural College at Guelph, Ontario, was elected professor of Animal Husbandry. Mr. J. M. Drew was elected instructor in Blacksmithing. All of these gentlemen have given most satisfactory proofs of their fitness for the positions assigned to them.

It affords me the greatest pleasure to speak in the warmest terms of approval respecting the work of the whole agricultural department. Never in the history of the University has this department been so well-manned, so harmonious, so earnest, so progressive, and so useful. The work done in the experiment station has been exceedingly varied, and much of it of real value to the state, as is shown by the bulletins which have been issued and distributed to many thousands of farmers, as well as by the special services rendered in protecting the crops of the state from some of their natural enemies with whom the farmers have long contended in vain.

Very much of the harmony and success at the experiment station has been due to the wise counsels of the excellent committee on Agriculture, and especially to the tact and faithfulness of its chairman, Hon. Wm. M. Liggett, to whom the Board is deeply indebted for his services. It is a pleasure to contrast the work now going forward, as shown by a great number of experiments in progress and by build-

ings crowded with students in the winter months, with the situation a few years ago, when experiments and students were alike rare. While we are greatly indebted to the liberality of the national government, as shown in its grants of land and in its more recent appropriations of money for both experiment work and teaching, it is pleasant to feel that the purposes of the national government in making such liberal appropriations for "institutions in which Agriculture and the Mechanic Arts occupy a prominent position," are being secured in Minnesota as completely at least as in any state in the Union. But all has not yet been done. There remains a work for the girls. The Regents have long felt that a school for girls, as near in character to the school of Agriculture as the conditions would admit, would be welcomed by the people and would be of great benefit to the state. Accordingly in the summer of 1894 an experiment was made in conducting such a school at the farm for a period of four weeks. Special courses of instruction were offered in Dairying and in Domestic Economy and Cooking, with other incidental studies. The school was attended by sixty students, and was in all respects successful as planned. The school for girls has been shown to be desirable. It should be extended to a period of three or four months at least, and studies not required the present year should be made a part of the course, so that the training may be scholastic as well as technical. It is desirable that the Board adopt at an early day, some definite plan for the school, indicating its curriculum, the length of its annual session, and other essential matters which a student must know before determining to attend.

To meet the demands for increased accommodations for students at the School of Agriculture another large building or several smaller ones will need to be erected the coming year. The Committee on Agriculture will undoubtedly lay before the Board plans for such building or buildings, and I bespeak for their recommendations a most favorable consideration by the Board and by the legislature of the state at its coming session.

THE MEDICAL COLLEGES.

In 1893 some important changes were made in the Medical Colleges which have contributed much to the harmony and peace of the Medical department. The office of dean of the Medical department was abolished and all the colleges were made independent, each having its own dean. Several of the professors of the College of Homeopathic Medicine and Surgery having resigned, the college was reorganized and the result has been very satisfactory. The primary chairs have been strengthened in their equipment, and a number of

additional assistants have been employed. The course of study necessary for a degree has been extended to four years, beginning with the class entering in 1895 for the College of Medicine and Surgery and the College of Homeopathic Medicine and Surgery. An optional fourth year has also been provided in the College of Dentistry, leading to the degree of D. M. D. *cum laude*.

Dr. Perry H. Millard, who was largely instrumental in organizing the Medical College, and who has from the first been at the head of the department is now dean of the College of Medicine and Surgery. Dr. Alonzo P. Williamson is dean of the College of Homeopathic Medicine and Surgery. New professors in this college appointed in 1893 are the following: George E. Clark, professor of the Theory and Practice of Medicine; Asa Wilcox, professor of Obstetrics; Henry H. Leavitt, professor of Paedology; Lincoln E. Penny, professor of Skin and Genito-Urinary Diseases; John E. Sawyer, professor of History and Methodology of Medicine.

The College of Dentistry and the College of Pharmacy have both prospered and have done good work. They seem to me to be successful in elevating the standard of the professions which they serve and the faculties have shown themselves to be enterprising and progressive in their spirit. The work done in the College of Dentistry has excited attention and called forth much favorable comment in some of the older states; and I believe that both dentistry and pharmacy can be as thoroughly mastered in the University as anywhere.

I am very much gratified at the spirit of concord and co-operation which now characterizes all the Medical Colleges, and I believe that a future of marked prosperity and usefulness awaits them.

COLLEGE OF LAW.

The last two years have witnessed a steady progress in the department of Law, both in the number of its students and in the organization and efficiency of its work.

During the year 1892-93 there were enrolled 287 students, and during the year 1893-94 the number enrolled was 315. The number of students in this department thus steadily increases, notwithstanding the fact that each year the requirements for admission have been made more exacting and enforced with greater thoroughness, and the further fact that the final examinations, upon which the conferring of degrees is based, have been made each year more severe.

Requirements for admission for students who enter and register for the degree of Bachelor of Law are now the same as those for entering the freshman class in the College of Literature, Science and

the Arts, except that Latin is not required of those who enter at the beginning of the year 1894; but those who enter at the beginning of the year 1895 will be required to have at least one year's Latin.

In addition to the large increase in students and the additional requirements for admission during the two years just past, the organization of the school has been improved by a greater subdivision of labor and by the appointment of heads of departments, who are responsible for the thoroughness of instruction and the proficiency of the students in the branches taught by them respectively.

There has been a steady progress, also, in the important matter of thorough classification of legal learning, and in the equally important matter of insisting upon students mastering the work of each year before they are entitled to enter upon the work of the succeeding year.

At the present time there are three distinct courses of study—a day course of two years, an evening course, comprising the same subjects but requiring three years for its completion, and a graduate course of one year, to enter which a person must have received his bachelor's degree.

During the last year the day course has been lengthened to three years, so that students entering in 1895 will be required to pursue their legal studies three years before they can receive their degree of LL. B. This places the College of Law, as to the length of its course, upon a footing equal to that of any law school in the country; and it is believed that the course of study, thoroughness of organization, and the efficiency of the work done in the various sub-departments are not inferior to those of the leading law schools in the land.

In the graduate course of one year there were enrolled last year twenty-seven students. The object of this course is to introduce students to the subjects of General Jurisprudence, Political Science, International and Constitutional Law, and thus open to their view these rich fields of investigation, which they may cultivate in after years as time and inclination may permit.

GIFTS RECEIVED.

Through the exertions of Mrs. J. A. Bowman of Minneapolis the University has received a collection of portraits, pictures and works of art of various kinds, to which considerable additions are promised in the future. Mrs. Bowman has solicited contributions from many artists and others, and has been indefatigable in her efforts—not so much to create an art gallery as to introduce into the University works which would relieve the bareness of the walls and which would

be of historical value to the University, as perpetuating the likenesses of its former Regents and friends. Until the library building is completed and the full collection of pictures can be gathered together it is impossible to say how much this effort will have contributed towards the establishment of an art gallery; but the thanks of the University are due to the donors,—whose names will be honorably mentioned in due time,—and to Mrs. Bowman for the work she has done, and not less for the spirit of devotion to the University which she has manifested in all her efforts.

A LEGACY.

The University received in 1894 its first bequest. By the last will and testament of James T. Howard of St. Johnsbury, Vt., the sum of ten thousand dollars was bequeathed to the University of Minnesota. The estate did not prove to be as valuable as the testator had supposed that it would be, and the amount actually received was four thousand dollars in United States bonds on which there was a premium of four hundred dollars, making the actual amount four thousand four hundred dollars after all expenses had been paid. This bequest is particularly gratifying, because it shows an interest in the University felt by a citizen of a distant state and because it will serve as an example to wealthy citizens of Minnesota, who cannot in any other way do so much good to Minnesota as by generous legacies bestowed upon the University. The bequest already received has been devoted to the establishment of a scholarship in the Graduate department, to be known as the Albert Howard Scholarship, in accordance with the terms of the will.

CYRUS NORTHROP.

SUPPLEMENTARY.

I have thus completed the record of the two years ending with July 31, 1894. But, as I desire to present to the board more specifically than I have yet done the needs of the university for the coming year, it is necessary to speak of an occurrence later than the date at which this report properly closes.

At about 9:30 on the evening of Aug. 9, 1894, fire suddenly broke out in the drill and assembly hall, and in a few minutes the whole building was in flames. In an hour it was a mass of charred ruins. The contents of the building, including, besides the furniture, that portion of the Columbian exhibit of the state which was given to the university, some machinery for the ore-testing works, and the arms and equipments of the cadets, were destroyed or hopelessly damaged. The building had become, as the university grew, exceedingly valuable on occasions when large numbers of people were to be accommodated; and its loss was a serious damage to the institution. There was fortunately sufficient insurance to cover the loss on the arms and equipments, and there was also an insurance on the building of \$18,000. As it is essential to the work of the university that it should have a drill hall, and as a gymnasium has long been needed and desired by the students, the opportunity is now presented to construct a building of reasonable dimensions that will furnish both a drill hall and a gymnasium. For such a building the legislature of Wisconsin appropriated for its university three years ago the sum of \$200,000, and the building has been erected at Madison. I believe the building actually cost only \$125,000. The legislature of Wisconsin also appropriated at an earlier session \$450,000 to replace a science hall that had been burned. In both cases the action was wise, as it secured buildings large enough to meet the wants of the future as well as of the present. The criticism has been made on the buildings of the University of Minnesota, by prominent college men who have visited the institution, that they were not large enough; and our own experience is demonstrating that this is true of almost every building which has been erected. I hope that the same mistake will not be made again, but that the actual growth of the

university will be realized and its future growth will be properly estimated in planning future buildings that are to be for the use of the whole body of students. The 'drill hall and gymnasium' will be for the use of the students of the professional schools as well as for the academic students. The building, therefore, must be large. It must have accommodations for the physical culture of ladies. It must be capable of being converted into a large auditorium when needed. It is safe to say that no other large institution of learning in the country has been so poorly provided with the means for physical culture during the last ten years as the University of Minnesota. The erection of a proper gymnasium is in the interest of the health and culture of thousands of students, the sons and daughters of citizens of Minnesota. How much shall be asked of the legislature for this needed building, the board will, of course, determine. If only a small sum is asked, it means another building with cramped quarters from the beginning, and yearly increasing inadequacy of room. If a very large appropriation is asked, it probably means failure to secure moderate appropriations for other objects not less necessary. It is very certain that the legislature, however well disposed, will never make appropriations for the university that are not asked for; and it is equally certain that, in view of the growth of the university, the character of its work, the rank which it now holds among the institutions of learning in our country, and the good it is doing to the state, the time has come when the regents are not only justified but required to ask from the legislature larger appropriations than ever before for building and equipment—appropriations that will enable the institution to do justice to its ever-increasing body of students.

The number of students in this university is several hundred greater than the number in the University of Wisconsin; but the amount expended for buildings at the latter institution is nearly double the cost of the buildings at our university, and more than double the amount expended by the State of Minnesota for these buildings. Missouri, also, has expended recently more than \$550,000 on buildings and equipments for her university; and has given her university since 1891 \$1,525,000 in direct appropriation and interest on endowment.

Another most imperative need of the university is a large addition to the books in the library. An institution cannot be in any just sense a university unless it has a large and well-selected library. The state has generously provided a noble library building. I ask that a generous appropriation for books be asked for, in order that the university may do its work properly. If we cannot have any-

thing else, at least give us books. The professors need them, the students need them, the methods of modern education require them, and we cannot go on successfully without them. If it be found impossible to give as much at once as is needed, I suggest that an annual appropriation of respectable proportions be asked for in addition to whatever sum may be at once granted.

A new laboratory building for the medical department is another imperative need. The present building is of a temporary character and so small that even from the first it has been necessary to divide classes into sections and repeat the work with every section. Each year the classes have grown, and the present year the increase alone is nearly one hundred, making the total number of students 364. There are in histology, embreology and bacteriology 250 students and only 750 feet of space in which to carry on the work of microscopic investigation. The entire week is occupied by the professor in going through the freshman class once, section by section. The instruction thus given is insufficient. The course in bacteriology will have to be postponed till next year, yet this subject is a most important one. I cannot go into all the details of our embarrassments in this work because of insufficient room. I respectfully refer the regents for more information to the communication of Prof. Thomas G. Lee, herewith presented. It explains the situation fully. Twenty-five thousand dollars will build a suitable histological and pathological laboratory; and this building will relieve the pressure on the department of medical chemistry by enabling it to occupy, in addition to its present quarters, the rooms now devoted to histology, embreology, pathology and pharmacy, provision for pharmacy being made, as I think it can be, in one of the other buildings. Already we have been obliged to decline to receive students in the medical department because we had not adequate room for the laboratory work. With the establishment next year of a fourth year in the medical course, the pressure for room, unless relieved by the action of the coming legislature, will be simply intolerable.

Without prolonging the discussion or dwelling at length on other pressing wants, I deem it my duty to lay plainly before you the needs of the university which ought to be met at once. It must be borne in mind that it takes a year, and sometimes two years, for the university to get the benefit of an appropriation for buildings, and that unless our wants are met now it will be three or four years at the least before they can be met. Meantime our numbers are likely to increase rather than diminish, and we already have on our rolls for the present year more than two thousand students. No reasonable man can expect the university to care for such large num-

bers with laboratories that were hardly large enough when the number of students was only half as great as now.

I think it is best to be perfectly frank and state fully what we sorely need, in order that the whole situation may be understood. We need a new dining hall with dormitories at the School of Agriculture; an addition to the Dairy Building; books for the library; an observatory and telescope; histological and pathological laboratory; drill hall and gymnasium; shops for mechanic arts college, and heating, lighting and power plant; a plant house for scientific work in botany; additional accommodations for other departments doing laboratory work.

If an appropriation to meet these requirements could be granted, it would give an impulse to the work at the university that would soon place the institution in the front rank of American universities and would relieve the Board of Regents of a most intolerable burden; the constant consciousness that the university is suffering because it is not adequately equipped, and the equally constant consciousness that the board has no money with which to supply what is needed.

I have thus laid before the board what I conceive to be the pressing needs of the university as respects buildings and equipments, putting the figures in each case as low as I dare. I leave the matter to the calm judgment of the board to determine what appropriations shall be asked for, and to the patriotism and wisdom of the legislature to determine what appropriations shall be granted.

In conclusion, I congratulate the board upon the abundant evidences of prosperity which the record of the university for the last two years, and the unexampled number of students in attendance at the present time, afford.

CYRUS NORTHROP,

President of the University of Minnesota.

University of Minnesota, Dec 1, 1894.

REPORT OF EXPERIMENT STATION.

ST. ANTHONY PARK.

To the Board of Regents of the University of Minnesota:

I have the honor to present herewith the biennial report of the Experiment Station for the period beginning Dec. 1, 1892, and ending Dec. 31, 1894; the fiscal year of the station having been changed a year ago from December 1st to January 1st. Reports of the various officials of the station are appended, and for more detailed reports of all the transactions of the Experiment Station I refer you to the annual reports for 1893 and 1894, it having been decided to issue an annual report instead of the general biennial report, as was formerly the custom. Respectfully submitted,

WM. M. LIGGETT,
Chairman of Staff.

ENLARGEMENT OF EQUIPMENT.

The erection of a building costing \$30,000 from appropriation provided by the last legislature gave additional facilities for the horticultural and entomological divisions of the Experiment Station, but these rooms are already growing small, as the school work for so large a number of students as are now present requires a great deal of space for teaching along these practical lines.

The east wing of the barn, which blew down during the summer of 1893, was rebuilt the following winter on a much improved plan, which gave better accommodations for the beef and dairy animals, and provided a most excellent place on the second floor for the horses and wagons in use at the farm. A building was erected for a slaughter house in which the killing, cutting up and curing of meats is taught to the students in the School of Agriculture, and here it is planned that experiments regarding methods of handling meats can be carried out. The herds of beef and dairy cattle were found, by the new tuberculin test, to be seriously affected with tuberculosis, and about one-third of the herd was destroyed or isolated for curative experiments. The dairy herd has been increased by the addition of full blooded animals, and, as reported in Bulletin 35, has made a most wonderful record. Filling out the herd of beef cattle has been delayed until another season on account of the serious infection with tuberculosis. Grade beef animals, however, have been purchased from time to time, and numerous experiments are being carried out in feeding this class of stock. Small herds of various breeds of hogs are being built up, and a small start is being made in the way of collections of sheep. Several experiments have been conducted in feeding sheep, and a number are now under way in feeding and breeding swine. A commodious sheep barn is one of the needs of next year. The Experiment Farm has been somewhat changed as to the manner of its management, and is no longer conducted largely as a model farm but more as an experiment farm. Each field is being so prepared that in the future it will be the best suited for its use in field experiments. A large number of experiments have been commenced in field management, which will require a long number of years for their completion.

It was found necessary to supplement the two small wells on the Experiment Farm with a large well 282 feet deep. This eight-inch well with a six-inch steam pump supplies water through the 1,800 barrel tank and the excellent system of water pipes to all buildings of the station and school.

CHANGES IN STATION OFFICERS.

In August, 1893, Clinton D. Smith, director and professor of dairying, resigned to accept a position in the Michigan Agricultural College. Instead of electing another director Regent Wm. M. Liggett was chosen as chairman of the Experiment Station staff. Prof. W. M. Hays, who was re-elected as professor of agriculture at the Experiment Station, was made vice chairman. Prof. T. L. Haecker was promoted from assistant agriculturist to professor of dairy husbandry, and given charge of the dairy stock and dairy manufacturing in the Experiment Station. Dr. M. H. Reynolds, who had been for two or three years with the Minnesota Farmers' Institute, was elected as professor of veterinary science and veterinarian of the Experiment Station to fill the vacancy caused by the resignation of Dr. Christopher Graham in the spring of 1893. Prof. Thos. Shaw, formerly of agriculture in the Ontario Agricultural College, was chosen as professor of live stock husbandry, and placed in charge of the beef cattle, sheep and swine at the Experiment Station. In the spring of 1894 the board authorized the Experiment Station to conduct experiments in Lyon county on the farm of O. C. Gregg, superintendent of the farmers' institutes. Under the direction of Prof. Hays Mr. T. A. Hoverstad, a graduate of the college of agriculture, and very largely assisted by Mr. Gregg, important experiments were begun, and some valuable results are already being worked out. The rental price of this excellent farm was presented to the Experiment Station free through the kindness of the State Board of Farmers' Institutes, who were able through moneys earned by using the Farmers' Institute Annual somewhat as a medium for advertising farm implements and live stock to thus provide an experiment farm under the conditions of Southwestern Minnesota. The rental of the land included the use of a great abundance of farm machinery, as well as

teams and all other equipments necessary. The following summary shows the amount of money expended, also the net cost above products sold and those now on hand, as per invoice: Total cost of labor and superintendence, \$1,185; seeds and plants, \$76.99; sundries, \$186.35. Credits: Wheat raised, \$495; hay, \$375; experimental grains, \$75; plowing, \$100. Making the net cost to the station \$399.57.

The hearty thanks of the station are again due the following named railroads for transportation furnished in the transaction of the work at the various trial stations and in studying other sections where it was necessary to visit other parts of the state:

Great Northern, Northern Pacific, Eastern Minnesota, Duluth, Missabe & Northern, Duluth & Iron Range, Chicago, Milwaukee & St. Paul, Chicago, St. Paul, Minneapolis & Omaha, Minneapolis, St. Paul & Sault Ste. Marie, St. Paul & Duluth, Chicago Great Western.

Some of these railroads have also accommodated us by transporting, free of charge, material used in various experimental studies. The 500 bushels of wheat donated in the spring of 1891 by Mr. Chas. A. Pillsbury and sent to various good farms throughout the state has done a large amount of good, as shown by frequent testimonies we hear regarding the wheat produced from that seed. In the field experiments during the year 1893 plots have been used, and during 1894 plots were used at the university farm, and 300 plots at Coteau farm.

The following bulletins and an annual report for 1893 have been issued during the biennial period, July 1st, 1892, to July 1st, 1894:

Bulletin 22.—Comparison of Corn; Barley; Corn and Shorts; Barley and Shorts; Shorts and Olfmeal; and Barley, Shorts and Olfmeal in the ration of growing pigs; Corn vs. Barley for fattening hogs; Cornmeal, Barley meal and a mixture of Barley meal and Olfmeal compared; wet vs. dry feed.

Bulletin 23.—Wheat; Milling and Baking tests; Co-operative tests with selected Seed Wheat; The Frit Fly. Report upon an insect injurious to Wheat. Exhausted.

Bulletin 24.—Ornamental and Timber Trees, Shrubs and Herbaceous Plants; Notes on hardness and desirability. Supply exhausted.

Bulletin 25.—Small fruit; Notes from Trial Stations; Renewing old Strawberry Beds; Shading Strawberry Beds; Seedling Fruits; Analyses of Grapes; Spraying Grape Vines. Supply exhausted.

Bulletin 26.—Digestion Experiments on Milch Cows, Pea Ensilage, Wheat Bran; on Pigs, Barley, Shorts, Barley, Corn and Shorts. Corn, Shorts, Corn and Bran, Peas and Bran, Peas, Bran.

Bulletin 27.—Feeding Stuffs, Composition of fodders, Wheat and Mill products. Dairy Products. Composition of Sugar beets.

Bulletin 28.—Insects; Popular Classification of; Their relation to Agriculture.

Bulletin 29.—Wheat; Heavy and light weight seed, vigor of growth of the plant. The draft of the wheat plant upon the soil in different stages of its growth.

Bulletin 30.—Soils; Composition of native and cultivated; Effects of continuous cultivation upon their fertility.

Bulletin 31.—Lambs; Practical Rations for; also Lambs vs. Wethers, for Fattening. Field Experiments in 1893; Oats, Corn, Wheat, Potatoes.

Bulletin 32.—Late Blight and rot of the Potato; Potato scab. Cross Fertilization of Grapes. Conservation of Moisture in the Soil. Fruits; Notes on varieties.

The members of the Experiment Station staff have done a large and commendable amount of writing for the agricultural and general press of the state, and have furnished numerous valuable articles for publication of various state agricultural societies.

Especial attention is called to the appended reports of the various division heads regarding the work they have on hand and suggestions as to what they should carry out in the future.

W. M. LIGGETT,
Chairman of Station Staff.

REPORT OF THE AGRICULTURAL DIVISION.

In harmony with the desire of the agricultural committee of the Board of Regents, much time has been spent during the past year by the division of agriculture in devising plans for comprehensive experiment work along the practical lines relating to management of farms and crops. In separating from the agricultural division the dairy and live stock work, the board emphasized the importance of thorough work along the many lines relating to the management of fields, crops, roads, soils, manures, etc.

Field management is one of the most difficult lines on which to do experimental work because of the great variety of conditions as to soil, climate and needs of the farmers. To get valuable averages in these lines of experimentation soils in different localities and of different character must be used and the experiments must be carried through enough series of years that not only general averages can be obtained, but that the particular needs of each season and each soil be studied.

Studies have been started in the management of fields by starting at the university farm two lines of rotation experiments. One series of forty-two plots is devoted to thirty practical rotations, each one representing a different way of farming and comparing with twelve which are used as check plots. It seems useless to plan this kind of an experiment so as to finish it short of fifteen or twenty years. Prof. Snyder has kindly consented to join in this work, and has made analyses of the soil of each plot. Some of the things which we may hope to obtain in this experiment are the average yields of a dozen or more kinds of crops grown; the influence each kind of rotation, also of single crop farming, has on the yield of the several crops; the relative value of short and long grass lays in rotations; the ease of keeping down weeds with one rotation as compared with another; the ultimate fertility of the soil under one system of farming as compared with another; the relative net income from each system of field management through a long series of years. Supplemental to the above series of experiments is another in which are employed seventy-two plots. These plots are to be planted to certain crops in broad belts. The second year the belt of each crop runs at right angles to the direction of the belts of the first year and across the belt of land planted the year previous to each other crop. This causes each crop to be grown after each kind of crop, as well as after a crop of its own kind. From this experiment the influence of one crop on future crops can be learned, the influence of each crop on weedy land, and as to which crop is best to follow each other crop. In connection with these experiments an effort is being made to collect statistics from our own fields and from the farmers of the state regarding cost in labor, seed and other expenses of each operation in the production of each kind of crop. These averages will be used in connection with the average yields per acre secured in the rotation experiments. By putting together cost of the various kinds of crops and their gross returns, also the influence they have on the fertility of the land, we will be able to get the net profits from each crop and from each system of field management.

The testing and improvement of varieties of grains and forage crops are planned in such manner that as fast as we secure the knowledge of the best varieties of any class of these crops through testing varieties of seeds from all obtainable sources, we shall improve and distribute the best things in quantity to the farmers of the state. Some excellent varieties of dent corn, which have proved best of the varieties tested for the last five years, are now on hand in nearly large enough quantities to justify their sale or distribution to a large number of our farmers. Of the 150 varieties of Russian and American wheats which have been under experiment at the Minnesota and North Dakota Experiment Farms, we are now able to select the best and grow them until they increase to quantities for distribution to many farmers. Large numbers of varieties of barley, oats, flax and other crops are also being tried, and ere long excellent stocks of the best of these will also be on hand for propagation and later for distribution. Experiments with varieties of staple forage crops as timothy, clover, millets and sorghums are also under way, and new kinds of forage crops are constantly being introduced and compared with the best kinds now in general use by our farmers. As the best kinds of each variety of crops is discovered experiments are started to improve them by careful selection and by crossing. Most interesting and apparently valuable results have already been obtained in the selection and crossing of wheats, barley, timothy and some new varieties we have originated are already given promise of good yields and to be of good quality. Dr. Luggar has done much at securing new varieties of forage crops from many parts of the world, some of which seem worthy of our giving field trials. The secretary of the U. S. department of agriculture has recommended that the government furnish each experiment station with a sum of money each year with which seeds may be distributed under their direction, rather than the continuance of the distribution of seeds by the U. S. department of agriculture, and

we sincerely hope and desire that this change may be favorably considered by congress.

The tillage of crops in our state, subject to drouth as it is, is one of the most important lines for experimenting. Several scores of plots are now being devoted to such subjects as depth of plowing, time of plowing, methods of conserving moisture in the soil, value of green manure crops, methods of summer cultivation and management of fields in relation to methods of growing crops, and kinds of crops to grow under drouthy and also under moist conditions.

The harvesting and preserving of grain and forage crops are also being studied, and in connection with the teaching of shocking and stacking grains and making of silage, storing of roots, etc., considerable interesting experimental work is being done. The preservation and handling of human foods is being provided for in certain lines by our new meat house, and the facilities for the study of these products can easily be greatly increased in connection with the boarding of students and in connection with statistics being gathered from the farmers of the state.

The subject of farm drainage is receiving attention, and it is hopeful that ere long some publications will be made regarding surface and the drainage.

Road making has received some attention, and the roads at the Experiment Farm are being much improved. While the purpose of this work is mainly to furnish instruction in the School of Agriculture, it also has an important bearing on the subject of good roads in the state. The station was able to materially assist in making a good roads display at the last meeting of the state fair.

Sub-Experiment Farms.—Recognizing the far greater value of results to be obtained along the lines of experimentation above outlined, by doing the work at several representative places in the state, the agriculturist, at the suggestion of the agricultural committee has made a study of the question of conducting experiments at a few other representative points throughout the state. The board of managers of the State Farmers' Institutes, recognizing the need of this class of experiments, and of horticultural experiments, in the various parts of the state visited by the institutes, voluntarily provided for the rental price of a farm in Lyon county belonging to the superintendent of the farmers' institutes, Mr. O. C. Gregg. Arrangements for doing work there during the past year were provided somewhat late, but the work was organized with Mr. T. A. Hoverstad in charge of the experiments, and Mr. Gregg gave much valuable assistance in carrying out the work of the season. This farm consists of 360 acres, about 150 of which were under the plow and 25 of which was lake meadow land. The net expenditure in this connection of the work for this first season was \$359.57. The rather dry season considerably impaired the results, though the test of the varieties of wheat alone are worth far more than the entire cost of the season's work.

Plans for experiments on most of the land above mentioned at Coteau farm, as well as at the university farm, are well arranged, and if this work could be extended to two other farms representing the third and fourth large divisions of Minnesota, we would have a good provision for studying questions, and would have land enough on which to propagate many useful kinds of crops for distribution to our farmers and on which grains and even some rough feed could be produced for the animals at the university farm. The important live stock interests in connection with the station and school work at the university farm require far more animals than we can there raise foodstuffs for, and it will be economy either to raise food on outside lands managed by the Experiment Station or to transfer the raising of young stock largely to such farms. The school work required by this division increases with the growth of the School of Agriculture, and the demands for more instruction in the college course are becoming imperative. Some of our college graduates, if given charge of this outside work in summer, would become our best men to conduct the experiments, and from the experience there gained would be our best teachers to care for the increasing teaching required in these lines in winter.

WILLET M. HAYS,
Agriculturist.

DIVISION OF DAIRY HUSBANDRY.

Since the taking charge of the work of this division my efforts have been chiefly directed in the line of practical instruction in the various branches of dairy husbandry. While the primary object of the division is to prosecute scientific investigation in matters directly bearing upon dairying, yet the peculiar situation of the dairy industry during the past two years seems to call for information of a more popular character. Therefore my time has been largely diverted to a more thorough organization of the dairy school and the practical dairy work in the School of Agriculture.

The great depression in the price of wheat and the partial failure of the crop have induced farmers to give more attention to dairying and the organization of creamery associations and the erection of creameries. There has been so much call for information as to the best methods of organizing creamery associations and constructing and equipping creameries that in order to meet this demand a press bulletin was issued on this subject last March. The great demand for educated and experienced buttermakers brought so many applications for admission to the dairy school that many could not be accepted for want of room.

New Creameries.—During the past season some sixty new creameries were built in the state, and in order to supply them with experienced buttermakers many had to be secured from other states. In view of this unexpected and rapid development of the dairy industry in the state, the enlargement of Dairy Hall seems a necessity. When this building was erected no provision was made for a laboratory, and without which it is impossible to give proper instruction in milk testing. For this work it is necessary to have a large room equipped with apparatus for testing milk, conducting composite test and for the examination of milks and dairy products. The room for practical home dairy work is only large enough to accommodate about one-third of the students taking dairy work in the School of Agriculture. There is also great need for a large lecture room, a large room for a class in cheese work and two cheese-curing rooms where temperature and moisture can be kept under control. Thus far most of the machinery used in the Dairy Hall during the factorymen's course has been borrowed from the manufacturers and dealers. While these generous loans are appreciated, yet it is doubtful whether this is a wise plan, for the reason that the Experiment Station should be in a position to publish data obtained in operating the different kind of machines for the information of the public. It is therefore respectfully recommended that provision be made for the equipment of Dairy Hall.

The merits of the various breeds of cattle for dairy purposes should be ascertained and the Experiment Station, if supplied with the necessary stock, can furnish this information. Bulletin No. 35, issued from this division, shows that there is a great difference in cows in the economical production of milk and butter fat, and the results obtained seem to warrant further investigation in this respect. For this purpose and for use in the class room in connection with the School of Agriculture and the College of Agriculture more animals of the different types and breeds are needed.

Experiment in Creamery Milk.—During the spring of 1893 experiments were undertaken in the influence of the period of lactation on the creaming of milk by the gravity process. It has been noticed that at certain times the cream in milk will separate and rise to the surface more readily than others. To ascertain, if possible, the cause of this variation it was decided to set the milk of each cow separately during different periods of lactation. Before the work was completed abortion broke out in the dairy herd, which prevented the completion of the work. Some valuable results were obtained, however, and as soon as it is found that the disease has been eradicated, the work will again be taken up. Further experiments have been made in testing milk and the use of chemicals for preserving samples of milk so that the daily testing in creameries can be dispensed with, thereby saving much time and labor to the operator.

Dairy Herd Record.—Ever since the establishment of the dairy herd at the station, each milking of every cow has been weighed and tested for butter fat. By this means the effect that any change in the dairy has upon the flow of milk and its fat contents can be readily noted. It also furnishes the yield of milk and butter fat of each cow in the herd, and by keeping a careful record of the

feed taken by each the cost of milk and butter fat from any given time can be computed. This involves no small amount of labor, but it is of such vital importance in securing the data so much needed that the discontinuance would seriously interfere with the object for which the herd was established. During the year 1892 there were twenty-five cows in the dairy herd; an accurate record was kept of the yield of milk and butter fat. The largest annual yield of milk was by a Holstein-Friesian, 9,418 pounds; the smallest yield was by a Jersey, 2,282 pounds. The largest yield of butter fat was by a Guernsey, 364 pounds, being equivalent to 440 pounds of butter. The smallest yield was by a Jersey, being 116 pounds. The average annual yield of milk was 5,644 pounds, of butter fat 260 pounds. During the year no accurate record was kept of the amount of feed consumed by each cow. It was, therefore, impossible to ascertain the cost of milk and butter products. During the year 1893 there were 23 cows in the dairy herd. A careful record was kept of the amount of feed taken by each cow daily, and the amount of milk and butter fat produced. The largest annual yield of milk was by a grade Holstein cow giving 10,287 pounds; the smallest yield was 4,526 pounds, by a grade Jersey. The whole herd averaged 6,407 pounds of milk and 300 pounds butter fat, being equivalent to 364 pounds of butter for each cow in the herd. The average cost of 100 pounds of milk was 61 cents, the average cost of a pound of butter was 10.6 cents. The average cost of feed was \$38 per cow. The annual yield of butter per cow was larger than was made by any other station herd, and the cost of production less.

During the winter of 1893-4 an experiment was made in the cost of milk and butter production during the winter months. Every cow in the herd was in the trial. The cost of a pound of butter fat ranged from 10.8 cents per pound to 18.2 cents, the average cost of a pound of butter fat from the herd was 13.9 cents. It appears from this trial that there is a great difference in the cost of butter fat from different cows; that the productive capacity of a cow depends more upon type and conformation than upon size and breed. Those of the beef type produced butter fat at a cost of 17 cents per pound. Those carrying a medium amount of flesh produced butter fat at a cost of fifteen cents per pound; the spare cows lacking in depth of body produced it for 14.6 cents, and the spare cows with deep bodies at 12.1 cents. These results are of such great importance to dairymen that another trial will be made with other animals representing the various types.

Feeding Prairie Hay.—During the past winter comparison was made with timothy and prairie hay for dairy cows. The result of the trial was highly satisfactory, both as to the conduct of the cows during the experiment and the result obtained. Twelve cows were in the trial, which lasted seventy-seven days. The cows maintained a full flow of milk and yield of butter fat during the experiment. The results showed that the cows preferred the prairie hay and gave far more milk and butter fat and at less cost than during the periods when timothy was fed.

Rearing Dairy Calves.—During the winter of 1893-4 an experiment was made in rearing dairy bred calves. One of the greatest obstacles to successful dairying in that portion of the state lying west and north of the Twin Cities is the scarcity of cows. The demand for them is so general that it cannot be supplied by purchase. It is therefore important that all heifer calves be raised, and the object of the experiment was to ascertain how this could be done most economically. This trial showed that by rearing calves on whole milk it cost five cents per pound growth, and when fed on skim milk and ground flax seed at half the cost, and it makes a rapid growth and does not acquire the habit of laying on flesh.

Cheese Work.—Considerable work has been done in experiments in the manufacture of Edam, Gouda and Swiss cheese. The people of Minnesota annually buy an enormous amount of cheese, both domestic and foreign brands. It is believed the cheese could be made at home profitably. Climatic conditions are so different here than is the case in Holland where Edam and Gouda are made, that ordinary curing rooms will not answer for those brands, as they require much moisture for proper curing. Gouda cheese seems especially adapted for the farm dairy, and for this reason further investigation will be made, with a view of finding a method of manufacture, which will adapt it to our climate. The work in Edam cheese has been especially satisfactory, and the cheese is now being made in two factories in this state.

During the coming winter experiments will be conducted in feeding prairie hay to dairy cows, economical production of milk and butter fat, comparing a wheat ration with a standard ration composed of bran, barley, corn and linseed meal with rearing dairy calves. It is the aim to concentrate work more into special lines, and as soon as circumstances will warrant give more attention to the purely scientific feature of experiment. But at present the demand seems to be far more practical, popular work which farmers can apply to their every day work.

T. L. HAECKER.
Professor of Dairy Husbandry.

DIVISION OF HORTICULTURE.

The lines of work which have occupied the attention of the Division of Horticulture during the biennial period ending Dec. 31st, 1894, may be grouped under the following heads:

Care of the Grounds.—The grounds adjacent to the farm school buildings and the woodland have been considerably improved. Several important drives have been laid out, and a large number of desirable hardy plants have been set out along their borders. This has added very much to the appearance of the grounds. The earlier plantations along the drives and around the buildings are developing into specimens of much beauty. The labeling of the trees and shrubs on the grounds with their common and botanical names and the place from which they have been introduced is a measure that meets with universal commendation from students and visitors.

A feature of special interest in this line is the improvement of the grounds by the grading and seeding down of the land adjacent to the drill hall. By much care during the very dry season of 1894 it has been found possible to get these grounds into very good shape.

The board walks about the grounds have necessitated considerable expense for repairs during the past two seasons. The present walks have outlived their usefulness, having been put down six years ago, and they are now dangerous. They should be replaced next year. While referring to this subject, permit me to urge upon the board the economy of putting down stone walks instead of wood. Artificial stone costs but little more than twice as much as wood, lasts indefinitely, and is always ornamental, while board walks are unsightly, and when they commence to rot are dangerous.

Nursery.—The nursery at the university farm is in excellent condition, and contains many ornamental fruit trees and shrubs which are being grown for planting on the grounds of the university, and for supplying the outlying experiment stations. Including the plants in the nursery, there are now about twelve hundred species and varieties of plants on the farm besides about one hundred and fifty species and varieties which are grown in the green house. Altogether there are between thirteen and fourteen hundred varieties of plants cultivated by this division of the Experiment Station.

Forest Plantation.—The forest plantation embraces about five acres. Its object is to furnish a variety of trees, such as are of value in this state, and to test the value of the newly introduced kinds. The trees are generally grown in rows eight feet apart. They were planted out in the spring of 1890, and with few exceptions have made an excellent growth. There are now forty-three species of timber trees in this plantation. It attracts much attention from visitors, and is of great value for instruction for the students of the School of Agriculture, and also as an experiment.

Experiments with Apples.—The experiments with apples have consisted of the trials of varieties of promising hardiness from Russia, Hungary and North Germany and of seedlings from various sources in this country. Probably four hundred named varieties of apples have been on trial by this division during the last six years. Many of them have been discarded as worthless, but there are now on trial three hundred and twenty-five named varieties, besides several hundred unnamed seedlings of our own growing. Among these there are some varieties of great merit that I believe will make possible the growing of apples successfully over a large portion of Minnesota. Judging from the behavior of some of the best of the varieties at the university farm and at other places where

they have been on trial in this state for a longer period, I am very confident that there are large sections in the southern part of the state which will eventually raise considerable quantities of these improved hardy varieties. The most desirable of these varieties are Duchess of Oldenburg, Breskovka, Botovinka and Blushed Calville, which are summer and early autumn varieties, and Hibernial, Lieby, Longfield and Anissim, which are late autumn or winter varieties.

Plums.—The development of our native plums by selection and hybridization is a matter of much importance. We now have varieties which are well adapted to cultivation that are a great improvement over anything to be found in a wild state. This fruit has not only been greatly improved in size and quality, but in the development of these qualities it has lost nothing of its hardiness and certainty of producing paying crops. As an instance of the certainty with which this fruit is produced it might be well to state that since the orchard on the university farm commenced to bear in 1888, only one crop has been missed and six good crops have been produced. In quality and general appearance this fruit compares favorably with any plums that have been offered for sale in our markets the past season. The varieties of most value are Desota, Weaver, Wolf, Cheney and Forest Garden.

Grapes.—Perhaps there is no crop that is more certain than the grape crop in favorable locations in this state. At the Experiment Station in eight successive years we have had a good supply of fruit from our vines. The varieties of special interest are Worden, Moore's Early, Agawam, Amina, Brighton, Barry and Green Mountain.

Small Fruits.—Strawberries, raspberries, blackberries, currants and gooseberries grow readily in this state, and some improvement is made from time to time in the varieties adapted to cultivation. The area of land grown in these crops increases very rapidly from year to year, consequently the interest taken at the Experiment Station with these fruits likewise increases. These have been reported on at considerable length in the various bulletins.

Potatoes.—It is a part of the work of this division to try the new varieties of potatoes that are introduced from time to time. About forty varieties have been tried at the university farm the past season, and this trial was also repeated at Bethel on some of the best potato land in Anoka county. Experiments have also been made with various materials for the prevention of blight on the vines and scab on the tubers. The results of these experiments will be found reported on in the bulletins of this division. As a result of these trials it has been very satisfactorily shown that slightly scabby potatoes may be planted in new soil without any danger of having the crop from them scabby, provided they are soaked for one-half hour before planting in a solution of one part corrosive sublimate to one-thousand parts of water.

Vegetables.—Experiments have been made in the growing of tomatoes, onions, sweet corn and beans with various objects in view. Results of these will be found reported on in the bulletins of this division.

Fungous Diseases.—Several fungous diseases have been experimented upon in the use of various fungicides. The diseases to which special attention has been paid are raspberry cane rust, strawberry leaf blight, melon blight, tomato rot, potato scab, rot and blight and gooseberry mildew. These have been treated in various ways, according to the peculiarities of the disease. The results are of much interest, and will be found reported in a bulletin shortly to be issued.

Crossing and Hybridizing.—This is a line of work now attracting much attention, and many experiments are being made at the university farm in intelligent breeding of plants in the belief that by so doing our cultivated plants will improve much more rapidly than when left to chance and selection. Special experiments in this line have been made with apples, strawberries, plums, grapes and sand berries.

Greenhouses.—The greenhouses are in a very good state of preservation, and are a valuable aid in the work of the Experiment Station and in the teaching of botany in the School of Agriculture. It is, however, very important that some additional space be afforded for bench room so that the students may have an opportunity of carrying on this work practically the same as any laboratory work.

Summer School of Agriculture.—The advent of the Summer School of Agriculture begins a new era in the instruction work and the duties of the profes

sors at the university farm. During the time this school was in session much time was devoted to it, and, as a consequence, the work of this division was greatly increased. This feature without doubt will be greatly enlarged in the near future, necessitating more assistance in the minor work of the division and in teaching. I trust the board will be in a position to grant such help the coming year so that the introduction of the summer school as a successful feature will not result in poorer work in other lines.

SAMUEL B. GREEN,
Horticulturist.

DIVISION OF AGRICULTURAL CHEMISTRY.

Soils.—An important feature of the laboratory work has been soil investigation. One bulletin on this subject, No. 30, has been published, in which the indirect part taken by the humus and the organic matter, in keeping up the fertility, is considered. Another bulletin on soils will be ready for publication in about three months, dealing more with the forms in which the plant food is present in the soil. In the soil investigations I have been aided by the students of our School of Agriculture, who have furnished many samples, with their complete history, from the time they were first cultivated. In one case a soil which has been continuously cultivated to wheat for forty years, was obtained, and in another case one cultivated twenty-five years continuously to corn was supplied. An analysis is made of the soil from the farm of each student in the chemistry class of the School of Agriculture. Inasmuch as soil investigation has been such a prominent feature of the work in the laboratory, I deemed it wise to devote some time to the study of the various methods employed in soil analysis. The result was an improved method for obtaining the soil acid solution by means of a soil digestion flask. This method has since been adopted by the association of Official Agricultural Chemists as the official method.

At the World's Columbian Exposition the exhibit of Minnesota soil by this division received an award from the government for soils rich in plant food.

Wheat.—The growth of the wheat plant from the seed until maturity has been studied during two seasons. The composition of wheat of different weights per bushel, all grown from the same lot of seed, was reported in Bulletin No. 29, as well as the composition of healthy, vigorous, and weak and sickly plants. The digestibility of wheat, both whole and ground, when used as an animal food, has been determined. The results are given in a bulletin, which is now in the press.

Animal Foods.—The composition, digestibility and comparative value of animal foods has been an important line of work. Three bulletins relating to different parts of this subject have been published during the biennial period. One bulletin, No. 26, is devoted to digestibility; No. 27 to the composition of grains, milled products and fodders, and No. 36 the comparative values of different fodders.

Human Foods.—With the addition of the meat house to the school and station equipment, it is intended to make an extended study of the chemical composition of various meats, in order to furnish exact data for their more economical uses. This work will be prosecuted during the coming winter, when chemical analyses of all parts of various animals will be made.

Clover.—A study was made of the chemical development and value of red clover, and the results are published in Bulletin No. 34. It is the intention of the division to make at least one crop the subject of an extended investigation, each year, so as to obtain a better knowledge of the chemical development of all of our farm crops in order to combine them in the best systems of rotations.

Rotation of Crops.—In connection with Prof. Hays an extended study of the rotation of crops has been undertaken. A complete analysis has been made of the soil and subsoil from forty-four separate plots. These plots are to be farmed to different systems of rotation. The crop removed from each plot, each year, is separately analyzed. At the close of the rotation period the soils will all be analyzed again. It will be some time before the results of this work will mature, but I consider this one of the best lines of work that can be undertaken.

Miscellaneous Work.—In addition to the work classified under the various heads, other minor work has been in progress, as:

Effect produced upon the grade of flour by using "green" and "cured" wheat. The physical quality of gluten from different grades of wheat, its capacity to hold water, tenacity, opacity, form of threads, etc.

Analyses of miscellaneous materials sent in by farmers, as: water, dairy salt, ashes, Paris green, various farm products, etc., together with various inquiries from farmers relating to these topics.

Work for other departments, such as the analysis of all dairy products. During the year about 150 samples of dairy products have been analyzed.

Equipment and Needs of the Laboratory.—The equipment of the station laboratory remains about the same as at the last report. Hose connections with hose have been placed in the building for fire protection. A good system of ventilation is required. Some provision should also be made for obtaining and keeping up the files of the important publications in connection with the relation of chemistry to agriculture.

HARRY SNYDER,
Chemist.

DIVISION OF ENTOMOLOGY, ZOOLOGY AND BOTANY.

The work during the past two years has embraced the study of a large number of destructive insects. Those affecting the cereals, grasses, fodder plants, and those injuring such injurious weeds as the "Russian Thistle," or Saltwort, have been especially studied, and many of their peculiar life histories have been solved. This must be the first step in combating injurious insects in an intelligent way, as without knowing these we fight in the dark. Minnesota is peculiarly situated as regards practical entomological work, quite different from the more eastern and southern states, where a more diversified farming is the rule. In Minnesota comparatively only a few kinds of crops are produced upon a very large scale, and remedies against destructive insects cannot be based upon the use of insecticides as elsewhere, simply because labor and material would cost about as much as the resulting crops, if not more, and consequently stress must be laid upon the vulnerable points in the life histories of insects. In other words, we have to depend upon natural and not upon artificial remedies, excepting in the war against insects injurious to gardens, orchards, etc., when the latter can be employed. Close study has shown that almost every insect has, during its period of existence, one or more such vulnerable points where it may be attacked successfully.

The Army-worm, Timothy-worm, Frit-fly, Horn-fly, a small Buffalo-gnat, various borers, the different kinds of grasshoppers, many insects injurious to the small fruits and vegetables, but chiefly the chinch-bug, have been more or less carefully investigated, and active measures have been taken in the case of some of them to lessen their ravages. A large number of articles were published in various local papers in regard to these insects, and farmers in the infested districts were instructed how to combat them successfully. This was especially the case with the worst of our insect pest, the chinch-bug, which is again on the increase, and may not reach the culmination point of destructiveness before 1896 or 1897. In 1892 only a few chinch-bugs could be detected in isolated and widely separated spots. They had materially increased in 1893, in some places to such an extent as to cause serious losses. The past season, having been remarkably dry and warm, was greatly in the favor of such insects, and notwithstanding all efforts to stop their increase, the insect was multiplied in many parts of the state to such an extent as to threaten a total loss of cereals and corn in 1895. This insect has also reached many regions in which it has not appeared before. The farmers in such districts not being familiar with their enemy, are sadly in need of information and explicit directions in regard to the use of preventive remedies. To this effect a bulletin has been prepared, which will be printed during the early part of this winter. Gov. Nelson, who takes deep interest in all work aimed to help the farmer, has furnished means to carry on experiments against the chinch bugs by means of a number of diseases known to be fatal to them. These experiments, which took up considerable time of the entomologists during the past two seasons, had only a partial success, because the means that could be furnished were not adequate for such experiments, because they could not be commenced in time, and because the last season was

decidedly against any disease caused by a fungus requiring moisture and a somewhat weakened constitution of the host, when the very opposite climatic conditions prevailed. But enough has been seen and demonstrated that much can be done in this direction towards reducing the numbers of this pest. A large number of stations were established in which diseased bugs were produced upon a large scale, and many thousand boxes filled with such material were mailed to farmers for distribution, each box being accompanied by a circular setting forth the methods in which to handle and increase this material. Such experiments and applications require a large amount of money to pay for assistance, material, postage, etc., and it is to be hoped that the legislature will see fit to grant a sufficient amount for the coming years so full of promise of great losses by the chinch bug.

Grasshoppers of the migratory kinds, but not the well known Rocky Mountain species, have again visited the state, and, being favored by the very dry season of 1894, have deposited large numbers of eggs. Especially two species were and are common, and both have caused much injury to the gardens of Duluth and vicinity, as well as to many farmers farther west, and as a large number of eggs are now in the soil to produce a large crop of grasshoppers next spring, it will be necessary to fight them as soon as they hatch, another remedy not being feasible. Arrangements have been made to do so if the permission is given by the Board of Regents and if funds are granted for this purpose by the state.

During the autumn of 1894 many anxious inquiries were made about a number of so-called insects, or about insects not observed before, and a large amount of correspondence resulted in consequence, and many letters had to be written to quiet natural fears. It is a pleasant fact to state that none of these newly observed insects will prove to be very injurious; they simply became excessively numerous on account of the dry weather.

As the students of the School of Agriculture had no suitable text book in entomology a bulletin of 72 pages, very fully illustrated, was issued, and many schools in the state are now utilizing it for a similar purpose.

The collection of Minnesota insects is steadily perfected, and considerable material has been added to show at a glance the relations existing between plants and insects, between insects and insects, and between insects and the farmer. At the request of the world's fair commission a nearly complete collection of insects occurring in the state was prepared in 48 large drawers, and created much comment during the exhibition.

Early in 1893 zoology was added to the work of the entomologist, and regular lessons were given since then in that science. This science had to be somewhat different from that taught in other schools, as it should be practical. The preparation of lessons required much time, as the relations of animals to agriculture and allied pursuits had never received that attention they so well deserved.

A museum to illustrate these points by actual specimens, both of animal and food consumed, has been started, and contains at present six fine cabinets to show the animals of the state with their stomach contents, classified according to its relation to agriculture as useful, injurious or indifferent, or in other words showing at a glance whether this or that animal, bird, reptile, etc., is useful, injurious or indifferent. Some 160 specimens have been secured and finely mounted by Mr. W. T. Shaw, a student of the College of Agriculture. As the other students take considerable interest in this matter they will no doubt secure many of the still lacking species in due time. It might be mentioned at this point that the students are utilized as much as possible to assist during the summer in fighting such injurious insects as the chinch bugs, and if money should be granted by the state many will act as agents in the infested region to produce and distribute diseased bugs. A special class for this purpose will be started at the proper time. The museum contains also three cabinets partly filled with insects and two with Minnesota plants. One large wall cabinet is filled with bundles of grass and forage plants, and another will be devoted to soils, animals, fossils, shells, etc., to demonstrate how agricultural soils are produced by nature. As the museum will be built upon an entirely different method from that followed by other museums, it will be a very attractive feature to all interested in agriculture and allied pursuits. As an opportunity offers the more important breeds of domestic animals will be added; the smaller ones, as fowls, etc., as mounted specimens, the larger ones by well executed drawings or photographs.

Very much time was taken up by the work against chinch bugs, both in 1893 and 1894, and but little time could be devoted to botanical work. During the numerous trips made by the entomologist it has been his aim to increase the collection of plants as much as possible, and also to study the innumerable diseases of plants whenever and wherever found in the region visited. Some special attention was devoted to the fungi injurious to our plums, and an illustrated article appeared in the pages of the Minnesota Horticulturist, the official periodical published by the State Horticultural society. A number of articles upon other injurious fungi were published in various publications in the regions affected so that the horticulturists had the opportunity to apply the remedies most likely to assist them. Diseases affecting lettuce and radishes in hot houses were thus investigated and the results published. A long list of the parasitic plants found near the station, and causing diseases of cultivated and wild plants, were prepared for the annual report of 1893. This list comprises several hundred species, and is arranged according to the botanical position of their hosts. In the same volume was published an exhaustive article upon the bacteria in their relation to the dairy and dairy products, giving in a somewhat condensed form the leading facts and relations thus far discovered. Lectures upon the same subject were given in the factory course of the dairy and in the summer school for females; to the latter was added a number of lectures upon insects infesting the house, etc.

The work upon plots to study grasses and other forage plants has been greatly extended, and over 800 different species have been grown. The last season was by no means a very desirable one for such experiments, being phenomenally dry, and consequently many of the plants suffered greatly. Yet the season taught some lessons and brought out very clearly the power of some plants to resist drought, and this knowledge is a very important one. A list of plants grown in 1893 in the plots was published in the last Annual Report. A large collection of grasses and forage plants was prepared for class work, for the museum, for the world's fair and for the combined exhibit of the agricultural stations. For the world's fair 200 pressed plants were under glass in nice frames, and over 300 in large bundles. For the station's exhibit about 150 kinds of grasses were pressed. The collection of weeds and their seeds for the museum is progressing rapidly, and will be displayed as soon as the necessary boxes, etc., have been made. Numerous small collections of grasses and forage plants were given to such students that desired them for study and comparison and a complete collection of weeds found in Minnesota was prepared for the use of the Farmers' Institute.

The correspondence with farmers in regard to weeds and injurious insects is constantly increasing, and requires a very large amount of time. The local papers gladly publish short articles of immediate value for their neighborhood, and are thus of great value to the work that stations are intended for.

The various railroad lines leaving St. Paul and Minneapolis have furnished free transportation and deserve thanks, as without their liberality it would be impossible to visit the infested regions as soon as occasion arises.

Very respectfully submitted,

OTTO LUGGER.

Entomologist.

It is my pleasant duty to transmit to you the report of the work of my department for the years 1893 and 1894. And in doing so I may mention at the outset that the work in this department is still in what may be termed the incipient stages, for reasons which will be given below.

The department of animal industry, as you are aware, was created by the Board of Regents in the autumn of 1893. As it is virtually a new department, it will be in order to explain its objects and to outline the duties connected with it. It is in a sense of continuation of the work of experimentation with live stock that was previously carried on to some extent by certain members of the faculty of the School of Agriculture. And it is virtually a new department in the sense, first, that it is now in itself a distinct department; second, that it calls for lectures and experimentation from the work of the professor of agriculture; and third, that in everything which appertains to it the work is being greatly enlarged and extended. The present occupant of the chair of animal industry assumed the duties of the department Oct. 1, 1893. These duties include, first,

delivering a course of lectures on the domestic animals of the farm during the months of October and November. Second, the selection and care of representative animals of the various breeds of live stock chosen for illustrative work in the class room and also for experimentation. Third, carrying on such experiments in the breeding and feeding of domestic animals as may be thought to have an important bearing on the live stock industry. And fourth, laying the results of these experiments before the farmers of the state in bulletin form and in other ways.

When in October, 1893, the department became a distinct feature of the work of the station, only a limited number of the improved breeds were represented. In cattle the specimens on hand included Shorthorns and Aberdeen Polls. The swine were represented by small Yorkshires, Essex and Poland Chinas; and the sheep by a small flock of Southdowns. Since that time but little has been done by way of stocking the farm with representative animals, for the reason, first, that it was discovered that tuberculosis was present in the herd of cattle, and it was deemed advisable to defer making purchases until all danger of infection had been removed. And second, the want of accommodation, by way of shelter, stood squarely in the way of such extension. Before very much should be attempted in this direction further accommodation is wanted for cattle, sheep and swine.

Something, however, has been done. Specimens of improved Yorkshire pigs, Berkshires and Poland Chinas have been bought. A few representative animals have also been chosen of the Oxford Down, Shropshire and Dorset Horn breeds of sheep, and the flock of Southdowns is still retained. The beef cattle are at present represented by a few specimens of Shorthorns and Herefords.

In the autumn of 1893 experiments were commenced in feeding cattle and sheep for the block. The objects sought in feeding the cattle were to ascertain (1), the respective merits of a light, a moderate and a heavy meal ration when feeding for the block; (2), the comparative increase in live weight from feeding improved and unimproved stock; and (3) the profit or loss arising therefrom. Several items of interest were secured, but the want of suitable accommodation when the experiment began very much impaired its value. In the sheep feeding experiment the chief of the objects sought was to ascertain (1), the relative values of grade lambs of the improved breeds and also of the unimproved for feeding; (2), the respective merits of feeding a limited and an unlimited grain ration; (3), the respective merit of feeding in sheds under confinement, in the open air, and with liberty to go in and out of sheds at will, and (4), the gain or loss from winter feeding. The value of this experiment was neutralized by the difficulty found in obtaining suitable lambs, the want of suitable shelter, and the pregnant condition of some of the lambs when bought. But some interesting facts were brought out. When these lambs were sold twelve animals of the improved sort brought a greater relative return than nineteen animals that were unimproved. Several other minor experiments were undertaken, as the feeding of improved and unimproved pigs, and the rearing of calves on skim milk and adjuncts.

At the present time the following live stock experiments are under way, viz.: 1, Feeding steers for the block; 2, feeding lambs for the block; 3, feeding calves for the block; 4, feeding swine for the market, and 5, some minor experiments in feeding wheat.

In the first experiment, nine one and two year old grade steers are being used, representing grades of the Shorthorn, Hereford and Galloway breeds respectively. There are three specimens of each. Chief among the objects sought are, to ascertain (1) the relative values of a light, a moderate and a heavy meal ration during the finishing period; (2), the relative value of grades of the breeds represented for stall feeding; (3) the suitability of early matured animals to the market requirements of to-day; and (4), the profit or loss arising from finishing animals in the stall in winter in Minnesota, under present conditions.

In the second experiment forty lambs are being fed. They are good Shropshire grades. Prominent among the objects sought are the following:—

(1) To ascertain the respective merits of feeding lambs in winter without shelter, with shelter at will, and under confinement; (2) to learn the respective values of wheat screenings and wheat in feeding lambs for market; (3) to ascertain the relative gains per day that arise from suitable feeding; and (4) to

determine the gain or loss in feeding lambs for the block under present conditions in Minnesota.

In the third experiment calves that were fed on skim milk with adjuncts during the milk period are being pushed rapidly to maturity, to ascertain (1) the weight that may be obtained at one year and at two years respectively from liberal feeding, and (2) the profit or loss arising from the same.

In the fourth experiment, three lots of pigs are being fed, the offspring of a pure improved Yorkshire sire and a pure or a high grade dam, of the Poland China, Berkshire sire and Essex breeds respectively. Four animals are in each lot. The following are chief among the objects sought: viz.: (1) to determine the absolute value of these respective crosses; (2) to determine their relative value; and (3) to ascertain the profit or loss arising from rearing pork for market in Minnesota under present conditions.

The minor experiments relate to the feeding of wheat in various combinations to determine its value in meat making, relatively and absolutely.

Another experiment in sheep husbandry has also commenced which is intended to cover several years. A number of grade ewes have been purchased, comprising grades of the Shropshire, Cotswold and Merino breeds. These are being crossed upon with a pure Dorset ram. The intention is to cross the female progeny with males of the Dorset Horn breed for successive generations. The objects sought include (1) whether the habit of the Dorset Horns to bring forth lambs in the autumn can be engrafted upon the progeny of the ordinary grades of the country, and (2) to learn which of the breeds under experiment are likely to prove the most suitable for the purpose. There is surely a place for the growth of a large number of winter lambs in the vicinity of our large cities. This flock will also be utilized in certain grazing experiments with winter rye, corn, sorghum, Kaffir corn and rape.

Much experimenting will be done in growing forage crops to provide pasture for sheep in view of the great need for some such crop or crops to supply the want of succulent fodder for sheep in the late summer and early autumn months. These experiments will be conducted in a large way the coming season.

The accommodation for live stock is at present quite inadequate for carrying on the work of the department extensively, or in the best form, except in so far as it relates to feeding cattle for the block. In the late autumn of 1893 a horse stable was converted into a place for stall feeding, and it is well suited to the purpose.

I have your authority for saying that a large and commodious sheep barn will be erected next summer, that a stable heretofore devoted to dairy uses will be transformed into a suitable place for keeping representative animals of the beef breeds, and that the piggeries now being used in part as sheep sheds will be moved, made warm enough for wintering pigs comfortably in a Minnesota winter climate, and remodeled to adapt them to the requirements of the age and of the station.

As has been already stated, there has been a dearth of representative animals of the important breeds. The practical work in the class room suffered severely from the lack. But before another school year begins that want will doubtless have been supplied. The work in the class room, however, has been greatly encouraging notwithstanding, and in all its features; as for instance, in the very large attendance, in the eager attention given, and in the great interest felt in the subject. In the absence of suitable text books the students have in the meantime been supplied with copious and accurate notes with reference to the whole ground covered by the lectures. And it may be mentioned here that the lectures discuss all the pure breeds of cattle, sheep and swine at present in North America, with the exception of dairy cows. They treat of the origin and history of these breeds, of their characteristics and uses, and of their standard points. And they cover the subjects of animal feeding and animal breeding.

In view of the contemplated extension of this department in the near future, and of the disposition manifested by the Board of Regents to deal liberally with the same, the outlook in regard to it is so reassuring that we may confidently expect that in the near future the department of animal industry at our Experiment Station will be put on so firm a basis that it may be made greatly helpful to the State.

Very respectfully yours,
THOS. SHAW,
 Professor of Animal Industry.

REPORT OF THE STATION VETERINARIAN.

Work done in this department during the past year has been quite varied. A large number of letters from farmers and stock men all over the state with reference to diseases of domestic animals have been answered, and some outside work that has seemed quite necessary has been done and this has interfered with experimental work at the Station. One severe epidemic among swine in Washington County, carefully investigated, proved to be a very serious matter. Farmers of one township alone, Cottage Grove, lost approximately 350 head and the disease was spreading on toward Woodbury Township or already over the line. This should have been quarantined at the beginning and such a heavy loss might have been averted.

Glanders.—Fifteen horses have been tested, of which four were condemned and post mortem results confirmed the evidence given by mallein. One reported epidemic among horses at Brainerd proves on investigation to have been not an epidemic of one disease, but several entirely distinct diseases which happened to occur in the same neighborhood in close succession and caused much unnecessary alarm.

Eserine.—A series of experiments has been inaugurated at the hospital, object of which is to estimate the utility of eserine alone, and in various combinations with other drugs as a hypodermic cathartic. The first eleven numbers in this experiment have been completed and accurate records kept. This experiment will probably be continued during the coming year until a large number of tests of the drug in various combinations and varied doses have been made. Results thus far seem to indicate that an ideal cathartic action can be secured by hypodermic method, and if this can be demonstrated satisfactorily and show wide utility it will have several important advantages over administrations of such medicines per stomach. But the results are as yet so incomplete that it is not thought wise to publish any statements or estimates at present.

Chloroform.—A series of experiments has also been carried out with a view to ascertaining, if possible, whether chloroform anaesthesia could not be secured with much simpler and more convenient way than we now have in common practice. It is hoped during the coming year to continue this experiment also until sufficient evidence can be gathered to demonstrate the feasibility of certain plans already in mind, and have seemed to work very nicely so far.

At the Veterinary Hospital, 65 cases have been treated during the year and the results show a curious variety of diseases. Free clinic is maintained for the benefit of the students and it is expected that this clinic can be very rapidly increased. One curious thing that appears from the study of hospital records is the number of bursatee cases. Quite a number of the City Veterinarians have also had an extensive experience with this peculiar trouble, with which the neighboring states seem to be affected.

Tuberculosis.—In pursuance with plan determined a year ago, 187 tests with tuberculin have been made during the year with 56 positive reactions and four suspicious. These tests were made on 104 animals of which 31 reacted and 4 were suspicious. It is desired to gather material on which to base an estimate of the prevalence and spread of tuberculosis among cattle of the state. I hope to continue this work also next year on a much larger scale and test herds in various conditions and in various parts of the state and to make enough tests from which an average can be taken that will represent the whole state. The results have justified the greatest confidence in tuberculin as a diagnostic agent. The diagnosis of tuberculosis by clinical symptoms is so unsatisfactory and uncertain, in many cases absolutely impossible, that it seems as though tuberculin should be welcomed everywhere as a great discovery. The breeders should see in it a good friend for the stock industry instead of opposing it and making such foolish statements concerning it as that injection will cause tuberculosis in animals previously free from the disease. I hear of this so frequently and it seems so unfortunate that an idea so foolish and utterly impossible in reality should gain any credence at all. The opinions of competent Veterinarians everywhere after an experience of several years and counting many thousands of cases go to show that tuberculin is very reliable, having shown an accuracy as confirmed by post mortem work of at least 95 per cent and the most expert Veterinarians can scarcely hope to diagnose on clinical symptoms alone over

40 per cent or 50 per cent of cases affected. A study of the records of these 185 cases shows plainly that tuberculosis is very apt to follow in family lines. Wherever, in a herd, an old cow is found affected, tests of her descendants are apt to show that they are also diseased. In quite a number of cases one generation has been skipped but the disease appears in the next one and so this continues. And experience also confirms what has been proven so many times that animals which have no inheritance of tuberculosis, are very liable to infection when closely associated with cattle that are already tuberculous. For instance, several failed to react under previous test but had been standing in an affected stable and reacted at later date. These are undoubtedly cases of recent infection but distinctly tuberculous. All the animals which have been pronounced tuberculous, except nine which have been reserved for experimental purposes, have been post mortemed and in all cases plain evidence of tuberculosis has been demonstrated. Quite a number of photographs have been taken, also. The universal opinion among those dealing with this disease is that no breed has a monopoly and that it is unfair to blame one breed as being more commonly affected with tuberculosis than other distinct breeds. This opinion was very freely expressed at the recent meeting of the U. S. Vet. Med. Association at Philadelphia, that Holsteins, Short Horns, Polled Angus, Jersey, Alderneys, etc., are all affected. Considering the prevalence of this disease among well bred cattle and considering the fact that in tuberculin we have a very certain diagnostic agent and that breeders are waking up to the facts in the case, it would seem foolish for any man to buy expensive and well bred cattle on other conditions than subject to tuberculin test, and if they fail to stand the test they should most certainly be discarded as breeders. The time is apt to come and soon when this test will be very commonly demanded before purchase, or at least the animals purchased subject to test, and the former is decidedly preferable because if animals show disease and the intending purchaser's premises are free from the disease, the only result would be a possible infection of the previously healthy premises. It would seem that beef and dairy products are articles of such essential interest to modern civilization, that we cannot afford to have the beef and dairy industries crippled by careless or selfish postponing of this question. And that breeders of beef and dairy cattle must be their own protectors by furnishing animals and their products which shall be wholesome and free from danger of tubercular infection. People are getting so well informed on this matter that the time will soon come when these things will be demanded.

A series of experiments have been inaugurated with eight cattle, which have been demonstrated tuberculous by tuberculin, to determine, or at least to furnish data from which an estimate may be made whether tuberculin has not some value as a curative agent as previous experience would seem to indicate. I have on hand nine cattle representing various breeds, the Jersey, Short Horn, Polled Angus and Holstein. Some have shown low reaction, some high reaction during test and are of different ages. Some are very evidently diseased and some probably very slightly. Tuberculin will be given in various doses and at varying intervals during as long periods as may seem necessary, from six to nine months, and then post mortem made of all cases as the experiment is finished for each and careful records kept of the experiment and of the post mortems. Quite a number of points regarding tuberculin as a diagnostic agent can also be settled in such experiments and some of them are quite important that we should know. The experiment is only just started and it is impossible at present to form an estimate as to whether results will be favorable or unfavorable.

W. H. REYNOLDS,
Station Veterinarian.

FINANCIAL REPORT.

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

DEAR SIR: Herewith I submit my biennial report for the fiscal years commencing Aug. 1, 1892, and ending July 31, 1894.

Very respectfully,
D. W. SPRAGUE, *Accountant.*

Report for the fiscal year commencing Aug. 1, 1892, and ending July 31, 1893:

REVENUES—CURRENT EXPENSE FUND.

Balance on hand Aug. 1, 1892.....	\$19,381.20
From U. S. Government, Act of March 2, 1887	
—Hatch bill.....	*18,750.00
From U. S. Government, Act of Aug. 30, 1890	
—Morrill bill.....	†37,000.00
From Interest on University Bonds and Land	
Contracts.....	34,946.33
From Annual Appropriation by Legislature..	65,000.00
From sales of Salt Spring Lands.....	8,318.33
From sales agricultural products Agricultural	
School and Experiment Station.....	4,677.22
From Insurance—Loss on main building.....	7,854.26
From Fees.....	26,092.68
	\$222,020.02

*Five quarterly installments of \$3,750 each were received during this fiscal year.

†The appropriations for the fiscal years 1893 and 1894 were both received during this fiscal year.

RECEIPTS.

The following amounts have been received from State Treasurer on Auditor's warrants :

	Pay Rolls.	Bills.
Outstanding warrant Aug. 1 (June bills).....		\$6,799.48
Outstanding warrant Aug. 1 (July bills).....		4,974.82
August expense list.....	\$2,769.94	7,264.58
September expense list.....	12,269.42	3,522.47
October expense list.....	12,785.51	6,473.54
November expense list.....	12,984.11	4,550.60
December expense list.....	12,955.74	10,041.42
January expense list.....	13,005.96	7,164.91
February expense list.....	13,743.36	5,464.21
March expense list.....	12,939.19	6,751.47
April ex- pense list....	<div style="display: inline-block; vertical-align: middle;"> <p style="font-size: small; margin: 0;">April bills, the May and June pay rolls, amounting to \$39,815.78, were received from the state treasurer as follows:</p> </div>	
May ex- pense list ...		
June ex- pense list....		
	\$132,832.49	\$76,553.12
Total pay rolls and bills.....		\$209,385.61
Paid county treasurers for collec- tions and refunded interest on land contracts.....		296.56
		209,682.17
	Balance.....	\$12,327.85
Outstanding warrant July 31, 1894.....		20,150.74
Balance in treasury Aug. 1, 1894.....		\$32,488.59

GENERAL UNIVERSITY.

CURRENT EXPENSE.

1892.		No. Voucher.	
July	1.	Stephen Mahoney, invited guests to Alumni dinner.....	1 12.00
Aug.	1.	Gene G. Banker, work on expense list.....	2 6.00
July	2.	N. W. Builder and Decorator, cut of Chemical Laboratory..	3 110.00
June	7.	Danz Orchestra, music commencement exercises.....	4 12.00
July	6.	Review of Reviews, advertising.....	5 18.50
July	1.	Swinburn Printing Co., 10,000 envelopes.....	8 13.25
Aug.	1.	Kimball Printing Co., stationery and printing.....	11 180.30
July	30.	E. B. Johnson, stamps, adv., gas, office help.....	15 39.75
Aug.	8.	Ang. Anderson, copying government land grants.....	16 122.14
Aug.	2.	Wm. H. Yattaw, cleaning building and petty expenses.....	16 24.10
July	8.	Northrop, Breslan & Goodwin, seeds and plants.....	18 10.75
July	22.	Tribune Job Printing Co., printing, wrappers, etc.....	22 48.72
July	31.	D. W. Sprague, petty bills.....	24 9.30
Mar.	19.	Pioneer Fuel Co., 24,800 pounds Yough. coal.....	45 350.83
Aug.	31.	General University pay roll.....	57 116.16
Aug.	30.	E. B. Johnson, stamps, express and help.....	58 1.00
Aug.	20.	L. Kimball Printing Co., printing 500 envelopes.....	60 6.82
Aug.	30.	Minneapolis Paper Co., 2,500 envelopes, No. 10.....	61 22.75
Aug.	30.	Wm. H. Yattaw, freight, cleaning, labor and expenses.....	64 24.77
Aug.	29.	Warner Bros., miscellaneous hardware.....	66 3.00
Sept.	1.	N. W. Telephone Exchange, service for September.....	77 150.00
Sept.	3.	A. C. Bausman, 100 laws of Minnesota (bound).....	78 12.00
Aug.	2.	Review of Reviews, advertising.....	79 5.61
Sept.	1.	Gene G. Banker, copying expense list.....	86 13.70
Aug.	31.	D. W. Sprague, petty bills.....	87 1,230.83
Sept.	30.	Pay roll.....	126 66.95
Sept.	30.	E. B. Johnson, postage, freight, help and miscellaneous.....	127 8.67
Sept.	20.	Gene G. Banker, copying expense list.....	128 6.25
Sept.	10.	Emerson, Low & Barber Co., 1,000 linen envelopes, No. 12..	129 75.00
Sept.	6.	Minneapolis Paper Co., 100 reams examination paper.....	131 15.00
July	30.	J. S. Pillsbury, one bunting flag.....	132 85.00
Aug.	29.	The Jerome Paper Co., toilet paper and fixtures.....	133 74.28
Sept.	30.	Wm. H. Yattaw, cleaning, freight and sundry expenses.....	144 592.19
Oct.	1.	F. G. McMillan, repairs.....	145 15.00
Sept.	27.	R. C. Clark, inspecting 5 boilers.....	149 30.93
Sept.	1.	C. W. Menelley, miscellaneous supplies.....	155 12.04
Sept.	21.	Northwestern Fuel Co., 5,350 pounds Yough. coal.....	159 95.50
Sept.	27.	Tribune Job Printing Co., stationery and printing.....	160 12.56
Sept.	30.	D. W. Sprague, petty bills.....	185 50.00
Sept.	8.	Harry W. Jones, labor.....	202 1,350.83
Oct.	31.	Pay roll.....	203 3.13
Oct.	31.	D. W. Sprague, petty bills.....	205 6.75
Oct.	19.	Tribune Job Printing Co., printing.....	210 78.68
Nov.	18.	E. B. Johnson, postage, express, help and miscellaneous.....	211 143.00
Oct.	31.	Wm. H. Yattaw, freight, labor and repairs.....	212 8.00
Nov.	1.	Gene G. Banker, copying expense lists.....	214 10.00
Oct.	15.	Littlefield & Moore, galvanized iron bill boxes.....	217 2.00
Sept.	22.	Miller Printing Co., stationery.....	218 1,050.50
Oct.	22.	Tralnor Bros., work on tunnel and connections.....	219 5.93
Oct.	24.	Mary Bowen, work in office.....	222 1,450.83
Nov.	30.	Pay roll.....	233 7.80
Nov.	30.	D. W. Sprague, petty bills.....	235 140.99
Nov.	30.	E. B. Johnson, postage, gas, help and miscellaneous.....	236 62.50
Nov.	9.	The Smith-Premier Typewriter Co., 1 instrument.....	239 64.84
Nov.	30.	W. H. Yattaw, labor, express and miscellaneous expenses.....	300 8.00
Nov.	23.	Gene G. Banker, help in office.....	302 11.26
Nov.	5.	Standard Oil Co., supplies.....	303 5.35
Nov.	29.	Jno. A. Schlener & Co., stationery.....	306 418.07
Oct.	21.	Lake Superior Coal Co., 187,000 lbs. Yough. coal.....	307 16.75
Nov.	30.	The Miller Printing Co., stationery and printing.....	308 7.25
Nov.	30.	R. B. Lees, miscellaneous repairs.....	310 44.50
Nov.	14.	Cody & Hineline, repairs in steam plant.....	314 13.90
Nov.	22.	Northwestern Fuel Co., Cumb. coal.....	323 13.86
Nov.	26.	C. A. Smith & Co., 1,260 feet lumber.....	365 500.00
Nov.	30.	Minneapolis Fuel Co., coal.....	390 1,450.83
Dec.	24.	Pay roll.....	391 8.86
Dec.	31.	D. W. Sprague, petty bills.....	392 675.00
Dec.	15.	J. S. Pillsbury, design for grounds and locating building...	393 1,422.49
Nov.	30.	Lake Superior Coal Co., 639,320 lbs. Yough. coal.....	394 140.75
Dec.	31.	E. B. Johnson, gas, postage, help and petty expenses.....	395 7.33
Dec.	23.	Gene G. Banker, work in office.....	396 10.75
Dec.	24.	C. W. Menelley, oil, soap, brooms, etc.....	397 9.69
Dec.	31.	R. B. Lees, carpenter repairs.....	

EIGHTH BIENNIAL REPORT

		No. Voucher.	
Nov. 1.	American Chemical Co., 200 lbs. "Emerald Car Cleaner"	398	16.00
Dec. 27.	Warner Bros., miscellaneous hardware	400	11.43
Dec. 29.	Tribune Job Printing Co., printing 1,000 envelopes	401	1.50
Jan. 4.	H. L. Breeden, office work	402	15.45
Dec. 31.	Wm. H. Yattaw, labor, freight and miscellaneous expenses	409	25.17
Dec. 15.	C. A. Smith & Co., 300 feet lumber	412	6.00
Dec. 21.	O. T. Sweet, 80 yards crash	415	6.80
Dec. 29.	Jno. A. Schlener & Co., stationery	416	2.50
Dec. 31.	Minneapolis Fuel Co., coal	462	2,253.43
Jan. 1.	Minn. Brush Electric L. Co., service during commencement	472	48.75
Jan. 1.	Pay roll	494	1,450.83
Jan. 31.	D. W. Sprague, petty bills	495	5.65
Jan. 31.	E. B. Johnson, freight, gas, postage and help	496	74.45
Jan. 31.	Wm. H. Yattaw, cleaning and miscellaneous expenses	497	35.89
Dec. 16.	Glæssner & Washburn, furniture and repairs	502	24.25
Dec. 31.	Lake Superior Coal Co., 96,365 lbs. asst. coal	505	214.42
Jan. 10.	Wm. W. Folwell, examining library buildings	506	125.45
Jan. 17.	Minneapolis Paper Co., stationery, and printing	508	1.95
Jan. 27.	Standard Oil Co., oil and grease	512	16.11
Jan. 26.	Warner Bros., miscellaneous hardware	513	44.27
Jan. 31.	Minneapolis Fuel Co., 851,550 lbs. asst. coal	515	1,980.72
Dec. 30.	W. F. Porter & Co., repairs in boiler house	517	25.23
Sept. 24.	N. W. Fuel Co., 5,700 lbs. Yough. coal	519	12.83
Feb.	Pay roll	594	1,450.83
Feb. 28.	D. W. Sprague, petty bills	595	9.01
Feb. 28.	E. B. Johnson, postage, gas, freight, etc.	598	119.40
Feb. 28.	Wm. H. Yattaw, express, labor and repairs	599	36.16
Feb. 25.	Warner Bros., miscellaneous hardware	601	13.07
Feb. 27.	Emma S. Allen, office help	602	6.00
Feb. 10.	J. S. Pillsbury, taxes on University lots	603	21.33
Feb. 24.	Glæssner & Washburn, furniture and repairs	606	36.75
Feb. 16.	Tribune Job Printing Co., stationery and printing	607	32.25
Feb. 1.	O. T. Sweet, 48½ yards 9-4 cotton cloth	609	10.67
Feb. 15.	Harrison & Smith, binding	610	2.50
Feb. 1.	C. W. Meneilley, supplies	612	19.15
Feb. 28.	Minneapolis Fuel Co., 810,300 lbs. Youghy. coal	614	1,863.69
Feb. 3.	Williston S. Hough, trip to Madison	615	24.70
Feb. 23.	Jno. A. Schlener & Co., stationery	622	19.35
Dec. 31.	Homan Cement and Lime Co., pipe covering	643	140.00
Mar.	Pay roll	727	1,450.83
Mar. 31.	D. W. Sprague, petty bills	728	3.25
Mar. 29.	Jno. A. Schlener & Co., stationery	730	6.10
Mar. 30.	Alfred Roper, 500 bulletins (No. 3)	731	75.00
Mar. 18.	Minneapolis Paper Co., 100 reams examination paper	734	69.78
Mar. 31.	E. B. Johnson, postage, express, help, etc.	738	50.55
Feb. 23.	The Miller Printing Co., stationery and printing	739	8.25
Mar. 25.	Jno. A. Schlener & Co., stationery and printing	741	10.15
Nov. 17.	Revere Rubber Co., supplies	747	13.32
Feb. 25.	Naylor & Co., tools and supplies	748	7.30
April 4.	Emma S. Allen, help in office	749	6.00
Mar. 23.	Warner Bros., supplies	750	23.51
Mar. 13.	Standard Oil Co., one-half barrel cylinder oil	751	11.22
Mar. 31.	Wm. H. Yattaw, labor, express and repairs	752	52.50
Mar. 20.	The Minneapolis Plumbing Co., adjusting accounts	753	17.50
Mar. 27.	M. A. Scovill, treas., membership in Association of American Agricultural College	756	10.00
April 1.	Minneapolis Fuel Co., 961,750 lbs. coal	757	2,430.35
April 3.	Frank T. Wilson, apparatus and instruments	758	156.04
Mar. 1.	R. B. Lees, 1 cabinet	796	10.00
April 30.	Pay roll	830	1,350.83
April 30.	D. W. Sprague, petty bills	831	7.81
April 1.	H. S. Breeden, writing in office	832	7.80
April 28.	Emma S. Allen, work on expense list	833	9.00
April 29.	Minneapolis Fuel Co., coal and coke	834	607.86
April 24.	Louis Dreka, altering plate and 215 diplomas	835	269.50
April 25.	Warner Bros., miscellaneous hardware	836	16.64
April 22.	Jno. A. Schlener & Co., stationery	841	3.55
April 25.	S. M. Emery, attendance regents' meeting	842	10.12
April 14.	Tribune Job Printing Co., 3,000 envelopes	849	10.50
April 28.	The Miller Printing Co., 2,500 lithograph certificates	850	15.00
Mar. 30.	C. A. Smith & Co., lumber, 1,706 feet asst.	852	24.51
May 1.	C. W. Meneilley, supplies	853	11.25
May 1.	Wm. H. Yattaw, labor and repairs	856	102.13
April 29.	E. B. Johnson, gas, labor, postage, etc.	857	17.19
April 1.	F. S. Martin, plumbing	858	58.93
April 30.	Cody-Hineline Co., repairing steam pipe	859	5.75
May 1.	O. T. Sweet, 80 yards crash	896	7.60
May 4.	Tribune Job Printing Co., 1,000 stamped envelopes	917	22.20
April 30.	E. B. Johnson, express charges	918	1.85
May 31.	Pay roll	935	1,750.83
May 15.	Louis Dreka, 35 diplomas	936	38.50
June 1.	Warner Bros., supplies	937	16.65

UNIVERSITY BOARD OF REGENTS.

		No. Voucher.	
May 26.	Richard & Gruman, writing diplomas	938	129.00
June 1.	X. A. Smith, sodding	939	26.70
May 24.	N. W. Fuel Co., 88,220 lbs. coal	940	203.13
May 2.	Fred Barney, delinquent taxes	941	37.75
June 1.	The Miller Printing Co., stationery and printing	942	1,659.61
June 1.	Minneapolis Fuel Co., 48,900 lbs. Yough. coal	943	112.48
May 31.	D. W. Sprague, petty bills	944	17.33
June 3.	Wm. H. Yattaw, express, labor and miscellaneous	945	125.18
May 30.	E. B. Johnson, gas, postage, help, express, etc.	946	262.30
June 2.	Glessner & Washburn, repairs	952	2.50
May 31.	W. F. Porter & Co., plumbing	958	17.21
May 22.	H. S. Breeden, help in office	967	9.00
May 4.	Revere Rubber Co., supplies	968	6.55
April 10.	Minneapolis Tribune Co., adit. for Medical building	969	11.00
May 31.	Tribune Job Printing Co., stationery and printing	974	28.50
May 29.	R. B. Lees, repairs	977	20.15
May 23.	Frank T. Wilson, plates for Columbian Exposition	980	140.70
April 30.	W. K. Morrison & Co., supplies	981	1.60
July 25.	Emma Allen, work on expense list	1018	8.00
May 27.	K. A. Smith, grading campus	1019	100.00
June 30.	Pay roll	1020	1,350.83
April 1.	W. F. Porter & Co., tools and machinery	1024	849.62
Total			<u>\$36,994.58</u>

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CURRENT EXPENSE.

		No. Voucher.	
July 11.	Minneapolis Paper Co., 25 reams linen paper	6	\$15.00
Aug. 1.	O. T. Sweet, 41 yards 9-4 cotton	7	8.20
July 1.	Swinburne Printing Co., stationery and printing	8	7.14
Aug. 1.	Kimball Printing Co., binding and printing	9	70.00
July 28.	Warner Brothers, miscellaneous hardware	10	10.94
July 30.	E. B. Johnson, express, advertising, gas, sundries	11	196.46
Aug. 1.	Lettie M. Craft, work in library	12	42.50
July 1.	Christian Becker, balances, weights and glass pans	13	159.11
June 30.	Whitall, Tatum & Co., chemical glassware	14	127.78
Aug. 2.	Wm. H. Yattaw, cleaning building and petty expenses	16	244.67
Aug. 1.	Glessner & Washburn, repairing furniture and carpets	17	222.90
Aug. 1.	Ina Firkins, work in library	19	37.50
July 14.	Harrison & Smith, binding 14 vols.	20	6.40
Aug. 1.	Miller Printing Co., printing circulars, tickets, etc.	21	60.00
July 6.	F. G. McMillan, repairing main building, damaged by fire	23	2,000.00
July 31.	D. W. Sprague, petty bills	24	2.00
July 29.	N. W. Telephone Ex. Co., services and rent of telephone	46	6.00
Aug. 31.	College of S., L. and Arts, pay roll	57	300.00
Aug. 30.	E. B. Johnson, sundry petty expenses	58	41.52
Aug. 31.	The Miller Printing Co., stationery and printing	59	58.50
Aug. 20.	L. Kimball Printing Co., repairing books injured by fire	60	87.80
Aug. 9.	Minneapolis Paper Co., 5 reams letter heads	62	6.00
Aug. 23.	Am. Chemical Co., 100 lbs. E. C. C. soap	63	8.00
Aug. 30.	Wm. H. Yattaw, cleaning, freight and petty expenses	64	308.75
Aug. 10.	Seldon Cornice & Roofing Co., repairing tile roof	65	8.20
Aug. 1.	Traimor Bros., stone steps to main building	67	256.00
Aug. 29.	Cody & Hineine, plumbing and gas fitting repairs	68	42.68
Aug. 4.	Bullock & Crenshaw, apparatus and instruments	69	27.33
Aug. 17.	Noyes Bros. & Cutler, druggists' supplies	70	16.56
Aug. 12.	Henry Heil Chem. Co., chemical supplies	71	255.87
Aug. 10.	Bhner & Amend, apparatus and supplies	72	104.13
Aug. 12.	E. P. Sheldon, work in Herbarium	73	54.75
Aug. 17.	H. Landenberger, supplies	74	41.42
Aug. 31.	James Bladon & Co., repairing gas fixtures	75	64.50
Sept. 1.	N. W. Telephone Exchange, service for September	77	3.00
Aug. 31.	D. W. Sprague, petty bills	87	1.65
Aug. 30.	P. H. Marlow, repairs in main building	108	643.42
Aug. 26.	F. G. McMillan, repairs in the main building	109	3,087.03
July 30.	R. B. Lees, book case and carpenter work	110	87.85
Sept. 30.	Pay roll	126	4,623.33
Sept. 29.	E. B. Johnson, postage, freight and miscellaneous expense	127	87.58
Aug. 19.	Richard Krey & Co., apparatus and instruments	130	76.27
Sept. 1.	Littlefield & Moore, repairing main building	134	132.79
Sept. 1.	J. H. Hogen & Co., repairing main building	135	234.48
Sept. 30.	L. Kimball Printing Co.	136	12.85
Sept. 26.	R. B. Lees, repairs, main building	137	16.75
Sept. 30.	Wm. H. Yattaw, cleaning, express and sundry expenses	138	66.89
Sept. 1.	Glessner & Washburn, repairs, main building	139	23.82
July 6.	R. J. Rickey, repairs, main building	140	40.00

EIGHTH BIENNIAL REPORT

		No. Voucher.	
Sept. 6.	Wm. W. Folwell, 40 charts and diagrams.....	141	15.00
Sept. 16.	C. D. Whittall & Co., erasers and crayons.....	142	16.40
Sept. 30.	R. B. Lees, 100 lockers in main building.....	143	185.00
Aug. 1.	Minneapolis Elec. and Cons. Co., repairs, batteries and bells	146	14.00
Sept. 28.	Warner Bros., miscellaneous hardware.....	147	22.58
Sept. 12.	John Kelly, repairs.....	148	31.00
Sept. 12.	New England Furniture Co., 2 antique tables.....	150	24.00
Sept. 30.	Jno. A. Schiener & Co., stationery.....	154	5.31
Sept. 30.	N. W. Telephone Exchange Co., service.....	158	6.00
Sept. 27.	Tribune Job Printing Co., stationery and printing.....	159	28.00
Sept. 30.	D. W. Sprague, petty bills.....	160	7.70
Sept. 6.	Cody & Hineline, repairs and plumbing.....	164	10.70
Sept. 30.	Mrs. S. J. Hall, books for library.....	169	28.50
Oct. 31.	Pay roll.....	202	4,503.33
Oct. 31.	D. W. Sprague, petty bills.....	203	12.78
Oct. 17.	Northwestern Fuel Co., 33,800 lbs. Yough. coal.....	204	76.05
Nov. 18.	Eimer & Amend, supplies.....	206	54.44
Oct. 29.	Warner Bros., miscellaneous supplies.....	207	14.25
Oct. 26.	Albert Schneider, maps and plates.....	208	22.50
Oct. 7.	Cody & Hineline, repairs in W. C.....	209	14.30
Nov. 18.	E. B. Johnson, postage, express, help and miscellaneous.....	210	108.09
Oct. 31.	Wm. H. Yattaw, freight, labor and repairs.....	211	39.49
Oct. 27.	Bintliff Mfg. Co., repairs.....	213	18.70
Sept. 28.	Marine Biological Laboratory, supplies.....	215	88.10
Oct. 25.	Caswell A. Ballard, labor.....	216	40.75
Sept. 22.	Miller Printing Co., stationery and printing.....	217	17.25
Nov. 1.	Glassner & Washburn, repairing furniture.....	220	188.03
Oct. 20.	Morris & Wilson, stationery.....	221	6.18
Aug. 31.	J. H. Hagen & Co., repairing fire damage.....	222	1,532.40
Nov. 30.	Pay roll.....	222	4,533.33
Nov. 30.	D. W. Sprague, petty bills.....	223	6.00
Oct. 23.	Frederick Read, chemical supplies.....	224	311.31
Nov. 30.	E. B. Johnson, postage, gas, help and miscellaneous.....	225	128.84
Nov. 30.	L. Kimball & Co., 500 envelopes.....	226	2.00
Nov. 8.	Horace G. Wadlin, books for library.....	227	10.00
Nov. 30.	Wm. H. Yattaw, labor, express and miscellaneous expenses.....	229	26.54
Nov. 14.	James W. Queen & Co., apparatus and instruments.....	301	498.36
Nov. 30.	Clara N. Kellogg, work in Rhetoric department.....	304	14.00
Nov. 28.	Warner Bros., miscellaneous hardware.....	305	11.30
Nov. 30.	Miller Printing Co., stationery and printing.....	307	51.25
Nov. 30.	R. B. Lees, miscellaneous repairs.....	308	11.73
Dec. 1.	R. B. Lees, repairs.....	309	7.26
Nov. 3.	Eimer & Amend, 2 reams filter paper.....	311	12.00
Nov. 11.	Henry Heil Chem. Co., supplies.....	312	9.35
Nov. 28.	Henry F. Nachtrieb, postage and miscellaneous expenses.....	313	23.93
Nov. 22.	Caswell A. Ballard, work in Herbarium.....	315	26.75
Nov. 24.	Albert Schneider, drawing plates.....	316	15.00
Nov. 25.	James Bladen & Co., 6 feet Mohair tube.....	332	1.50
Nov. 30.	E. E. McDermott, salary.....	361	60.00
Nov. 30.	Louise Kehle, salary.....	366	40.00
Dec. 24.	Pay roll.....	390	4,660.00
Dec. 31.	D. W. Sprague, petty bills.....	391	4.53
Dec. 31.	E. B. Johnson, gas, postage, help and petty expenses.....	394	114.61
Dec. 31.	R. B. Lees, carpenter repairs.....	397	42.35
Dec. 23.	John Kelley, plastering and material.....	399	7.50
Dec. 29.	Tribune Job Printing Co., 2,000 letter heads.....	401	7.00
Dec. 9.	Geo. W. Turnbull, roof paint.....	403	31.25
Dec. 7.	A. S. Clark, books for library.....	404	4.55
Dec. 9.	Germania Publishers, books for library.....	405	10.00
Dec. 30.	Prof. Jas. A. Dodge, freight, express and cartage.....	406	50.26
Jan. 2.	James W. Day, ice.....	407	61.90
Nov. 26.	L. Kimball Printing Co., binding 12 vols.....	408	10.50
Dec. 31.	Wm. H. Yattaw, labor, express and miscellaneous expenses.....	409	49.31
Dec. 30.	The Miller Printing Co., 100 students' records.....	410	8.00
Dec. 16.	Caswell A. Ballard, work in Herbarium.....	414	30.00
Dec. 17.	W. H. Moore, books for library.....	464	455.45
Dec. 15.	Gustav E. Stechert, books for library.....	469	280.91
Dec. 24.	W. A. Jones, M. D., 12 lectures.....	471	60.00
Jan.	Pay roll.....	494	4,675.00
Jan. 31.	D. W. Sprague, petty bills.....	495	11.30
Jan. 31.	E. B. Johnson, freight, gas, postage, help, etc.....	496	127.64
Jan. 31.	Wm. H. Yattaw, cleaning and miscellaneous expenses.....	497	27.00
Jan. 24.	Caswell A. Ballard, work in Herbarium.....	498	30.50
Jan. 10.	Chas. D. Whittall & Co., books for library.....	499	15.00
Jan. 2.	J. H. Hagen & Co., repairs.....	500	24.50
Jan. 8.	Cody & Hineline, repairing plumbing.....	501	13.10
Jan. 31.	R. B. Lees, repairs and miscellaneous.....	503	50.80
Jan. 24.	Gustav E. Stechert, books for library.....	504	140.52
Dec. 12.	Bullock & Crenshaw, supplies.....	507	16.88
Jan. 17.	Minneapolis Paper Co., stationery.....	508	21.79
Dec. 23.	E. C. Cauvett, plumbing.....	509	7.53
Jan. 31.	Emma S. Allen, office help.....	510	9.00

		No. Voucher.	
Jan. 24.	Am. Library Ass'n, book for library	511	5.00
Jan. 30.	Miller Printing Co., stationery and printing	514	77.60
Dec. 30.	W. F. Porter & Co., repairs	517	40.52
Jan. 27.	D. Appleton & Co., book for library	518	6.00
Jan. 23.	L. Kimball Printing Co., 410 pay rolls	526	18.00
Jan. 18.	Harrison & Smith, binding for library	548	1.25
Dec. 8.	W. A. Olmstead, supplies	549	5.08
Feb. ...	Pay roll	594	4,705.00
Feb. 28.	D. W. Sprague, petty bills	595	9.87
Dec. 10.	Bausch & Lomb Optical Co., instruments	596	79.84
Jan. 14.	Whitall Tatum & Co., druggists' supplies	597	57.57
Feb. 28.	E. B. Johnson, gas, postage, freight, help, etc.	598	280.31
Feb. 28.	Wm. H. Yattaw, express, labor and repairs	599	41.66
Feb. 2.	Gustav E. Stechert, books for library	600	139.99
Jan. 3.	Beard Art and Sta. Co., 6 portrait frames	604	6.25
Mar. 1.	B. F. Groat, teaching sec. in Trig.	605	28.50
Feb. 16.	Tribune Job Printing Co., stationery and printing	607	25.75
Feb. 15.	Harrison & Smith, binding for library	610	24.46
Jan. 29.	H. M. Patterson, books for library	611	10.19
Feb. 24.	Cody-Hineline Co., repairs	613	19.35
Feb. 15.	J. G. Swann's Sons, flower pots	616	7.03
Feb. 25.	Caswell A. Ballard, work in Herbarium	617	34.50
Feb. 22.	Geo. Sidney Smith, books for library	618	10.00
Jan. 25.	Minneapolis Electric and Constrecton Co., repairing battery	619	3.50
Feb. 23.	Jno. A. Schlenner & Co., stationery	622	.54
Feb. 25.	R. B. Lees, repairs	623	16.90
Feb. 13.	Ginn & Company, books for library	644	5.35
Mar. 1.	Geo. T. Plowman, archaeological draughting	663	50.00
Mar. ...	Pay roll	727	4,705.00
Mar. 31.	D. W. Sprague, petty bills	728	5.55
Mar. 15.	Morris & Wilson, 350 catalogues	729	14.00
Mar. 15.	E. B. Meyrowitz, apparatus	732	5.80
Feb. 1.	Gustav E. Stechert, books for library	733	28.49
Mar. 18.	Minneapolis Paper Co., 24 reams paper	734	14.40
Mar. 21.	Rand McNally & Co., books for library	735	6.00
Mar. 9.	Jas. H. Bishop & Co., 3 bundles card board	736	7.70
Mar. 27.	Caswell A. Ballard, work in Herbarium	737	32.50
Mar. 31.	E. B. Johnson, postage, express, help, etc.	738	100.87
Feb. 28.	The Miller Printing Co., stationery and printing	739	42.50
Mar. 18.	Gustav E. Stechert, books for library	740	466.56
Mar. 25.	Jno. A. Schlenner & Co., stationery and printing	741	2.70
Mar. 27.	W. D. Frost, work in Herbarium	742	47.00
Feb. 9.	Electrical Engineering and Supply Co., apparatus	743	13.18
Mar. 9.	Elmer & Amend, apparatus and supplies	744	76.89
Jan. 3.	Marie Schoen, German lessons	745	12.40
Mar. 31.	Wm. H. Yattaw, labor, express and repairs	752	36.27
Mar. 7.	Wm. H. A. Rutherford, services in library	746	18.00
Mar. 30.	R. B. Lees, furniture and repairs	754	18.65
April 30.	Pay roll	830	4,871.67
April 30.	D. W. Sprague, petty bills	831	12.70
April 14.	Gustav E. Stechert, books for library	837	376.75
Mar. 16.	Elmer & Amend, supplies	838	5.96
April 27.	E. Eugene McDermott, instruction in elocution	839	100.00
April 25.	Caswell A. Ballard, work in Herbarium	843	30.00
Mar. 30.	Queen & Co., supplies	844	66.23
April 25.	W. D. Frost, work in Herbarium	845	19.00
April 14.	Harrison & Smith, binding for library	846	33.92
Mar. 1.	J. B. Ellis, books for library	851	7.15
April 14.	Gustav E. Stechert, books for library	855	10.75
May 1.	Wm. H. Yattaw, labor and repairs	856	25.15
April 29.	E. B. Johnson, gas, labor, postage, etc.	857	224.34
April 30.	Cody-Hineline Co., repairs and material	859	6.76
Aug. 11.	Luzac & Co., books for library	860	39.20
April 28.	R. B. Lees, repairs	895	9.80
April 30.	E. B. Johnson, expressage	918	5.04
May 17.	H. W. Brewster, teaching psychology	933	35.00
May 31.	Pay roll	935	4,871.67
May 31.	D. W. Sprague, petty bills	944	6.88
June 3.	Wm. H. Yattaw, express, labor and miscellaneous	945	28.76
May 30.	E. B. Johnson, gas, postage, help, express, etc.	946	282.72
Dec. 31.	R. B. Lees, repairs	947	5.14
May 8.	Bullock & Crenshaw, apparatus	948	15.80
May 25.	James A. Dodge, supplies	949	46.26
June 1.	G. E. Hult, work in library	950	11.40
June 1.	Marie Schoen, teaching private class	951	34.90
June 2.	Glessner & Washburn, repairs	952	39.25
May 26.	R. H. Sanford, mounting photos	953	8.60
May 21.	Beard Art and Sta. Co., supplies	954	84.25
May 31.	D. Appleton & Co., books for library	955	6.00
June 2.	W. D. Frost, work in Herbarium	956	11.75
May 23.	Caswell A. Ballard, work in Herbarium	957	25.00
Mar. 1.	N. W. Telephone Exchange Co., balance on 1892 account	959	2.50

	No. Voucher.	
May 31. Harrison & Smith, binding 270 vols	961	206.61
May 26. Gustav E. Stechert, books for library	962	486.48
June 1. Noyes Bros. & Cutler, supplies	972	5.13
May 29. R. B. Lees, furniture and repairs	977	14.05
May 10. Cody & Hineline, repairs	986	3.50
June 1. D. Appleton & Co., books for library	994	10.00
June 30. Pay roll	1020	4,821.67
Total		<u>\$66,530.39</u>

Military Tactics.

CURRENT EXPENSE.

	No. Voucher.	
July 1. Swinburn Printing Co., 200 letter heads	8	\$1.00
Aug. 4. United States Springfield Armory, repairs	83	9.09
Sept. 30. Pay roll	126	65.00
Sept. 30. Wm. H. Yattaw, freight, etc.	138	7.79
Sept. 17. G. H. Morgan, white gloves, etc., lost from store R	151	11.39
Oct. 31. Pay roll	202	65.00
Nov. 30. Pay roll	292	65.00
Dec. 24. Pay roll	390	65.00
Jan. ... Pay roll	494	65.00
Feb. ... Pay roll	594	65.00
Feb. 16. Tribune Job Printing Co., stationery and printing	607	3.00
Feb. 15. J. Hoffman & Sons, repairing 9 guns	625	8.40
Feb. 21. U. S. Infantry and Cavalry School, books for library	628	16.95
Feb. 9. Geo. H. Morgan, books for library	629	15.50
Mar. ... Pay roll	727	65.00
Mar. 31. D. W. Sprague, petty bills	728	1.10
April 30. Pay roll	830	65.00
April 30. D. W. Sprague, petty bills	831	3.40
May 31. Pay roll	935	65.00
June 3. Wm. H. Yattaw, express, labor and miscellaneous	945	4.60
Mar. 18. J. Hoffman & Sons, cleaning and repairing 9 guns	966	8.40
June 30. Pay roll	1020	65.00
Total		<u>\$740.62</u>

COLLEGE OF MINING, METALLURGY AND THE MECHANIC ARTS.

CURRENT EXPENSE.

	No. Voucher.	
July 30. E. B. Johnson, express, gas, sundries	11	\$6.63
Aug. 2. Wm. H. Yattaw, cleaning buildings and petty expenses	16	74.58
July 14. Harrison & Smith, 50 certificates	20	2.00
July 31. D. W. Sprague, petty bills	24	1.40
Aug. 31. College of M., M. and M. A., pay roll	57	50.00
Aug. 30. E. B. Johnson, sundry petty expenses	58	8.20
Aug. 30. The Miller Printing Co., stationery and printing	59	53.25
Aug. 30. Wm. H. Yattaw, cleaning, freight and petty expenses	64	58.50
Aug. 29. Cody & Hineline, plumbing and gas fitting repairs	68	4.47
Aug. 30. C. W. Hall, miscellaneous supplies	76	27.78
Aug. 30. F. W. Sardeson, collections of fossils	84	124.78
Sept. 30. Pay roll	126	1,380.00
Sept. 29. E. B. Johnson, postage, freight and miscellaneous expenses	127	31.96
Sept. 30. Wm. H. Yattaw, cleaning, freight and sundry repairs	138	8.10
Sept. 28. Warner Bros., miscellaneous hardware	147	1.84
Sept. 20. Northwestern Fuel Co., 2,000 lbs. Cumb. coal	156	7.25
Sept. 26. R. B. Lees, apparatus	157	5.39
Sept. 27. Tribune Job Printing Co., stationery and printing	159	10.00
Sept. 30. D. W. Sprague, petty bills	160	16.12
Sept. 8. W. S. Nott Co., bale white waste	161	11.40
Sept. 8. Leonard & Ellis, 30 gallons cylinder oil	162	30.00
Sept. 21. E. H. Sargent & Co., tools and supplies	163	20.83
Sept. 6. Cody & Hineline, repairs and plumbing	164	15.00
Sept. 30. Geo. D. Shephardson, miscellaneous supplies	166	7.45
Sept. 16. Squires & Todd, pine and maple lumber	167	107.68
Sept. 23. Wm. R. Appleby, trip to Colorado	168	103.44
Oct. 31. Pay roll	202	1,430.00
Oct. 31. D. W. Sprague, petty bills	203	20.87
Oct. 17. Northwestern Fuel Co., 4,000 Cumb. coal	204	14.50
Nov. 18. E. B. Johnson, postage, help, express, etc.	210	5.71
Oct. 31. Wm. H. Yattaw, freight, labor and repairs	211	15.93

	No. Voucher.	
Sept. 22. Miller Printing Co., stationery and printing.....	217	16.00
Aug. 31. J. H. Hagen & Co., labor and material, painting building....	222	164.00
Sept. 12. F. E. Reed & Co., one engine lathe.....	245	300.00
Oct. 19. N. W. General Electric Co., apparatus and instruments....	248	129.98
Oct. 11. Wm. R. Appleby, trip to Butte and return.....	249	71.25
Oct. 27. R. B. Lees, repairing old cabinet.....	250	20.00
Oct. 5. Electric Engineering and Supply Co., apparatus and instru- ments.....	251	100.64
Oct. 15. Janney, Semple & Co., supplies.....	252	39.87
Sept. 30. W. K. Morrison & Co., supplies.....	253	11.41
Nov. 30. Pay roll.....	292	1,405.00
Nov. 30. D. W. Sprague, petty bills.....	293	18.89
Nov. 30. E. B. Johnson, postage, gas, express, etc.....	295	5.73
Nov. 30. L. Kimball Printing Co., 7,000 blanks.....	296	23.50
Nov. 30. Yattaw, labor, express and miscellaneous expenses.....	299	4.30
Nov. 5. Standard Oil Co., supplies.....	302	4.79
Nov. 30. Miller Printing Co., stationery and printing.....	307	43.50
Nov. 30. R. B. Lees, miscellaneous repairs.....	308	6.20
Nov. 22. Northwestern Fuel Co., Cumb. coal.....	314	7.25
Nov. 28. Jas. H. Bishop & Co., 100 sheets linen paper.....	323	3.20
Nov. 22. Noyes Bros. & Cutler, 5 lbs. glass tubing.....	324	2.50
Nov. 1. Janney, Semple & Co., supplies.....	327	6.39
Oct. 31. W. K. Morrison & Co., miscellaneous hardware.....	329	10.97
Oct. 31. C. Hennecke Co., supplies.....	330	50.75
Sept. 30. Joseph Zesbaugh, drawing supplies.....	331	10.72
Nov. 25. James Bladon & Co., gas fixtures.....	332	4.70
Nov. 30. Tribune Job Printing Co., stationery and printing.....	358	14.30
Dec. 24. Pay roll.....	390	1,361.67
Dec. 31. D. W. Sprague, petty bills.....	391	16.77
Dec. 31. E. B. Johnson, gas, postage and petty expenses.....	394	25.22
Dec. 31. R. B. Lees, carpenter repairs.....	397	1.00
Jan. 2. Jas. W. Day, ice.....	407	28.00
Dec. 31. Wm. H. Yattaw, freight, labor and miscellaneous.....	409	2.50
Dec. 30. The Miller Printing Co., stationery and printing.....	410	12.75
Dec. 17. Janney, Semple & Co., machine and tool steel.....	423	41.32
Dec. 19. Jas. H. Bishop & Co., paper.....	424	13.15
Nov. 30. Bullock & Crenshaw, apparatus and instruments.....	425	11.00
Dec. 6. Lyman Ellet Drug Co., supplies.....	426	5.31
Dec. 12. Electric Engineering and Supply Co., apparatus and supplies.....	427	68.90
Dec. 9. G. W. Crane & Co., supplies.....	428	11.76
Nov. 28. J. P. Gilmore, shellac, glue, etc.....	429	9.90
Dec. 14. W. K. Morrison & Co., miscellaneous hardware.....	435	30.54
Dec. 31. Minneapolis Fuel Co., 2,000 lbs. coke.....	462	8.25
Dec. 24. E. H. Sargent & Co., apparatus and supplies.....	463	56.93
Dec. 10. Totten & Hoag, machinery.....	465	120.00
Dec. 21. Frayser & Chalmers, machinery.....	466	110.00
Dec. 13. Lockwood, Upton & Co., 5 pairs tongs.....	470	3.00
Jan. Pay roll.....	494	1,361.67
Jan. 31. D. W. Sprague, petty bills.....	495	15.25
Jan. 31. E. B. Johnson, gas, freight, postage, etc.....	496	18.76
Jan. 31. Wm. H. Yattaw, cleaning and miscellaneous expenses.....	497	4.25
Jan. 31. R. B. Lees, repairs and miscellaneous.....	503	53.30
Jan. 24. Gustav E. Stechert, books for library.....	504	3.96
Dec. 29. Mech. Engineering Society, subscription for library.....	530	6.00
Jan. 27. W. R. Hoag, postage, express, library books.....	531	6.12
Jan. 20. Franklin Educational Co., supplies.....	532	10.85
Dec. 23. Adolph Glaser, cork fire lighters.....	533	5.00
Jan. 23. W. S. Nott Company, 50 feet 2½ belt.....	534	7.50
Dec. 21. Haggerty Brothers, supplies.....	535	17.86
Jan. 31. W. R. Appleby, freight and supplies.....	536	38.14
Dec. 28. Penn. Lead Co., special refined lead.....	537	15.75
Jan. 3. E. H. Sargent & Co., machinery.....	538	15.50
Jan. 30. Geo. D. Shepardson, postage, book, and rubber tubing.....	539	5.69
Dec. 20. National Lead Co., 200 lbs. Litharge.....	540	15.00
Jan. 6. Electrical Engineering Co., apparatus and instruments.....	541	185.00
Jan. 25. Morris & Wilson, books for library.....	542	90.27
Jan. 31. Henry T. Ardley, salary, H. T. Ardley.....	543	80.00
Dec. 31. Tribune Job Printing Co., stationery and printing.....	544	7.50
Jan. 27. Marder, Luse & Co., card cutter.....	545	10.80
Feb. Pay roll.....	594	1,361.67
Feb. 28. E. B. Johnson, postage, express, gas, etc.....	598	40.41
Feb. 28. Wm. H. Yattaw, freight, labor and repairs.....	599	5.61
Feb. 24. Tribune Job Printing Co., binding for library.....	608	7.50
Feb. 28. Minneapolis Fuel Co., 2,000 lbs. coke.....	614	8.25
Feb. 18. W. S. Nott Company, 23 feet belting.....	620	10.54
Feb. 23. Jno. A. Schlener, stationery.....	622	1.50
Jan. 18. Frank F. Heywood & Co., supplies.....	631	18.50
Feb. 3. Beard Art and Sta. Co., 4 photo frames and mats.....	632	6.50
Feb. 25. R. B. Lees, repairs.....	633	30.40
Jan. 31. N. K. Morrison & Co., miscellaneous supplies.....	634	5.17
Feb. 11. Electric Engineering and Supply Co., apparatus and inst'm'ts.....	635	18.56
Feb. 13. W. S. Nott Company, 57 feet belting.....	636	6.03

EIGHTH BIENNIAL REPORT

		No. Voucher.	
Feb. 24.	L. Kimball Printing Co., stationery and printing.....	637	6.50
Jan. 1.	A. C. Bausman, stationery and printing	638	8.50
Jan. 28.	E. C. Atkins & Co., machinery	639	7.28
Feb. 1.	Am. Inst. Elec. Engineering, 1 year's subscription	640	5.00
Jan. 28.	Gustav E. Stechert, books for library	641	13.80
Feb. 28.	D. W. Sprague, petty bills	645	18.75
Mar.	Pay roll	727	1,391.67
Mar. 31.	D. W. Sprague, petty bills	728	6.30
Mar. 31.	E. B. Johnson, stamps, express, help, etc.	738	7.02
Feb. 28.	The Miller Printing Co., stationery and printing.....	739	7.00
Mar. 31.	Wm. H. Yattaw, labor, express and repairs.....	752	2.83
April 1.	Minneapolis Fuel Co., 6,000 lbs. coal	757	25.55
Mar. 27.	Tribune Job Printing Co., 1,000 envelopes	759	2.50
Mar. 22.	Minneapolis Office and School Furn. Co., 100 specimen stands	769	5.00
Feb. 11.	Edwin E. Howell, library and supplies	770	47.15
Mar. 18.	E. H. Sargent & Co., apparatus, instruments and supplies...	778	65.58
Mar. 25.	H. E. Smith, postage and supplies	780	5.75
Mar. 17.	E. O. Parker, 18,850 lbs. moulding sand	781	16.35
Dec. 31.	Minneapolis Office and School Furniture Co., 6 specimen cases	782	180.00
Mar. 3.	Northwestern Fuel Co., 2,000 lbs. Cumb. forge coal.....	783	7.25
Mar. 29.	Geo. D. Shepardson, postage, express and supplies.....	784	7.45
Mar. 22.	W. K. Morrison & Co., hardware supplies.....	785	28.99
Mar. 11.	Central Electric Co., apparatus and instruments.....	786	12.88
Mar. 30.	The Simonds Mfng. Co., tools and machinery	787	30.00
Mar. 7.	Christian Becker, tools and machinery	788	117.00
Mar. 1.	H. L. Swain & Co., supplies	789	5.38
Feb. 25.	Denver Fire Clay Co., tools and machinery	790	77.15
Mar. 27.	Morris & Wilson, books for library.....	791	24.84
Mar. 27.	A. M. Frazee, work in printing room.....	792	5.05
April 30.	Pay roll	830	1,391.67
April 30.	D. W. Sprague, petty bills.....	831	19.42
Mar. 31.	Tribune Job Printing Co., printing and binding.....	840	6.50
April 14.	Tribune Job Printing Co., 2,000 labels.....	849	2.50
May 1.	Wm. H. Yattaw, labor and repairs	856	3.92
April 29.	E. B. Johnson, gas, postage, labor, etc.	857	5.85
Jan. 24.	D. & D. Electric Mfng. Co., 1 electric motor	863	90.00
Mar. 16.	W. R. Hoag, apparatus and instruments.....	865	109.08
April 28.	W. R. Hoag, freight and cartage on instruments.....	866	13.55
Mar. 1.	C. Sickler, apparatus and instruments	867	48.50
April 1.	Janney, Semple & Co., copper, lead and tin.....	868	33.83
April 28.	W. R. Appleby, freight, labor and supplies.....	869	33.13
Mar. 31.	Minneapolis Office and School Furniture Co., furniture	870	22.50
Nov. 26.	C. W. Hall, trip (as delegate) to New Orleans.....	871	84.80
Mar. 27.	W. & L. E. Gurley, repairing instruments.....	872	48.60
Mar. 31.	Christian Becker, apparatus and instruments.....	873	42.38
April 27.	Geo. A. Casseday, map, charts and materials.....	874	57.00
April 27.	Leslie H. Chapman, work on chart.....	875	6.00
Mar. 25.	E. H. Sargent & Co., tools and machinery	876	5.06
Mar. 24.	Gillette-Herzog Mfng. Co., supplies	877	42.95
April 24.	Electric Engineering and Supply Co., supplies	878	7.69
April 17.	N. W. General Electric Co., supplies	879	6.30
Mar. 31.	W. K. Morrison & Co., supplies	894	3.95
April 30.	E. B. Johnson, expressage	918	3.00
May 31.	Pay roll	935	1,391.67
May 31.	D. W. Sprague, petty bills	944	11.54
June 3.	Wm. H. Yattaw, express, labor and miscellaneous.....	945	3.00
May 30.	E. B. Johnson, gas, postage, express and help.....	946	55.09
May 26.	Gustav E. Stechert, books for library.....	962	17.50
May 31.	Tribune Job Printing Co., stationery and printing.....	974	39.50
May 25.	Noah Johnson, teaching with field survey parties.....	979	21.00
April 30.	W. K. Morrison & Co., supplies	981	5.75
May 25.	W. R. Hoag, postage and repairs	982	5.15
May 16.	The Ashcroft Mfng. Co., tools and machinery.....	983	39.69
May 26.	The E. Horton & Son Co., tools and machinery.....	984	32.50
May 18.	A. D. McNair, salaries of employes	985	10.15
June 30.	Pay roll	1020	1,375.00
	Total		<u>\$18,881.70</u>

Geological and Natural History Surveys.

		No. Voucher.	
Aug. 2.	W. H. Yattaw, cleaning and other petty expenses.....	16	\$13.75
Aug. 31.	Geological survey, pay roll	57	350.00
Sept. 30.	Pay roll	126	480.00
Sept. 30.	L. Kimball Printing Co., stationery and printing.....	136	8.00
Sept. 30.	Wm. H. Yattaw, cleaning and miscellaneous expenses.....	138	2.28
Oct. 31.	Pay roll	202	480.00

UNIVERSITY BOARD OF REGENTS.

		No. Voucher.	
Nov. 18.	E. B. Johnson, stamps, etc.	210	.80
Oct. 31.	W. R. Hoag, State Topographical Survey	247	100.00
Oct. 27.	R. B. Lees, repairing book case	250	6.30
Nov. 30.	Pay roll	292	480.00
Nov. 30.	E. B. Johnson, postage, express etc.	295	12.96
Nov. 30.	Wm. H. Yattaw, miscellaneous expenses	299	4.30
Dec. 24.	Pay roll	390	480.00
Dec. 31.	E. B. Johnson, postage, gas, help, etc.	394	6.29
Jan. 2.	James W. Day, ice	407	11.95
Dec. 31.	Wm. H. Yattaw, labor, freight and miscellaneous	409	3.70
Jan. ...	Pay roll	494	480.00
Feb. ...	Pay roll	594	380.00
Feb. 28.	E. B. Johnson, postage, gas, express, etc.	598	15.99
Feb. 28.	Wm. H. Yattaw, express, labor and repairs	599	5.61
Feb. 9.	Benjamin La Mere, animals for museum	662	85.00
Jan. 11.	Minneapolis Paper Co., 9,000 cards for museum	664	21.65
Feb. 14.	Chas. T. Leonard, 7 shades and transoms	665	7.28
Mar. ...	Pay roll	728	380.00
Mar. 17.	Gustav E. Stechert, books for library	821	61.28
Mar. 29.	N. H. Winchell, labor, instruments and supplies	822	205.66
April 30.	Pay roll	830	505.00
Mar. 16.	Eimer & Amend, supplies	838	14.75
Mar. 31.	Tribune Job Printing Co., blank books	840	34.00
May 1.	Wm. H. Yattaw, labor and repairs	856	3.08
April 29.	E. B. Johnson, gas, postage, labor, etc.	857	1.64
Mar. 27.	Noah Johnson, work on Topographical Survey	864	18.00
April 30.	E. B. Johnson, expressage	918	39.65
Dec. 3.	Henry F. Nachtrieb, books for library	919	21.50
July 30.	H. F. Nachtrieb, books for library	920	413.70
April 6.	H. F. Nachtrieb, miscellaneous supplies	921	98.94
April 17.	Otto Luggler, 100 insect boxes, etc.	922	140.00
Mar. 26.	Dr. F. Franceschi, 1 set plants	923	5.50
April 15.	Gustav E. Stechert, books for library	924	229.64
April 3.	Minneapolis Paper Co., 111 books (wrapped)	925	5.83
April 1.	O. G. Pringle, books for library	926	61.00
April 4.	Moffet, Thurston & Plant Co., 10,000 plant tables	927	6.25
April 5.	A. A. Heller, 125 Bot. specimens	928	10.00
April 28.	N. H. Winchell, express, postage, help, etc.	929	133.66
Jan. 27.	L. Kimball Printing Co., 500 letter heads	932	2.50
Feb. 22.	Paul Klincksleek, supplies	930	33.42
May 31.	Pay roll	935	505.00
May 31.	E. B. Johnson, gas, postage, express and help	946	128.63
May 31.	Harrison & Smith, 1,200 cards	961	3.00
May 26.	Gustav E. Stechert, books for library	962	67.27
May 1.	A. C. Bausman, 48 field note books	970	43.00
May 11.	J. W. Fisk, apparatus and instruments	971	178.17
June 1.	Noyes Bros. & Cutler, supplies	972	60.22
May 5.	Anderson & Korb, supplies	973	41.17
May 29.	Gloucester Net and Twine Co., supplies	975	98.38
May 15.	Richard Spruce, supplies	976	27.00
May 29.	R. B. Lees, furniture	977	48.50
May 6.	Blomgren Bros., 8 engravings	978	48.00
June 30.	Pay roll	1020	505.00
July 2.	H. F. Nachtrieb, supplies	1025	200.00
Total			<u>\$7,812.20</u>

COLLEGE OF LAW.

		No. Voucher.	
Aug. 1.	Kimball Printing Co., 1,000 letter heads	9	\$4.50
July 30.	E. B. Johnson, express, advertising, gas, sundries	11	1.92
Aug. 2.	W. H. Yattaw, cleaning and petty expenses	16	12.00
Aug. 30.	E. B. Johnson, petty expense	...	.6
Aug. 30.	The Miller Printing Co., stationery and printing	...	2.00
Aug. 30.	Minneapolis Paper Co., 500 envelopes No. 20	61	1.33
Aug. 30.	Wm. H. Yattaw, cleaning, freight and petty expense	64	24.00
Sept. 30.	Pay roll	126	505.00
Aug. 30.	E. B. Johnson, petty expense	...	.18
Sept. 30.	L. Kimball & Co., stationery and printing	136	1.00
Sept. 30.	Wm. H. Yattaw, cleaning and miscellaneous expenses	138	10.65
Sept. 27.	Tribune Job. Printing Co., stationery and printing	159	1.00
Sept. 6.	Cody & Hinelein, repairing plumbing	164	7.60
Sept. 20.	James Bladon & Co., gas fixtures	165	26.25
Oct. 31.	Pay roll	202	680.00
Nov. 18.	E. B. Johnson, stamps, express, freight, etc.	210	20.54
Sept. 22.	Miller Printing Co., stationery and printing	217	7.50
Aug. 31.	J. H. Hagen & Co., painting law building	222	151.50
Sept. 15.	Minneapolis Office and School Furniture Co., furniture	254	23.00

EIGHTH BIENNIAL REPORT

		No. Voucher.	
Oct. 8.	Wagner & Nelson, repairs	255	13.85
Nov. 30.	Pay roll	292	615.00
Nov. 30.	E. B. Johnson, postage, express and petty expenses.....	295	30.40
Nov. 30.	Wm. H. Yattaw, miscellaneous expenses	299	3.75
Nov. 30.	W. S. Pattee, salary	357	125.00
Dec. 24.	Pay roll	390	615.00
Dec. 31.	E. B. Johnson, gas, postage and petty expenses.....	394	29.92
Dec. 31.	Wm. H. Yattaw, miscellaneous expenses.....	409	5.00
Dec. 8.	M. Rasmussen, varnishing main entrance.....	430	7.00
Dec. 23.	Bradstreet-Thurber Co., 21-6 dozen chairs.....	431	57.42
July 5.	L. Kimball Printing Co., 1,000 circulars.....	432	26.25
Jan. ...	Pay roll	494	580.00
Jan. 31.	E. B. Johnson, gas, freight, postage, etc.....	496	30.08
Mar. 31.	Wm. H. Yattaw, labor and repairs	752	3.75
Jan. 8.	Cody & Hinellue, putting in new closet.....	501	15.85
Jan. 31.	R. B. Lees, postoffice case and repairs.....	503	14.40
Feb. ...	Pay roll	594	910.00
Feb. 28.	E. B. Johnson, gas, freight, postage, etc.....	598	53.92
Feb. 28.	Wm. H. Yattaw, express, labor and repairs	598	5.50
Feb. 24.	Cody-Hineline Co., repairs	613	17.37
Mar. ...	Pay roll	727	922.50
Mar. 31.	Wm. H. Yattaw, labor and repairs	752	3.75
Mar. 8.	Callaghan & Co., books for library	794	25.50
Mar. 21.	Hall, Black & Co., 500 examination papers	795	8.50
Dec. 6.	Lawyers' Co-Operative Pub. Co., advertising and library.....	823	9.00
April 30.	Pay roll	830	862.50
April 30.	D. W. Sprague, petty bills	831	3.00
May 1.	Wm. H. Yattaw, labor and repairs	856	3.75
April 29.	E. B. Johnson, postage, gas, help, etc.....	857	29.76
Mar. 31.	Minneapolis Office and School Furniture Co., furniture.....	870	16.00
Oct. 17.	T. & J. W. Johnson & Co., books for library.....	880	32.50
May 22.	W. S. Pattee, extra salary	931	375.00
May 31.	Pay roll	935	825.00
June 1.	Wm. H. Yattaw, express, labor and miscellaneous.....	945	5.00
May 31.	E. B. Johnson, gas, postage, express, help, etc.....	946	31.84
May 31.	Tribune Job Printing Co., stationery and printing.....	974	1.50
June 30.	Pay roll	1020	300.00
Total			\$3,099.67

COLLEGE OF MEDICINE.

		No. Voucher.	
July 30.	E. B. Johnson, express, gas, sundries.....	11	\$4.48
Aug. 2.	Wm. H. Yattaw, cleaning and petty expenses.....	16	3.15
July 22.	Tribune Job Printing Co., 3,000 annuals.....	22	94.00
July 31.	D. W. Sprague, petty bills	24	2.50
Aug. 1.	Minn. Hospital College, repairing building.....	31	275.00
June 8.	Minneapolis Gas Light Co., gas used from January, 1890, to February, 1891.....	32	218.88
July 29.	N. W. Telephone Exchange Co., services	46	2.70
Aug. 31.	Medical Department, pay roll	57	47.92
Aug. 30.	Minneapolis Paper Co., 1,000 envelopes No. 20.....	61	2.05
Aug. 30.	Wm. H. Yattaw, cleaning, freight and petty expenses.....	64	6.89
Aug. 29.	Cody and Hineline, plumbing and gas fitting repairs.....	68	2.50
Aug. 1.	O. M. Bailey, freight on chairs	85	9.67
Aug. 24.	Minneapolis Gas Light Co., gas pipe, stopcock, etc.....	107	61.30
Sept. 30.	Pay roll	126	2,072.92
Sept. 29.	E. B. Johnson, miscellaneous expenses.....	127	.95
Sept. 30.	L. Kimball Printing Co., stationery and printing.....	136	41.75
Sept. 30.	Wm. H. Yattaw, cleaning and miscellaneous expenses.....	138	22.20
Sept. 28.	Warner Bros., miscellaneous hardware.....	147	1.25
Oct. 31.	Pay roll	202	2,010.00
Oct. 31.	D. W. Sprague, petty bills	203	11.45
Oct. 19.	Tribune Job Printing Co., printing	205	6.25
Oct. 29.	Warner Bros., miscellaneous supplies	207	1.05
Nov. 18.	E. B. Johnson, gas, stamps, freight, etc.....	210	30.22
Oct. 31.	Wm. H. Yattaw, freight, labor, etc.....	211	181.22
Sept. 22.	Miller Printing Co., stationery and printing.....	217	3.00
Oct. 8.	Ward's National Science Estab., 1 model skin.....	256	6.00
Oct. 1.	D. O. Haynes & Co., advertisement in "Phar. Era".....	257	24.00
Oct. 6.	Campus Quartet, opening medical building	258	15.00
Oct. 3.	W. K. Sudduth, postage	259	5.00
Oct. 18.	Drake Mantel and Tile Co., state bulletin.....	260	12.50
Nov. 1.	N. W. Telephone Exchange Co., service for November.....	274	6.00
Nov. 30.	Pay roll	292	2,010.00
Nov. 31.	D. W. Sprague, petty bills.....	293	2.42
Nov. 30.	E. B. Johnson, postage, expenses and miscellaneous.....	295	59.96
Nov. 30.	L. Kimball Printing Co., 600 invitations and envelopes.....	298	8.50

		No. Voucher.	
Nov. 30.	Wm. H. Yattaw, door plates and miscellaneous expense.....	299	36.97
Nov. 29.	Jno. A. Schlener & Co., stationery.....	303	1.73
Nov. 28.	Warner Bros., miscellaneous hardware.....	305	32.06
Nov. 30.	Miller Printing Co., stationery and printing.....	307	20.00
Aug. 22.	Minneapolis O. and S. Furn. Co., cabinets, chairs and stools.....	325	16.00
Nov. 1.	Lochwood, Upton & Co., drilling steel plates.....	333	7.10
Nov. 1.	Northwestern Lancet, adv. for year ending April, 1893.....	334	60.00
Oct. 20.	Minneapolis Gas Light Co., repairs.....	335	6.90
Nov. 30.	Tribune Job Printing Co., stationery and printing.....	358	13.00
Oct. 1.	D. O. Haynes & Co., advertisement in Pharm. Era.....	360	24.00
Nov. 5.	O. T. Sweet, 80 yards crash and towels.....	362	9.45
Oct. 31.	Wm. Wood & Co., advertisement Medical Record.....	363	22.50
Dec. 1.	N. W. Telephone Exchange Co., service for December.....	364	6.00
Oct. 25.	Baker & Co., supplies.....	367	47.26
Dec. 24.	Pay roll.....	390	2,061.67
Dec. 31.	D. W. Sprague, petty bills.....	391	10.25
Dec. 31.	E. B. Johnson, gas, postage and express.....	394	72.16
Dec. 31.	R. B. Lees, carpenter repairs.....	397	2.85
Dec. 31.	Wm. H. Yattaw, freight, express, miscellaneous expenses.....	409	55.79
Jan. 1.	N. W. Telephone Exchange, services for January, 1893.....	411	6.00
Oct. 29.	Tribune Job Printing Co., 1,000 catalogues.....	433	44.25
Dec. 6.	M. F. Patterson, dental supplies.....	434	8.25
Dec. 14.	W. K. Morrison & Co., miscellaneous hardware.....	435	26.49
Nov. 26.	Noyes Bros. & Co., druggists' supplies.....	436	43.77
Oct. 13.	W. S. Nott Company, 153 feet belting and couplings.....	437	8.02
Oct. 15.	Goodnow & Wightman, supplies.....	438	16.14
Dec. 31.	P. H. Willard, M. D., postage stamps, etc.....	439	25.30
Dec. 14.	Minneapolis Pharmacy Co., supplies.....	440	50.00
Dec. 17.	Twin City Calcium Light Co., refilling cylinder.....	441	10.50
Jan.	Pay roll.....	494	2,061.67
Jan. 31.	D. W. Sprague, petty bills.....	495	5.40
Jan. 31.	E. B. Johnson, gas, express, postage, etc.....	496	103.20
Jan. 31.	Wm. H. Yattaw, cleaning and petty expenses.....	497	16.88
Jan. 31.	R. B. Lees, repairing doors, etc.....	508	4.80
Jan. 17.	Minneapolis Paper Co., 1,000 letter heads.....	508	1.40
Feb. 1.	N. W. Telephone Exchange Co., service for February, 1893.....	516	6.00
Jan. 21.	Noyes Bros. & Cutler, druggists' supplies.....	546	104.06
Jan. 13.	M. F. Patterson, dental supplies.....	547	53.46
Dec. 8.	W. A. Olmstead, supplies.....	549	8.78
Jan. 16.	L. B. Wilson, colored plates for library.....	550	25.00
Jan. 26.	S. S. White Dental Mfg. Co., advertising (Dental Cosmos).....	551	100.00
Jan. 1.	Boston Medical and Surgical Journal, subscription for library.....	552	5.00
Jan. 18.	C. J. Bell, supplies.....	553	7.90
Jan. 31.	C. J. Bell, work in laboratory.....	554	125.00
Jan. 5.	Wm. J. Dyas, advertisement Can. Druggist.....	555	12.00
Jan. 1.	Era Pub. Co., advertisement Medical Era.....	556	20.00
Dec. 9.	Minneapolis Dental Mfg. Co., apparatus and supplies.....	557	5.00
Jan. 1.	N. W. Journal of Homeopathy, advertising.....	558	13.33
Jan. 7.	Minneapolis Pharm. Co., adv. in Homeopathic Magazine.....	559	75.00
Jan. 1.	F. J. Wulling, postage and miscellaneous supplies.....	560	5.12
Jan. 3.	William Wood & Co., adv. Med. Record.....	561	22.50
Feb.	Pay roll.....	594	2,126.67
Feb. 28.	E. B. Johnson, gas, postage, express, etc.....	598	181.65
Feb. 28.	Wm. H. Yattaw, freight, labor and repairs.....	599	34.41
Feb. 16.	Tribune Job Printing Co., stationery and printing.....	607	7.00
Jan. 25.	Minneapolis Electric Construction Co., 3 storage batteries.....	619	13.00
Feb. 25.	R. B. Lees, repairs.....	623	17.65
Mar. 1.	N. W. Telephone Exchange Co., service for March.....	630	6.00
June 20.	Geo. A. Hendricks, labor and supplies.....	666	94.17
Mar.	Pay roll.....	727	2,121.67
Mar. 31.	D. W. Sprague, petty bills.....	728	14.90
Mar. 23.	Warner Bros., supplies.....	750	1.34
Mar. 31.	Wm. H. Yattaw, labor, express, repairs.....	752	37.88
Mar. 20.	Minneapolis Plumbing Co., adjusting plumbing accounts.....	753	17.50
Mar. 30.	R. B. Lees, repairs.....	754	35.45
April 1.	N. W. Telephone Exchange Co., service for April.....	755	6.00
Mar. 27.	Tribune Job Printing Co., 1,000 letter heads.....	759	4.00
Dec. 31.	Minneapolis Office and School Furniture Co., 3 cases.....	782	25.00
Mar. 1.	R. B. Lees, furniture and repairs.....	796	26.70
Mar. 16.	Tribune Job Printing Co., stationery and printing.....	797	19.00
Mar. 4.	Eimer & Amend, supplies.....	798	125.64
Feb. 18.	W. T. Kenner & Co., books for library.....	799	14.00
Feb. 24.	R. O. Beard, miscellaneous.....	800	19.00
Mar. 10.	Noyes Bros. & Cutler, supplies.....	801	58.24
Feb. 16.	C. J. Bell, express.....	802	6.20
Feb. 17.	Cody-Hineline Co., plumbing.....	803	12.19
Jan. 28.	Journal of Am. Med. Ass'n, advertising.....	804	40.00
Dec. 6.	Henry H. Shufeldt & Co., supplies.....	805	28.07
Feb. 1.	The Druggists' Circular, advertising.....	806	35.00
April 30.	Pay roll.....	830	2,131.67
April 30.	D. W. Sprague, petty bills.....	831	13.77
Mar. 16.	Elmer & Amend, supplies.....	838	14.65
Mar. 31.	Tribune Job Printing Co., 2,500 records.....	840	6.25

		No. Voucher.	
April 22.	Jno. A. Schlener & Co., stationery	841	4.30
May 1.	N. W. Telephone Exchange Co., service for May	847	6.00
June 1.	Minneapolis Times Co., advertising	854	12.00
May 1.	Wm. H. Yattaw, labor and repairs	856	41.98
April 29.	E. B. Johnson, gas, postage, help, etc.	857	93.76
April 30.	Cody-Hineline Co., plumbing	859	4.94
Mar. 31.	Minneapolis Office and School Furniture Co., furniture	870	65.00
Feb. 20.	N. W. Galv. Iron Cornice Co., hot air pipes	881	16.80
Feb. 15.	J. M. Locke, repairs	882	6.45
Mar. 3.	John Nevin & Son, repairs	883	24.30
Mar. 6.	F. A. Dunsmore, supplies	884	27.95
Jan. 26.	E. C. Cauvet & Co., plumbing	885	6.52
Oct. 15.	The Clare-Speaker Co., supplies	886	20.50
Dec. 9.	Edmer & Amend, supplies	887	150.07
Dec. 1.	Chas. T. Leonard, furniture	888	210.00
Mar. 1.	James W. Day, ice	889	25.80
Mar. 23.	Thos. G. Lee, miscellaneous	890	36.60
April 17.	R. L. Polk & Co., book for library	891	6.00
Mar. 31.	Noyes Bros. Cutler, supplies	892	29.05
Feb. 6.	Richard Krey & Co., supplies	893	25.86
Mar. 31.	W. K. Morrison & Co., supplies	894	10.88
April 28.	R. B. Lees, repairs	895	11.65
May 4.	Tribune Job Printing Co., 1,000 stamped envelopes	917	22.20
Jan. 27.	L. Kimball Printing Co., 1,000 class cards	922	9.50
May 31.	Pay roll	925	2,131.67
May 31.	D. W. Sprague, petty bills	944	12.34
June 3.	Wm. H. Yattaw, express, labor and miscellaneous	945	23.72
May 31.	E. B. Johnson, gas, postage, express, help, etc.	946	89.28
May 23.	Caswell A. Balard, instructing in Botany	957	50.00
June 1.	N. W. Telephone Exchange Co., service for June	960	6.00
May 31.	Tribune Job Printing Co., stationery and printing	974	4.50
May 29.	R. B. Lees, repairs	977	13.75
May 10.	Cody & Hineline, repairs	986	5.20
Nov. 11.	Goodnow & Wrightman, tools and machinery	987	98.41
Jan. 6.	Geo. Tieman, apparatus and instruments	988	29.22
Mar. 31.	McCarthy & Donnelly, supplies	989	20.00
Mar. 1.	Johnson & Shaw, supplies	990	11.85
Oct. 24.	J. M. Locke, painting room in medical building	991	7.50
May 1.	F. J. Wuling, miscellaneous	992	6.10
Mar. 19.	Henry H. Shufeldt, 1 barrel alcohol	995	28.46
June 30.	Pay roll	1020	2,015.00
July 10.	Tribune Job Printing Co., postage and printing	1026	30.00
	Total		<u>\$25,534.77</u>

COLLEGE OF AGRICULTURE.

CURRENT EXPENSE.

		No. Voucher.	
July 1.	Swinburn Printing Co., stationery and printing	8	\$8.80
July 14.	Harrison & Smith, paper	20	2.00
July 31.	D. W. Sprague, petty bills	24	3.00
July 29.	S. Swanson, work on strainers	25	34.00
July 26.	Andrew Bass, boarding well sinkers	26	19.20
June 6.	Midway Supply Co., man and team hire	27	23.50
June 30.	Clinton D. Smith, express, postage and petty expenses	33	4.02
July 27.	Clinton D. Smith, freight, postage and petty expenses	34	15.60
July 25.	T. L. Haecker, expense visiting dairies in Minnesota	35	35.60
July 5.	Northwestern Fuel Co., 3,000 lbs. pea coal	38	9.00
July 1.	Pillsbury-Washburn Co., 2,000 lbs. bran	41	10.00
June 30.	Lyman Elliot Drug Co., 363 lbs. sulph. acid and carbon	43	7.94
July 5.	S. D. Brimhall, V. M. D., visit and operation	44	15.00
Aug. 31.	School of Agriculture, pay roll	57	500.47
Aug. 26.	H. W. Brewster, postage, express and repairs	80	14.25
Aug. 31.	D. W. Sprague, petty bills	87	3.22
Aug. 30.	Clinton D. Smith, stamps	88	3.45
Aug. 9.	Minnesota Linseed Oil Works, ½ ton oil meal	98	11.00
Aug. 29.	J. A. Vye, T. L. Haeckers' trip, visiting creameries	100	24.57
April 4.	Pillsbury-Washburn Co., 9,000 lbs. bran	104	50.00
Aug. 9.	Lund & Nerli, laying sewer pipe	105	400.00
Sept. 30.	Pay roll	126	898.58
Sept. 14.	R. C. Clark, inspecting 3 boilers	152	9.00
Sept. 27.	H. W. Brewster, postage and cleaning building	153	49.30
Sept. 30.	Jno. A. Schlener & Co., stationery and instruments	154	42.55
Sept. 30.	D. W. Sprague, petty bills	160	3.00
Sept. 26.	Clinton D. Smith, dairy supplies	170	13.62
Sept. 9.	Pillsbury-Washburn Co., bran and shorts	172	26.50
Aug. 31.	Brooks Bros. lumber	176	21.10
Sept. 5.	Noyes Bros. & Cutler, apparatus and instruments	179	69.57
Aug. 29.	Minnesota Linseed Oil Co., ground oil cake	180	10.50

UNIVERSITY BOARD OF REGENTS.

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	No. Voucher.	
Oct. 31.	Pay roll	202 1,185.55
Oct. 31.	D. W. Sprague, petty bills	203 2.50
Sept. 30.	Harrison & Smith, stationery and printing	223 9.00
Oct. 25.	J. A. Vye, expenses of T. L. Haecker visiting fairs	224 74.90
Sept. 28.	Pillsbury-Washburn Co., 6,000 lbs. bran	225 30.00
Oct. 28.	Clinton D. Smith, apparatus and miscellaneous supplies	226 17.75
Oct. 19.	Bovey De Laittre Lumber Co., lumber	227 31.60
Oct. 1.	Farm, Stock and Home, advertising	228 12.60
Oct. 26.	H. W. Brewster, postage, express and repairs	229 9.15
Oct. 1.	E. A. Webb, advertising	230 8.40
Oct. 21.	Held & Gruenhagen, tools, locks, etc.	231 8.40
Sept. 7.	Noyes Bros. & Cutler, druggists' supplies	232 48.88
Oct. 14.	Pioneer Fuel Co., 4,000 stove coal	233 17.70
Oct. 26.	Chas. R. Aldrich, superintendent, resetting boiler	234 20.00
Aug. 31.	J. M. Locke, repairs	235 19.85
Oct. 19.	Effingham, Maynard & Co., books for library	236 9.43
Oct. 10.	W. F. Porter & Co., resetting boilers	237 225.00
Sept. 28.	Minnesota Linseed Oil Works, 3,000 lbs. oil meal	238 34.00
Oct. 25.	N. W. Fuel Co., 3,000 lbs. pea coal	239 3.38
Oct. 28.	Northern Supply Co., 41,700 lbs. pea coal	240 99.03
Oct. 24.	W. F. Porter & Co., repairs	241 96.93
Oct. 8.	J. M. Locke, repairs	242 9.38
Oct. 18.	Cornish, Curtiss & Greene Co., creamery supplies	243 28.00
Oct. 10.	Brooks Bros., repairs	244 13.60
Nov. 30.	Pay roll	292 1,267.99
Nov. 30.	D. W. Sprague, petty bills	293 11.75
Oct. 27.	S. E. Olson & Co., table and kitchen furnishings	317 72.46
Nov. 10.	J. Gutzwiller, Jr., stationery and printing	318 10.50
Oct. 29.	Bausch & Lomb Opt. Co., instruments	319 6.00
Nov. 22.	Pioneer Fuel Co., 17 loads pine slabs	320 53.55
Oct. 8.	Pioneer Fuel Co., 4,000 lbs. asst. coal	321 11.75
Nov. 28.	Jas. H. Bishop & Co., 2 reams cap paper	323 3.60
Nov. 22.	Noyes Bros. & Cutler, instruments	324 4.62
Nov. 25.	Clinton D. Smith, petty expense bills	338 15.13
Sept. 2.	Held & Gruenhagen, repairs	340 2.20
Oct. 19.	Creamery Packing Mfrg. Co., apparatus and instruments	343 18.20
Nov. 5.	A. L. McCoy, repairing dairy floor	345 23.38
Nov. 27.	W. K. Morrison & Co., lock and trimmings	348 5.48
Oct. 13.	Midway Supply Co., labor	349 10.18
Oct. 29.	J. Gutzwiller, Jr., milk tickets and slips	350 5.00
Nov. 3.	Borden & Selleck, scales	351 20.25
Oct. 31.	Standard Oil Co., gasoline	352 22.11
Nov. 5.	B. M. B. Whitney, repairs	353 13.37
Nov. 2.	Northern Supply Co., 30,007 lbs. pea coal	354 75.00
Nov. 4.	Pillsbury-Washburn Co., 7,000 lbs. bran	355 34.00
Nov. 30.	Tribune Job Printing Co., stationery and printing	358 10.00
Nov. 1.	C. D. Whitall & Co., stationery	359 6.90
Oct. 1.	Am. Veterinary Review, 2 years' subscription	322 6.00
Dec. 24.	Pay roll	390 1,332.40
Dec. 31.	D. W. Sprague, petty bills	391 13.40
Dec. 31.	E. B. Johnson, postage	394 .25
Dec. 20.	Tribune Job Printing Co., stationery and printing	401 28.75
Dec. 20.	Jno. A. Schlener & Co., stationery	416 7.25
Dec. 13.	Pioneer Fuel Co., coal	417 116.65
Nov. 30.	Pioneer Fuel Co., 2 tons stove coal	418 17.70
Dec. 29.	Otto Luger, lining drawers of cabinet, etc.	419 29.46
Dec. 28.	Held & Gruenhagen, tools and repairs	420 9.90
Dec. 31.	H. W. Brewster, postage, express and repairs	421 23.89
Nov. 17.	B. Westerman	422 3.41
Nov. 7.	Henry Welskoph, paint and brush	442 5.85
Dec. 2.	Minnesota Linseed Oil Works, 1 ton oat meal	443 22.00
Dec. 7.	Pillsbury-Washburn Co., 30,000 lbs. bran	444 139.89
Oct. 18.	Cornish, Curtiss & Greene Co., dairy apparatus	447 16.50
Nov. 30.	Harrison & Smith, stationery and printing	448 9.50
Nov. 8.	Northern Supply Co., 93,800 lbs. pea coal	449 234.50
Nov. 2.	Held & Gruenhagen, repairs	452 5.05
Nov. 26.	Adam Lindig, 120 gallons milk	453 18.00
Dec. 27.	Clinton D. Smith, freight, milk and supplies	455 46.01
Dec. 23.	J. A. Vye, subscriptions for library	456 13.25
Nov. 3.	Brooks Bros., lumber	459 27.00
Oct. 5.	Noyes Bros. & Cutler, supplies	461 1.94
Dec. 31.	Minneapolis Fuel Co., 114,600 lbs. pea coal	462 318.15
Jan.	Pay roll	494 1,364.98
Jan. 31.	D. W. Sprague, petty bills	495 10.83
Jan. 24.	Gustav E. Stechert, books for library	504 19.66
Jan. 17.	Minneapolis Paper Co., stationery and printing	508 11.48
Jan. 30.	Pioneer Fuel Co., 104,000 lbs. pea coal	520 306.92
Jan. 3.	Sam'l B. Green, labor	521 8.00
Nov. 23.	Bausch & Lomb Opt. Co., 3 objectives "1/4"	522 23.62
Jan. 11.	W. A. Wheeler, labor, lumber and materials	523 26.18
Jan. 28.	R. B. Lees, 2 gun racks	524 20.00
Jan. 12.	D. D. Merrill & Co., books for library	525 19.98
Jan. 23.	L. Kimball Printing Co., 100 blanks	526 3.00

		No. Voucher.	
Jan. 2.	Northwestern Agriculturist, advertising	527	7.00
Jan. 1.	S. B. Loye & Sons, supplies	528	8.75
Jan. 21.	D. W. Sprague, pay roll Dairy department	529	431.00
Jan. 18.	Harrison & Smith, blank book	548	3.75
Jan. 30.	Clinton D. Smith, freight and miscellaneous expenses	562	37.84
Jan. 30.	Clinton D. Smith, supplies	563	72.20
Dec. 29.	R. R. Howell & Co., plumbing	564	50.99
Dec. 24.	Cornish, Curtiss & Greene, apparatus and supplies	565	76.38
Dec. 30.	Jas. McCoy, repairs	566	6.50
Dec. 5.	Northern Supply Co., 44,760 lbs. pea coal	567	111.90
Jan. 5.	Minn. Linseed Oil Works, 3,000 lbs. oil meal	568	33.00
Jan. 10.	Fairbanks, Morse & Co., machinery	569	15.52
Jan. 6.	Crane & Co., repairs	570	6.01
Jan. 6.	Crescent Creamery Co., milk furnished in January	571	908.96
Feb.	Pay roll	584	1,822.01
Feb. 28.	D. W. Sprague, petty bills	585	7.73
Feb. 2.	Gustav E. Stechert, books for library	600	38.40
Feb. 16.	Tribune Job Printing Co., stationery and printing	607	5.00
Feb. 28.	Minneapolis Fuel Co., 57,700 lbs. stove coal	614	217.81
Feb. 22.	Geo. Sidney Smith, books for library	618	10.00
Jan. 27.	D. D. Merrill & Co., books for library	621	7.68
Feb. 23.	Jno. A. Schiener & Co., stationery	622	7.00
Feb. 27.	H. W. Brewster, express, freight, etc.	624	8.86
Feb. 9.	Pioneer Fuel Co., coal and wood	626	244.13
Jan. 30.	Brown, Treacy & Co., books for library	627	10.00
Feb. 24.	Clinton D. Smith, petty expense bills	646	17.85
Feb. 27.	Clinton D. Smith, miscellaneous	647	2.42
Aug. 3.	Held & Gruenhagen, repairs	648	7.45
Feb. 13.	Minn. Linseed Oil Works, 2 tons oil meal	649	48.00
Dec. 2.	McDonald Bros., supplies	651	5.10
Dec. 24.	F. B. Fargo & Co., 1 "Fargo Butter Worker"	654	40.00
Feb. 25.	O. Peterson, 280 gallons milk	656	42.00
Feb. 24.	Northern Supply Co., 13 cords bass wood	659	40.95
Mar.	Pay roll	727	918.93
Mar. 31.	D. W. Sprague, petty bills	728	27.65
Mar. 31.	D. W. Sprague, postage, express and petty bills	738	1.00
Mar. 27.	Tribune Job Printing Co., stationery and printing	759	9.50
Feb. 16.	D. D. Merrill & Co., books for library	760	8.65
Mar. 24.	Pioneer Fuel Co., pine slabs	761	7.00
Feb. 27.	Orange-Judd Company, books for library	762	6.00
Feb. 10.	Bovey De Laitre Lumber Co., lumber	763	25.17
Nov. 30.	W. K. Morrison & Co., kitchen furniture	764	9.73
Mar. 7.	Gustav E. Stechert, books for library	765	43.46
Mar. 18.	Rickard & Gruman, lettering 21 agricultural diplomas	766	10.50
Mar. 14.	Minneapolis Fuel Co., 24,000 lbs. stove coal	767	90.60
Mar. 30.	Campus Quartette, services at commencement	768	15.00
Mar. 29.	H. W. Brewster, freight, postage and labor	771	9.04
Mar. 28.	Held & Gruenhagen, repairs and supplies	772	8.40
Mar. 23.	W. F. Hillman, instruction in vocal music	773	40.00
Feb. 28.	W. F. Porter & Co., plumbing	774	10.11
Mar. 4.	Louis Dreka, diplomas	775	8.75
Mar. 18.	Pioneer Fuel Co., pine slabs	776	5.25
Mar. 29.	J. A. Vye, 310 gallons milk	777	46.50
Mar. 31.	Pioneer Fuel Co., 30,200 lbs. pea coal	779	92.11
Mar. 29.	Clinton D. Smith, postage and miscellaneous	807	46.73
April 30.	Pay roll	830	971.79
April 30.	D. W. Sprague, petty bills	831	8.40
Mar. 31.	Tribune Job Printing Co., 600 programs	840	11.50
April 20.	Alfred Roper, 18 large cards.* (See end of year)	848	17.50
April 17.	Garretson, Cox & Co., books for library	861	30.00
April 20.	Alfred Roper, 18 large cards	862	17.50
April 26.	Clinton D. Smith, miscellaneous	897	9.34
April 14.	Pillsbury-Washburn Co., 2,000 lbs. bran	898	10.00
April 13.	Emil Greiner, apparatus	903	10.20
Mar. 31.	Minn. Linseed Oil Works, 1 ton oil meal	909	25.00
April 6.	Noves Bros. & Cutler, supplies	915	3.69
Jan. 27.	L. Kimball Printing Co., stationery and printing	932	11.95
May 31.	Pay roll	935	940.36
May 26.	Gustav E. Stechert, books for library	982	3.16
May 29.	J. A. Vye, postage, freight, repairs	963	12.01
April 24.	Pillsbury-Washburn Co., 7,000 lbs. bran	964	33.50
June 30.	George Marsh, surveying at farm	965	7.50
April 30.	W. K. Morrison & Co., supplies	981	3.38
May 25.	Clinton D. Smith, freight	986	7.20
April 17.	Chas. T. Leonard, furniture	1007	20.66
April 28.	Minn. Linseed Oil Works, 1 ton oil meal	1012	24.00
June 20.	F. E. Haynes, miscellaneous	1012	47.40
June 30.	Pay roll	1020	898.27

VETERINARY.

May 27.	Warner Bros., 1 keg horseshoes	10	\$5.25
May 30.	J. P. Gilmore, druggists' supplies	28	11.70

	No. Voucher.	
July 1. Olof Schwartzkopff, petty expenses	29	10.03
June 2. Journal of Comparative Medicine, advertising	30	5.00
Aug. 31. Veterinary department, pay roll	57	150.00
Aug. 16. Noyes Bros. & Cutler, druggists' supplies	81	23.24
Aug. 12. J. H. Hagen & Co., miscellaneous	82	7.75
Aug. 31. D. W. Sprague, petty bills	87	2.34
Aug. 30. Clinton D. Smith, stamps, labor, etc.	88	6.00
Total		\$19,462.04

Experiment Station.

(General Station Expenses.)

CURRENT EXPENSE.

	No. Voucher.	
June 30. Clinton D. Smith, express, postage and petty expenses.....	33	\$25.23
July 27. Clinton D. Smith, stamps, labor, etc.....	34	5.40
April 1. H. W. Shuman, labor	36	12.30
June 30. Harrison & Smith, letter heads and printing	42	6.00
Aug. 31. General Station, pay roll	57	203.66
Sept. 1. N. W. Telephone Exchange Co., service for September.....	77	7.00
Aug. 30. Clinton D. Smith, miscellaneous expenses	88	43.63
July 30. Crane & Co., valve and pemb. injector.....	91	11.14
Dec. 30. Pioneer Fuel Co., 50,915 lbs. coal	94	164.40
July 28. R. R. Howell & Co., tools and machinery	101	52.59
June 1. Held & Gruenhagen, miscellaneous hardware	102	2.15
July 27. Swan Swanson, sinking well 89 feet	106	191.00
Sept. 30. Pay roll	126	173.75
Sept. 30. N. W. Telephone Exchange Co., service	158	7.00
Sept. 30. D. W. Sprague, petty bills	160	6.04
Sept. 26. Clinton D. Smith, postage and miscellaneous supplies.....	170	26.37
Aug. 30. Jas. H. Bishop & Co., 16,400 manilla envelopes.....	175	43.48
Sept. 14. R. C. Clark, inspecting 3 boilers	181	9.00
Oct. 31. Pay roll	202	167.70
Oct. 28. Clinton D. Smith, express and miscellaneous supplies.....	261	10.04
Sept. 30. Harrison & Smith, stationery and printing.....	267	14.50
Nov. 1. N. W. Telephone Exchange Co., service for November.....	274	7.00
Nov. 30. Pay roll	292	182.55
Nov. 30. D. W. Sprague, petty bills	293	3.00
Nov. 25. Clinton D. Smith, freight and petty expense bills.....	337	31.07
Oct. 29. J. Gutzwiller, stationery and printing	356	349.00
Nov. 1. C. D. Whitall & Co., 1 dozen Carter's fluid.....	359	4.50
Dec. 1. N. W. Telephone Exchange Co., service for December, 1892.....	364	7.00
Dec. 24. Pay roll	390	226.91
Jan. 1. N. W. Telephone Exchange Co., service for January, 1893.....	411	7.00
Dec. 8. J. Gutzwiller, Jr., stationery and printing.....	450	550.30
Dec. 27. R. R. Howell & Co., repairs	451	6.10
Dec. 27. J. A. Vye, freight and drayage	454	93.00
Dec. 27. Clinton D. Smith, postage and petty expenses	455	21.05
Nov. 17. P. Howard, repairs	457	9.00
Jan. ... Pay roll	494	276.11
Feb. 1. N. W. Telephone Exchange Co., service for February, 1893.....	516	7.00
Jan. 30. Clinton D. Smith, oil, freight and postage	572	22.08
Jan. 30. Clinton D. Smith, miscellaneous expenses	573	3.75
Dec. 16. J. Gutzwiller, Jr., stationery and printing.....	574	171.25
Jan. 25. N. W. Fuel Co., 1 cord maple wood	576	7.00
Jan. 17. Pioneer Fuel Co., 6,400 lbs. coal	579	24.10
Feb. ... Pay roll	594	286.72
Feb. 28. D. W. Sprague, petty bills	595	6.25
Feb. 23. Jno. A. Schlenker & Co., stationery.....	622	2.65
Mar. 1. N. W. Telephone Co., service for March.....	630	7.00
April 25. Warner Bros., miscellaneous supplies	642	18.49
Feb. 24. Clinton D. Smith, oil, freight, postage, etc.....	646	17.49
Feb. 27. Clinton D. Smith, miscellaneous supplies	647	11.40
Aug. 3. Held & Gruenhagen, repairs	648	4.70
Jan. 27. Noyes Bros. & Cutler, apparatus and instruments.....	652	11.75
Feb. 14. J. Gutzwiller, Jr., stationery and printing.....	655	265.60
Feb. 1. Pioneer Fuel Co., 29,325 lbs. pea coal.....	658	89.44
Feb. 9. Northwestern Fuel Co., 9,980 lbs. pea coal and 1 cord wood.....	661	41.19
Mar. ... Pay roll	727	301.37
Mar. 31. D. W. Sprague, petty bills	728	7.00
April 1. N. W. Telephone Exchange Co., service for April.....	755	7.00
Mar. 29. J. A. Vye, postage	777	10.00
Mar. 29. Clinton D. Smith, postage and miscellaneous.....	807	41.56
Feb. 21. R. R. Howell & Co., pipe and rubber packing.....	811	10.23
Mar. 31. Northwestern Fuel Co., coal and wood.....	812	248.89
Feb. 23. Baltimore Engraving Co., 90 illustrations for bulletins.....	815	70.00
Feb. 7. E. B. Meyrowitz, 1 thermograph	817	15.00

		No. Voucher.	
Mar. 22.	J. Gutzwiller, Jr., stationery and printing.....	818	226.15
Feb. 24.	Noyes Bros. & Cutler, supplies	820	16.00
April 30.	Pay roll	830	256.51
April 22.	Jno. A. Schlener & Co., paper fasteners.....	841	.50
May 1.	N. W. Telephone Exchange Co., service for May.....	847	7.00
April 26.	Clinton D. Smith, miscellaneous	897	92.17
Nov. 11.	Held & Gruenhagen, repairs	910	8.25
April 4.	Crane & Ordway Co., repairs	911	11.60
Jan. 10.	Midway Supply Co., hauling coal	913	5.00
May 31.	Pay roll	935	216.02
Mar. 1.	N. W. Telephone Exchange Co., balance on 1892 account.....	959	4.50
June 1.	N. W. Telephone Exchange Co., service for June.....	960	7.00
May 31.	Tribune Job Printing Co., stationery and printing.....	974	8.75
May 25.	Clinton D. Smith, postage, labor and supplies.....	996	28.50
May 1.	R. R. Howell & Co., repairs	999	10.19
April 19.	Brooks Bros., 732 feet lumber.....	1000	14.00
June 30.	Pay roll	1020	277.01
Total			\$5,858.81

Experiment Station.

DIV. OF AGRICULTURE: CURRENT EXPENSE.

		No. Voucher.	
June 30.	Clinton D. Smith, express, postage and petty bills.....	33	\$23.87
July 27.	Clinton D. Smith, stamps, labor, expenses, etc.....	34	3.70
July 6.	Adam Lindig, 150 bushels oats	37	52.68
July 29.	N. W. Telephone Exchange Co., services.....	46	7.00
Aug. 31.	Division of Agriculture, pay roll	57	313.44
Aug. 31.	Clinton D. Smith, stamps, expenses, labor	88	16.81
July 7.	Wm. Deering & Co., machinery	89	36.00
June 3.	W. K. Morrison & Co., spades and hoes	93	2.50
July 30.	Lindsay Bros., binding twine	97	19.40
Aug. 15.	Deere & Co., 1 No. 3 Belle City cutter, self feeding.....	99	84.84
June 1.	Held & Gruenhagen, miscellaneous hardware.....	102	1.35
Aug. 20.	Adam Lindig, 53 bushels oats.....	103	18.55
Sept. 30.	Pay roll	126	463.07
Sept. 30.	D. W. Sprague, petty bills	160	1.80
Sept. 26.	Clinton D. Smith, repairs, labor, etc.....	170	23.59
Sept. 22.	Lindsay Bros., binding twine	171	6.50
Aug. 9.	Minneapolis Grain and Feed Co., feed	173	9.92
Sept. 8.	N. W. Fuel Co., 3,000 lbs. coal.....	174	10.88
Sept. 28.	Adam Lindig, 39.28 bushels oats.....	178	14.32
Sept. 16.	A. J. Drew, oats and sacks	184	29.02
Oct. 31.	Pay roll	202	491.27
Oct. 31.	D. W. Sprague, petty bills	203	1.20
Oct. 28.	Clinton D. Smith	261	79.03
Oct. 12.	Jas. Powers, threshing oats and barley.....	263	48.04
Oct. 12.	Andrew Boss, threshing expenses	266	21.25
Oct. 11.	Northern Supply Co., 50,020 lbs. Hocking Valley coal.....	268	108.79
July 6.	C. L. Moffatt, horseshoeing and repairs	269	15.25
Sept. 30.	Pioneer Fuel Co., 7,300 lbs. Hocking Valley coal.....	273	21.00
Nov. 30.	Pay roll	292	530.87
Nov. 30.	D. W. Sprague, petty bills	293	3.57
Nov. 28.	Clinton D. Smith, 42 lambs	336	133.00
Nov. 25.	Clinton D. Smith, freight and petty expense bills.....	337	45.21
Sept. 2.	Held & Gruenhagen, repairs	340	9.22
Nov. 17.	Appleton M'fg. Co., machinery	341	36.00
Nov. 28.	C. L. Moffatt, repairs and horseshoeing	346	9.25
Oct. 27.	W. K. Morrison & Co., implements and glass.....	348	3.50
Dec. 24.	Pay roll	390	309.67
Dec. 31.	D. W. Sprague, petty bills	391	9.85
Nov. 2.	Held & Gruenhagen, repairs	452	1.75
Dec. 27.	Clinton D. Smith, freight and petty expense bills.....	455	2.85
Nov. 1.	Farm, Stock and Home Co., advertising.....	458	11.20
Nov. 3.	Brooks Bros., lumber	459	6.27
Nov. 4.	F. A. Fletcher & Co., supplies	460	13.00
Jan. ...	Pay roll	494	280.24
Jan. ...	D. W. Sprague, petty bills	495	3.38
Jan. 30.	Clinton D. Smith, freight, repairs, etc.....	573	11.35
Dec. 7.	C. L. Moffatt, horseshoeing and repairs	581	13.75
Feb. ...	Pay roll	594	260.73
Feb. 28.	D. W. Sprague, petty bills	595	2.63
Feb. 24.	Clinton D. Smith, freight and supplies	646	5.65
Aug. 3.	Held & Gruenhagen, repairs	648	2.23
Feb. 14.	John A. Salzer, seed wheat and oats	650	4.25
Feb. 14.	Lake Superior Coal Co., 29,900 lbs. Hocking Valley coal.....	657	63.54
Feb. 13.	Pioneer Fuel Co., 3,000 lbs. Hocking Valley coal.....	660	8.25
Mar. ...	Pay roll	727	287.06
Mar. 29.	Clinton D. Smith, postage, seeds, etc.....	807	6.65

	No. Voucher.	
Mar. 18. Northrop, Braslan & Goodnow Co., seeds and plants.....	810	24.90
Mar. 10. Held & Gruenhagen, oil, bolts and tools.....	813	6.50
Jan. 16. C. L. Moffat, horseshoeing	816	7.00
Jan. 20. Bemis Bros. Bag Co., supplies	819	6.75
April 30. Pay roll	830	333.72
April 8. Batchelor's Seed Store, grass seed	839	5.68
Mar. 31. Brooks Bros., lumber	900	10.70
Mar. 1. C. L. Moffatt, repairs	906	11.75
Mar. 29. Northrop, Braslan & Goodnow Co., seeds.....	912	21.40
Mar. 4. L. L. May & Co., seeds and plants.....	916	21.75
May 31. Pay roll	935	372.85
May 25. Clinton D. Smith, freight and express	996	5.84
April 26. Northwestern Fuel Co., 14,700 lbs. coal	997	42.75
May 26. Lake Superior Coal Co., 35,850 lbs. Hocking Valley coal.....	998	77.08
May 11. Lindsay Bros., machinery	1001	10.00
April 19. Pioneer Fuel Co., 3,000 lbs. Yough. coal	1005	8.63
May 23. Adam Lindig, 35 bushels potatoes	1013	26.25
May 6. Northrop, Braslan & Goodnow, seeds	1015	97.50
June 30. Pay roll	1020	395.57
Total		\$5,480.93

Experiment Station.

DIV. OF CHEMISTRY: CURRENT EXPENSE.

	No. Voucher.	
June 30. Clinton D. Smith, express, freight and petty expenses.....	33	\$3.81
July 27. Clinton D. Smith, chemical supplies	34	1.00
Aug. 31. Division of Chemistry, pay roll	57	133.34
Nov. 6. Kennedy Land Co., 23½ bushels Ladoga wheat.....	92	14.81
July 30. Standard Oil Co., 3 barrels gasoline	95	20.14
Aug. 18. Noyes Bros. & Cutler, druggists' supplies.....	96	5.32
June 1. Held & Gruenhagen, miscellaneous hardware	102	6.15
Sept. 30. Pay roll	126	115.06
Sept. 26. Clinton D. Smith, freight, labor and repairs.....	170	10.31
Aug. 15. Brooks Bros., 20 exhibit boxes	182	13.00
June 1. Elmer & Amend, apparatus and instruments.....	183	80.50
Oct. 31. Pay roll	202	113.38
Oct. 28. Clinton D. Smith, freight, express, etc.....	261	6.91
Oct. 28. Clinton D. Smith, repairs	262	34.04
Oct. 1. Lyman Eiel Drug Co., supplies	272	5.61
Nov. 30. Pay roll	292	135.31
Nov. 25. Clinton D. Smith, freight and petty expense bills.....	337	9.32
Oct. 31. Standard Oil Co., supplies	339	38.14
Oct. 24. W. F. Porter & Co., repairs, water tank.....	344	16.55
Dec. 24. Pay roll	390	133.04
Dec. 27. Clinton D. Smith, freight	455	2.24
Oct. 5. Noyes Bros. & Cutler, supplies	461	14.53
Mar. 1. Elmer & Amend, apparatus	467	319.00
Dec. 20. W. F. Porter & Co., laying supply pipe main B. to B. H.....	468	800.00
Jan. ... Pay roll	494	130.18
Jan. 30. Clinton D. Smith, supplies	572	2.40
Jan. 18. Journal Analy. Chem., subscriptions, 1892-93.....	577	6.00
Jan. 11. Noyes Bros. & Cutler, 410 lbs. sulphuric acid.....	578	8.68
Feb. ... Pay roll	594	111.75
Feb. 24. Clinton D. Smith, petty expense bills	646	4.25
Aug. 3. Held & Gruenhagen, repairs	648	2.00
Feb. 1. Pioneer Fuel Co., 29,325 lbs. pea coal.....	658	89.45
Mar. ... Pay roll	727	140.19
Mar. 10. Held & Gruenhagen, 1 auger and handle	813	.65
Mar. 25. Standard Oil Co., 5 barrels gasoline	814	37.05
Feb. 24. Noyes Bros. & Cutler, supplies	820	16.37
April 30. Pay roll	830	110.08
Nov. 11. Held & Gruenhagen, supplies	910	.35
April 6. Noyes Bros. & Cutler, supplies	915	14.67
May 31. Pay roll	935	109.83
May 25. Clinton D. Smith, express, labor and supplies.....	996	9.95
May 2. Emil Greiner, apparatus	1,003	20.60
April 26. Elmer & Amend, apparatus and supplies	1,010	54.30
June 30. Pay roll	1,020	133.74
Total		\$3,034.00

EIGHTH BIENNIAL REPORT

Experiment Station.

DIV. OF ENTOMOLOGY: CURRENT EXPENSE.

		No. Voucher.	
July 25.	Otto Luggier, trip to Excelsior and Red River Valley.....	39	16.34
June 30.	Otto Luggier, trip to Excelsior, postage and express.....	40	16.25
Aug. 31.	Division of Entomology, pay roll.....	57	89.63
Aug. 31.	Clinton D. Smith, petty expenses.....	88	1.25
Aug. 18.	Noyes Bros. & Cutler, instruments and supplies.....	96	6.30
Sept. 30.	Pay roll.....	126	85.63
Sept. 14.	Bemis Bros. Bag Co., 200 string samples.....	177	6.00
Oct. 31.	Pay roll.....	202	83.33
Oct. 24.	Thos. Husby, furniture.....	246	90.00
Sept. 28.	Otto Luggier, trip to Crookston, etc.....	271	15.27
Nov. 30.	Pay roll.....	292	97.85
Dec. 24.	Pay roll.....	390	93.80
Dec. 31.	Otto Luggier, damage to Mulberry tree.....	413	25.00
Dec. 27.	Clinton D. Smith, cork and expressage.....	455	11.00
Jan.	Pay roll.....	494	99.29
Jan. 30.	Clinton D. Smith, supplies.....	572	9.08
Dec. 1.	Minneapolis Paper Co., supplies.....	580	37.80
Feb.	Pay roll.....	594	103.13
Feb. 24.	Clinton D. Smith, petty expense bill.....	646	.66
Feb. 13.	Byron Halsted, 1 set of "Century American Weeds".....	653	10.00
Mar.	Pay roll.....	727	105.05
Mar. 23.	Otto Luggier, express, railroad fare, etc.....	808	9.05
April 30.	Pay roll.....	830	138.71
April 25.	Otto Luggier, tools and miscellaneous supplies.....	907	14.51
May 31.	Pay roll.....	935	40.83
April 26.	Haage & Schmidt, seeds and plants.....	993	18.87
April 14.	John & Co., apparatus and instruments.....	1,016	33.77
June 30.	Pay roll.....	1,020	152.99
Total			<u>\$1,511.39</u>

Experiment Station.

DIV. OF HORTICULTURE: CURRENT EXPENSE.

		No. Voucher.	
June 30.	Clinton D. Smith, express, freight and petty expenses.....	33	5.80
July 27.	Clinton D. Smith, stamps, seeds and labor.....	34	1.90
Aug. 31.	Division of Horticulture, pay roll.....	57	250.65
Aug. 17.	L. B. Green, freight, express and fare on trip.....	90	24.71
June 3.	W. K. Morrison & Co., lawn mower, scythes, etc.....	93	28.15
June 1.	Held & Gruenhagen, miscellaneous.....	102	.63
Sept. 30.	Pay roll.....	126	176.25
Sept. 26.	Clinton D. Smith, labor.....	170	6.50
Oct. 31.	Pay roll.....	202	225.12
Oct. 31.	D. W. Sprague, petty bills.....	203	3.83
Oct. 28.	Clinton D. Smith, express, etc.....	261	4.35
Oct. 22.	O. H. Peck, apparatus and instruments.....	264	41.54
Sept. 24.	L. A. Shorey, gensing roots.....	265	5.00
Oct. 22.	S. B. Green, labor, express, car fare, etc.....	270	28.77
Nov. 30.	Pay roll.....	292	210.38
Nov. 25.	Clinton D. D. Smith, freight and petty expense bills.....	337	2.70
Sept. 2.	Held & Gruenhagen, repairs.....	340	4.55
Oct. 28.	R. Douglas & Sons, seeds and plants.....	342	7.50
Sept. 20.	Brown & Haywood, 2 boxes glass.....	347	5.98
Oct. 29.	J. Gutzwiller, stationery and printing.....	356	4.00
Dec. 24.	Pay roll.....	390	165.75
Dec. 31.	D. W. Sprague, petty bills.....	391	8.58
Oct. 24.	J. C. Vaughn, seeds and plants.....	445	6.75
Nov. 1.	O. H. Peck, supplies.....	446	9.53
Nov. 2.	Held & Gruenhagen, repairs.....	452	3.66
Dec. 27.	Clinton D. Smith, strawberry plants.....	455	1.00
Nov. 3.	Brooks Bros., lumber.....	459	2.04
Jan.	Pay roll.....	494	160.99
Jan. 31.	Clinton D. Smith, miscellaneous petty expenses.....	573	1.20
Jan. 19.	T. V. Munson, set photos of native grapes.....	575	10.00
Feb.	Pay roll.....	594	139.85
Aug. 3.	Held & Gruenhagen, repairs.....	648	.50
Mar.	Pay roll.....	727	149.93
Mar. 29.	Clinton D. Smith, postage, stationery and printing.....	807	4.25
Mar. 28.	Sam'l B. Green, express, labor and supplies.....	809	21.61
April 30.	Pay roll.....	830	219.95
April 18.	J. T. Lovett, seeds and plants.....	901	12.40
April 3.	R. Douglas & Sons, seeds and plants.....	902	8.50
April 17.	Deere & Co., No. 38 plow.....	904	12.80
April 15.	Chas. E. Pennock, seeds and plants.....	905	6.20
April 18.	Lyman Elell Drug Co., supplies.....	908	5.75

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	No. Voucher.	
Nov. 11. Held & Gruenhagen, repairs	910	2.53
Mar. 29. Northrop, Braslan & Goodnow Co., seeds	912	1.21
April 19. S. B. Green, freight and supplies	914	7.65
May 31. Pay roll	935	251.35
May 25. Clinton D. Smith, seeds	996	.30
April 11. T. S. Hubbard & Co., seeds and plants	1,002	8.50
May 1. Elgin Nurseries, seeds and plants	1,004	10.00
April 14. Ellwanger & Barry, seeds and plants	1,006	17.75
April 26. H. A. Terry, seeds and plants	1,008	16.50
April 28. Gardner & Son, seeds and plants	1,009	7.50
May 2. Edward Hoyt, seeds and plants	1,011	12.70
April 29. F. A. Fletcher & Co., harness and whip	1,014	11.50
June 30. Pay roll	1,020	308.00
Total		<u>\$2,645.04</u>

CURRENT EXPENSE.

Summary of disbursements for the fiscal year ending July 31, 1893.		
General University		\$36,994.58
College of Science, Literature and the Arts		66,530.39
Military Tactics		740.62
College of Mining, Metallurgy and the Mechanic Arts		18,881.70
Geological and Natural History Survey		7,812.20
College of Law		8,000.67
College of Medicine		25,534.77
College of Agriculture		19,462.04
Experiment Station—		
General Station	\$5,858.81	
Division of Agriculture	5,480.93	
Division of Chemistry	3,034.00	
Division of Entomology	1,511.39	
Division of Horticulture	2,645.04	
		18,530.17
Total current expense for the year ending July 31, 1893.		<u>\$202,586.14</u>

SPECIAL APPROPRIATIONS.

FOR LIBRARY.

Balance in the treasury Aug. 1, 1892.....		\$6,063.81
Disbursements for the fiscal year ending July 31, 1893:		
1892.	No. Voucher.	
July 7. Gustav E. Stechert, books	48	\$166.17
June 29. Lawyers' Co-Operative Pub. Co., books	49	18.50
Aug. 12. E. B. Johnson, books	119	864.04
Aug. 17. Gustav E. Stechert, books	120	121.58
Aug. 4. E. B. Johnson, books	121	712.50
June 24. Houghton, Mifflin, & Co., books	122	25.00
June 27. Harrison & Smith, binding books	123	12.82
Aug. 22. The Scientific Publishing Co., books	124	270.00
Aug. 29. Wm. E. Lockwood, books	125	118.76
Sept. 16. Gustav E. Stechert, books	136	458.97
Aug. 22. American Book Co., books	137	66.96
Sept. 7. D. Appleton & Co., books	138	24.00
May 9. J. B. Ellis, books	139	15.15
Oct. 17. L. Kimball Printing Co., binding books	282	128.75
Sept. 27. Chas. Scribner & Sons, books	283	30.00
Nov. 1. Gustav E. Stechert, books	284	472.22
Sept. 17. W. T. Kenner, books	285	581.53
Oct. 31. Mrs. S. J. Hall, books	286	33.00
Oct. 13. D. D. Merrill & Co., books	287	22.68
Oct. 20. Morris & Wilson, books	288	46.75
Sept. 23. Estes & Lauriat, books	289	6.00
Sept. 7. Boericke & Tafel, books	290	90.05
Nov. 23. H. C. Leonard, charts	377	34.45
Nov. 23. Morris & Wilson, books	378	30.60
Nov. 1. D. D. Merrill & Co., books	379	10.34
Nov. 2. E. A. Foot, M. D., books	380	5.82
Oct. 18. E. H. Colegrove, books	381	4.00
Nov. 15. American Book Co., books	382	5.28
Nov. 4. Gustav E. Stechert, books	383	169.52
Oct. 29. Geo. E. MacLean, books	482	314.69
Dec. 15. Gustav E. Stechert, books	483	219.10
Dec. 1. Gustav E. Stechert, books	484	73.71
Jan. 1. W. S. Pattee, books	485	787.25
Dec. 22. Charles D. Raymer, books	486	5.00
Dec. 16. Morris & Wilson, books	487	2.52
Nov. 2. A. B. Seymour, books	488	12.17
Dec. 14. J. H. Vail & Co., books	489	5.13
Total expended		\$5,934.51
Balance undrawn July 31, 1893		99.30
		<u>\$6,063.81</u>

FOR BUILDING AND EQUIPMENT FUND.

Statement of receipts and disbursements for the fiscal year, commencing Aug. 1, 1892, and ending July 31, 1893.	
Balance in the treasury Aug. 1, 1892.....	\$4,006.80
Appropriation available on and after April 1, 1893.....	40,000.00
Total	<u>\$44,006.80</u>

DISBURSEMENTS.

(Medical Department.)

	No. Voucher.	
Aug. 1. Erick Lund, labor and material to construct-medical college building	54	\$4,250.00
Aug. 15. E. Kneeland, labor and material to construct laboratory of college building	668	2,500.00
Aug. 1. Erick Lund, labor and material to construct tunnel from medical college building	609	113.00
Sept. 1. Erick Lund, labor and material to construct medical college building	670	8,500.00
Sept. 19. E. Kneeland, labor and material to construct chemical laboratory of medical college building.....	671	1,700.00
Oct. 1. Erick Lund, labor and material to construct medical college building	672	8,500.00
Sept. 7. Erick Lund, labor and material to construct tunnel from medical college building	673	800.00

		No. Voucher.	
Oct. 1.	E. Kneeland, labor and material to construct chemical laboratory of medical college building	674	1,025.00
Oct. 15.	Reed & Stem, architects' fees on the medical college building	675	1,420.85
Aug. 16.	Buffalo Dental Mfg. Co., supplies Dental department	676	151.52
Aug. 22.	S. S. White Dental Mfg. Co., supplies Dental department	677	148.85
Aug. 19.	Boston Dental Mfg. Co., 8 Boston vulcanizers	678	96.00
Oct. 21.	Thos. D. Lee, chemicals, apparatus, instruments and freight	679	181.67
Oct. 25.	C. A. Smith & Co., lumber for laboratory steps, etc.	680	32.13
Oct. 18.	James Bladon & Co., lamps and L. fixtures	681	800.00
Oct. 12.	Erick Lund, labor and material to construct tunnel from medical laboratory	682	100.00
Oct. 3.	Harry W. Jones, architect's fees	683	162.65
Oct. 1.	Watson & Christensen, furniture	684	480.00
Nov. 30.	Chas. Bailey, 1 rolling chair	685	20.00
Dec. 1.	R. B. Lee, fitting up laboratory	686	270.35
Nov. 17.	M. Rasmussen, painting and lettering seats	687	22.00
Nov. 10.	Richard Krey & Co., freight and cartage on supplies	688	7.50
Oct. 29.	Gillett-Herzog Mfg. Co., 2 iron panels	689	8.00
Nov. 12.	Bell Electric Co., 10 annunciators in medical building	690	48.00
Oct. 31.	Stillwater Mfg. Co., 3 cases and 1 table	691	300.00
Oct. 31.	Stillwater Mfg. Co., furniture	692	1,491.25
Dec. 16.	Wickes' Refrigerator Co., equipment	693	250.00
Sept. 29.	Hewson-Herzog Supply Co., equipment	694	86.75
Nov. 10.	W. W. Sykes & Co., plumbing and gas fitting	695	1,000.00
Nov. 29.	W. W. Sykes & Co., plumbing and gas fitting for dispensary	696	100.00
Dec. 18.	W. W. Sykes & Co., plumbing and gas fitting	697	310.00
Jan. 28.	James Bladon & Co., gas fitting	698	10.75
Oct. 31.	Richard Krey & Co., equipment for laboratory	700	333.93
Dec. 17.	F. A. Dunsmore, M. D., 3 laboratory tables	701	15.00
Jan. 20.	Warner Brothers, 1 alcohol tank	702	7.00
Dec. 10.	Stillwater Mfg. Co., 1 book case	703	52.00
Jan. 30.	R. B. Lees, equipment, medical building	704	93.01
Jan. 20.	Watson & Christenson, 1 desk and chair	705	39.50
Dec. 10.	Minneapolis Office and School Furniture Co., equipment	706	444.50
Dec. 20.	Erick Lund, labor and material to construct medical building	707	8,021.10
Dec. 1.	Erick Lund, labor and material to construct medical building	708	114.58
Total			\$44,006.89

FOR GEOLOGICAL AND NATURAL HISTORY SURVEY.

Balance in the treasury Aug. 1, 1892	\$1,020.89
Appropriation available Aug. 1, 1892	7,500.00
Appropriation available July 1, 1893	10,000.00
Total	\$18,529.89

Disbursements for the fiscal year ending July 31, 1893:

1892.		No. Voucher.	
July 24.	N. H. Winchell, salaries of employes, miscellaneous	50	\$213.57
July 16.	E. A. Foot, M. D., books	51	134.75
July 14.	Ward's National Science Establishment, mounting deer and miscellaneous	52	135.00
July 28.	Warner Brothers, iron boxes and copper tank	53	17.55
Aug. 29.	Henry F. Nachtrieb, sundry petty accounts	111	320.69
Aug. 29.	Henry F. Nachtrieb, salaries of employes, miscellaneous	112	386.57
Aug. 29.	N. H. Winchell, pocket voucher, freight and labor	113	116.26
July 28.	Anderson & Korb, supplies for field service	114	92.48
Aug. 30.	N. H. Winchell, salaries of employes	115	295.00
Aug. 10.	Morris & Wilson, books	116	32.58
Aug. 31.	R. B. Lees, 2 oak book cases	117	37.36
July 20.	Minneapolis Paper Co., dead felt and express	118	4.75
Aug. 22.	Conway MacMillan, work done in college	118½	54.65
Sept. 14.	Conway MacMillan, salaries of employes	190	400.00
Oct. 1.	Edmund P. Sheldon, work on survey	191	50.00
Sept. 27.	N. H. Winchell, salaries of employes	192	140.00
Sept. 27.	N. H. Winchell, field service of I. E. Todd	193	156.63
Sept. 13.	B. C. Taylor, services on survey	194	35.00
Sept. 13.	B. C. Taylor, expenses on survey	195	25.83
Sept. 15.	Caswell A. Ballard, services on survey	196	25.00
Sept. 15.	Caswell A. Ballard, expenses on survey	197	7.85
Sept. 14.	W. D. Frost, services on survey	198	50.00
Sept. 17.	N. H. Winchell, salaries of employes	199	390.00
Sept. 30.	Edmund P. Sheldon, miscellaneous expenses	200	44.34
Sept. 14.	W. D. Frost, petty expenses on survey	201	19.59
Oct. 12.	N. H. Winchell, services of employes	275	150.00
Oct. 27.	N. H. Winchell, pocket voucher, freight and labor	276	63.94
Oct. 12.	N. H. Winchell, miscellaneous field supplies	277	93.81
Oct. 27.	N. H. Winchell, salaries, supplies and miscellaneous	278	212.68
Oct. 27.	N. H. Winchell, salaries of employes	279	187.50

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		No. Voucher.	
Oct. 24.	Harper Bros., 50 sheets cork	280	28.00
Sept. 12.	Wright, Barrett & Stillwell, apparatus and instruments	281	40.83
Nov. 30.	Gustav E. Stechert, books	368	233.66
Nov. 30.	N. H. Winchell, salaries, miscellaneous supplies	369	221.15
Nov. 28.	Henry F. Nachtrieb, sundry petty accounts	370	63.57
July 12.	Minneapolis Office and School Furniture Co., 1 exhibit case	371	50.00
Nov. 5.	L. Kimball Printing Co., binding books	372	92.00
June 8.	Minneapolis Office and School Furniture Co., 1 oak table	373	9.00
Nov. 12.	Henry H. Shufeldt & Co., 2 barrels alcohol	374	54.29
Nov. 3.	James K. Hosmer, books	375	96.50
Nov. 30.	Noah Johnson, salary on survey	376	26.00
Jan. 1.	N. H. Winchell, salaries of employes	473	130.50
Dec. 30.	N. H. Winchell, miscellaneous expenses	474	64.87
Dec. 24.	R. B. Lees, labor and material	475	123.50
Dec. 31.	R. B. Lees, 1 case	476	15.00
Dec. 31.	W. R. Hoag, salary, express, postage	477	51.55
Dec. 16.	The Jno. J. Crooke Co., 60 lbs. pure tin	478	19.50
Dec. 14.	Theodore C. Schneider, 1 electro magnet	479	10.00
Dec. 14.	Henry F. Nachtrieb, sundry petty bills	480	26.80
Nov. 15.	Elmer & Amend, 1 Westphal balance	481	22.50
Dec. 14.	Gustav E. Stechert, books	481½	11.90
Nov. 19.	Gustav E. Stechert, books	582	435.20
Jan. 25.	Natural Science Ass'n of America, 1 copy "Birds of N. America"	583	20.00
Jan. 26.	N. H. Winchell, instruments, salaries, miscellaneous	584	558.47
Jan. 24.	Emory F. Dodson, 32 file cases	585	80
Jan. 30.	R. B. Lees, labor and material	586	110.92
Jan. 11.	Abram French Co., 27¾ dozen butter jars	587	74.72
Dec. 30.	O. H. Peck, apparatus and supplies	588	5.79
Jan. 31.	N. H. Winchell, final cost of Winnebago meteorite	589	609.74
Dec. 28.	Benjamin La Mere, 1 wildcat and deer skin	590	13.00
Dec. 31.	L. Kimball Printing Co., 1,000 slips	591	2.25
Jan. 23.	E. B. Johnson, 100 hours special labor	592	20.00
Mar. 3.	N. H. Winchell, salaries of employes, miscellaneous	713	197.97
Jan. 31.	The Cody-Hineline Co., plumbing	714	36.34
Feb. 25.	Warner Bros., tools	715	3.69
Feb. 6.	Cohausey Glass Mfg. Co., supplies	716	47.50
Mar. 15.	W. S. Barker, 11 copper tanks	717	79.50
Feb. 6.	Moffet, Thurston & Plant Paint Co., 20,000 slips	718	12.50
Feb. 1.	Morris & Wilson, stationery and printing	719	11.50
Jan. 31.	Brock Bros., apparatus	720	149.00
Feb. 28.	R. B. Lees, labor and material	721	114.64
Mar. 20.	Jno. A. Schlener & Co., stationery and instruments	722	11.45
Mar. 14.	Minneapolis Paper Co., supplies	723	12.06
Mar. 21.	Minneapolis Paper Co., supplies	824	13.89
Mar. 20.	John McConn, supplies	825	16.00
Mar. 8.	J. G. Smith, supplies	826	33.75
Mar. 2.	A. E. Foote, books	827	18.47
Mar. 10.	W. W. Calkins, collection N. Am. Lichens	828	29.00
Mar. 31.	E. B. Johnson, express and freight	829	21.96
May 29.	N. H. Winchell, miscellaneous expenses	1,021	233.37
June 22.	N. H. Winchell, salaries, freight, pocket vouchers	1,022	252.96
	Total		\$9,016.22
	Balance undrawn July 31, 1893		9,513.67
			<u>\$18,529.89</u>

FOR EQUIPMENT OF COLLEGE PHARMACY.

To appropriation available Aug. 1, 1892		\$5,000.00	
Disbursements during fiscal year ending July 31, 1893:			
1892.	No. Voucher.		
Nov. 16.	Noyes Bros. & Cutler, equipment	384	\$910.30
Oct. 25.	Cody & Hineline, plumbing	385	14.49
Nov. 26.	Elmer & Amend, equipment	386	531.75
Nov. 10.	W. W. Sykes & Co., plumbing and gas fitting	387	25.53
Oct. 20.	Cody & Hineline, running gas and water pipes	388	114.75
Dec. 21.	W. W. Sykes & Co., gas fitting	389	179.64
Nov. 30.	Minneapolis Office and School Furniture Co., fixtures for laboratory	490	272.00
Dec. 15.	Lehn Fink, lot of specimens	491	55.00
Dec. 31.	J. Kerswell, boiler oil, can and brush	492	2.75
Dec. 1.	R. B. Lees, labor and material, fitting up laboratory	724	45.83
Aug. 1.	E. Litz, microscopes	725	888.57
Jan. 1.	W. W. Sykes & Co., plumbing and gas fitting	726	100.00
	Total		\$3,140.57
	Balance undrawn July 31, 1893		\$5,000.00
			<u>\$5,000.00</u>

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FOR SCHOOL OF MINES.

Balance in the treasury Aug. 1, 1892..... \$4,303.88

DISBURSEMENTS.

1892.	No. Voucher.	
July 13. The Minneapolis Office and School Furn. Co., 2 book cases..	47	\$90.00
Balance undrawn July 31, 1893.....		<u>\$4,213.88</u>

Special Annual Appropriation for Salaries of Instructors in the School of Mines and for Electrical Engineering.

Annual appropriation \$4,500.00

DISBURSEMENTS.

1892.		No. Voucher.	
Sept. 30.	W. R. Appleby, salary	201½	\$200.00
Sept. 30.	Geo. D. Shepardson, salary	201½	180.00
Oct. 31.	W. R. Appleby, salary	291	200.00
Oct. 31.	Geo. D. Shepardson, salary	291	180.00
Nov. 30.	W. R. Appleby, salary	389½	200.00
Nov. 30.	Geo. D. Shepardson, salary	389½	180.00
Dec. 31.	W. R. Appleby, salary	493	200.00
Dec. 31.	Geo. D. Shepardson, salary	493	180.00
Dec. 31.	Peter Christianson, salary	493	25.00
Dec. 31.	C. P. Berkey, salary	493	25.00
Dec. 31.	John Cates, salary	493	50.00
Jan. 31.	W. R. Appleby, salary	593	200.00
Jan. 31.	Geo. D. Shepardson, salary	593	180.00
Jan. 31.	Peter Christianson, salary	593	25.00
Jan. 31.	C. P. Berkey, salary	593	25.00
Jan. 31.	John Cates, salary	593	50.00
Feb. 28.	W. R. Appleby, salary	667	200.00
Feb. 28.	Geo. D. Shepardson, salary	667	180.00
Feb. 28.	Peter Christianson, salary	667	25.00
Feb. 28.	C. P. Berkey, salary	667	25.00
Feb. 28.	John Cates, salary	667	50.00
Mar. 31.	W. R. Appleby, salary	829½	200.00
Mar. 31.	Geo. D. Shepardson, salary	829½	180.00
Mar. 31.	C. P. Berkey, salary	829½	25.00
Mar. 31.	Peter Christianson, salary	829½	25.00
Mar. 31.	John Cates, salary	829½	50.00
April 30.	W. R. Appleby, salary	934	200.00
April 30.	Geo. D. Shepardson, salary	934	180.00
April 30.	Peter Christianson, salary	934	25.00
April 30.	C. P. Berkey, salary	934	25.00
April 30.	John Cates, salary	934	50.00
May 31.	W. R. Appleby, salary	1,019½	200.00
May 31.	Geo. D. Shepardson, salary	1,019½	180.00
May 31.	Peter Christianson, salary	1,019½	25.00
May 31.	C. P. Berkey, salary	1,019½	25.00
May 31.	John Cates, salary	1,019½	50.00
June 30.	W. R. Appleby, salary	1,023	200.00
June 30.	Geo. D. Shepardson, salary	1,023	180.00
June 30.	Peter Christianson, salary	1,023	25.00
June 30.	C. P. Berkey, salary	1,023	25.00
June 32.	John Cates, salary	1,023	50.00
Total			<u>\$4,500.00</u>

SUMMARY OF DISBURSEMENTS UNDER SPECIAL APPROPRIATIONS.

For Library.....	\$5,964.51
For Building and equipment.....	44,096.89
For Geological and Natural History Survey	9,016.22
For equipment of College of Pharmacy.....	3,140.59
For Equipment of School of Mines.....	90.00
For Salaries—School of Mines and Electrical Engineering.....	4,500.00
Total special appropriations	\$66,808.21
Total current expense.....	202,586.14
Grand total for the year 1893-94.....	<u>\$269,394.35</u>

FINANCIAL REPORT

Of the University of Minnesota for the fiscal year commencing Aug. 1, 1893, and ending July 31, 1894:

REVENUES—CURRENT EXPENSE FUND.

Balance on hand Aug. 1, 1893.....	\$32,488.59
From U. S. Government, Act of March 1, 1887, Hatch bill.....	11,250.00
From U. S. Government, Act of Aug. 30, 1890, Morrill bill*.....	20,000.00
From Interest on University Bonds and Land Contracts.....	36,589.58
From annual appropriation by Legislature....	65,000.00
From $\frac{1\frac{1}{2}}{100}$ of one mill tax levy.....	50,504.64
From sales of Salt Spring Lands.....	3,461.60
From sales at Experiment Station and School of Agriculture.....	5,906.55
From fees.....	42,444.95
	\$267,645.91

RECEIPTS.

The following amounts have been received from State Treasurer and Auditor's warrants:

	PAY ROLLS.	BILLS.	
Outstanding warrants Aug. 1, 1893.	\$12,598.08	\$7,552.66	
July expense list.....	3,497.70	4,944.59	
August expense list.....	2,925.53	5,341.74	
September expense list.....	13,422.70	4,692.40	
October expense list.....	14,669.27	6,490.35	
November expense list.....	14,828.27	6,754.20	
December expense list.....	14,863.26	11,320.96	
January expense list.....	14,985.67	9,642.00	
February expense list.....	14,945.95	6,738.46	
March expense list.....	15,022.40	4,702.25	
April expense list.....	14,891.60	5,643.60	
May expense list.....	15,078.85	3,890.80	
June expense list.....	14,394.90	.....
	\$166,124.18	\$77,714.01	
Total pay roll and bills		\$243,838.19	
Paid county treasurer for collection.....		127.24	
Premium and interest paid on bonds.....		2,760.00	
		246,725.43	
Balance		\$20,920.48	
Outstanding warrant Aug. 1, 1894.....		14,387.15	
		\$35,307.63	

* The appropriation of \$20,000 under the Morrill bill for 1894-5 was received in July, and is therefore embraced in the revenues of 1893-4.

UNIVERSITY BOARD OF REGENTS.

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GENERAL UNIVERSITY.

CURRENT EXPENSE—DISBURSEMENTS.

	No.	Voucher.	
1893.			
July 31.	Pay roll	22	\$605.83
June 6.	Minneapolis Gen. Electric Co., running arc lamps, May 30 and 31	23	62.25
June 8.	Danz Orchestra, music furnished at commencement	24	115.00
June 26.	Harrison & Smith, binding 17 vol. for library	25	25.50
June 10.	Minn. Educational Ass'n, adv. proceedings association	26	15.00
June 1.	The Gopher of 1894, advertising	27	25.00
May 24.	Frank T. Wilson, express attending exhibit at World's Fair at Chicago	28	111.00
July 19.	Tribune Job Printing Co., stationery and printing	31	51.95
July 24.	Wm. H. Yattaw, help, express and petty bills	36	28.85
Aug. 14.	C. W. Menellay, miscellaneous supplies	41	26.65
July 24.	E. B. Johnson, stamps, gas, express, labor, miscellaneous	42	260.16
July 1.	The Miller Printing Co., stationery and printing	43	25.25
April 22.	Minneapolis Directory Co., medical and surgical register for library	49	25.00
June 10.	Minneapolis Paper Co., 1 roll 30 lb. Champ. Exp. paper	63	2.59
July 27.	D. W. Sprague, office help and car fare	86	4.13
Aug. 2.	H. S. Breeden, office work on journal and ledger	89	10.95
Aug. 31.	Pay roll	106	630.83
Aug. 31.	D. W. Sprague, petty expense bills	132	9.20
July 27.	National Supply Co., 250 lbs. Lustre soap	133	17.50
June 15.	Am. Chemical Co., 150 lbs. Emerald soap	134	10.50
July 10.	W. S. Nott Company, sheet packing and wicking	135	7.80
Aug. 16.	Trainer Brothers, 2 manhole covers	136	6.00
Aug. 14.	O. E. Williams, cleaning up campus	137	30.00
Aug. 25.	H. S. Breeden, office work on expense lists, etc.	138	30.00
June 1.	Alfred Roper, stationery and printing	139	80.00
Aug. 18.	John Lind, expenses attending regents' meetings	140	24.40
Aug. 12.	Frank T. Wilson, expense attending exhibit at World's Fair, Chicago	141	224.59
June 27.	John M. Kuhn, bromides for World's Fair, education exhibit	142	40.00
July 26.	Miss Lizzie House, assorting and distributing library mail	143	20.00
July 17.	John Kelley, repairs	144	29.00
Aug. 10.	Minneapolis Paper Co., 132 reams examination paper	145	81.92
Aug. 23.	Jno. A. Schlener & Co., stationery	146	8.20
May 1.	Minneapolis Fuel Co., 30,480 lbs. Yough. coal	147	70.10
Aug. 26.	Warner Bros., tools and miscellaneous hardware	149	16.07
July 26.	Warner Bros., hose, scythes and miscellaneous hardware	151	16.27
May 13.	Northwestern Fuel Co., 7,520 lbs. Pittsburg coal	152	16.92
Sept. 1.	E. B. Johnson, postage, exchange, gas, help and miscellaneous	156	200.72
Aug. 31.	Wm. H. Yattaw, labor, car fare, exchange and plumbing supplies	157	62.35
Aug. 30.	R. B. Lees, repairing doors, locks, etc.	158	7.40
Aug. 1.	University Press, stationery and printing	162	35.30
Aug. 31.	University Press, stationery and printing	163	14.75
Aug. 1.	R. B. Lees, 1 box, for packing books	165	.75
Sept. 1.	The Miller Printing Co., 1 full Russia cover	166	1.00
Aug. 31.	The Tribune Job Printing Co., 1,000 stamped envelopes	206	22.20
Aug. 31.	The Tribune Job Printing Co., stationery and printing	207	10.00
Aug. 26.	Littlefield & Moore, repairs and plumbing	155	143.14
Sept. 30.	Pay roll	209	1,310.83
Sept. 30.	D. W. Sprague, petty bills	210	19.89
Sept. 30.	Emma Allen, work on expense lists	211	9.00
Sept. 26.	E. B. Johnson, gas, express, labor and advertising	212	90.82
Sept. 1.	Farm, Stock and Home, advertising	213	22.40
Sept. 26.	Warner Bros., miscellaneous hardware	214	17.18
Sept. 12.	W. S. Nott Company, 104 lbs. white waste	215	8.84
Sept. 9.	Standard Oil Co., 1 barrel lubricating oil	216	18.21
Sept. 2.	N. W. Fuel Co., 76,600 lbs. Yough. coal	217	181.93
Aug. 9.	F. Benjamin, brooms, Sapolio and soap	218	5.68
Oct. 13.	Goodnow & Lawther, 199,430 lbs. Yough. coal	219	431.78
Oct. 3.	H. L. Swain & Co., repairing conductors	220	2.70
Sept. 8.	Gustav E. Stechert, books for library	224	290.39
Sept. 20.	Cody & Hineline, repairs	228	81.71
Sept. 25.	D. Appleton & Co., books for library	230	10.00
Aug. 31.	Harrison & Smith, binding books for library	232	6.75
Aug. 1.	W. H. Lowdermilk & Co., catalogue of U. S. government publications	237	10.00
Oct. 2.	Aid Collins, special agent, insurance on boilers	245	150.00
Sept. 30.	Tribune Job Printing Co., stationery and printing	247	33.50
Oct. 2.	Gustav E. Stechert, books for library	262	96.55
Sept. 9.	N. W. Religious Press, advertising	264	24.76
Sept. 19.	Harrison & Smith, binding books for library	266	26.67
Oct. 11.	Worcester Envelope Co., stationery and printing	269	14.92
Oct. 7.	Geo. R. Newell & Co., matches, soap and blacking	267	12.30
Oct. 11.	N. W. Brush Factory, 2 1/2 dozen floor and ceiling brushes	270	19.00
Oct. 17.	Goodnow & Lawther, 94,200 lbs. Yough. coal	275	203.96
Oct. 31.	Pay roll	320	1,335.83
Oct. 30.	D. W. Sprague, petty bills	321	7.00

		No. V	voucher.
Oct. 3.	The Miller Printing Co., 2,000 fee records.....	322	15.25
Oct. 5.	A. M. Pratt Co., supplies.....	323	7.50
Oct. 17.	W. S. Nott Company, supplies and 50 feet hose.....	324	19.83
Oct. 25.	Emma S. Allen, work on expense lists.....	325	9.00
Oct. 24.	E. B. Johnson, gas, freight, help and miscellaneous.....	326	71.57
Oct. 26.	Warner Bros., miscellaneous hardware supplies.....	330	28.03
Oct. 25.	Miller Printing Co., stationery and printing.....	338	3.25
Oct. 17.	Cody & Hineline Co., repairing gas pipe.....	380	.85
Nov. 16.	Goodnow & Lawther, 362,940 lbs. Yough. coal.....	390	785.83
Oct. 31.	Tribune Job Printing Co., stationery and printing.....	400	40.50
Oct. 26.	Jno. A. Schlener & Co., stationery and printing.....	409	31.48
Nov. 30.	Pay roll.....	421	1,265.83
Nov. 30.	D. W. Sprague, petty bills.....	422	7.41
Nov. 30.	Goodnow & Lawther, 333,530 lbs. Yough. coal.....	423	722.12
Dec. 1.	E. B. Johnson, gas, advertising, postage, freight, help and miscellaneous.....	424	379.38
Nov. 30.	H. L. Breeden, work on expense list.....	425	9.60
Nov. 10.	Frank T. Wilson, salaries of employes and miscellaneous.....	426	137.12
Nov. 10.	Hobbs & Son, repairing roof.....	427	66.75
Nov. 2.	National Supply Co., 250 lbs. Lustre soap.....	428	17.50
Nov. 1.	Archambo, Martin & Morse, plumbing repairs.....	429	18.97
Sept. 30.	Daniel Bock, repairing electric bells.....	430	5.00
Nov. 1.	Dickinson's, 75 yards crash and 6 sponges.....	431	6.35
Nov. 28.	Jno. A. Schlener & Co., 2 dozen, Faber Hex.....	432	1.30
Nov. 29.	The Miller Printing Co., stationery and printing.....	433	1.75
Nov. 27.	W. H. Moore, books for library.....	434	309.50
Nov. 11.	Harrison & Smith, binding 24 vols.....	437	18.75
Nov. 1.	Walter Babcock, labor and material, painting and paper-hanging.....	438	30.44
Nov. 29.	William Angus, services as evening librarian.....	440	36.00
Sept. 16.	National History Pub. Co., books for library.....	442	5.35
Nov. 21.	Gustav E. Stechert, books for library.....	443	5.95
Nov. 1.	W. W. Sykes & Co., gas fitting repairs.....	446	11.10
Nov. 10.	Glessner & Washburn, furniture and repairs.....	469	31.69
Oct. 31.	W. K. Morrison & Co., door springs and miscellaneous.....	470	2.60
Nov. 25.	Goodnow & Lawther, 72,250 lbs. Yough. coal.....	532	156.43
Dec. 31.	Pay roll.....	550	1,463.15
Dec. 31.	D. W. Sprague, petty bills.....	551	15.53
Dec. 31.	E. B. Johnson, gas, freight, labor and miscellaneous.....	552	254.06
Dec. 2.	Leader Printing & Pub. Co., papers to Oct. 1, 1893.....	553	6.00
Dec. 1.	Glessner & Washburn, 10 dozen chairs.....	554	180.00
Dec. 12.	Louis Dreka, altering plate and 25 diplomas.....	555	31.50
Nov. 21.	O. K. Folin, expenses attending shipping exhibit from Chicago.....	556	41.90
Nov. 17.	Brown & Haywood Co., 17 Lts. D. S. A. glass.....	557	7.26
Nov. 30.	W. K. Morrison & Co., tools, implements and supplies.....	558	31.73
Jan. 1.	The Northwestern Magazine, advertising, September to December, inclusive.....	559	25.00
Dec. 31.	H. S. Breeden, work on pay roll and expense list.....	560	10.50
Dec. 23.	Allan Black, putting in regulators and plumbing.....	561	244.14
Dec. 30.	Miller Printing Co., stationery and printing.....	565	19.25
Dec. 20.	Jno. A. Schlener & Co., stationery.....	586	14.60
Nov. 5.	Century Oil Co., 1 barrel Empire Boiler Compound.....	588	16.64
Aug. 2.	C. A. Smith & Co., 1,451 feet assorted lumber.....	589	18.34
Dec. 2.	L. P. Hunt, expense attending packing Chicago exhibit.....	590	12.00
Dec. 20.	Tribune Job Printing Co., stationery printing.....	604	28.50
Dec. 30.	Goodnow & Lawther, 1,068,950 lbs. Yough. coal.....	606	2,318.36
Jan. 31.	Pay roll.....	683	1,315.83
Jan. 31.	D. W. Sprague, petty bills.....	684	17.90
Jan. 25.	H. S. Breeden, work on expense lists.....	685	9.30
Jan. 11.	The Crane-Ordway Co., plumbing.....	686	9.96
Feb. 16.	Jno. A. Schlener & Co., stationery.....	687	2.10
Jan. 31.	E. B. Johnson, stamps, express, labor, miscellaneous.....	688	317.30
1894.		No. v	voucher.
Jan. 1.	W. W. Sykes & Co., repairs.....	689	56.34
Jan. 2.	Union Iron Works, tools and repairs.....	690	6.71
Jan. 5.	W. S. Nott Company, 75 feet hose.....	691	8.25
Jan. 23.	Mrs. E. D. Neill, book for library.....	692	20.00
Jan. 20.	R. B. Lees, 40 new lockers and repairs.....	693	83.28
Jan. 31.	Goodnow & Lawther, 911,600 lbs. Yough. coal.....	694	1,973.69
Jan. 25.	Gustav E. Stechert, books for library.....	695	31.37
Jan. 25.	Tribune Job Printing Co., stationery and printing.....	700	15.25
Dec. 30.	W. K. Morrison & Co., miscellaneous hardware.....	723	7.70
Jan. 11.	Electrical Engineering Co., 1 battery cut out.....	724	3.75
Jan. 29.	Harrison & Smith, binding books for library.....	725	35.18
Jan. 10.	Standard Oil Co., supplies.....	727	4.16
Jan. 11.	Janney, Semple & Co., 1 No. 5 Bonney's vise.....	728	18.00
Feb. 28.	Pay roll.....	802	1,315.83
Feb. 28.	D. W. Sprague, petty bills.....	803	17.04
Feb. 8.	The Tension Envelope Co., 8,125 Tension envelopes.....	804	49.97
Feb. 22.	Minneapolis Paper Co., stationery.....	805	67.00
Jan. 31.	Standard Oil Co., 1/2 barrel Capt. Cyl.....	806	11.70
Mar. 1.	The Dickinson Co., 40 yards crash.....	807	5.50
Feb. 28.	H. S. Breeden, work on pay roll, etc.....	808	13.50
Feb. 21.	J. S. Todd & Co., 1 case white chalk.....	809	7.00

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	No. Voucher.	
Feb. 27.	Jno. A. Schlener & Co., stationery	810 13.21
Jan. 30.	Alfred Roper, 6,000 copies bulletin	811 78.50
Jan. 31.	W. K. Morrison & Co., tools and supplies	812 9.05
Feb. 28.	D. W. Sprague, petty expenses and supplies	813 7.02
Mar. 1.	E. B. Johnson, freight, gas, postage, labor and miscellaneous	814 84.88
Feb. 17.	Tribune Job Printing Co. reprinting name on order book	815 2.25
Mar. 1.	University Press, stationery and printing	816 12.84
Feb. 27.	Goodnow & Lawther, 778,800 lbs. Yough. coal	817 1,686.20
Mar. 6.	The Miller Printing Co., 1,000 note sheets	820 3.50
Feb. 17.	Morris & Wilson, book for library	823 .75
Feb. 23.	Gustav E. Stechert, books for library	835 100.92
Mar. 13.	Gustav E. Stechert, books for library	878 209.63
Jan. 25.	C. D. Whittall & Co., library and supplies	879 24.34
Mar. 30.	Wm. H. Yaffaw, tools and machinery	880 32.00
Mar. 22.	M. A. Scovell, treasurer, miscellaneous	881 15.00
Mar. 31.	Pay roll	888 1,265.83
Mar. 29.	E. B. Johnson, freight, stamps, gas, office help, miscellaneous	889 70.02
Mar. 27.	Goodnow & Lawther, 80,300 Yough. coal	890 173.85
Mar. 5.	Homan Cement and Lime Co., fire brick, tile and clay	891 13.25
Feb. 20.	Union Iron Works, repairs	892 79.08
Mar. 26.	Minneapolis Paper Co., supplies	893 6 8.95
Mar. 7.	D. M. Gilmore, 73.8 feet black iron pipe	894 5.70
Feb. 12.	Geo. R. Newell & Co., supplies	895 10.15
Mar. 10.	C. A. Erickson, work on boiler setting	896 11.00
Mar. 17.	Luster Soap Company, 300 lbs. Luster soap	897 21.00
Mar. 26.	The Cody-Hineline Co., plumbing repairs	898 28.68
Mar. 14.	William Angus, services in library	906 40.00
Mar. 24.	Harrison & Smith, binding books for library	907 45.22
Mar. 21.	D. Appleton & Co., books for library	908 6.00
Mar. 31.	D. W. Sprague, petty bills	913 10.12
April 13.	John N. Greer, secretary, advertising	914 15.00
Mar. 26.	Jno. A. Schlener & Co., stationery	916 3.25
Mar. 20.	Tribune Job Printing Co., stationery and printing	917 7.00
Jan. 29.	The Cody-Hineline Co., repairs	920 8.20
Mar. 16.	W. K. Morrison & Co., supplies	946 3.54
April 30.	Pay roll	988 1,215.83
April 30.	D. W. Sprague, petty bills	989 15.17
May 1.	H. S. Breeden, work on expense lists	990 11.40
April 27.	Ohio Stove Co., 1/2 dozen galv. iron boxes	991 9.00
Mar. 31.	De Veny Printing Co., stationery and printing	992 14.50
April 21.	Ernest A. Wright, stationery and printing	993 18.95
Mar. 24.	Ernest A. Wright, engraving diploma plate and 50 diplomas	994 87.50
Mar. 30.	D. M. Gilmore, gas pipe and tees for repairs	995 5.66
Aug. 21.	Goodnow & Lawther, 73,540 lbs. Yough. coal	996 159.22
April 2.	Jas. H. Bishop & Co., supplies	997 32.62
Dec. 11.	O. K. Folin, freight on portion of "Minnesota Exhibit"	998 72.84
April 18.	Jno. A. Schlener & Co., office supplies	999 5.18
April 28.	Mrs. Mary Bowen, work in the library	1,000 14.10
April 19.	Harrison & Smith, binding books for library	1,001 40.78
April 2.	Gustav E. Stechert, books for library	1,002 32.29
May 1.	E. B. Johnson, gas, freight, postage, office help and supplies	1,003 85.10
June 7.	Minneapolis General Electric Co., service at Coliseum	1,011 15.00
April 30.	Tribune Job Printing Co., stationery and printing	1,021 4.00
April 13.	Northrop, Braslan, Goodnow & Co., lawn grass seed	1,025 30.15
May 29.	Rickard & Gruman, lettering diplomas	1,073 110.00
May 23.	Alfred Roper, stationery and printing	1,075 386.03
June 1.	J. S. Pillsbury, books for library	1,076 102.50
June 8.	Stephen Mahoney, dinners to regents and friends	1,077 32.00
June 9.	W. P. Jewett, trip to Washington, D C., in April, 1894	1,078 125.00
May 31.	Pay roll	1,085 1,215.83
May 31.	D. W. Sprague, petty bills	1,086 16.33
May 31.	The Miller Printing Co., stationery and printing	1,088 14.00
April 30.	The Cody-Hineline Co., repairs	1,089 15.58
April 28.	W. S. Nott Company, 200 feet hose, sprinkler and nozzle	1,090 30.80
May 30.	H. S. Breeden, work on expense list	1,091 11.25
May 23.	Alfred Roper, 6,000 copies calendars	1,092 500.00
May 18.	Leslie & McAfee, 40 reams examination paper	1,093 28.80
May 9.	Goodnow & Lawther, 38,500 lbs. Yough.	1,094 83.36
June 20.	John C. Campbell, miscellaneous	1,095 4.75
Mar. 8.	Buntin Drug Co., supplies	1,096 34.91
June 1.	E. B. Johnson, salaries of employees, gas, postage, freight	1,097 267.13
May 9.	Gustav E. Stechert, books for library	1,098 77.10
May 15.	Jno. A. Schlener & Co., stationery	1,108 3.15
April 30.	W. K. Morrison & Co., machinery and supplies	1,124 40.14
May 24.	Tribune Job Printing Co., stationery and printing	1,143 3.75
May 28.	Geo. R. Newell & Co., supplies	1,099 8.35
June 30.	Pay roll	1,184 1,215.83
	Total	\$33,144.34
	Less Voucher No. 862 (A. Roper), paid twice	17.50
	Total	\$33,121.04

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CURRENT EXPENSE—DISBURSEMENTS.

1893.		No. Voucher.	
July 31.	Pay roll	22	\$655.00
June 19.	Henry F. Nachtrieb, books and supplies	29	20.68
July 13.	W. J. Dyer Bros., rent of piano to June 1	30	10.00
July 19.	Tribune Job Printing Co., stationery and printing	31	9.50
Aug. 17.	R. Friedlander & Sohn, books for library	32	4.82
June 14.	James A. Dodge, freight and repairs	33	6.55
April 1.	C. A. Hoffman, apparatus and instruments	34	122.80
May 24.	Bachrach & Bro., photographers' supplies	35	8.00
July 24.	Wm. H. Yattaw, help, express and petty bills	36	158.17
May 26.	Whitall, Tatum & Co., chemical supplies	37	53.12
June 3.	R. Friedlander & Sohn, books for library	38	84.35
Sept. 6.	K. F. Koehlers' Antiquarium, books for library	39	10.17
June 2.	Edw'd C. Cauvet, connecting waste pipe	40	52.27
July 24.	E. B. Johnson, gas, stamps, express and miscellaneous	42	566.17
July 1.	The Miller Printing Co., stationery and printing	43	5.25
Aug. 31.	D. W. Sprague, petty bills	132	6.50
Aug. 19.	P. M. Magnusson, 5 lessons in Psychology	153	5.00
Aug. 3.	Gustav D. Stechert, book for library	154	31.02
Sept. 1.	E. B. Johnson, postage, express, gas, help, etc.	156	35.24
Aug. 31.	Wm. H. Yattaw, labor, car fare, express, etc.	157	107.19
Aug. 30.	R. B. Lees, repairs	158	54.15
Aug. 9.	New England Furniture Co, 1 antique swivel chair	161	6.30
Aug. 1.	University Press, stationery and printing	162	41.62
Aug. 31.	University Press, stationery and printing	163	4.83
July 28.	Bradstreet, Thurber & Co., 1 antique oak office desk	164	17.25
Sept. 1.	The Miller Printing Co., printing blanks	166	29.60
April 5.	W. F. Porter & Co., plumbing and putting in radiators in the rooms formerly used as chapel and repairs	167	1,029.75
Aug. 21.	R. B. Lees, putting in oak shelving, etc.	174	19.90
Aug. 31.	Tribune Job Printing Co., stationery and printing	207	3.00
Sept. 30.	Pay roll	209	5,702.00
Sept. 30.	D. W. Sprague, petty bills	210	19.84
Sept. 26.	E. B. Johnson, gas, express, labor and advertising	212	43.77
Sept. 26.	Warner Bros., tools	214	4.95
Sept. 16.	Geo. P. Gould & Co., one desk	221	12.00
Sept. 2.	Eimer & Amend, chemical apparatus and supplies	222	318.54
Sept. 19.	Munsell & Co., book for library	223	18.00
Sept. 8.	Gustav E. Stechert, book for library	224	13.86
Sept. 20.	James W. Queen & Co., apparatus and instruments	225	194.50
Sept. 20.	O. J. Breda, books for library	227	151.15
Sept. 21.	Lyman Eleil Drug Co., 10 gallons turpentine	229	5.00
Sept. 30.	W. D. Frost, work in Herbarium	231	27.25
Aug. 31.	Harrison & Smith, binding books for library	232	13.25
Sept. 26.	J. C. Arthur, 1 centrifugal app.	234	25.00
Sept. 8.	Watson & Christensen, 1 oak table	235	7.50
Oct. 2.	R. B. Lees, furniture	236	127.00
Sept. 26.	Noyes Bros. & Cutler, hydrochloric acid and matches	238	12.40
Sept. 30.	Tribune Job Printing Co., stationery and printing	247	29.25
April 27.	Smithsonian Institute, transmission of 129 addressed packages	263	12.35
Oct. 21.	R. B. Lees, repairs and miscellaneous	265	22.45
Oct. 12.	Jno. A. Brashear, apparatus	271	35.00
Oct. 3.	H. L. Swain & Co., repairs	220	2.75
Oct. 17.	William Marshall, 3 Adj. condensers	272	48.00
Oct. 10.	Cushman & Plumber, books for library	273	21.00
Oct. 2.	University Press, stationery and printing	274	7.00
Oct. 31.	Pay roll	320	5,672.00
Oct. 30.	D. W. Sprague, petty bills	321	10.30
Oct. 24.	E. B. Johnson, gas, freight, help and miscellaneous	326	187.90
Oct. 16.	Eimer & Amend, apparatus, instruments and supplies	327	146.84
Oct. 24.	Houghton, Mifflin & Co., books for library	328	25.00
Sept. 24.	Frederick Read, scientific supplies	329	482.48
Oct. 26.	Warner Bros., miscellaneous hardware	330	11.01
Oct. 10.	Franklin Educational Co., apparatus and supplies	331	33.90
Oct. 7.	Beard Art and Stationery Co., 10 frames	332	10.00
Oct. 24.	E. A. Cuzner, seeds and plants	333	6.75
Oct. 26.	Caswell A. Ballard, work in Herbarium	334	41.25
Oct. 4.	W. H. Moore, books for library	335	16.50
Oct. 1.	R. Friedlander & Son, books for library	336	15.68
Oct. 4.	St. Paul Distillery, 1 barrel alcohol	339	27.98
Oct. 25.	Miller Printing Co., stationery and printing	338	15.50
Oct. 17.	Gustav E. Stechert, books for library	341	65.32
Feb. 27.	H. Weller, books for library	342	14.82
Oct. 18.	Queen & Company, 1 Ryan volt meter and wire	362	10.95
Oct. 23.	Harrison & Smith, binding 173 miscellaneous magazines	367	145.39
Sept. 7.	Noyes Bros. & Cutler, ½ gross 4-ounce tinc. bottles	371	5.40
Oct. 31.	Tribune Job Printing Co., stationery and printing	400	55.25
Oct. 26.	Jno. A. Schlener & Co., 1 press and impression books	409	9.00
Nov. 30.	Pay roll	421	5,587.00

UNIVERSITY BOARD OF REGENTS.

		No. Voucher.	
Nov. 30.	D. W. Sprague, petty bills	422	5.25
Dec. 1.	E. B. Johnson, gas, postage, freight, help and miscellaneous.	424	197.44
Sept. 28.	Frederick Read, scientific supplies	436	178.79
Nov. 2.	W. D. Frost, work in Herbarium	439	28.00
Nov. 29.	William Angus, janitor work in library	440	20.00
Oct. 31.	Watson & Christensen, 1 oak table	441	5.50
Nov. 30.	A. J. Dahl & Co., books for library	444	42.80
Nov. 1.	W. W. Sykes & Co., plumbing repairs	446	11.20
Dec. 1.	W. S. Hough, books for library and postage	447	6.00
Nov. 10.	Glessner & Washburn, furniture and repairs	469	20.71
Oct. 20.	Queen & Co., apparatus	484	17.70
Nov. 29.	The Miller Printing Co., stationery and printing	433	41.75
Dec. 31.	Pay roll	550	5,797.00
Dec. 31.	D. W. Sprague, petty bills	551	13.46
Dec. 31.	E. B. Johnson, gas, freight, labor, miscellaneous	552	254.67
Dec. 1.	University Press, 1,000 programs	564	14.00
Dec. 30.	Miller Printing Co., stationery and printing	565	5.75
Dec. 13.	W. J. Dyer & Bros., rent of piano	566	10.00
Dec. 31.	James W. Day, ice, January to December, 1893	567	79.58
Dec. 9.	Graham Paper Co., 5 reams paper 25x38	568	20.50
Dec. 11.	Gustav E. Stechert, books for library	569	156.10
Dec. 4.	Minneapolis Office and School Furn. Co., 24 cherry turnings	570	6.00
Oct. 1.	Frederick Read, duty and storage on chemicals	571	18.80
Dec. 30.	Conway MacMillan, express, supplies, miscellaneous	572	3.25
Dec. 1.	Alex P. Anderson, work in Herbarium	573	26.75
Nov. 16.	Botanical Gazette, books for library	574	9.25
Oct. 25.	Moffett, Thurston & Plant Co., 10,000 slips	575	6.25
Oct. 31.	Emory F. Dodson, furniture	576	310.50
Nov. 24.	Queen & Company, apparatus and instruments	577	551.00
Dec. 20.	Morris & Wilson, books for library	580	3.63
Oct. 25.	J. B. Ellis, books for library	581	7.15
Nov. 27.	D. T. MacDougal, supplies	582	5.75
Dec. 23.	Caswell A. Ballard, work in Herbarium	583	25.00
Dec. 1.	W. D. Frost, work in Herbarium	584	28.75
Dec. 27.	Henry F. Nachtrieb, books for library, labor, miscellaneous	585	33.05
Dec. 20.	Jno. A. Schlener & Co., stationery	586	10.48
Dec. 9.	Elmer & Amend, apparatus and supplies	632	68.10
Dec. 19.	Noyes Bros. & Cutler, 2 barrels alcohol	636	57.28
Dec. 20.	Tribune Job Printing Co., stationery and printing	664	20.25
1894.			
Jan. 31.	Pay roll	683	5,785.00
Jan. 31.	D. W. Sprague, petty bills	684	9.60
Jan. 31.	E. B. Johnson, postage, express, labor, miscellaneous	688	57.10
Jan. 6.	Gustav E. Stechert, books for library	696	24.97
Jan. 31.	Fred S. Jones, postage and repairs	697	5.65
Jan. 31.	Henry F. Nachtrieb, salaries of employes and supplies	698	129.20
Jan. 23.	Brackett & Corey, apparatus and instruments	699	10.00
Jan. 25.	Tribune Job Printing Co., stationery and printing	700	3.00
Jan. 4.	Richards & Co., apparatus and supplies	701	82.47
Sept. 7.	Beard Art and Sta. Co., books for library	702	12.85
Dec. 30.	Elmer & Amend, 1 dynamometer	703	5.75
Jan. 29.	Josiah Thompson, Jr., insurance on botanical specimens	704	6.38
Nov. 7.	Alfred Hirschmann, apparatus	705	83.50
Jan. 31.	Caswell A. Ballard, work in Herbarium	708	30.00
Jan. 26.	Alex P. Anderson, work in Herbarium	709	28.25
Jan. 29.	Edmund P. Sheldon, freight, postage and twine	710	5.90
Jan. 29.	W. D. Frost, work in Herbarium	711	42.75
Dec. 21.	R. B. Lees, repairs	720	.85
Jan. 11.	Electric Engineering Co., apparatus for lecture table	724	3.30
Jan. 29.	Harrison & Smith, binding books for library	725	6.00
Jan. 10.	Minneapolis Paper Co., 1 gr. 100 World blotters	743	1.00
Jan. 19.	Bausch & Lomb Optical Co., apparatus and instruments	745	5.18
Jan. 30.	Noyes Bros. & Cutler, supplies	752	1.00
Feb. 28.	Pay roll	802	28.88
Feb. 28.	D. W. Sprague, petty bills	808	5,781.00
Sept. 27.	Jno. A. Schlener & Co., stationery	808	13.45
Mar. 1.	E. B. Johnson, freight, gas, postage, labor and miscellaneous	810	1.85
Feb. 17.	Tribune Job Printing Co., stationery and printing	814	126.25
Mar. 6.	The Miller Printing Co., stationery and printing	815	11.75
Feb. 26.	Daniel Buck, putting in electric bells	820	27.50
Feb. 27.	Henry T. Nachtrieb, labor and supplies	821	10.48
Feb. 21.	Thos. Meehan & Sons, books for library	822	48.17
Feb. 10.	Harrison & Smith, binding books for library	823	7.00
Feb. 6.	M. Rasmussen, lettering 3 card boards	824	30.90
Feb. 28.	Caswell A. Ballard, work in Herbarium	825	6.00
Mar. 1.	W. A. Jones, M. D., professional services	826	30.00
Feb. 17.	Morris & Wilson, stationery and printing	827	60.00
Feb. 23.	Gustav E. Stechert, books for library	828	12.40
Feb. 21.	Noyes Bros. & Cutler, supplies	835	2.98
Feb. 27.	R. B. Lees, repairs	858	2.44
Mar. 13.	Gustav E. Stechert, books for library	867	13.90
Mar. 31.	Pay roll	878	63.32
		888	5,821.00

		No. Voucher.	
Mar. 29.	E. B. Johnson, salaries of employes, gas, freight, stamps, miscellaneous	889	256.98
Mar. 26.	Minneapolis Paper Co., 1-5 ream 24x36 100-lb. tag	893	1.20
Mar. 20.	Henry F. Nachtrieb, salaries of employes and postage	899	59.00
Mar. 30.	Caswell A. Ballard, work in Herbarium	900	32.50
Mar. 30.	W. D. Frost, work in Herbarium	901	50.00
Mar. 27.	Alex. P. Anderson, work in Herbarium	902	17.20
Mar. 20.	Noyes Bros. & Cutler, supplies	903	8.75
Dec. 24.	Frederick Read, apparatus and instruments	904	27.90
Mar. 24.	D. T. MacDougal, postage and supplies	905	7.50
Mar. 10.	The Wernicke Co., 2 dozen test tube stands	909	9.60
Mar. 16.	Queene & Co., apparatus and instruments	910	87.96
Mar. 13.	Milton Bradley Co., 1 color wheel, complete	911	10.00
Mar. 22.	Richards & Co., apparatus and instruments	912	229.74
Mar. 31.	D. W. Sprague, petty bills	913	6.05
Mar. 26.	Jno. A. Schlener & Co., stationery	916	9.35
Mar. 20.	Tribune Job Printing Co., stationery and printing	917	13.55
April 19.	James R. Angell, apparatus and instruments	918	6.35
Mar. 31.	W. K. Morrison & Co., tools	919	8.05
Mar. 8.	Rickard & Gruman, engrassing diplomas	986	1.00
April 30.	Pay roll	988	5,821.00
April 30.	D. W. Sprague, petty bills	989	21.33
April 21.	Ernest A. Wright, stationery and printing	993	97.45
April 18.	Jno. A. Schlener & Co., ½ roll cross-section paper	999	7.50
April 7.	Gustav E. Stechert, books for library	1,002	3.10
May 1.	E. B. Johnson, gas, freight, postage, office help and supplies	1,003	145.18
Feb. 15.	Queene & Co., apparatus and instruments	1,005	7.50
April 14.	The Wernicke Co., furniture	1,006	234.10
April 9.	Minneapolis Paper Co., supplies	1,007	6.76
Dec. 23.	Frederick Read, supplies	1,008	17.23
Feb. 6.	Eustis Bros., repairing clock	1,009	7.00
Mar. 19.	Richards & Co., apparatus and instruments	1,010	13.00
April 30.	Henry F. Nachtrieb, framing portraits	1,012	7.00
April 30.	Henry F. Nachtrieb, salaries of employes and supplies	1,071	61.61
June 1.	S. G. Smith, services, lectures in social science	1,072	500.00
May 31.	Pay roll	1,085	5,821.00
May 31.	D. W. Sprague, petty bills	1,086	4.50
May 31.	D. W. Sprague, petty bills	1,087	16.63
May 31.	The Miller Printing Co., stationery and printing	1,088	3.67
June 1.	E. B. Johnson, help, gas, postage, freight, miscellaneous	1,097	161.92
May 9.	Gustav E. Stechert, books for library	1,098	5.76
May 22.	Caswell A. Ballard, salary of employes	1,100	30.00
May 30.	Alex. P. Anderson, Herbarium work	1,101	20.50
May 31.	W. D. Frost, Herbarium work	1,102	25.00
May 4.	Gustav E. Stechert, books for library	1,103	177.44
April 10.	Harrison & Smith, binding for library	1,104	8.40
April 12.	Eustis Bros., making time recorder	1,105	25.00
May 26.	University Press, printing	1,106	13.00
May 15.	Jno. A. Schlener & Co., stationery	1,108	2.25
April 20.	Morris & Wilson, books for library	1,114	30.25
May 16.	James R. Angell, apparatus and instruments	1,117	85.00
May 1.	Queene & Co., apparatus and instruments	1,118	24.25
April 7.	M. Rasmussen, apparatus and instruments	1,119	9.50
Mar. 13.	The Wernicke Co., furniture	1,120	65.00
May 5.	Harrison & Smith, printing and binding	1,121	103.34
May 14.	Noyes Bros. & Cutler, supplies	1,122	.85
June 30.	Pay roll	1,184	5,747.00
Total			<u>\$69,158.35</u>

Military Tactics.

		No. Voucher.	
1893.			
Sept. 30.	Pay roll	209	\$65.00
Oct. 31.	Pay roll	320	65.00
Oct. 31.	D. W. Sprague, petty bills	321	.50
Oct. 31.	Tribune Job Printing Co., stationery and printing	400	16.00
Oct. 26.	Jno. A. Schlener & Co., 1-24-lb. B. E. rule	409	.30
Nov. 30.	Pay roll	421	65.00
Nov. 15.	A. M. Burch, 1 E. B. Tuba and sheet music	445	25.00
Dec. 31.	Pay roll	550	65.00
Dec. 20.	Morris & Wilson, ½ dozen padlocks	580	4.15
Jan. 31.	Pay roll	683	65.00
Jan. 31.	D. W. Sprague, petty bills	684	4.78
Jan. 31.	E. B. Johnson, freight on rifles	688	28.72
Jan. 20.	R. B. Lees, 6 new gun racks and repairs	693	37.00
Feb. 28.	Pay roll	802	65.00
Mar. 1.	E. B. Johnson, gas, postage and miscellaneous	814	6.52
Feb. 17.	Tribune Job Printing Co., stationery and printing	815	16.50
Mar. 31.	Pay roll	888	65.00

		No. Voucher.	
Mar. 29.	E. B. Johnson, express	889	1.00
Mar. 31.	D. W. Sprague, petty bills	913	2.60
Mar. 24.	Andrew Mills, 1 American ensign 10x20.....	921	9.95
April 30.	Pay roll	988	65.00
April 30.	E. B. Johnson, freight on ammunition.....	1,003	1.52
May 31.	Pay roll	1,085	65.00
June 30.	Pay roll	1,184	65.00
Total			<u>\$804.54</u>

COLLEGE OF MINING, METALLURGY AND THE MECHANIC ARTS.

CURRENT EXPENSE—DISBURSEMENTS.

1893.		No. Voucher.	
July 24.	Wm. H. Yattaw, help, express and petty bills.....	36	\$22.63
July 24	E. B. Johnson, gas, postage, help and miscellaneous.....	42	78.96
June 30	The Bristol Mfg. Co., 1 Bristol's recording No. 2 pressure gauge	55	30.00
July 4	F. W. Sardeson, freight, transportation and miscellaneous..	56	56.12
June 6	Gage Tool Co., 19 S. S. planes.....	57	44.22
May 16	Twin City Sidewalk Co., 43 yds cement floor in boiler room.	58	36.75
July 20	C. W. Hall, salary of employes, postage and miscellaneous	59	34.38
July 26.	Fred W. Sardeson, transportation and livery expenses.....	60	9.15
Jan. 31	L. Kimball Print Co., 1,000 testing blanks.....	70	5.50
July 27	D. W. Sprague, stationery, charts and miscellaneous.....	86	7.71
Aug. 31	D. W. Sprague, petty expense bill.....	132	4.17
Sept. 1.	E. B. Johnson, express, gas, postage, help, etc.....	156	19.10
Aug. 31.	Wm. H. Yattaw, labor, express, car fare, etc.....	157	77.40
Aug. 30.	R. B. Lees, glass, putty and labor.....	158	12.45
Aug. 1.	University, press, stationery and printing.....	162	27.08
Aug. 31.	University, press, stationery and printing.....	163	2.42
Aug. 1.	R. B. Lees, tables, boxes and window glass.....	165	31.45
Sept. 1.	The Miller Printing Co., printing blanks and cards.....	166	32.00
June 12.	C. Hennecke Co., plaster castings.....	169	54.78
June 28.	Twin City Iron works, repairing engine	171	29.65
June 27.	Gillett-Herzog Mfg. Co., blue prints, Third street viaduct..	173	15.00
Sept. 30.	Pay roll	209	1,460.00
Sept. 30.	D. W. Sprague, petty bills	210	15.47
Sept. 26.	E. B. Johnson, gas, express, labor and advertising.....	212	17.40
Oct. 13.	Goodnow & Lawther, 2,000 pounds Cumberland coal.....	219	7.25
June 26.	The Clark Electric Co., apparatus and instruments.....	226	75.00
Oct. 2.	R. B. Lees, furniture.....	236	25.00
Sept. 9.	Janney, Semple & Co., tools, steel and iron.....	239	51.41
Sept. 19.	Beard Art and Sta. Co., 6 easels and 500 letter heads and envelopes.....	240	8.15
Sept. 30.	F. W. Sardeson, transportation and board.....	241	61.37
Sept. 12.	I. S. Pratt, typewriting and paper	242	6.60
Sept. 16.	Hobbs & Son, repairing slate roof	243	13.35
Sept. 18.	Electrical Engineering Co., binding posts, insulators and wire	244	7.50
Sept. 15.	N. W. General Elect. Co., 1 10-lt. dynamo No. 53.....	248	150.00
Sept. 30.	Geo. D. Shepardson, typewriting, stamps and binding case.	249	9.36
Aug. 1.	Gustav E. Steehert, books for library	250	19.68
Oct. 1.	Minneapolis Fuel Co., 6,000 pounds coke and coal.....	268	26.25
Oct. 2.	University Press, stationery and printing	274	6.50
Oct. 31.	Pay roll	320	1,460.00
Oct. 30.	D. W. Sprague, petty bills.....	321	2.13
Oct. 24.	E. B. Johnson, gas, freight, help and miscellaneous.....	326	8.08
Oct. 25.	Miller Printing Co., stationery and printing.....	338	2.00
June 22.	W. A. Edwards Printing Co., stationery and printing.....	358	52.00
Oct. 3.	E. H. Sargent & Co., chemical supplies	359	13.99
Oct. 30.	Geo. D. Shepardson, office assistance and express.....	360	7.35
Oct. 10.	Electrical Engineerin Co., 1 Weston Volt meter and apparatus	361	81.79
Oct. 18.	Queen & Co., wire for repairing instruments	362	12.62
Oct. 19.	F. L. Stoddard, tools, nails, brad and screws	363	51.14
Oct. 3.	H. L. Swain & Co., labor on forges, pipes and dampers..	364	13.10
Sept. 1.	C. A. Smith & Co., 2,725 feet asst. lumber.....	365	106.65
Oct. 28.	Wm. H. Appleby, salaries of employes, freight, postage and supplies.....	366	25.32
Oct. 23.	Harrison & Smith, binding 87 volumes for library.....	367	59.04
Oct. 25.	Janney, Semple & Co., iron and steel supplies	368	10.87
Nov. 16.	Goodnow & Lawther, 4,000 pounds Cumberland coal.....	399	14.50
Oct. 31.	Tribune Job Printing Co., stationery and printing.....	400	5.50
Nov. 30.	Pay roll	421	1,460.00
Nov. 30.	D. W. Sprague, petty bills.....	422	9.79
Dec. 1.	E. B. Johnson, gas, postage, freight, help and miscellaneous	424	5.35

	No. Voucher.	
Oct. 31. Elmer & Amend, apparatus and supplies	435	17.14
Nov. 1. W. W. Sykes & Co., plumbing repairs	446	5.60
Nov. 6. O. H. Peck, photographic apparatus	462	41.72
Oct. 20. John Bliss & Co., 18-day chronometer	463	65.00
Nov. 23. Harrison & Smith, binding 14 volumes for library	464	16.13
Nov. 21. W. R. Hoag, freight, postage, miscellaneous	465	15.62
Nov. 21. W. R. Hoag, 1 sextant and accessories and express	466	48.75
Nov. 21. W. R. Hoag, trip to Chicago and return	467	26.00
Nov. 21. W. R. Hoag, salary of employes and miscellaneous ex- penses	468	6.90
Nov. 10. Glessner & Washburn, 1 desk and 1½ doz. stools	469	33.25
Oct. 31. W. K. Morrison & Co., tools and machinery	470	20.17
Nov. 3. E. G. Smith, instruments	471	7.50
Nov. 23. Janney, Semple & Co., machinery and tool steel	472	11.51
Nov. 8. C. A. Smith Lumber Co., 500 feet lumber	473	9.25
Oct. 30. W. A. Johnston & Co., Houston's dictionary	474	5.00
Nov. 25. Moffett, Bushnell & Co., stationery and printing	475	5.00
Nov. 29. Geo. D. Shepardson, office help, machinery and supplies	476	13.84
Nov. 1. Photographic Supply Co., photo supplies	477	13.69
Nov. 2. The Colliery Engineer Co., books for library	478	19.50
Nov. 13. W. S. Nott Co., white waste and packing	479	12.18
Nov. 2. H. P. Rugg & Co., gas fitting supplies	480	19.59
Nov. 29. Wm. R. Appleby, postage, express, help, rubber stamps	482	8.75
Oct. 16. Denver Fire Clay Co., supplies	483	46.40
Nov. 21. F. L. Stoddard, miscellaneous hardware	494	5.22
Dec. 31. Pay roll	550	1,435.00
Dec. 31. D. W. Sprague, petty bills	551	24.10
Dec. 31. E. B. Johnson, gas, freight, labor, miscellaneous	552	30.53
Dec. 1. Archambo, Martin & Morse Co., repairs	563	22.52
Dec. 1. University Press, 400 programmes	584	7.25
Dec. 30. Miller Printing Co., stationery and printing	585	4.00
Dec. 31. James W. Day, ice from January to December, 1893	767	29.04
Nov. 19. F. Darton & Co., apparatus and instruments	618	199.50
Dec. 27. O. H. Peck, apparatus and instruments	619	21.94
Dec. 21. Bausch & Lomb Opt. Co., apparatus and instruments	620	100.00
Dec. 12. Gustav E. Stechert, books for library	621	11.06
Dec. 29. Geo. D. Shepardson, books, stamps and miscellaneous	622	6.56
Dec. 29. C. W. Hall, salaries of employes, freight, postage and sup- plies	623	41.77
Dec. 20. H. P. Rugg & Co., supplies for repairs	624	19.42
Nov. 27. Lyman-Ellet Drug Co., 15 pounds glass tubing	625	7.50
Dec. 16. F. L. Stoddard, tools and miscellaneous hardware	626	7.86
Dec. 26. W. R. Appleby, office assistance, freight and postage	627	7.63
Dec. 14. Electrical Engineering Co., apparatus and instruments	628	19.45
Dec. 11. Franklin Educational Co., apparatus and instruments	629	6.94
Nov. 18. D. Van Nostrand Co., books for library	630	52.05
Dec. 30. Birney E. Task, services as instructor in mechanical draw- ing	668	120.00
Jan. 31. Pay roll	683	1,555.00
Jan. 31. D. W. Sprague, petty bills	684	17.48
Jan. 31. E. B. Johnson, postage, express, labor, miscellaneous	668	
Jan. 1. W. W. Sykes & Co., repairs	689	6.11
Jan. 25. Tribune Job Printing Co., stationery and printing	700	21.95
Jan. 24. D. & D. Electric Mfg. Co., apparatus	722	28.00
Dec. 30. W. K. Morrison & Co., tools and supplies	723	15.63
Jan. 11. Electrical Engineering Co., supplies	724	6.20
Jan. 29. Harrison & Smith, binding books for library	725	41.83
Jan. 23. Trainor Brothers, mason work on engine bed, etc.	726	33.73
Jan. 11. Janney, Semple & Co., 45 pounds Hex. nuts, asst.	728	3.15
Jan. 26. H. P. Rugg & Co., repairs	729	6.71
Jan. 4. D. Van Nostrand Co., books for library	730	8.22
Dec. 16. E. H. Sargent & Co., supplies	731	23.50
Jan. 2. R. B. Lees, repairs and furniture	732	63.13
Jan. 22. Gustav E. Stechart, books for library	733	27.48
Jan. 10. W. R. Hoag, instruments	734	84.30
Dec. 16. Buffalo Dental Mfg. Co., 1 No. 147 B water heater	735	20.25
Jan. 24. Geo. D. Shepardson, office help and petty expenses	736	10.28
Dec. 27. Schleicher, Schumm & Co., 1 "C" gas engine	737	351.00
Feb. 28. Pay roll	802	1,555.00
Feb. 28. D. W. Sprague, petty bills	803	34.47
Jan. 31. W. K. Morrison & Co., repairs	812	2.34
Mar. 1. E. B. Johnson, freight, gas, postage, labor, miscellaneous	814	17.56
Mar. 1. University Press, stationery and printing	816	8.66
Jan. 18. Thompson & Lees, repairs	818	139.59
Jan. 31. Fauth & Co., slow motion attachment to level	819	8.00
Jan. 31. The Miller Printing Co., stationery and printing	820	17.50
Mar. 6. Gustav E. Stechart, 1 Electrical Review	835	.15
Feb. 23. Gustav E. Stechart, books for library	878	20.62
Mar. 13. Gustav E. Stechart, books for library	882	35.00
Mar. 9. Carnegie Steel Co., sundries	888	1,580.00
Mar. 31. Pay roll		
Mar. 29. E. B. Johnson, freight, postage, gas, office help, miscellane- ous	880	27.93

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	No. Voucher.	
Mar. 31.	D. W. Sprague, petty bills.....	913 25.37
Mar. 31.	W. R. Appleby, office help and miscellaneous supplies....	933 15.30
Mar. 30.	R. B. Lees, furniture and repairs.....	934 93.73
Jan. 18.	Thompson & Lees, repairs.....	935 9.11
Mar. 30.	Noah Johnson, services on topographical survey.....	936 13.00
Feb. 6.	H. J. Day, brass work for lanterns.....	937 23.94
Mar. 30.	Northwestern foundry, 2 tons No. 1 soft Pioneer.....	938 30.00
Mar. 30.	J. E. Wadsworth, freight and supplies.....	939 6.32
Mar. 27.	Electrical Engineering Co., appar.....	940 33.25
Mar. 19.	Richards & Co., apparatus and instruments.....	941 14.40
Feb. 10.	J. H. Paul, 1 oak book case.....	942 50.00
Mar. 31.	Geo. D. Shepardson, salaries of employes, postage, freight, etc.....	943 10.03
Mar. 21.	Photographic Supply Co., 1 camera.....	944 10.80
Mar. 26.	Sillesky & Scott Bros., 228 lbs. castings.....	945 5.70
Mar. 16.	W. K. Morrison & Co., tools and supplies.....	946 3.23
Aug. 22.	Harry E. Smith, apparatus and instruments.....	947 14.50
Mar. 29.	H. E. Smith, supplies.....	948 7.20
Feb. 1.	Am. Inst. of Elect. Eng., books for library.....	949 5.00
Jan. 26.	Mpls. Photo. Supply Co., supplies.....	950 9.16
Feb. 28.	W. R. Appleby, office assist. and.....	951 5.41
Feb. 27.	Geo. D. Shepardson, salaries of emp. and miscellaneous.....	952 15.68
Feb. 12.	Electrical Engineering Co., supplies.....	953 6.04
Feb. 20.	A. E. Foot, M. D., books for library.....	954 28.95
Jan. 18.	Dr. Kallen, apparatus and instruments.....	955 231.00
Nov. 18.	Alfred Hirschman, apparatus and instruments.....	956 127.25
Mar. 31.	C. W. Hall, office help, postage and miscellaneous.....	932 28.90
Jan. 28.	Minneapolis Office and School Furniture Co., furniture....	957 10.00
April 30.	Pay-roll.....	988 1,580.00
April 30.	D. W. Sprague, petty bills.....	989 35.01
May 1.	E. B. Johnson, gas freight, postage, labor and supplies....	1003 25.86
Mar. 31.	W. K. Morrison & Co., supplies.....	1044 15.14
Mar. 31.	Karl A. Hiersemann, books for library.....	1015 12.50
Mar. 1.	Twin City Calcium Light Co., apparatus and instruments....	1016 18.92
April 5.	Glessner & Washburn, 3 window shades.....	1017 5.25
Mar. 23.	The Washington Slate Co., 4 blackboards.....	1018 25.92
Mar. 30.	Richards & Co., tools and machinery.....	1019 94.69
April 16.	Pioneer Fuel Co., 2,000 lbs. gas coke.....	1020 7.50
April 30.	Tribune Job Print. Co., stationery and printing.....	1021 6.50
April 16.	Goodnow & Lawther, 1 ton coal and coke.....	1023 10.00
April 28.	Janney, Semple & Co., instruments and supplies.....	1024 24.38
Mar. 12.	The Beard Art & Sta. Co., frames for signs and charts....	1022 7.00
May 2.	F. A. Peckham, books for library.....	1026 11.00
April 18.	Electrical Engineering Co., supplies.....	1038 5.04
Feb. 6.	M. Rasmussen, repairing showcase.....	1074 6.00
May 31.	Pay-roll.....	1085 1,580.00
May 31.	D. W. Sprague, petty bills.....	1086 6.62
May 31.	The Miller Printing Co., stationery and printing.....	1088 1.83
June 1.	E. B. Johnson, gas, postage, express, help and miscel....	1097 26.97
May 9.	Gustav E. Stechert, books for library.....	1098 32.83
May 15.	John A. Schlener & Co., stationery.....	1108 1.10
April 30.	W. K. Morrison & Co., supplies.....	1124 6.50
May 31.	W. R. Appleby, express, office help and supplies.....	1125 5.13
May 5.	Harrison & Smith, printing and binding.....	1121 45.05
May 22.	Richards & Co., supplies.....	1126 64.48
May 16.	Northwestern Foundry, 2 tons pig iron.....	1127 30.00
May 21.	Electrical Engineering Co., apparatus and instruments....	1128 7.35
May 1.	A. L. Eidemiller, apparatus.....	1129 10.00
Mar. 31.	School of Mines Quarterly, 11 copies Quarterly.....	1130 5.00
May 18.	D. & D. Electric Mfg. Co., 2 double pole switches.....	1131 7.00
May 31.	H. E. Smith, postage and supplies.....	1132 4.60
May 4.	The Denver Fire Clay Co., tools and machinery.....	1133 19.50
April 17.	Gustav E. Stechert, books for library.....	1134 6.21
May 29.	L. H. Chapman, tracing map of university grounds.....	1136 5.00
June 30.	Pay-roll.....	1184 1,530.00
Total	.....	\$20,608.00

Geological and Natural History Survey.

CURRENT EXPENSE—DISBURSEMENTS.

1893.	No. Voucher.	
July 31.	Pay-roll.....	22 \$375.00
July 24.	Wm. H. Yattaw, help, express and petty bills.....	36 16.83
July 24.	E. B. Johnson, postage, gas and miscellaneous.....	42 1.56
June 10.	Minneapolis Paper Co., 140 books wrapped.....	63 4.25
Aug. 31.	Pay-roll.....	106 450.00
Aug. 31.	D. W. Sprague, petty expense bills.....	132 3.00
Sept. 1.	E. B. Johnson, gas, postage, express, help etc.....	156 14.14
Aug. 31.	Wm. H. Yattaw, labor, express, car fare, etc.....	157 23.34
Aug. 31.	Tribune Job Print. Co., stationery and printing.....	207 2.00
Sept. 30.	Pay-roll.....	209 650.00

		No. Voucher.	
Oct. 30.	Pay-roll	320	670.00
Oct. 26.	Caswell A. Ballard, supplies and labor	334	13.30
July 28.	K. F. Koehler's Antiquarium, books for library	337	21.29
Oct. 31.	Tribune Job Print. Co., stationery and printing	400	2.00
Oct. 12.	U. S. Grant, field expenses and salaries of employes	401	78.21
Oct. 27.	N. H. Winchell, postage, express, lay and pocket voucher	402	76.27
Oct. 21.	Alex P. Anderson, freight and express	403	12.91
Oct. 12.	A. H. Elftman, field expenses, May 1, to Dec. 19, 1893	404	122.12
Oct. 12.	W. N. Suksdorf, specimens of plants	405	18.20
June 21.	Smithsonian Institute, transmission of 105 packages	406	21.00
Oct. 27.	Gunflint Lake Iron Co., supplies to survey party	407	21.34
Oct. 27.	Pay-roll	408	440.10
Nov. 30.	Pay-roll	421	670.00
Nov. 30.	D. W. Sprague, petty bills	422	3.35
Dec. 1.	E. B. Johnson, gas, postage, help and miscellaneous	424	2.16
Nov. 1.	W. W. Sykes & Co., plumbing repairs	446	5.59
Dec. 1.	N. H. Nachtrieb, trip to Chicago, freight, clerk hire, miscel.	498	122.90
Dec. 1.	U. S. Grant, express, postage, labor, pocket voucher	499	20.18
Dec. 1.	Warren Upham, field expenses geolog. survey, in Sept., Oct. and Nov.	500	55.07
Dec. 1.	J. E. Spurr, field expenses geological survey in November	501	57.65
Dec. 1.	J. E. Spurr, transportation and expenses, self and men, in Sept., 1893	502	62.76
Dec. 1.	J. E. Spurr, field expenses in Oct., self and one man	503	50.02
Dec. 1.	J. E. Culver, field expenses for himself and two men, May 15 to Oct. 26	504	199.69
Nov. 29.	Caswell A. Ballard, work in herbarium	505	36.25
Nov. 1.	Carl E. Akeley Co., mounting moose and deer	506	120.00
Oct. 30.	Marder, Luse & Co., making matrices	507	6.56
Nov. 30.	Henry F. Nachtrieb, survey field expenses, zoological div.	508	252.71
Nov. 30.	J. E. Spurr, salaries for Nov. of self and two employes	509	177.67
Dec. 31.	Pay-roll	550	670.00
Dec. 31.	E. B. Johnson, gas, freight, labor, miscel.	552	9.12
Dec. 31.	James W. Day, ice from Jan. to Dec., 1893	567	4.93
Dec. 11.	Gustav E. Stechert, books for library	569	90.27
Dec. 4.	Mpls. Office & School Furn. Co., 140 trays	570	30.00
Dec. 30.	Conway McMillan, express, supplies, miscel.	572	69.58
Oct. 15.	Minneapolis Paper Co., 300 books wrapped	578	15.00
Nov. 6.	T. H. Kearney, 265 specimens of Kentucky plants	579	21.20
Dec. 20.	Morris & Wilson, books for library	580	14.10
Dec. 27.	R. Friedlander & Son, books for library	587	11.54
Dec. 31.	N. H. Winchell, salary employes, express, supplies	637	69.87
Jan. 31.	Pay-roll	683	670.00
Jan. 31.	D. W. Sprague, petty bills	684	6.13
Feb. 16.	John A. Schlener & Co., stationery	687	1.20
Jan. 31.	E. B. Johnson, postage, express, labor, miscel. 1894	688	49.67
Jan. 20.	R. B. Lees, making oak case and rep. tables	693	17.50
Jan. 25.	Gustav E. Stechert, books for library	695	199.70
Jan. 25.	Tribune Job Print. Co., stationery and printing	700	10.70
Dec. 28.	Bernh. Liebisch, books for library	706	9.11
Jan. 10.	R. Friedlander & Son, books for library	707	42.57
Jan. 31.	N. H. Winchell, salaries of employes, freight, supplies	738	193.49
Jan. 31.	N. H. Winchell, salary of employes and freight	739	48.12
Dec. 11.	R. S. Williams, 406 species of plants	740	29.50
Jan. 1.	B. F. Bush, 139 West. Mo. plants	741	11.12
Nov. 3.	A. A. Heller, 370 species Virginia plants	742	31.45
Jan. 10.	Minneapolis Paper Co., stationery and printing	743	16.75
Jan. 15.	Henry J. Green, repairing instruments	744	9.45
Jan. 19.	Bausch & Lomb Opt. Co., apparatus and instruments	745	6.15
Feb. 28.	Pay roll	802	610.00
Feb. 28.	D. W. Sprague, petty bills	803	4.25
Mar. 1.	E. B. Johnson, freight, postage, labor, miscellaneous	814	27.91
Mar. 1.	University Press, 500 botanical slips	816	1.75
Feb. 17.	Morris & Wilson, stationery and books for library	828	16.03
Jan. 26.	R. Friedlander & Sohn, books for library	829	20.34
Feb. 12.	Josephine A. Clark, 1,000 index cards	830	15.00
Jan. 23.	F. H. Burtlehans, 220 botanical specimens	831	13.20
Feb. 20.	R. S. Williams, 143 specimens Mosses	832	8.71
Jan. 31.	A. J. Dahl & Co., books for library	833	14.10
Mar. 31.	Pay roll	888	640.00
Mar. 29.	E. B. Johnson, gas, express, stamps, miscellaneous	889	41.69
Mar. 26.	Minneapolis Paper Co., stationery	893	8.15
Jan. 28.	Minneapolis Office and School Furniture Co., 1 oak table	957	9.50
April 30.	Pay roll	988	600.00
May 1.	E. B. Johnson, freight	1,003	1.99
April 14.	Wm. Howling & Son, mounting moose and deer	1,013	76.00
April 21.	A. D. Meeds, salaries of employes	1,036	38.20
April 21.	N. H. Winchell, salaries of employes and miscellaneous	1,037	292.46
May 31.	Pay roll	1,085	600.00
May 31.	D. W. Sprague, petty bills	1,087	2.00
May 18.	Leslie & McAfee, 5 reams foolscap paper	1,093	10.50
June 1.	E. B. Johnson, freight	1,097	1.56

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	No. Voucher.	
May 4. Gustav E. Stechert, books for library.....	1,108	99.57
April 17. Josephine A. Clark, 1,060 index cards.....	1,107	15.90
Mar. 10. A. H. Curtiss, specimens Florida plants.....	1,109	37.12
April 16. J. B. Ellis, books for library.....	1,110	7.16
Mar. 30. John Macoum, specimens of plants.....	1,111	12.00
April 2. Torrey Botanical Club, books for library.....	1,112	20.00
May 22. Minneapolis Paper Co., stationery and printing.....	1,113	8.89
Mar. 13. Oswald Weigel, books for library.....	1,115	10.04
Mar. 15. R. Friedlander & Sohn, books for library.....	1,116	52.32
June 1. Geo. H. Morse, salary of employes.....	1,123	40.00
May 29. Geo. A. Casseday, materials and printing.....	1,135	5.10
May 29. Noah Johnson, services on typographical survey.....	1,137	10.00
May 29. N. H. Winchell, salaries of employes, express, supplies.....	1,138	164.28
June 30. Pay roll.....	1,184	600.00
Total.....		\$11,373.14

COLLEGE OF LAW.

CURRENT EXPENSE—DISBURSEMENTS.

July 19. Tribune Job Printing Co., stationery and printing.....	31	\$6.50
July 24. Wm. H. Yattaw, help, express and petty bills.....	36	8.75
July 24. E. B. Johnson, gas, postage, help and miscellaneous.....	42	30.40
July 1. The Miller Printing Co., stationery and printing.....	43	1.00
June 19. The Cody-Hineline Co., repairing plumbing work.....	61	113.96
June 5. W. S. Pattee, expenses incurred during commencement week.....	62	84.00
June 16. Wheaton, Reynolds & Co., changing water closet partition.....	148	38.50
June 30. J. H. Hagen & Co., paints, varnish, glue and labor.....	150	101.22
Sept. 1. E. B. Johnson, gas, postage, express, help, etc.....	156	2.56
Aug. 31. Wm. H. Yattaw, labor, express, car fare, etc.....	157	7.50
Aug. 30. R. B. Lees, repairs.....	158	18.25
Sept. 1. The Miller Printing Co., 1,000 receipts.....	166	3.25
Aug. 31. The Tribune Printing Co., 2,000 letter heads.....	207	7.50
Sept. 30. Pay roll.....	209	556.00
Sept. 26. E. B. Johnson, gas, expenses, labor and advertising.....	212	15.16
Sept. 20. James Bladon & Co., gas fixtures.....	251	16.30
Sept. 1. Travis Book Mfg. Co., binding book for library.....	256	27.00
Oct. 30. Pay roll.....	320	744.00
Oct. 24. E. B. Johnson, gas, freight, help and miscellaneous.....	326	9.23
Nov. 30. Pay roll.....	421	828.00
Dec. 1. E. B. Johnson, gas, postage, freight, help and miscellaneous.....	424	41.52
Nov. 10. Glessner & Washburn, furniture.....	469	61.00
Dec. 31. Pay roll.....	550	724.00
Dec. 31. E. B. Johnson, gas, freight, labor, miscellaneous.....	552	90.40
Dec. 21. R. B. Lees, repairing doors.....	562	2.07
Dec. 1. Hall, Black & Co., stationery and printing.....	663	38.50
Jan. 31. Pay roll.....	683	719.00
Jan. 31. E. B. Johnson, postage, express, labor, miscellaneous.....	688	9.59
Feb. 28. Pay roll.....	802	789.00
Mar. 1. E. B. Johnson, freight, gas, postage, labor, miscellaneous.....	814	28.48
Nov. 27. Callaghan & Co., books for library.....	834	79.85
Mar. 31. Pay roll.....	888	872.00
Mar. 29. E. B. Johnson, gas, freight, stamps, miscellaneous.....	889	45.60
Mar. 26. Minneapolis Paper Co., 25 sheets cloth board.....	893	3.00
Jan. 28. Minneapolis Office and School Furniture Co., 1 8-ft. table.....	957	12.00
April 30. Pay roll.....	988	1,070.00
April 30. D. W. Sprague, petty bills.....	989	5.56
May 1. E. B. Johnson, gas, freight, postage, labor and supplies.....	1003	41.43
May 24. Tribune Job Printing Co., stationery and printing.....	1004	12.08
May 31. Pay roll.....	1085	1,202.42
June 1. E. B. Johnson, postage, gas, express, help and miscell.....	1097	53.48
May 25. De Veny Printing Co., 1 student record.....	1139	10.00
June 30. Pay roll.....	1184	500.00
Total.....		\$9,030.11

COLLEGE OF MEDICINE.

CURRENT EXPENSE—DISBURSEMENTS.

1893.	No. Voucher.	
July 31. Pay roll.....	22	\$65.00
July 19. Tribune Job Printing Co., stationery and printing.....	31	10.30
July 24. Wm. H. Yattaw, help, express and petty bills.....	36	39.37
Aug. 14. C. M. Menellely, miscellaneous supplies.....	41	16.60
July 24. E. B. Johnson, gas, stamps, help, miscellaneous.....	42	51.36
July 1. The Miller Printing Co., stationery and printing.....	43	8.89
April 29. New England Furniture Co., tabl drayage.....	64	12.90
June 24. P. H. Millard, M. D., postage and, hat rack and shade.....	65	11.15
May 25. Chas. L. Green, M. D., services of model.....	66	10.10

EIGHTH BIENNIAL REPORT

	No. Voucher.	
May 1.	1.	Minneapolis Electric & Construction Co., 3 Cell's batteries.
June 1.	1.	The Swineburn Printing Co., stationery and printing.
June 5.	5.	The Gillett-Herzog Mnf'g. Co., 2 beams, plates and bolts.
Jan. 31.	1.	L. Kimball Printing Co., 1,000 class cards.
July 27.	31.	D. W. Sprague, 3 tables.
Aug. 31.		Pay roll.
July 17.		John Kelley, repairs.
Sept. 1.		E. B. Johnson, gas, postage, express, labor, etc.
Aug. 31.		Wm. H. Yattaw, labor, express, car fare, etc.
Aug. 30.		R. B. Lees, building tank, animal room, cages, etc.
Sept. 1.		N. W. Telephone Ex. Co., service for September, 1893.
Aug. 1.		N. W. Telephone Ex. Co., services for August, 1893.
July 1.		W. W. Sykes & Co., plumbing and steam fitting.
May 20.		Bramblett & Beygen, 2 cuts medical building.
June 27.		Gillett-Herzog Mnf'g Co., beams, bolts and plates.
July 1.		Medical Century, advertising.
Aug. 25.		Minneapolis Pharmacy Co., advertising in Minneapolis Homeopathic Magazine.
Aug. 31.		Tribune Job Printing Co., 500 lc wrappers.
Sept. 30.		Tribune Job Printing Co., stationery and printing.
Sept. 30.		Pay roll.
Sept. 30.		D. W. Sprague, petty bills.
Sept. 26.		E. B. Johnson, gas, express, labor and advertising.
Oct. 3.		H. L. Swain & Co., repairs.
Sept. 26.		Noyes Bros. & Cutler, apparatus and instruments.
Oct. 1.		The N. W. Telephone Ex. Co., service for October.
Sept. 30.		Tribune Job Printing Co., stationery and printing.
Sept. 5.		A. R. Miller & Sons, tools and supplies.
Sept. 29.		Watson & Christenson, furniture.
Oct. 2.		R. B. Lees, putting up shelving in laboratory.
Sept. 28.		Am. Druggist Pub. Co., advertising.
Sept. 26.		Northwestern Lancet, advertising 1 year.
Sept. 29.		Minneapolis Pharmacy Co., supplies.
Oct. 2.		Noyes Bros. & Cutler, supplies.
Sept. 13.		E. B. Meyrowitz, 1 test case.
Sept. 30.		Pharmaceutical Record Co., advertising.
Mar. 11.		Richard King & Co., instruments.
Aug. 24.		H. W. Johns Mnf'g. Co., 5 sheets 1/8 board.
Oct. 31.		Pay roll.
Oct. 30.		D. W. Sprague, petty bills.
Oct. 24.		E. B. Johnson, gas, freight, help and miscellaneous.
Oct. 26.		Warner Bros., 1 galvanized iron alcohol tank.
Nov. 1.		N. W. Telephone Ex. Co., service for November.
Oct. 18.		Reserve Rubber Co., 1 pair rubber boots and 25 feet hose.
Oct. 9.		Noyes Bros. & Cutler, 2 gross assorted bottles.
Sept. 7.		Noyes Bros. & Cutler, apparatus and supplies.
Oct. 11.		Eimer & Amend, apparatus and supplies.
Oct. 30.		W. T. Keener & Co., books for library.
Oct. 17.		Lyman-Ellet Drug Co., laboratory supplies.
Oct. 20.		M. F. Patterson, platinum wire.
Oct. 19.		Twin City Calcium Light Co., dental supplies.
Sept. 8.		R. O. Beard, medical supplies.
Dec. 10.		'02. Frank Heyward, 243 boxes, 7 1/2 x 11 1/2.
April 28.		John N. Schutz, supplies.
Oct. 17.		Cody & Hineine Co., labor and material connecting still.
Oct. 21.		R. B. Lees, labor and material fitting up departments.
Oct. 31.		Tribune Job Printing Co., stationery and printing.
Nov. 30.		Pay roll.
Nov. 30.		D. W. Sprague, petty bills.
Dec. 1.		E. B. Johnson, gas, freight, postage, help and miscellaneous.
Nov. 1.		W. W. Sykes & Co., plumbing and repairs.
Oct. 31.		W. K. Morrison & Co., tools and supplies.
Oct. 21.		R. B. Lees, material and repairs.
Nov. 1.		H. A. Child, 4 barrels R. salt.
Nov. 17.		Minneapolis Pharmacy Co., supplies.
Oct. 23.		McCarthy & Donnelly, supplies.
Oct. 23.		Minneapolis Pharmacy Co., instruments.
Oct. 25.		Lucas Bros., furniture.
Oct. 30.		S. S. White Dental Mnf'g. Co., furniture.
Nov. 16.		Buffalo Dental Mnf'g. Co., 1 steam gauge.
Nov. 17.		Noyes Bros. & Cutler, apparatus and supplies.
Nov. 15.		M. F. Patterson, dental supplies.
Nov. 29.		M. F. Patterson, dental supplies.
Nov. 21.		F. L. Stoddard, tools and supplies.
Dec. 1.		N. W. Telephone Ex. Co., service for December, 1893.
Oct. 20.		Elmer & Amend, supplies.
Dec. 31.		Pay roll.
Dec. 31.		E. B. Johnson, gas, freight, labor and miscellaneous.
Dec. 21.		R. B. Lees, repairs.
Dec. 1.		Archambo, Martin & Morse Co., repairs.
Dec. 31.		James W. Day, ice from Jan. 1 to Dec. 31, 1893.
Dec. 30.		N. W. Telephone Co., service for January, 1890.
Dec. 9.		Eimer & Amend, supplies.

	No. Voucher.	
Sept. 29. Watson & Christenson, furniture.....	633	32.20
Nov. 11. The Carroll Aluminium Mntg. Co., apparatus	634	24.00
Nov. 24. Janney, Semple & Co., 21 pounds bar tin.....	635	5.88
Dec. 19. Noyes Bros. & Cutler, apparatus and supplies.....	636	14.30
Dec. 30. W. S. Layton, M. D., apparatus and supplies.....	662	34.15
Dec. 20. Tribune Job Printing Co., stationery and printing.....	664	25.75
Jan. 31. Pay roll.....	683	2,147.50
Jan. 31. D. W. Sprague, petty bills.....	684	6.05
Feb. 16. Jno. A. Schliener & Co., stationery.....	687	2.50
Jan. 31. E. B. Johnson, postage, express, labor and miscellaneous.....	688	10.10
Jan. 20. R. B. Lees, putting up shelving.....	693	2.15
Jan. 25. Tribune Job Printing Co., stationery and printing.....	700	10.75
Dec. 21. R. B. Lees, repairs.....	720	13.20
Nov. 15. Richard King & Co., apparatus and supplies.....	746	107.54
Sept. 23. J. W. Flisk, 1 No. 301 aquarium.....	747	19.59
Dec. 9. E. Leitz, apparatus and instruments.....	748	456.50
Jan. 31. P. H. Millard, M. D., postage.....	749	16.00
Jan. 23. Journal of Am. Med. Ass's., advertising 3 months.....	750	50.00
Oct. 13. Johnson & Shaw, supplies.....	751	26.25
Jan. 30. Noyes Bros. & Cutler, supplies.....	752	33.05
Dec. 20. Thos. G. Lee, supplies.....	753	7.18
Dec. 16. Minneapolis Office and School Furniture Co., 1 oak table.....	754	24.00
Dec. 22. C. B. Powell, supplies.....	755	16.00
Sept. Warner Bros., labor and material.....	756	10.20
Dec. 27. M. F. Patterson, dental supplies.....	757	45.24
Feb. 1. N. W. Tel. Ex. Co., service for February, 1894.....	758	6.00
Feb. 1. J. A. Gates, services in chemical laboratory.....	759	50.00
Feb. 28. Pay roll.....	802	2,167.50
Feb. 28. D. W. Sprague, petty bills.....	803	19.05
Mar. 1. E. B. Johnson, gas, freight, postage, labor, miscellaneous.....	814	79.34
Feb. 17. Tribune Job Printing Co., stationery and printing.....	815	6.00
Mar. 1. University Press, stationery and printing.....	816	6.50
Feb. 21. Noyes Bros. & Cutler, supplies.....	857	0.42
Feb. 7. Minneapolis Dry Goods Co., supplies.....	858	78.20
Feb. 21. Noyes Bros. & Cutler, supplies.....	858	78.20
Jan. 30. Geo. D. Martin, apparatus and instruments.....	859	47.01
Jan. 1. J. H. Hagen & Co., repairs.....	860	97.50
Feb. 28. R. O. Beard, M. D., supplies.....	861	6.65
Mar. 1. N. W. Telephone Ex. Co., service for March, 1894.....	862	6.00
Jan. 6. Richard King & Co., apparatus and supplies.....	863	456.63
Mar. 1. Dr. F. Allport, apparatus, instruments and supplies.....	864	75.00
Feb. 10. M. J. Hart, salary of employes.....	865	50.00
Feb. 27. M. F. Patterson, dental supplies.....	866	123.04
Feb. 27. R. B. Lees, repairs.....	867	14.60
Mar. 31. Pay roll.....	888	2,157.50
Mar. 29. E. B. Johnson, gas, postage, freight, labor, miscellaneous.....	889	96.17
Mar. 20. Noyes Bros. & Cutler, supplies.....	903	9.85
Mar. 31. D. W. Sprague, petty bills.....	913	2.58
Mar. 26. Jno. A. Schliener & Co., stationery.....	916	3.90
Mar. 20. Tribune Job Printing Co., stationery and printing.....	917	3.00
Mar. 1. M. J. Hart, services rendered for month of February.....	958	12.50
April 2. M. J. Hart, services for month of March.....	959	12.50
April 1. N. W. Telephone Ex. Co., services for April.....	960	6.00
Mar. 1. C. A. Erdmann, supplies.....	961	4.00
Mar. 26. R. B. Lees, apparatus and repairs.....	962	19.10
Mar. 8. Eberbach Drug and Chemical Co., supplies.....	963	6.25
Mar. 24. M. F. Patterson, dental supplies.....	964	67.80
April 30. Pay roll.....	988	2,157.50
April 30. D. W. Sprague, petty bills.....	989	1.00
May 1. E. B. Johnson, gas, postage, express, labor and miscell.....	1,008	81.35
April 18. Jno. A. Schliener & Co., 1 D. gummed labels.....	999	1.00
May 24. Tribune Job Printing Co., stationery and printing.....	1,004	24.17
May 1. N. W. Telephone Ex. Co., service for month of May.....	1,027	6.00
April 25. C. L. Green, M. D., services of models.....	1,030	20.70
Mar. 31. Noyes Bros. & Cutler, supplies.....	1,031	7.41
April 21. R. B. Lees, labor and material repairing.....	1,032	6.90
April 29. M. J. Hart, salary of employes.....	1,033	12.50
April 1. D. D. Merrill & Co., 7 blackboards repaired.....	1,034	53.38
April 27. M. F. Patterson, dental supplies.....	1,034	76.06
May 31. Pay roll.....	1,085	2,157.50
May 31. D. W. Sprague, petty bills.....	1,086	5.25
May 18. Leslie & McAfee, 75 pieces cloth board.....	1,093	3.25
June 1. E. B. Johnson, gas, express, postage, help, miscellaneous.....	1,097	49.52
May 14. Noyes Bros. & Cutler, supplies.....	1,122	8.63
May 22. Caswell A. Ballard, salary of employes.....	1,100	100.00
May 1. W. T. Keener Co., books for library.....	1,140	6.00
Jan. 26. F. Allport, M. D., apparatus and instruments.....	1,141	50.00
June 1. J. A. Gates, services as assistant in chemical laboratory.....	1,142	50.00
May 24. Tribune Job Printing Co., stationery and printing.....	1,143	7.75
June 1. N. W. Telephone Ex. Co., service for June.....	1,144	6.00
Mar. 20. Webster & Churchill, supplies.....	1,145	6.15
June 30. Pay roll.....	1,184	2,147.50
Total.....		\$28,571.27

COLLEGE OF AGRICULTURE.

CURRENT EXPENSE—DISBURSEMENTS.

1893.		No. Voucher.	
July 31.	Pay roll.....	22	\$646.45
July 19.	Tribune Job Print. Co., stationery and printing.....	31	12.00
July 1.	Journal Printing Co., ad. for proposals for a drill hall.....	44	16.20
June 17.	Minn. Linseed Oil Works, 1 ton oil meal.....	45	24.00
June 15.	The Aermotor Co., one 12 aermotor.....	46	25.00
July 6.	Mary H. Cheeney, 17 charts of plant diseases.....	47	15.00
June 15.	E. E. Peterson, painting and lettering 100 tree signs.....	48	8.00
May 8.	Northwestern Fuel Co., 3,000 lbs. 1 Z. W. coal.....	50	7.88
June 2.	Pillsbury-Washburn Co., 3,000 lbs. bran.....	51	13.50
June 28.	McDonald Bros., butter jars.....	52	5.60
June 21.	Held & Gruenhagen, miscellaneous hardware supplies.....	53	16.45
July 1.	Olof Schwartzkopf, 1 skeleton of a cow.....	54	25.00
June 28.	Clinton D. Smith, labor, apparatus and supplies.....	71	5.15
May 30.	Noyes Bros. & Cutler, chemical supplies.....	74	10.50
July 27.	D. W. Sprague, tree labels, cards and drawing cloth.....	86	9.50
Aug. 8.	Land and River Imp. Co., water pipe for sewer.....	87	443.66
Aug. 19.	J. A. Vye, freight on sewer pipe.....	88	29.97
Aug. 31.	Pay roll.....	106	510.76
Aug. 31.	D. W. Sprague, petty bills.....	132	9.54
Sept. 1.	The Miller Printing Co., printing 500 half tones.....	166	3.00
Sept. 6.	Chas. Wilkins & Co., work done on contract, laying water mains.....	168	325.85
Aug. 26.	J. A. Vye, freight and express.....	177	3.19
July 29.	J. A. Vye, freight, salt and miscellaneous hardware.....	179	6.31
July 26.	Held & Gruenhagen, 1 40x50 D. S. glass, cut and set.....	183	3.25
July 20.	Creamery Pkg. Mfg. Co., 2 doz. Babcock bottles.....	187	6.00
June 29.	Pioneer Fuel Co., 3,000 lbs. ea. egg and nut coal.....	188	24.75
June 24.	R. B. Lees, window and door screens.....	189	28.00
July 1.	Amber Soap Co., 90 lbs. Amber soap.....	192	6.30
Aug. 11.	Polar Creamery Co., 1 polar creamery B. B.....	198	23.00
July 28.	Geo. Marsh, surveys for water pipes and new building.....	201	7.50
Aug. 23.	R. C. Clark, inspecting 3 boilers.....	203	9.00
Aug. 31.	Tribune Job Print. Co., 500 ea. 1c and 2c postal cards.....	206	15.00
Sept. 1.	Pioneer Fuel Co., 7,400 lbs. stove coal.....	208	31.90
Sept. 30.	Pay roll.....	209	644.59
Sept. 30.	D. W. Sprague, petty bills.....	210	10.00
Oct. 13.	Goodnow & Lawther, 92,900 lbs. asst. coal.....	219	264.98
Sept. 30.	Tribune Job Print. Co., stationery and printing.....	247	17.50
Sept. 28.	J. A. Vye, express, tools and supplies.....	278	3.25
Oct. 2.	H. W. Brewster, postage stamps.....	280	8.26
May 18.	Held & Gruenhagen, window glass, set.....	281	8.30
Sept. 12.	Minn. Linseed Oil Works, 500 lbs. ground flaxseed.....	282	12.50
Sept. 23.	Held & Gruenhagen, miscellaneous hardware.....	283	6.02
Sept. 5.	M. B. Whitney, rep. walk at exp. station.....	284	8.00
Aug. 19.	Pillsbury-Washburn Co., 3,000 lbs. bran.....	286	15.00
Sept. 20.	Geo. Marsh, inspecting the laying of water pipes.....	287	24.00
Aug. 17.	St. Paul Lumber Co., 1 steel range and furniture.....	288	43.00
Oct. 31.	Pay roll.....	290	116.55
Oct. 1.	Northwestern Farmer, advertising.....	320	1,325.94
Oct. 28.	H. W. Brewster, freight, postage and miscellaneous.....	343	16.40
Oct. 1.	Farm, Stock and Home, advertising.....	344	9.55
Oct. 23.	E. W. Stewart, books for library.....	345	33.60
Oct. 15.	Chas. Wilkins & Co., furnishing and laying water mains.....	346	18.00
Oct. 27.	Mrs. D. R. Case, labor, cleaning buildings.....	347	248.27
Oct. 24.	Held & Gruenhagen, tools and repairs.....	348	54.00
Oct. 14.	The Royal Furniture and Carpet Co., stove and kitchen utensils.....	349	9.83
Oct. 17.	American Book Co., books for library.....	350	28.55
Sept. 30.	Minn. Tribune Co., advertising Farmers' Weekly.....	351	17.28
Oct. 18.	Wm. Boss, putting in sewer at school of agriculture.....	352	10.40
Oct. 2.	P. V. Collins, advertising.....	353	75.00
Oct. 10.	Deere & Co., 1 Champion scraper.....	354	18.23
Oct. 28.	S. E. Olson & Co., supplies.....	355	5.50
Oct. 31.	N. W. Fuel Co., coal and pine wood.....	356	80.91
Oct. 28.	C. Peterson, 150 gals. whole milk.....	357	110.20
Sept. 30.	Goodyear Rubber Co., 50 ft. cotton hose, wires, etc.....	358	17.25
Oct. 3.	Pillsbury-Washburn Co., 6,000 lbs. bran and 6 burlaps.....	359	5.10
Oct. 5.	Emil Greener, apparatus.....	367	30.60
Oct. 16.	Creamery Pkg. Mfg. Co., apparatus and instruments.....	390	21.40
Oct. 26.	J. A. Vye, freight, postage, labor and supplies.....	391	23.85
Sept. 30.	W. K. Morrison & Co., tools.....	392	32.57
Sept. 30.	Lyman Eliel Drug Co., supplies and repairs.....	394	5.30
Sept. 29.	Held & Gruenhagen, repairs.....	395	5.93
Oct. 12.	T. L. Haecker, miscellaneous hardware, lime, brooms, etc.....	397	5.95
Nov. 16.	Goodnow & Lawther, 79,800 lbs. stove and pea coal.....	398	10.50
Oct. 31.	Tribune Job Print. Co., stationery and printing.....	399	307.26
Nov. 30.	Pay roll.....	400	59.82
Nov. 30.	Goodnow & Lawther, 48,500 lbs. pea coal.....	401	1,480.00
Nov. 28.	Jno. A. Schlener & Co., 12 gross Gillott's pens.....	423	141.38
		432	9.00

		No. Voucher.		
April 4.	John S. Pillsbury, music furnished commencement exercises at school of agriculture.....	448	32.00	
Nov. 13.	Goodnow & Lawther, 6,000 lbs. stove coal.....	449	25.50	
Nov. 20.	Porter Radiator and Iron Co., steam fitting supplies.....	450	8.98	
Nov. 27.	H. W. Brewster, stencil paper and express.....	451	10.00	
Oct. 31.	Morris & Wilson, books for library.....	452	13.85	
Nov. 7.	Northwestern Fuel Co., 12½ tons pea coal and 4 cords wood.....	453	90.73	
Nov. 9.	Bovey De Laittre Lumber Co., 667 ft. asst. lumber.....	454	22.68	
Nov. 4.	Boutel Bros., furniture.....	455	30.00	
Nov. 18.	Robt. Clarke & Co., books for library.....	456	13.50	
Nov. 17.	Maynard, Merrill & Co., books for library.....	457	4.08	
Nov. 9.	Henry Holt & Co., books for library.....	458	18.90	
Nov. 10.	Fred. Kaempfer, supplies for taxidermae work.....	459	7.60	
Nov. 20.	Thos. Husby, stands for museum.....	460	9.00	
Nov. 13.	Noyes Bros. & Cutler, taxidermal instruments.....	461	8.45	
Nov. 23.	J. A. Vye, postage, express and supplies.....	509	18.50	
Oct. 4.	Creamery Pkg. Mfg. Co., apparatus and supplies.....	515	39.55	
Nov. 20.	Cornish, Curtis & Greene Co., machinery, supplies and repairs.....	516	61.30	
Oct. 27.	Cornish, Curtis & Greene Co., 1 100-gal. copper cheese vat.....	517	30.00	
Nov. 17.	Lyman Elieil Drug Co., supplies.....	518	9.23	
Nov. 17.	Pillsbury-Washburn Mill. Co., 10,000 lbs. bran.....	519	48.00	
Nov. 11.	Standard Oil Co., 3 bbls. gasoline.....	520	22.51	
Dec. 15.	E. J. Graham, supplies.....	521	10.00	
Nov. 25.	C. Peterson, 300 gals. milk.....	522	45.00	
Nov. 1.	John Thompson, material used in extinguishing a kerosene stove.....	525	5.25	
Nov. 9.	N. W. Fuel Co., 15 cords pine wood.....	526	47.25	
Sept. 8.	Wallace Barnes, apparatus.....	527	9.00	
Nov. 4.	St. Paul Linseed Oil Works, 2 tons meal.....	528	50.00	
Nov. 14.	F. Smith & Co., apparatus.....	529	31.20	
Nov. 28.	Held & Gruenhagen, 3 L & D. S. glass.....	530	3.95	
Dec. 31.	Pay roll.....	550	1,239.83	
Dec. 31.	D. W. Sprague, petty bills.....	551	1.25	
Dec. 29.	H. W. Brewster, postage, express, supplies.....	591	8.40	
Dec. 28.	A. J. Glover, labor on boilers.....	592	13.56	
Dec. 23.	Pillsbury-Washburn Co., 3,000 lbs. bran.....	593	15.00	
Nov. 16.	American Chemical Co., 150 lbs. Emerald soap.....	594	12.00	
Oct. 30.	Union Railway Storage Co., 30 feet No. 24 S. pipe.....	595	30.00	
Mar. 15.	Romeyn B. Hough, book for library.....	596	5.00	
Nov. 15.	Schupp & Duesler, galv. piping, Hood's, etc. for B. S.....	597	65.00	
Dec. 20.	J. Gutzwiller, Jr., books and binding for library.....	598	130.00	
Dec. 15.	Porter Radiator and Iron Co., supplies for repairs.....	599	9.43	
Dec. 28.	C. Peterson, 310 gallons milk.....	600	46.50	
Nov. 30.	Harrison & Smith, 1,000 4-page circulars.....	601	16.00	
Dec. 19.	W. T. Shaw, mounting birds, etc., for museum.....	602	10.00	
Dec. 12.	Creamery Packing Mfg. Co., 1 30-gallon oil tank.....	603	5.00	
Dec. 21.	American Book Co., books for library.....	604	18.24	
Nov. 27.	Henry Holt & Co., books for library.....	605	12.96	
Dec. 19.	W. M. Hays, books for library.....	606	5.50	
Dec. 20.	Ginn & Co., books for library.....	607	10.00	
Nov. 20.	Elmer & Amend, apparatus and supplies.....	608	27.91	
Dec. 12.	N. W. Fuel Co., 2 cords pine wood.....	609	6.30	
Dec. 22.	C. W. G. Hyde, lessons in vocal music.....	610	35.00	
Dec. 26.	Samuel B. Green, instruments, drawings and labor.....	611	8.35	
Nov. 25.	Goodnow & Lawther, 38,000 lbs. pea coal.....	612	113.11	
Jan. 20.	Wm. Boss, instructing in engineering in January, 1894.....	613	75.00	
Jan. 20.	E. L. Aderhold, instructing in cheese making in January, 1894.....	614	140.00	
Jan. 20.	John Luchsinger, services as instructor in fancy cheese making.....	615	75.00	
Jan. 20.	J. H. Hecker, instructor in fancy cheese making.....	616	75.00	
Jan. 20.	P. M. Paulson, instructor in butter making.....	617	30.00	
Dec. 29.	J. A. Vye, express, labor and miscellaneous.....	638	24.11	
Aug. 19.	Pillsbury-Washburn Co., 3,000 lbs. bran.....	646	15.00	
Dec. 28.	Porter Radiator Co., repairs.....	659	4.50	
Dec. 20.	Tribune Job Printing Co., stationery and printing.....	664	27.50	
Dec. 14.	Tribune Job Printing Co., stationery and printing.....	665	17.75	
Dec. 30.	Goodnow & Lawther, 6,000 lbs. stove coal.....	667	25.50	
1894.				
Jan. 31.	Pay roll.....	683	1,319.24	
Jan. 31.	D. W. Sprague, petty bills.....	684	11.45	
Jan. 31.	Goodnow & Lawther, 6,000 lbs. stove coal.....	694	25.50	
Jan. 25.	Tribune Job Printing Co., stationery and printing.....	700	3.50	
Nov. 15.	W. R. Miller, photographing school buildings.....	712	5.00	
Jan. 13.	Joel P. Heatwole, advertising School of Agriculture.....	713	10.00	
Jan. 24.	Held & Gruenhagen, repairs.....	714	5.30	
Jan. 23.	Janney, Semple & Co., coal and iron supplies.....	715	24.98	
Jan. 10.	American Book Co., books for library.....	716	4.27	
Jan. 6.	Northwestern Fuel Co., pine wood and coal.....	717	119.55	
Jan. 4.	Goodnow & Lawther, 6,000 lbs. stove coal.....	718	25.50	
Dec. 20.	Bausch & Lomb Optical Co., apparatus.....	719	43.65	
Jan. 6.	Lyman Elieil Drug Co., 4 boxes crayons.....	775	32	

		No. Voucher.	
Dec. 22.	Porter Radiator Co., repairs	787	1.26
Jan. 11.	Tribune Job Printing Co., stationery and printing	789	1.70
Jan. 23.	Brooks Bros., 799 feet assorted lumber	792	29.88
Feb. 28.	Pay roll	802	1,373.79
Feb. 28.	D. W. Sprague, petty bills	803	12.58
Mar. 1.	E. B. Johnson, second-hand buggy	814	10.00
Jan. 16.	Tribune Job Printing Co., stationery and printing	843	5.00
Feb. 25.	H. W. Brewster, freight, postage, library and miscellaneous	844	8.27
Feb. 1.	Porter Radiator and Iron Co., repairs	845	7.60
Feb. 20.	John A. Lundberg, labor and material repairs	846	6.00
Feb. 27.	Louis Dreka, 20 diplomas	850	25.00
Feb. 12.	Held & Gruenhagen, supplies	851	12.40
Feb. 21.	Koehler & Hinricks, 1 Enterprise meat cutter	854	4.00
Dec. 16.	C. D. Holbrook, 1 engine, complete	856	295.00
Feb. 26.	J. A. Vye, express and supplies	868	3.25
Feb. 14.	Northwestern Fuel Co., coal	869	12.20
Mar. 31.	Pay roll	888	1,314.71
Mar. 31.	D. W. Sprague, petty bills	913	5.60
Mar. 26.	Jno. A. Schlener & Co., stationery	916	.50
Mar. 31.	H. W. Brewster, postage and miscellaneous	922	9.36
Mar. 14.	J. A. Vye, books and magazines for library	923	9.10
April 2.	J. A. Vye, salaries of employes	924	61.16
Mar. 30.	C. W. G. Hyde, salary of employes	925	50.00
April 2.	Wm. Boss, repairing buggy	928	10.00
Mar. 8.	Janney, Semple & Co., supplies	929	19.49
Mar. 28.	J. A. Vye, salaries of employes, postage and miscellaneous	965	8.91
Mar. 1.	Michigan Cedar Co., 2 flag poles	967	12.25
Sept. 29.	Jno. A. Schlener & Co., supplies	968	10.00
Mar. 25.	Linnea Luggier, mounting plants for Herbarium	980	5.10
Feb. 21.	Held & Gruenhagen, 25 gallons gasoline	983	2.50
Feb. 15.	The Crane & Ordway Co., repairs	984	10.30
Mar. 8.	Rickard & Gruman, engrossing diplomas	986	9.50
April 30.	Pay roll	988	854.24
Jan. 23.	New England Furniture and Carpet Co., furniture	1,028	8.34
April 25.	North Star Quartette, music on Agricultural School commencement	1,029	15.00
April 28.	H. W. Brewster, postage stamps and stationery	1,040	7.90
April 28.	Pioneer Press Co., subscription for Pioneer Press for library	1,041	5.00
Mar. 29.	Tribune Job Press Co., stationery and printing	1,042	6.50
April 27.	J. A. Vye, specimens and express	1,043	2.90
April 21.	R. R. Howell & Co., tools and machinery	1,045	2.90
Mar. 29.	Goodnow & Lawther, 47,790 lbs. pea coal	1,047	139.32
Mar. 22.	Goodnow & Lawther, 170,190 lbs. assorted coal	1,048	556.03
April 23.	Held & Gruenhagen, supplies	1,049	9.31
April 24.	Tribune Job Printing Co., 1,000 4-page circulars	1,050	12.00
May 31.	Pay roll	1,085	912.81
May 31.	J. A. Vye, cement and express	1,146	2.10
May 29.	Miles & Hale, general fittings	1,147	101.45
May 23.	Sam'l B. Green, labor	1,153	3.13
May 28.	Northrop, Brasian & Goodman, seeds and plants	1,154	18.00
June 30.	Pay roll	1,184	823.46
Total			\$19,271.31

Experiment Station.

GENERAL STATION—CURRENT EXPENSE—DISBURSEMENTS.

1893.		No. Voucher.	
July 31.	Pay roll	22	\$209.80
June 28.	Clinton D. Smith, freight, express and miscellaneous	71	4.90
June 14.	Wm. Boss, drawing map of farm	73	5.00
June 30.	E. H. S. Dartt, salaries of employes and miscellaneous	75	97.83
Mar. 20.	Fairbanks, Morse & Co., - 7½x30 art engine	76	340.00
June 3.	J. Gutzwiller, Jr., 15,650 copies Bulletin No. 28	83	428.18
Aug. 8.	Land and River Imp. Co., water pipe for sewer	87	443.65
Aug. 19.	J. A. Vye, freight on sewer pipe	88	29.98
Aug. 31.	Pay roll	106	221.88
Aug. 31.	D. W. Sprague, petty bills	132	3.00
Aug. 23.	Jno. A. Schlener & Co., 1 quart Carter's fluid	146	.60
Sept. 1.	N. W. Telephone Exchange Co., service for September, 1893	159	7.00
Aug. 1.	N. W. Telephone Ex. Co., service for August, 1893	160	7.00
Sept. 6.	Chas. Wilkins & Co., work done on contract laying water mains	168	325.85
Aug. 26.	J. A. Vye, postage, telegrams, express, labor, etc.	177	32.75
Aug. 26.	Clinton D. Smith, 1 double carriage complete	178	60.00
July 29.	J. A. Vye, postage, express and labor	179	20.97
June 17.	Fairbanks, Morse & Co., 1 split cross head No. 40 for steam pump	185	6.40
Aug. 23.	R. C. Clark, inspecting 1 boiler	204	3.00
July 28.	Geo. Marsh, surveying for water pipe and new building	201	7.50
Sept. 30.	Pay roll	209	164.35

UNIVERSITY BOARD OF REGENTS.

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	No. Voucher.		
Oct. 1.	The N. W. Telephone Ex. Co., service for October.....	246	7.00
Sept. 28.	J. A. Vye, postage, oil heater, office help and express.....	278	22.00
Sept. 20.	Geo. Marsh, inspecting work of laying water pipes.....	287	24.00
Oct. 31.	Pay roll.....	320	186.16
Oct. 30.	D. W. Sprague, petty bills.....	321	4.00
Nov. 1.	N. W. Telephone Ex. Co., service for November.....	340	7.00
Oct. 15.	Chas. Wilkins & Co., furnishing and laying water mains....	347	248.27
Sept. 28.	P. Howard, repairs.....	388	5.25
Oct. 26.	J. A. Vye, postage, repairs and miscellaneous.....	392	25.39
July 1.	Gustav E. Stechert, books for library.....	393	20.63
Oct. 31.	Tribune Job Print. Co., stationery and printing.....	400	4.50
Nov. 30.	Pay roll.....	421	240.63
Nov. 28.	Jno. A. Schlener & Co., 1 letter book.....	432	1.35
Dec. 1.	N. W. Telephone Co., service for December, 1893.....	496	7.00
Nov. 28.	J. A. Vye, postage, express, repairs and miscellaneous.....	509	42.95
Nov. 24.	Geo. Marsh, surveys and maps of farm.....	512	75.00
Nov. 23.	Union Railway Storage Co., 500 ft. 3 in. drain tile.....	514	17.50
Nov. 23.	C. A. Smith Lumber Co., 1,340 ft. assorted lumber.....	524	40.33
Oct. 5.	Thos. K. Gray, repairs.....	531	7.65
Dec. 31.	Pay roll.....	550	238.63
Dec. 30.	N. W. Telephone Ex. Co., service for January, 1894.....	631	7.00
Dec. 29.	J. A. Vye, postage, miscellaneous.....	638	25.80
Nov. 23.	Jno. A. Schlener & Co., stationery and office supplies.....	642	5.29
Dec. 1.	E. H. S. Dartt, expenses from July 1st to December 1st, 1893, at Owatonna Exp. Station.....	643	109.09
Dec. 27.	Leck & Leck, labor and material furnished in erecting east wing of farm barn.....	644	1,836.00
Dec. 20.	Northwestern Fuel Co., 14,100 pounds H. V. coal.....	645	31.68
Dec. 6.	H. L. Collins & Co., 2 doz. leader inv. files.....	655	17.00
Nov. 30.	W. K. Morrison & Co., miscellaneous hardware.....	657	2.08
Dec. 28.	Porter Radiator Co., repairs.....	659	5.58
Dec. 14.	Tribune Job Print. Co., stationery and printing.....	665	12.75
Dec. 30.	Goodnow & Lawther, 291,300 lbs. pea coal.....	667	849.18
Jan. 31.	Pay roll.....	683	228.58
Jan. 6.	Crane & Ordway Co., tools, apparatus and supplies.....	721	8.55
Feb. 1.	N. W. Telephone Ex. Co., service for February, 1894.....	758	7.00
Jan. 26.	J. A. Vye, oil, lamp and sapollo.....	761	5.00
Jan. 12.	Goodnow & Lawther, pea coal.....	763	124.83
Jan. 29.	J. Gutzwiller, Jr., stationery and printing.....	764	315.50
Oct. 31.	Fairbanks, Morse & Co., repairing water tower.....	770	168.04
Jan. 25.	Leck & Leck, building east wing farm barn.....	771	220.00
Jan. 24.	J. M. Maurer, putting in water pipes.....	772	80.00
Jan. 6.	M. Lydon, 1 bus body for sleds.....	781	30.00
Dec. 22.	Porter Radiator and Iron Co., repairs.....	787	5.50
Jan. 11.	Tribune Job Print. Co., stationery and printing.....	789	3.00
Feb. 28.	Pay roll.....	802	317.06
Feb. 28.	D. W. Sprague, petty bills.....	803	1.81
Feb. 26.	J. A. Vye, telegram, express and supplies.....	840	2.30
Feb. 19.	Tribune Job Printing Co., stationery and printing.....	852	9.75
Feb. 21.	Koehler & Hinrichs, 2 hs. en., Sage & Pepper.....	854	1.00
Mar. 1.	N. W. Telephone Ex. Co., service for March, 1894.....	862	7.00
Feb. 26.	J. A. Vye, express, postage, furniture and supplies.....	868	50.05
Feb. 14.	Northwestern Fuel Co., coal.....	869	30.80
Feb. 5.	J. Gutzwiller, Jr., stationery and printing.....	871	165.51
Feb. 15.	R. R. Howell & Co., repairs.....	873	8.00
Jan. 29.	Thos. K. Gray, repairs.....	874	5.20
Feb. 3.	C. A. Smith Lumber Co., repairs.....	877	19.75
Mar. 31.	Pay roll.....	888	225.10
1894.			
Mar. 31.	D. W. Sprague, petty bills.....	913	3.75
April 1.	N. W. Telephone Ex. Co., services for April.....	960	7.00
Mar. 28.	J. A. Vye, salaries of employes, postage, miscellaneous.....	965	55.68
April 3.	Leck & Leck, labor and material used on barn.....	966	439.00
Sept. 29.	Jno. A. Schlener & Co., supplies.....	968	1.25
Mar. 27.	Chas. R. Aldrich, architect's fees.....	971	76.95
Mar. 23.	Marion Hays, drawing and engraving.....	972	20.20
Mar. 6.	Tribune Job Print. Co., 4,000 envelopes.....	973	8.00
Mar. 28.	J. Gutzwiller, Jr., 2,500 copies Press Bulletin.....	976	20.75
Feb. 21.	Held & Gruenhagen, supplies.....	983	1.75
April 2.	W. M. Hays, miscellaneous.....	985	15.45
April 30.	Pay roll.....	988	208.96
April 18.	Jno. A. Schlener & Co., 1 qt. Carter's Arabin.....	999	1.00
May 1.	N. W. Telephone Ex. Co., service for May.....	1,027	7.00
April 27.	J. A. Vye, express, postage and supplies.....	1,043	50.55
Mar. 31.	Harrison & Smith, stationery and printing.....	1,064	295.88
May 31.	Pay roll.....	1,085	186.44
June 1.	N. W. Telephone Ex. Co., service for June.....	1,144	7.00
May 31.	J. A. Vye, postage, labor, supplies.....	1,146	38.07
May 31.	W. M. Hays, freight and transportation, postage, miscellaneous.....	1,156	41.41
May 7.	H. L. Collins Co., stationery and printing.....	1,162	7.90
June 30.	Pay roll.....	1,184	291.08

Total.....

\$10,371.33.

EIGHTH BIENNIAL REPORT

Experiment Station.

DIVISION OF AGRICULTURE—CURRENT EXPENSE.

1893.		No. Voucher.	
July 31.	Pay roll.....	22	\$487.69
June 21.	Held & Gruenhagen, tools.....	53	1.53
June 28.	Clinton D. Smith, express, seeds and miscellaneous.....	71	6.65
May 4.	Clinton D. Smith, lumber for repairs.....	72	7.78
April 20.	Northrop, Braslan & Goodnow, seeds and plants.....	78	59.63
May 11.	C. L. Moffatt, horse shoeing and repairs.....	80	13.50
June 10.	Lindsay Bros., tools and machinery.....	81	7.00
June 1.	Adam Lindig, 11 bu. potatoes.....	84	8.25
Aug. 31.	Pay roll.....	106	371.86
Aug. 26.	J. A. Vye, freight, repairs, supplies, etc.....	177	17.67
July 29.	J. A. Vye, telegrams repairs, and supplies.....	179	12.05
Aug. 23.	Mrs. R. Carroll, boarding threshers.....	181	17.50
July 12.	Squires & Todd, lumber for repairs.....	182	11.33
July 26.	Held & Gruenhagen, miscellaneous hardware.....	183	6.43
July 1.	Milburn, Stoddard & Co., 1 12-ft. wood rake.....	184	26.00
April 4.	W. K. Morrison & Co., 1/2 doz. Mett. brooms.....	190	2.00
July 24.	Lindsay Bros., 150 lbs. binding twine.....	191	16.50
Aug. 26.	T. H. Hellary, 10 bu. rye.....	193	7.50
Aug. 18.	Lake Superior Coal Co., 36,300 lbs. Hocking coal.....	195	78.05
July 12.	W. K. Morrison & Co., miscellaneous hardware.....	196	9.65
June 1.	C. L. Moffatt, horse shoeing and repairs.....	197	9.75
Aug. 23.	R. C. Clark, inspecting 1 boiler.....	204	3.00
Aug. 10.	J. A. Powers & Co., threshing oats, barley and wheat.....	205	34.69
Sept. 30.	Pay roll.....	209	286.21
Sept. 28.	J. A. Vye, labor, repairs, supplies.....	278	21.83
Aug. 30.	Bemis Bros. Bag Co., 75 2 1/2 lb. cotton, plain.....	279	2.25
Sept. 23.	Held & Gruenhagen, miscellaneous hardware.....	283	11.58
Sept. 21.	C. A. Smith Lumber Co., 170 feet clear lumber.....	285	6.99
Oct. 31.	Pay roll.....	320	237.01
Oct. 26.	J. A. Vye, implements, repairs and supplies.....	392	7.90
Sept. 30.	W. K. Morrison & Co., 45 lbs. tarred felt.....	394	.90
Sept. 26.	C. L. Moffatt, horse shoeing.....	396	9.75
Sept. 29.	Held & Gruenhagen, miscellaneous hardware.....	397	1.65
Nov. 30.	Pay roll.....	421	257.55
Nov. 28.	J. A. Vye, freight transportation, supplies and miscellaneous.....	509	18.23
Nov. 29.	J. A. Vye, 4 head cattle and 200 lbs. hay.....	510	91.40
Nov. 6.	Wilcox & Liggett, 4 heifers and 1 cow.....	511	172.20
Nov. 18.	N. W. Fuel Co., 6,400 lbs. H. V. coal.....	513	13.92
Nov. 14.	G. W. Plunk, stock.....	523	20.00
Dec. 31.	Pay roll.....	550	259.83
Dec. 31.	D. W. Sprague, petty bills.....	551	2.10
Dec. 29.	J. A. Vye, express, freight commission.....	638	4.95
Dec. 29.	J. A. Vye, live stock and freight.....	639	163.83
Dec. 28.	W. M. Hays, R. R. fare, board and miscellaneous.....	641	20.52
Dec. 20.	The Crane & Ordway Co., repairs.....	674	42.50
Nov. 24.	Held & Gruenhagen, repairs.....	648	6.59
Dec. 27.	F. W. Pratt, moving building.....	650	50.00
Oct. 10.	C. L. Moffatt, horse shoeing and and repairs.....	652	9.75
Dec. 28.	P. Howard, repairs.....	653	7.50
Dec. 9.	L. Johnson, stock.....	656	40.00
Nov. 30.	W. K. Morrison & Co., miscellaneous hardware.....	667	10.85
Dec. 12.	Kelley Bros. & Co., labor, man and team.....	661	78.00
1894.			
Jan. 31.	Pay roll.....	683	188.12
Jan. 9.	Crane & Ordway Co., repairs.....	721	1.69
Jan. 26.	J. A. Nye, freight, stationery, etc.....	761	22.15
Jan. 6.	J. A. Vye, 24,000 lbs. screenings.....	762	117.00
Jan. 26.	John Walsh, 30,169 lbs. hay.....	766	143.30
Jan. 1.	Crosgrove Live Stock Co., 3 steers.....	768	101.15
Jan. 15.	Adam Lindig, 3,895 lbs. clover hay.....	776	19.48
Jan. 16.	John Hardy, 5,045 lbs. timothy and clover hay.....	777	22.71
Jan. 8.	A. Geismann, 2,100 lbs. hay.....	778	8.40
Jan. 29.	C. L. Moffatt, horse shoeing and repairs.....	783	7.25
Jan. 12.	H. M. Johnson, 17,350 lbs. hay.....	790	39.82
Feb. 28.	Pay roll.....	802	157.87
Feb. 12.	Held & Gruenhagen, supplies.....	851	7.26
Feb. 15.	Pillsbury-Washburn, 1/2 ton bran and sacks.....	853	5.85
Feb. 26.	C. Peterson, 510 lbs. beef.....	855	25.50
Feb. 26.	J. A. Vye, freight.....	868	14.40
Feb. 14.	Northwestern Fuel Co., coal.....	869	56.78
Feb. 15.	Hubert Vonsten, 382 lbs. dressed pork.....	870	24.83
Jan. 16.	S. Swanson, boring 282 feet well.....	872	466.30
Feb. 15.	R. R. Howell & Co., 1 well auger.....	873	3.00
Feb. 3.	A. M. Johnson, feed.....	875	36.77
Feb. 20.	E. W. Hendrickson, feed.....	876	78.20
Mar. 31.	Pay roll.....	888	208.15
Mar. 28.	J. A. Vye, salaries of emp., postage, miscellaneous.....	965	12.22
Mar. 15.	Brooks Bros., lumber for repairs.....	970	1.71
Mar. 20.	Bemis Bros' Bag Co., supplies.....	975	8.75
Feb. 23.	W. K. Morrison & Co., tools and supplies.....	978	6.15

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		No. Voucher.	
Feb. 24.	C. L. Moffat, horse shoeing and repairs.....	982	9.75
April 30.	Pay roll.....	988	320.72
April 27.	J. A. Vye, express, freight, labor and supplies.....	1,043	40.79
April 16.	Pillsbury-Washburn Co.....	1,044	10.00
April 21.	R. R. Howell & Co., supplies.....	1,045	1.85
April 14.	Frank Wilsbacher, feed (hay and oats).....	1,046	58.80
April 23.	Held & Gruenhagen, supplies.....	1,049	25
April 27.	J. A. Vye, stock, freight and transportation.....	1,053	187.64
Mar. 24.	Brooks Bros., lumber for repairs.....	1,054	5.00
April 25.	E. W., Hendrickson, 1,600 lbs. hay.....	1,055	7.20
April 27.	J. C. Vaughan, seeds.....	1,056	1.00
April 6.	James M. Thorburn & Co., seeds and plants.....	1,057	3.85
April 26.	C. L. Moffat, horse shoeing.....	1,059	10.50
April 23.	Bemis Bros. Bag Co., supplies.....	1,070	6.25
May 31.	Pay roll.....	1,085	433.13
May 31.	J. A. Vye, express, labor and supplies.....	1,146	64.01
May 22.	Lyman Eliel Drug Co., supplies.....	1,152	1.60
May 28.	Northrop, Braslan, Goodwin & Co., seeds and plants.....	1,154	20.71
May 31.	W. M. Hays, labor.....	1,156	8.13
May 24.	W. R. Gregg, transportation, board and labor.....	1,157	8.05
April 26.	Northrop, Braslan, Goodwin Co., seeds and plants.....	1,160	72.14
May 17.	L. L. May & Co., seeds and plants.....	1,161	5.25
.....	E. W. Hendrickson.....	1,166	32.13
April 5.	Dominion exper. farm, seeds and plants.....	1,168	6.70
April 30.	F. A. Fletcher & Co., 1 set harness and repairs.....	1,172	29.75
May 17.	DeCou & Co., seeds and plants.....	1,173	2.18
May 25.	Held & Gruenhagen, tools and supplies.....	1,174	3.78
June 30.	Pay roll.....	1,184	489.20
Total.....			\$6,691.34

Experiment Station.

DIVISION OF CHEMISTRY—CURRENT EXPENSE.

		No. Voucher.	
1893.			
July 31.	Pay roll.....	22	\$133.33
June 21.	Held & Gruenhagen, rep, tanks and miscellaneous.....	53	5.50
June 28.	Clinton D. Smith, express on soil.....	71	1.15
May 30.	Noyes Bros. & Cutler, chemical supplies.....	74	13.51
Aug. 31.	Pay roll.....	106	120.83
Aug. 26.	A. J. Vye, transportation, freight and supplies.....	177	5.46
July 29.	J. A. Vye, express and 2 blank books.....	179	3.05
July 13.	Standard Oil Co., gasoline.....	186	7.79
Aug. 5.	Elmer & Amend, apparatus and supplies.....	199	15.62
Aug. 9.	Noyes Bros. & Cutler, 374 lbs. com. sulph. acid.....	200	6.55
Aug. 23.	R. C. Clark, inspecting one boiler.....	204	3.00
Sept. 30.	Pay roll.....	209	115.78
Sept. 28.	J. A. Vye, cleaning chem. laboratory.....	278	2.50
Sept. 23.	Held & Gruenhagen, miscellaneous hardware.....	283	9.75
Sept. 21.	C. A. Smith Co., 106 ft. lumber.....	285	3.40
Sept. 19.	Standard Oil Co., 2 bbls. gasoline.....	289	13.28
Oct. 31.	Pay roll.....	320	99.89
Oct. 30.	D. N. Harper, salary month of December, 1891.....	382	125.00
Oct. 13.	Noyes Bros. & Cutler, chemical supplies.....	384	18.12
Oct. 26.	J. A. Vye, freight, stationery, labor.....	392	11.45
July 1.	Gustav E. Stecher, books for library.....	393	43.38
Oct. 31.	Tribune Job Printing Co., stationery and printing.....	400	1.50
Nov. 30.	Pay roll.....	421	105.79
Nov. 28.	J. A. Vye, freight and express.....	509	2.05
Nov. 11.	Standard Oil Co., 3 bbls. gasoline.....	520	22.51
Dec. 31.	Pay roll.....	550	74.07
Dec. 29.	J. A. Vye, labor, express and freight.....	638	9.07
Dec. 11.	Emil Greiner, apparatus.....	640	11.11
Dec. 20.	Noyes Bros. & Cutler, supplies.....	649	8.42
1894.			
Jan. 31.	Pay roll.....	683	138.83
Jan. 26.	J. A. Vye, labor, cleaning.....	761	5.00
Jan. 26.	Goodnow & Lawther, pea coal.....	763	58.62
Jan. 29.	Noyes Bros. & Cutler, 10 lbs. comr. sodium.....	784	.90
Jan. 31.	Manchester Creamery Assc., supplies.....	795	141.38
Feb. 28.	Pay roll.....	802	95.83
Feb. 26.	J. A. Vye, express.....	840	.50
Feb. 12.	Held & Gruenhagen, supplies.....	851	1.25
Feb. 26.	J. A. Vye, express, labor, stationery and miscellaneous.....	868	11.13
Mar. 31.	Pay roll.....	888	102.83
Feb. 26.	J. A. Vye, express, labor, stationery and miscellaneous.....	965	4.05
April 30.	Pay roll.....	988	97.83
May 1.	E. B. Johnson, supplies.....	1,008	28.37
April 27.	J. A. Vye, labor and express.....	1,043	4.55
April 14.	Standard Oil Co., 3 bbls. gasoline.....	1,058	23.62
April 27.	Noyes Bros. & Cutler, supplies.....	1,060	21.21

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		No. Voucher.	
April 3.	Elmer & Amend, apparatus and instruments.....	1,069	14.23
May 31.	Pay roll.....	1,085	101.83
May 31.	J. A. Vye, express, miscellaneous supplies.....	1,146	1.75
May 7.	Noyes Bros. & Cutler, ½ gro. Mason's qt. cans.....	1,159	3.54
June 30.	Pay roll.....	1,184	120.83
Total.....			<u>\$1,975.92</u>

Experiment Station.

DIVISION OF ENTOMOLOGY—CURRENT EXPENSE.

		No. Voucher.	
1893.			
July 31.	Pay roll.....	22	\$145.58
June 21.	Held & Gruenhagen, miscellaneous hardware.....	53	3.20
June 28.	Clinton D. Smith, freight on books.....	71	1.06
May 17.	C. A. Smith Lumber Co., 577 ft. lumber.....	77	20.35
Aug. 31.	Pay roll.....	106	132.63
Aug. 26.	J. A. Vye, 98 ft. lumber and express.....	177	3.19
July 26.	Held & Gruenhagen, ½ gal. green sh. paint.....	183	1.50
June 13.	A. B. Seymour, book for library.....	202	10.71
Sept. 30.	Pay roll.....	209	128.33
Sept. 30.	Bemis Bros. Bag Co., 200 string samples.....	279	6.00
Oct. 31.	Pay roll.....	320	122.14
Oct. 26.	J. A. Vye, stationery.....	392	.75
July 1.	Gustav E. Stechert, books for library.....	393	31.46
Sept. 29.	Held & Gruenhagen, 1 gas heater.....	397	8.00
Oct. 31.	Tribune Job Print. Co., stationery and printing.....	400	5.00
Nov. 30.	Pay roll.....	421	84.83
Nov. 28.	J. A. Vye, express.....	509	1.15
Nov. 28.	Held & Gruenhagen, supplies.....	530	2.45
Dec. 31.	Pay roll.....	550	93.41
Dec. 29.	J. A. Vye, freight transportation, hotel fare.....	638	13.45
Dec. 29.	J. A. Vye, freight.....	639	8.45
Nov. 23.	Jno. A. Schlener & Co., 2 letter files.....	642	1.00
1894.			
Jan. 31.	Pay roll.....	683	83.33
Dec. 12.	Gustav E. Stechert, Books for library.....	765	157.60
Jan. 24.	Held & Gruenhagen, supplies.....	786	3.10
Feb. 28.	Pay roll.....	802	84.08
Mar. 31.	Pay roll.....	888	83.33
April 17.	Hensel, Brockmann & Lorbacher, duty and freight on seeds.....	915	10.30
April 30.	Pay roll.....	988	90.44
April 27.	J. A. Vye, express.....	1,043	2.95
April 27.	Noyes Bros. & Cutler, supplies.....	1,060	.66
Jan. 26.	Gustav E. Stechert, books for library.....	1,067	34.25
May 31.	Pay roll.....	1,085	83.33
May 31.	J. A. Vye, express.....	1,146	2.38
June 30.	Pay roll.....	1,184	83.33
Total.....			<u>\$1,543.72</u>

Experiment Station.

DIVISION OF HORTICULTURE—CURRENT EXPENSE.

		No. Voucher.	
1893.			
July 31.	Pay roll.....	22	\$174.02
June 28.	Clinton D. Smith, shears, seeds and plants.....	71	13.57
May 29.	Iowa Agricultural College, trees.....	79	9.40
May 11.	C. L. Moffatt, setting 4 horse shoes.....	80	1.00
June 19.	S. B. Green, express, freight and supplies.....	82	20.15
May 23.	Academy Nursery, seeds and plants.....	85	8.50
Aug. 31.	Pay roll.....	106	227.61
Aug. 26.	J. A. Vye, trees, plants, crates, labels and seeds.....	177	16.87
July 29.	J. A. Vye, berry plants and maple seedlings.....	179	6.50
July 25.	Sam'l. B. Green, freight, labor, supplies.....	180	12.04
July 26.	Held & Gruenhagen, 2 handled axes and tacks.....	183	2.05
April 4.	W. K. Morrison & Co., implements, twine, baskets.....	190	3.03
Aug. 17.	M. B. Whitney, rep. basement of dairy building.....	194	7.50
June 1.	C. L. Moffatt, horse shoeing and repairs.....	197	9.75
Sept. 30.	Pay roll.....	209	205.43
Sept. 28.	J. A. Vye, 50 pinus bauksiana and freight.....	278	3.37
Sept. 23.	Held & Gruenhagen, miscellaneous hardware.....	283	2.90
Oct. 31.	Pay roll.....	320	231.81
Oct. 10.	Brown & Haywood Co., 2 box glass.....	389	6.70
Oct. 26.	J. A. Vye, labor, freight and miscellaneous.....	394	9.54
Sept. 30.	W. K. Morrison & Co., 2 bu. baskets.....	396	.30
Sept. 26.	C. L. Moffatt, horse shoeing and repairs.....	396	3.25
Sept. 26.	Held & Gruenhagen, 1 oil heater.....	397	8.50
Nov. 30.	Pay roll.....	421	194.16

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		No. Voucher.	
Nov. 28.	J. A. Vye, express, repairs and miscellaneous.....	509	8.42
Nov. 28.	Held & Gruenhagen, supplies.....	530	6.65
Dec. 31.	Pay roll.....	550	151.35
Dec. 29.	J. A. Vye, labor, express, supplies.....	638	9.15
Oct. 23.	M. A. Thayer, 450 blackberry plants.....	651	6.60
Oct. 10.	C. L. Moffatt, repairs.....	652	2.40
Nov. 30.	W. K. Morrison & Co., miscellaneous hardware.....	657	1.50
Oct. 6.	J. C. Vaughan, seeds and plants.....	660	11.14
1894.			
Jan. 31.	Pay roll.....	683	145.78
Jan. 31.	D. W. Sprague, petty bills.....	684	4.70
Jan. 29.	C. L. Moffatt, horse shoeing and repairs.....	783	3.15
Jan. 17.	J. G. Swahn's Sons, 300 asst. pot stands.....	785	5.44
Feb. 28.	Pay roll.....	802	141.89
Feb. 28.	D. W. Sprague, petty bills.....	803	2.15
Feb. 12.	Held & Gruenhagen, supplies.....	851	1.50
Feb. 26.	J. A. Vye, express, labor, supplies.....	868	5.82
Mar. 31.	Pay roll.....	888	160.07
Mar. 22.	F. A. Fletcher & Co., repairing harness.....	979	9.35
April 30.	Pay roll.....	988	248.23
April 27.	J. A. Vye, express.....	1,043	1.92
April 23.	Held & Gruenhagen, supplies.....	1,049	4.60
April 24.	Tribune Job Print. Co., 1,000 envelopes.....	1,050	2.00
April 27.	J. C. Vaughan, seeds and plants.....	1,056	13.04
April 6.	James M. Thorburn & Co., seeds and plants.....	1,057	2.19
April 10.	Thos. Meehan & Sons, seeds and plants.....	1,061	8.45
April 7.	Ellwanger & Barry, seeds and plants.....	1,062	16.90
April 9.	Stayman & Blacke, seeds and plants.....	1,063	6.00
April 14.	Stark Bros., seeds and plants.....	1,065	11.10
April 11.	Howe, Hamilton & Graul, 1 cultivator.....	1,068	5.00
April 23.	Bemis Bros. Bag Co., supplies.....	1,070	4.73
May 31.	Pay roll.....	1,085	244.92
May 31.	J. A. Vye, freight, repairs, supplies.....	1,146	10.46
May 23.	Sam'l. B. Green, freight and miscellaneous.....	1,153	15.42
May 7.	Noyes Bros. & Cutler, 100 lbs. sulph. copper coml.....	1,159	5.00
April 23.	F. F. Pratt, 7 sacks seed potatoes.....	1,163	8.70
May 16.	Goodyear Rubber Co., 65 ft. hose.....	1,164	8.10
April 2.	C. G. Patten, seeds and plants.....	1,165	5.45
May 23.	Lindsay Bros., tools and machinery.....	1,169	8.67
May 28.	Iowa Agricultural College, seeds and plants.....	1,170	9.75
April 16.	F. P. Porter, seeds and plants.....	1,171	9.75
May 17.	DeCou & Co., seeds and plants.....	1,173	3.50
May 25.	Held & Gruenhagen, tools and supplies.....	1,174	2.77
June 30.	Pay roll.....	1,184	322.73
Total.....			\$2,834.59

Experiment Station.

DAIRY AND ANIMAL HUSBANDRY.

		No. Voucher.	
1893.			
Aug. 31.	Pay roll.....	106	\$194.13
Sept. 30.	Pay roll.....	209	196.70
Sept. 28.	J. A. Vye, supplies.....	278	5.00
Oct. 31.	Pay roll.....	320	381.99
Sept. 30.	C. B. & I. H. Smith, 1 oil heating stove.....	385	9.00
Nov. 30.	Pay roll.....	421	411.89
Dec. 31.	Pay roll.....	550	434.49
Dec. 31.	D. W. Sprague, petty bills.....	551	1.20
Dec. 29.	J. A. Vye, tools.....	638	2.00
Dec. 20.	The Crane & Ordway Co., repairs.....	647	3.44
Dec. 19.	Frank Lindig, 1 horse, vet. dent.....	654	5.00
Dec. 13.	O. A. Smith Lumber Co., 739 ft. asst. lumber.....	658	14.51
1894.			
Jan. 31.	Pay roll.....	683	624.46
Jan. 25.	Tribune Job Print. Co., stationery and printing.....	700	6.50
Jan. 13.	Crane & Ordway Co., repairs.....	721	13.26
Jan. 24.	J. A. Vye, freight, express, telegram and miscellaneous.....	760	145.39
Jan. 26.	J. A. Vye, freight, express, telegram and miscellaneous.....	761	12.23
Jan. 29.	Cornish, Curtis & Greene Co., tools, mach. equipment supplies.....	769	107.32
Jan. 29.	Crescent Creamery Co., supplies.....	769	878.08
Jan. 24.	J. M. Maurer, putting in water pipes.....	772	80.00
Jan. 25.	G. Peterson, 310 gal. milk.....	773	46.50
Jan. 8.	Fillsbury-Washburn, stock feed.....	774	45.90
Jan. 6.	Lyman Eliel Drug Co., supplies.....	775	11.90
Dec. 28.	Koehler & Hinrichs, 1 50-gal. copper-lined tank.....	779	51.00
Jan. 4.	Arthur W. Field, repairs.....	780	10.75
Jan. 29.	T. L. Haecker, 1 sleigh and robe.....	782	26.75
Jan. 29.	Noyes Bros. & Cutler, supplies.....	784	6.09
Jan. 24.	Held & Gruenhagen, repairs.....	786	12.03

		No. Voucher.	
Dec. 22.	Porter Radiator and Iron Co., repairs.....	787	13.74
Jan. 11.	Tribune Job Print. Co., stationery and printing.....	789	17.25
Jan. 31.	F. Kuchenbecker, supplies.....	788	60.20
Jan. 29.	Creamery Package Mfg. Co., supplies.....	791	10.70
Jan. 31.	F. E. Noble, supplies.....	793	79.18
Jan. 31.	John Flindt, supplies.....	794	90.28
Jan. 31.	Manchester Creamery Assc. supplies.....	795	90.79
Feb. 28.	Pay roll.....	802	492.10
Feb. 28.	D. W. Sprague, petty bills.....	803	3.20
Jan. 30.	Crescent Creamery Co., supplies.....	836	481.28
Dec. 27.	F. B. Fargo & Co., apparatus and supplies.....	837	40.55
Feb. 5.	Minn. Linseed Oil Works, 1 ton oil meal.....	838	25.00
Jan. 15.	J. H. Heacker, apparatus.....	839	9.00
Feb. 26.	J. A. Vye, freight and express.....	840	22.85
Jan. 2.	G. Calvor, books for library.....	841	3.61
Jan. 14.	F. M. Sharples, repairing.....	842	6.50
Feb. 12.	Cornish, Curtis & Greene Co., apparatus and supplies.....	847	15.45
Jan. 30.	Lyman, Eliel Drug Co., supplies.....	848	10.35
Dec. 30.	Archambo, Martin & Morse, repairs.....	849	6.75
Feb. 12.	Held & Gruenhagen, repairs.....	851	1.15
Feb. 19.	Tribune Job Print. Co., stationery and printing.....	852	11.00
Feb. 15.	Pillsbury-Washburn, 3½ tons bran.....	853	40.05
Feb. 26.	C. Peterson, 280 gal. milk.....	855	42.00
Feb. 27.	R. B. Lees, repairs.....	867	20.40
Feb. 26.	J. A. Vye, apparatus, express, supplies.....	868	22.92
Mar. 31.	Pay roll.....	888	531.88
Feb. 19.	Manchester Creamery Assc., dairy supplies.....	926	22.10
Mar. 27.	Pillsbury-Washburn Co., 5,000 lbs. bran.....	927	28.00
Mar. 27.	Minn. Linseed Oil Works, 1½ tons oil meal.....	930	37.50
Mar. 24.	C. Peterson, 310 gal. whole milk.....	931	46.50
Mar. 28.	J. A. Vye, labor, postage, freight and miscellaneous.....	965	8.55
Mar. 21.	Adam Lindig, 5,480 lbs. clover hay.....	969	27.40
Mar. 15.	Brooks Bros., 96 ft. lumber for repairs.....	970	3.84
Mar. 2.	S. Swanson, putting in pump in new well.....	974	12.00
Mar. 9.	Husby & Skange, addition to vet. hosp. contract.....	977	48.25
Feb. 21.	Fairbanks, Morse & Co., equipment.....	981	201.27
Feb. 24.	Held & Gruenhagen, 5 cheese rings.....	983	2.50
April 30.	Pay roll.....	988	561.85
April 19.	Cornish, Curtis & Greene Co., apparatus and supplies.....	1,039	43.72
April 27.	J. A. Vye, express, postage, miscellaneous.....	1,043	22.74
April 16.	Pillsbury-Washburn Co., feed.....	1,044	43.00
April 21.	R. R. Howell & Co., use of engine.....	1,045	10.00
April 14.	Frank Willbacher, feed (hay and oats).....	1,046	39.10
April 23.	Held & Gruenhagen, supplies.....	1,049	5.93
April 13.	Minn. Linseed Oil Works, 1½ tons oil meal.....	1,051	37.50
Mar. 26.	F. Kuchenbecker, supplies.....	1,052	27.56
Mar. 24.	Brooks Bros., lumber for repairs.....	1,054	19.42
April 25.	E. W. Hendrickson, 8,200 lbs. hay.....	1,055	37.17
April 26.	O. L. Moffat, horse shoeing.....	1,059	2.00
April 27.	Noyes Bros. & Cutler, supplies.....	1,060	7.60
Mar. 31.	Harrison & Smith, stationery and printing.....	1,064	11.00
April 27.	C. J. Alloway, 8 sheep.....	1,066	19.60
May 31.	Pay roll.....	1,085	474.64
May 31.	J. A. Vye, stock, freight, labor, supplies, miscellaneous.....	1,146	53.70
May 2.	Gust Lagerquist, machinery and labor.....	1,148	17.00
Aug. 14.	McDonald Bros., 96 jars, 3 and 5 lbs.....	1,149	5.28
May 26.	R. R. Howell & Co., 5 cheese presses.....	1,150	8.85
May 18.	Gustav E. Stechert, books for library.....	1,151	17.70
May 22.	Lyman Eliel Drug Co., supplies.....	1,152	3.58
April 30.	Pillsbury-Washburn Co., 6,000 lbs. bran.....	1,155	30.00
May 7.	Levi Bailey, stock.....	1,158	10.60
May 8.	Noyes Bros. & Cutler, repairing instruments.....	1,159	.71
April 9.	Wilcox & Liggett, stock.....	1,167	35.00
June 30.	Pay roll.....	1,184	458.94
Total.....			<u>\$8,332.79</u>

CURRENT EXPENSE.

Summary of disbursements for the fiscal year ending July 31, 1894:

General University.....	\$33,121.04	
College of Science, Literature and the Arts.....	69,158.35	
Military Tactics.....	804.54	
College of Mining, Metallurgy and the Mechanics Arts...	20,608.00	
Geological and Natural History Survey.....	11,373.14	
College of Law.....	9,030.11	
College of Medicine.....	28,571.27	
College of Agriculture.....	19,271.33	
Experiment Station {		
General Station.....	\$10,371.33	
Division of Agriculture.....	6,691.34	
Division of Chemistry.....	1,975.92	
Division of Entomology.....	1,543.72	
Division of Horticulture.....	2,834.57	
	<hr/>	
	\$23,416.88	23,416.88
Dairy and Animal Husbandry.....		8,332.79
		<hr/>
Total current expense for the year ending July 31, 1894.....		<u>\$223,687.45</u>

FOR BUILDING AND EQUIPMENT FUND.

By appropriation for library and assembly hall.....	\$175,000.00
By appropriation for manual training building—school of agriculture.....	30,000.00
Available on and after August 1st, 1893. Total.....	<u>\$205,000.00</u>

Disbursements for Library and Assembly Hall.

1893.		No. Voucher.	
July 19.	Harry Jones, architect's fees.....	3	\$100.00
Oct. 31.	W. F. Porter & Co., 3 steel boilers.....	104	3,618.00
Sept. 28.	Chas. S. Sedgwick, architect's fees.....	310	1,050.00
Sept. 20.	A. L. Buffington, architect's fees.....	311	1,000.00
Sept. 8.	A. L. Buffington, architect's fees.....	312	50.00
Sept. 30.	Minn. Tribune Co., ad. for proposals.....	313	15.00
Sept. 9.	The Dispatch Printing Co., ad. for proposals.....	315	18.25
July 18.	Pioneer Press Co., ad. for proposals.....	316	13.40
Oct. 20.	W. J. Marson, earth for filling around uni. buildings.....	319	600.00
Nov. 2.	Chas. S. Sedgwick, architect's fees.....	413	1,250.00
Nov. 1.	A. L. Buffington, architect's fees.....	414	1,250.00
Sept. 28.	Geo. W. and F. D. Orff, architect's fees.....	415	50.00
Jan. 22.	Pike & Cook, cut stone for erection of library.....	669	7,581.00
Dec. 27.	Pike & Cook, labor and material for library.....	670	2,310.30
Feb. 21.	Pike & Cook, 275,000 brick for library and assembly hall.....	799	1,423.00
Feb. 8.	Warren B. Dunnell, sketch drawing of library.....	800	50.00
April 26.	Pike & Cook, material and labor, library building.....	986	11,646.00
April 26.	Kelly & Lamb, heating and ventilating library building.....	986	2,259.06
May 26.	Pike & Cook, material and labor for library building.....	1,079	24,314.00
May 26.	Kelly & Lamb, heating and ventilating library building.....	1,080	1,358.84
April 24.	Traylor Bros., moving small building on campus.....	1,081	15.00
May 12.	Mpls. Fire Proof Covering Co., 75 bbis magnesplastic cement.....	1,177	187.50
May 16.	Chas. S. Sedgwick, architect's fees.....	1,178	50.00
May 1.	Pike & Cook, extra work on library building.....	1,179	802.59
June 27.	J. G. Beattie & Co., plumbing in library building.....	1,180	692.72
June 28.	Pike & Cook, material and labor for library.....	1,181	15,084.00
June 28.	Chas. R. Aldrich, architect's fees.....	1,182	500.00
	Library and Assembly Hall total.....		<u>\$77,288.66</u>

SCHOOL OF AGRICULTURE.

1893.	Disbursements.	No. Voucher.	
July 26.	A. J. Sampson, labor and material furnished for drill hall.....	1	\$6,387.75
July 25.	Aldrich & Corser, architects' fees.....	2	782.
	A. Knutson, grading around dairy hall.....	101	46.25

		No. Voucher.	
Aug. 29.	A. J. Sampson, labor and material furnished for erecting drill hall.....	131	7,612.25
Sept. 30.	A. J. Sampson, labor and material furnished on drill hall contract.....	309	6,532.25
Oct. 27.	Minn. Tribune Co., ad. for proposals.....	314	22.50
Oct. 21.	Charlie Berguson, grading around drill hall.....	317	29.25
Oct. 21.	Pay roll, grading around drill hall.....	318	63.01
Oct. 27.	A. J. Sampson, labor and material and extras on completion of drill hall.....	412	3,585.15
Oct. 26.	Chas. R. Aldrich, architect's fees.....	416	574.75
Oct. 2.	Archambo & Morse, steam heating dairy hall.....	417	1,565.25
Oct. 16.	W. W. Sykes & Co., plumbing at exp. station.....	418	666.00
Oct. 21.	A. Knutson, grading at state farm.....	419	73.37
Oct. 14.	M. B. Whitney, labor and material for eight bath rooms at exp. station.....	420	95.00
Nov. 30.	A. J. Sampson, balance due on last payment for erection of drill hall.....	534	170.00
Nov. 13.	W. W. Sykes & Co., plumbing in drill hall.....	535	121.00
Nov. 18.	J. H. Kelly, grading around drill hall.....	536	115.00
Nov. 1.	Wm. Donaldson & Co., equipment.....	537	76.00
Nov. 23.	Archambo, Martin, Morse & Co., setting boilers.....	538	27.40
Nov. 22.	M. B. Whitney, equipment drill hall.....	539	144.87
Oct. 1.	Moore Bros., insurance.....	540	12.75
Nov. 24.	Held & Gruenhagen, equipment.....	541	165.15
Nov. 28.	Thos. Husby, furniture and repairs.....	542	63.00
Dec. 1.	Wm. Donaldson & Co., equipment.....	672	151.10
Dec. 11.	M. B. Whitney, equipment.....	673	443.85
Dec. 1.	Fagan Bros., grading around drill hall.....	674	102.50
Dec. 21.	Cleveland Rubber Works, 250 ft. hose complete.....	675	55.50
Dec. 31.	Janney, Semple & Co., equipment.....	676	319.36
Feb. 23.	Archambo & Morse, heating and ventilating drill hall.....	886	521.75
Manual Training Building, Total.....			\$30,524.01
Library and Assembly Hall.....			77,288.66
Balance undrawn.....			97,187.33
			<u>\$205,000.00</u>

DEPARTMENT OF MEDICINE.

Disbursements.

		No. Voucher.	
1893.			
June 1.	John Fagan, 302 loads earth.....	4	54.36
May 23.	S. Kixmoller, grading and filling around med. building.....	5	121.95
1892.			
Dec. 1.	Erick Lund, labor and material, med. building.....	708	2,838.32
1893.			
Jan. 4.	Erick Lund.....	709	642.80
1892.			
Dec. 31.	Fagan Bros., excavating for med. building.....	710	104.75
Nov. 30.	Taylor Craig Corporation, partition in med. building.....	711	297.00
1893.			
April 1.	Harry W. Jones, architect's fees, chem. laboratory.....	712	50.00
Mar. 31.	W. F. Porter & Co., steam fitting, labor and material.....	102	360.59
Dec. 29.	W. F. Porter & Co., steam fitting, labor and material.....	103	920.50
April 14.	W. W. Sykes & Co., steam fitting, labor and material.....	105	627.16
Nov. 11.	Reed & Stem, architects' fees, med. building.....	671	500.00
Total.....			<u>\$6,517.43</u>

SPECIAL APPROPRIATIONS.

FOR LIBRARY.

Balance in Treasury August 1st, 1893..... \$99.30

Disbursements.

1893.
Nov. 20. Gustav E. Stechert, books..... No. Voucher. 548 \$99.30

FOR EQUIPMENT OF PHARMACY.

Balance in Treasury August 1st, 1893..... \$1,859.41

Disbursements.

Oct. 30. F. J. Wulling, advertising, stamps and supplies..... 410 45.90
Oct. 9. Minneapolis Office and School Furniture Co., furniture..... 411 125.00
Nov. 25. Noyes Bros. & Cutler, supplies..... 543 181.92

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	No. Voucher.	
Nov. 13. Melendy & Lyman, apparatus and supplies.....	544	70.27
Nov. 25. W. W. Sykes & Co., work on tables and connections.....	545	54.58
Nov. 14. Minneapolis Office and School Furniture Co., furniture.....	546	320.00
Nov. 1. D. O. Haynes & Co., advertising.....	547	24.00
Dec. 2. Bausch & Lomb Opt. Co., apparatus and instruments.....	677	316.80
Dec. 20. D. O. Haynes & Co., library, stationery and printing.....	678	26.00
Dec. 13. Crollus, Tucker & Allen Co., apparatus.....	679	9.60
Dec. 23. The Druggists' Circular, sub. and advt. 1 year.....	680	34.84
Dec. 15. Noyes Bros. & Cutler, apparatus and supplies.....	681	155.80
Jan. 30. F. J. Wulling, supplies.....	796	5.20
Dec. 23. F. J. Wulling, postage, apparatus, supplies.....	797	36.45
Jan. 23. Noyes Bros. & Cutler, supplies.....	798	194.10
Feb. 26. Noyes Bros. & Cutler, supplies.....	883	145.11
Feb. 14. Jno. A. Schlener & Co., furniture, stationery.....	884	16.67
Feb. 17. McDonald Bros., 6 5-gal. jars.....	885	3.75
April 30. F. J. Wulling, postage and supplies.....	1,082	4.18
April 13. Noyes Bros. & Cutler, supplies.....	1,083	29.20
Total.....		\$1,808.46
Balance undrawn.....		50.95
		\$1,859.41

THE GEOLOGICAL AND NATURAL HISTORY SURVEY.

Balance in Treasury August 1st, 1893..... \$0,513.67

Disbursements.

	No. Voucher.	
Aug. 3. N. H. Winchell, salaries of employes, miscellaneous.....	6	\$327.32
July 3. Pay roll, salaries of employes.....	7	1,902.66
July 1. H. Mayhew, supplies.....	8	244.98
July 12. Frank Schur, supplies.....	9	95.52
June 28. A. D. Meeds, pocket voucher.....	10	26.59
July 21. Anderson & Korb, supplies.....	11	71.07
July 31. J. E. Spurr, transportation, board and supplies.....	12	153.55
July 25. The Gun Flint Lake Iron Co., supplies.....	13	36.40
July 25. V. Pellifier, one canoe.....	14	10.00
June 22. Chas. T. Leonard, equipment and repairs.....	15	36.15
June 7. M. Dyke, 3 long pack straps.....	16	3.40
July 1. S. M. Williams, stationery.....	17	1.15
April 22. N. W. Lith. and Pub. Co., 300 township plats—Lith.....	18	10.50
July 17. C. A. Hoffman, repairs and miscellaneous.....	19	12.50
Aug. 2. Henry F. Nachtrieb, sundry petty accounts.....	20	245.37
Aug. 3. J. W. Erf, salary of employes.....	21	50.00
May 13. Gustav E. Stechert, books for library.....	90	78.58
May 31. Library bureau, furniture and supplies.....	91	30.00
June 24. Noah Johnson, salary of employes.....	92	16.00
June 28. L. H. Chapman, salary of employes.....	93	28.50
June 24. L. C. Lawrence, salary of employes.....	94	26.00
June 19. Henry F. Nachtrieb, supplies.....	95	6.98
Feb. 10. K. F. Koehlers, antiquarium, books for library.....	96	23.38
June 2. Kennedy Bros., equipment.....	97	44.00
June 1. A. B. Seymour, library.....	98	12.20
June 9. Minneapolis Paper Co., stationery and printing.....	99	6.79
May 5. Henry F. Nachtrieb, 5 hatching jars.....	100	25.00
Aug. 31. Pay roll, salaries of employes.....	107	804.99
Aug. 20. Gun Flint Lake Iron Co., supplies.....	108	40.38
Aug. 30. James C. O'Brien, salary of employes.....	109	86.00
Aug. 19. Ralph D. Cleveland, supplies.....	110	13.18
Aug. 28. Pay roll, salaries of employes.....	111	415.00
Aug. 28. Pay roll, salaries of employes.....	112	440.00
Aug. 15. Conway MacMillan, salary of employes, supplies.....	113	76.04
Jan. 22. Bausch & Lamb Opt. Co., 12 doz. compressors.....	114	3.69
July 1. Warner Bros., supplies.....	115	20.74
June 16. Benjamin LaMere, museum.....	116	30.50
June 27. Noyes Bros. & Cutler, apparatus supplies.....	117	93.77
June 22. Chas. T. Leonard, supplies.....	118	54.26
Aug. 15. Caswell A. Ballard, salary of employes.....	119	80.00
July 3. Journal Printing Co., 500 old papers and postage.....	120	1.85
Aug. 31. N. W. Winchell, salaries, freight, miscellaneous.....	121	460.52
Aug. 3. Gustav E. Stechert, books for library.....	122	89.25
Aug. 28. R. B. Lees, repairs, supplies, miscellaneous.....	123	24.25
Aug. 11. Minneapolis Paper Co., supplies.....	124	50.00
Aug. 30. A. R. Miller & Sons, supplies.....	125	5.16
Aug. 15. Conway MacMillan, miscellaneous.....	126	41.10
May 5. R. Friedlander & Sohn, books for library.....	127	912.47
June 4. Dr. Thos. S. Roberts, miscellaneous expenses on trip.....	128	50.45
Aug. 31. N. H. Winchell, salaries of employes, freight, supplies.....	129	92.18
Aug. 15. Alex. P. Anderson, salary of employes.....	130	80.00
Sept. 28. W. R. Hoag, services as state topographer.....	291	181.94
Sept. 30. J. E. Spurr, salary of employes, transportation and supplies.....	292	154.75

EIGHTH BIENNIAL REPORT

	No. Voucher.	
Sept. 5. L. F. Knox, supplies.....	293	146.04
Sept. 7. Warren Upham, expenses incurred in field work.....	294	110.34
Oct. 1. N. H. Winchell, salaries of employes, miscellaneous.....	295	94.17
Oct. 1. J. E. Spurr, salaries of employes.....	296	198.33
Oct. 1. Anderson & Korb, supplies.....	297	9.49
Sept. 25. J. E. Spurr, pocket voucher.....	298	7.88
Sept. 30. Pay roll, geological survey.....	299	603.46
Aug. 8. Benjamin La Mere, specimens for museum and expenses.....	300	75.00
Sept. 30. Edmund P. Sheldon, salaries of employes and miscellaneous.....	301	112.79
Sept. 4. Josephine E. Tilden, salary of employes.....	302	100.00
Sept. 7. Conway MacMillan, salary of employes, supplies.....	303	42.50
Sept. 27. Marder, Luce & Co., supplies.....	304	19.99
Sept. 5. C. H. Topping, salary of employes.....	305	15.00
Aug. 21. Lyman Eitel Drug Co., supplies.....	306	1.95
Sept. 12. The Journal Printing Co., 800 old papers.....	307	2.80
Sept. 14. Gustav E. Stechert, books for library.....	308	79.81

Total.....	\$9,506.71
Balance undrawn.....	6.96
	<u>\$9,513.67</u>

SCHOOL OF MINDS.

Balance in Treasury August 1st, 1893..... \$4,213.88

Disbursements.

	No. Voucher.	
May 31. W. R. Appleby, expenses to Chicago and return.....	1,183	\$33.40
Balance undrawn.....		\$4,180.48
		<u>\$4,213.88</u>

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

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

Disbursements.

	No. Voucher.	
Sept. 30. Wm. R. Appleby, salary.....	290½	220.00
Sept. 30. Geo. D. Shepardson, salary.....	290½	180.00
Sept. 30. Peter Christianson, salary.....	290½	25.00
Sept. 30. Chas. P. Berkey, salary.....	290½	25.00
Oct. 31. W. R. Appleby, salary.....	420½	220.00
Oct. 31. Geo. D. Shepardson, salary.....	420½	180.00
Oct. 31. Peter Christianson, salary.....	420½	25.00
Oct. 31. Chas. P. Berkey, salary.....	420½	25.00
Nov. 30. W. R. Appleby, salary.....	549	220.00
Nov. 30. Geo. D. Shepardson, salary.....	549	180.00
Nov. 30. Peter Christianson, salary.....	549	25.00
Nov. 30. Chas. P. Berkey, salary.....	549	25.00
Dec. 31. Wm. R. Appleby, salary.....	682	220.00
Dec. 31. Geo. D. Shepardson, salary.....	682	180.00
Dec. 31. Peter Christianson, salary.....	682	25.00
Dec. 31. Chas. P. Berkey, salary.....	682	25.00
Jan. 31. Wm. R. Appleby, salary.....	801	220.00
Jan. 31. Geo. D. Shepardson, salary.....	801	180.00
Jan. 31. Peter Christianson, salary.....	801	25.00
Jan. 31. Chas. P. Berkey, salary.....	801	25.00
Feb. 28. Wm. R. Appleby, salary.....	887	220.00
Feb. 28. Geo. D. Shepardson, salary.....	887	180.00
Feb. 28. Peter Christianson, salary.....	887	25.00
Feb. 28. Chas. P. Berkey, salary.....	887	25.00
Mar. 31. Wm. R. Appleby, salary.....	987	220.00
Mar. 31. Geo. D. Shepardson, salary.....	987	180.00
Mar. 31. Peter Christianson, salary.....	987	25.00
Mar. 31. Chas. P. Berkey, salary.....	987	25.00
April 30. Wm. R. Appleby, salary.....	1,084	220.00
April 30. Geo. D. Shepardson, salary.....	1,084	180.00
April 30. Peter Christianson, salary.....	1,084	25.00
April 30. Chas. P. Berkey, salary.....	1,084	25.00
May 31. Wm. R. Appleby, salary.....	1,176	220.00
May 31. Geo. D. Shepardson, salary.....	1,176	180.00
May 31. Peter Christianson, salary.....	1,176	25.00
May 31. Chas. P. Berkey, salary.....	1,176	25.00
June 30. Wm. R. Appleby, salary.....	1,185	220.00
June 30. Geo. D. Shepardson, salary.....	1,185	180.00
June 30. Peter Christianson, salary.....	1,185	25.00
June 30. Chas. P. Berkey, salary.....	1,185	25.00

Total..... \$4,500.00

SUMMARY OF DISBURSEMENTS UNDER SPECIAL
APPROPRIATIONS.

For Library	\$99.30
For Building and Equipment.....	114,330.10
For Geological and Natural History Survey.....	9,513.67
For Equipment of Pharmacy.....	1,859.41
For Equipment of School of Mines.....	33.40
For salaries School of Mines and Electrical Engineering...	4,500.00
Total.....	<u>\$130,335.88</u>

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		No. Voucher.	
Nov. 28.	J. A. Vye, express, repairs and miscellaneous.....	509	8.42
Nov. 28.	Held & Gruenhagen, supplies.....	530	6.65
Dec. 31.	Pay roll.....	550	151.35
Dec. 29.	J. A. Vye, labor, express, supplies.....	638	9.15
Oct. 23.	M. A. Thayer, 450 blackberry plants.....	651	6.60
Oct. 10.	C. L. Moffatt, repairs.....	652	2.40
Nov. 30.	W. K. Morrison & Co., miscellaneous hardware.....	657	1.50
Oct. 6.	J. C. Vaughan, seeds and plants.....	660	11.14
1894.			
Jan. 31.	Pay roll.....	683	145.78
Jan. 31.	D. W. Sprague, petty bills.....	684	4.70
Jan. 29.	C. L. Moffatt, horse shoeing and repairs.....	783	3.15
Jan. 17.	J. G. Swahn's Sons, 300 asst. pot stands.....	785	5.44
Feb. 28.	Pay roll.....	802	141.89
Feb. 28.	D. W. Sprague, petty bills.....	803	2.15
Feb. 12.	Held & Gruenhagen, supplies.....	851	1.50
Feb. 26.	J. A. Vye, express, labor, supplies.....	868	5.82
Mar. 31.	Pay roll.....	888	100.07
Mar. 22.	F. A. Fletcher & Co., repairing harness.....	979	9.35
April 30.	Pay roll.....	988	248.23
April 27.	J. A. Vye, express.....	1,043	1.92
April 23.	Held & Gruenhagen, supplies.....	1,049	4.60
April 24.	Tribune Job Print. Co., 1,000 envelopes.....	1,050	2.00
April 27.	J. C. Vaughan, seeds and plants.....	1,056	13.04
April 6.	James M. Thorburn & Co., seeds and plants.....	1,057	2.19
April 10.	Thos. Meehan & Sons, seeds and plants.....	1,061	8.45
April 7.	Ellwanger & Barry, seeds and plants.....	1,062	16.90
April 9.	Stayman & Blacke, seeds and plants.....	1,063	6.00
April 14.	Stark Bros., seeds and plants.....	1,065	11.10
April 11.	Howe, Hamilton & Graul, 1 cultivator.....	1,068	5.00
April 23.	Bemis Bros. Bag Co., supplies.....	1,070	4.73
May 31.	Pay roll.....	1,085	244.92
May 31.	J. A. Vye, freight, repairs, supplies.....	1,146	10.46
May 23.	Sam'l. B. Green, freight and miscellaneous.....	1,153	15.42
May 7.	Noyes Bros. & Cutler, 100 lbs. sulph. copper conl.....	1,159	5.00
April 23.	F. F. Pratt, 7 sacks seed potatoes.....	1,163	8.70
May 16.	Goodyear Rubber Co., 65 ft. hose.....	1,164	8.10
April 2.	C. G. Patten, seeds and plants.....	1,165	5.45
May 23.	Lindsay Bros., tools and machinery.....	1,169	8.67
May 28.	Iowa Agricultural College, seeds and plants.....	1,170	9.75
April 16.	F. P. Porter, seeds and plants.....	1,171	9.75
May 17.	DeCou & Co., seeds and plants.....	1,173	3.50
May 25.	Held & Gruenhagen, tools and supplies.....	1,174	2.77
June 30.	Pay roll.....	1,184	322.73
Total.....			<u>\$2,834.59</u>

Experiment Station.

DAIRY AND ANIMAL HUSBANDRY.

		No. Voucher.	
1893.			
Aug. 31.	Pay roll.....	106	\$194.13
Sept. 30.	Pay roll.....	209	196.70
Sept. 23.	J. A. Vye, supplies.....	278	5.00
Oct. 31.	Pay roll.....	320	381.99
Sept. 30.	C. B. & I. H. Smith, 1 oil heating stove.....	385	9.00
Nov. 30.	Pay roll.....	421	411.89
Dec. 31.	Pay roll.....	550	434.49
Dec. 31.	D. W. Sprague, petty bills.....	551	1.20
Dec. 29.	J. A. Vye, tools.....	638	2.00
Dec. 20.	The Crane & Ordway Co., repairs.....	647	3.44
Dec. 19.	Frank Lindig, 1 horse, vet. dent.....	654	5.00
Dec. 13.	C. A. Smith Lumber Co., 739 ft. asst. lumber.....	658	14.51
1894.			
Jan. 31.	Pay roll.....	683	624.46
Jan. 25.	Tribune Job Print. Co., stationery and printing.....	700	6.50
Jan. 13.	Crane & Ordway Co., repairs.....	721	13.26
Jan. 24.	J. A. Vye, freight, express, telegram and miscellaneous.....	760	145.39
Jan. 26.	J. A. Vye, freight, express, telegram and miscellaneous.....	761	12.23
Jan. 29.	Cornish, Curtis & Greene Co., tools, mach. equipment supplies.....	769	107.32
Jan. 29.	Crescent Creamery Co., supplies.....	769	878.08
Jan. 24.	J. M. Maurer, putting in water pipes.....	772	80.00
Jan. 25.	G. Peterson, 310 gal. milk.....	773	46.50
Jan. 8.	Fillsbury-Washburn, stock feed.....	774	45.90
Jan. 6.	Lyman Ebel Drug Co., supplies.....	775	11.90
Dec. 28.	Koehler & Hinrichs, 1 50-gal. copper-lined tank.....	779	51.00
Jan. 4.	Arthur W. Field, repairs.....	780	10.75
Jan. 29.	T. L. Haecker, 1 sleigh and robe.....	782	26.75
Jan. 29.	Noyes Bros. & Cutler, supplies.....	784	6.09
Jan. 24.	Held & Gruenhagen, repairs.....	786	12.03

	No. Voucher.	
Dec. 22.	Porter Radiator and Iron Co., repairs.....	787 13.74
Jan. 11.	Tribune Job Print. Co., stationery and printing.....	789 17.25
Jan. 31.	F. Kuchenbecker, supplies.....	788 60.20
Jan. 29.	Creamery Package Mfg. Co., supplies.....	791 10.70
Jan. 31.	F. E. Noble, supplies.....	793 79.18
Jan. 31.	John Flindt, supplies.....	794 90.28
Jan. 31.	Manchester Creamery Assc., supplies.....	795 90.79
Feb. 28.	Pay roll.....	802 492.10
Feb. 28.	D. W. Sprague, petty bills.....	803 3.20
Jan. 30.	Crescent Creamery Co., supplies.....	836 481.28
Dec. 27.	F. B. Fargo & Co., apparatus and supplies.....	837 40.55
Feb. 5.	Minn. Linseed Oil Works, 1 ton oil meal.....	838 25.00
Jan. 15.	J. H. Heacker, apparatus.....	839 9.00
Feb. 26.	J. A. Vye, freight and express.....	840 22.85
Jan. 2.	G. Calvor, books for library.....	841 8.61
Jan. 14.	P. M. Sharples, repairing.....	842 6.50
Feb. 12.	Cornish, Curtis & Greene Co., apparatus and supplies.....	847 15.45
Jan. 30.	Lyman, Ellet Drug Co., supplies.....	848 10.35
Dec. 30.	Archambo, Martin & Morse, repairs.....	849 6.75
Feb. 12.	Held & Gruenhagen, repairs.....	851 1.15
Feb. 19.	Tribune Job Print. Co., stationery and printing.....	852 11.00
Feb. 15.	Pillsbury-Washburn, 3½ tons bran.....	853 40.05
Feb. 26.	C. Peterson, 280 gal. milk.....	855 42.00
Feb. 27.	R. B. Lees, repairs.....	867 20.40
Feb. 26.	J. A. Vye, apparatus, express, supplies.....	868 22.82
Mar. 31.	Pay roll.....	888 531.88
Feb. 19.	Manchester Creamery Assc., dairy supplies.....	926 22.10
Mar. 27.	Pillsbury-Washburn Co., 5,000 lbs. bran.....	927 28.00
Mar. 27.	Minn. Linseed Oil Works, 1½ tons oil meal.....	930 37.50
Mar. 24.	C. Peterson, 310 gal. whole milk.....	931 46.50
Mar. 28.	J. A. Vye, labor, postage, freight and miscellaneous.....	965 8.55
Mar. 21.	Adam Lindig, 5,480 lbs. clover hay.....	969 27.40
Mar. 15.	Brooks Bros., 96 ft. lumber for repairs.....	970 3.84
Mar. 2.	S. Swanson, putting in pump in new well.....	974 12.00
Mar. 9.	Husby & Skauge, addition to vet. hosp. contract.....	977 48.25
Feb. 21.	Fairbanks, Morse & Co., equipment.....	981 201.27
Feb. 24.	Held & Gruenhagen, 5 cheese rings.....	983 2.50
April 30.	Pay roll.....	988 561.85
April 19.	Cornish, Curtis & Greene Co., apparatus and supplies.....	1,039 43.72
April 27.	J. A. Vye, express, postage, miscellaneous.....	1,043 22.74
April 16.	Pillsbury-Washburn Co., feed.....	1,044 43.00
April 21.	R. R. Howell & Co., use of engine.....	1,045 10.00
April 14.	Frank Wilbacher, feed (hay and oats).....	1,046 39.10
April 23.	Held & Gruenhagen, supplies.....	1,049 5.93
April 13.	Minn. Linseed Oil Works, 1½ tons oil meal.....	1,051 37.50
Mar. 26.	F. Kuchenbecker, supplies.....	1,052 27.56
Mar. 24.	Brooks Bros., lumber for repairs.....	1,054 19.42
April 25.	E. W. Hendrickson, 8,200 lbs. hay.....	1,055 37.17
April 26.	C. L. Moffat, horse shoeing.....	1,059 2.00
April 27.	Noyes Bros. & Outler, supplies.....	1,060 7.60
Mar. 31.	Harrison & Smith, stationery and printing.....	1,064 11.00
April 27.	C. J. Alloway, 8 sheep.....	1,066 19.60
May 31.	Pay roll.....	1,085 474.64
May 31.	J. A. Vye, stock, freight, labor, supplies, miscellaneous.....	1,146 53.70
May 2.	Gust Lagerquist, machinery and labor.....	1,148 17.00
Aug. 14.	McDonald Bros., 96 jars, 3 and 5 lbs.....	1,149 5.28
May 26.	R. R. Howell & Co., 5 cheese presses.....	1,150 8.85
May 18.	Gustav E. Stechert, books for library.....	1,151 17.70
May 22.	Lyman Ellet Drug Co., supplies.....	1,152 3.58
April 30.	Pillsbury-Washburn Co., 6,000 lbs. bran.....	1,155 30.00
May 7.	Levi Bailey, stock.....	1,158 10.60
May 8.	Noyes Bros. & Outler, repairing instruments.....	1,159 7.1
April 9.	Wilcox & Liggett, stock.....	1,167 35.00
June 30.	Pay roll.....	1,184 458.94
Total.....		<u>\$8,332.79</u>

CURRENT EXPENSE.

Summary of disbursements for the fiscal year ending July 31, 1894:

General University.....		\$33,121.04	
College of Science, Literature and the Arts.....		69,158.35	
Military Tactics.....		804.54	
College of Mining, Metallurgy and the Mechanics Arts...		20,608.00	
Geological and Natural History Survey.....		11,373.14	
College of Law.....		9,030.11	
College of Medicine.....		28,571.27	
College of Agriculture.....		19,271.33	
Experiment Station.	General Station.....	\$10,371.33	
	Division of Agriculture.....	6,691.34	
	Division of Chemistry.....	1,975.92	
	Division of Entomology.....	1,543.72	
	Division of Horticulture.....	2,834.57	
		<hr/>	
		\$23,416.88	23,416.88
Dairy and Animal Husbandry.....			8,332.79
		<hr/>	
Total current expense for the year ending July 31, 1894.....			<u>\$223,687.45</u>

FOR BUILDING AND EQUIPMENT FUND.

By appropriation for library and assembly hall.....	\$175,000.00
By appropriation for manual training building—school of agriculture.....	30,000.00
Available on and after August 1st, 1893. Total.....	<u>\$205,000.00</u>

Disbursements for Library and Assembly Hall.

1893.		No. Voucher.	
July 19.	Harry Jones, architect's fees.....	3	\$100.00
Oct. 31.	W. F. Porter & Co., 3 steel boilers.....	104	3,618.00
Sept. 28.	Chas. S. Sedgwick, architect's fees.....	310	1,050.00
Sept. 20.	A. L. Buffington, architect's fees.....	311	1,000.00
Sept. 8.	A. L. Buffington, architect's fees.....	312	50.00
Sept. 30.	Minn. Tribune Co., ad. for proposals.....	313	15.00
Sept. 9.	The Dispatch Printing Co., ad. for proposals.....	315	18.25
July 18.	Pioneer Press Co., ad. for proposals.....	316	13.40
Oct. 20.	W. J. Marson, earth for filling around uni. buildings.....	319	600.00
Nov. 2.	Chas. S. Sedgwick, architect's fees.....	413	1,250.00
Nov. 1.	A. L. Buffington, architect's fees.....	414	1,250.00
Sept. 28.	Geo. W. and F. D. Orff, architect's fees.....	415	50.00
Jan. 22.	Pike & Cook, cut stone for erection of library.....	669	7,581.00
Dec. 27.	Pike & Cook, labor and material for library.....	670	2,310.30
Feb. 21.	Pike & Cook, 275,000 brick for library and assembly hall.....	799	1,423.00
Feb. 8.	Warren B. Dunnell, sketch drawing of library.....	800	50.00
April 26.	Pike & Cook, material and labor, library building.....	986	11,646.00
April 26.	Kelly & Lamb, heating and ventilating library building.....	986	2,259.00
May 26.	Pike & Cook, material and labor for library building.....	1,079	24,314.00
May 26.	Kelly & Lamb, heating and ventilating library building.....	1,080	1,358.84
April 24.	Trainor Bros., moving small building on campus.....	1,081	15.00
May 12.	Mpls. Fire Proof Covering Co., 75 bbls magnesplastic cement.....	1,177	187.50
May 16.	Chas. S. Sedgwick, architect's fees.....	1,178	50.00
May 1.	Pike & Cook, extra work on library building.....	1,179	802.50
June 27.	J. G. Beattie & Co., plumbing in library building.....	1,180	692.72
June 28.	Pike & Cook, material and labor for library.....	1,181	15,084.00
June 28.	Chas. R. Aldrich, architect's fees.....	1,182	500.00
	Library and Assembly Hall total.....		<u>\$77,288.66</u>

SCHOOL OF AGRICULTURE.

1893.	Disbursements.	No. Voucher.	
July 26.	A. J. Sampson, labor and material furnished for drill hall.....	1	\$6,387.75
July 25.	Aldrich & Corser, architects' fees.....	2	782.00
	A. Knutson, grading around dairy hall.....	101	46.25

EIGHTH BIENNIAL REPORT

		No. Voucher.	
Aug. 29.	A. J. Sampson, labor and material furnished for erecting drill hall.....	131	7,612.25
Sept. 30.	A. J. Sampson, labor and material furnished on drill hall contract.....	309	6,532.25
Oct. 27.	Minn. Tribune Co., ad. for proposals.....	314	22.50
Oct. 21.	Charlie Berguson, grading around drill hall.....	317	29.25
Oct. 21.	Pay roll, grading around drill hall.....	318	63.01
Oct. 27.	A. J. Sampson, labor and material and extras on completion of drill hall.....	412	3,585.15
Oct. 26.	Chas. R. Aldrich, architect's fees.....	416	574.75
Oct. 2.	Archambo & Morse, steam heating dairy hall.....	417	1,565.25
Oct. 16.	W. W. Sykes & Co., plumbing at exp. station.....	418	666.00
Oct. 21.	A. Knutson, grading at state farm.....	419	73.37
Oct. 14.	M. B. Whitney, labor and material for eight bath rooms at exp. station.....	420	95.00
Nov. 30.	A. J. Sampson, balance due on last payment for erection of drill hall.....	534	170.00
Nov. 13.	W. W. Sykes & Co., plumbing in drill hall.....	535	121.00
Nov. 18.	J. H. Kelly, grading around drill hall.....	536	115.00
Nov. 1.	Wm. Donaldson & Co., equipment.....	537	76.00
Nov. 23.	Archambo, Martin, Morse & Co., setting boilers.....	538	27.40
Nov. 22.	M. B. Whitney, equipment drill hall.....	539	144.87
Oct. 1.	Moore Bros., insurance.....	540	12.75
Nov. 24.	Held & Gruenhagen, equipment.....	541	165.15
Nov. 28.	Thos. Husby, furniture and repairs.....	542	63.00
Dec. 1.	Wm. Donaldson & Co., equipment.....	672	151.10
Dec. 11.	M. B. Whitney, equipment.....	673	443.85
Dec. 1.	Fagan Bros., grading around drill hall.....	674	102.50
Dec. 21.	Cleveland Rubber Works, 250 ft. hose complete.....	675	55.50
Dec. 31.	Janney, Semple & Co., equipment.....	676	319.36
Feb. 23.	Archambo & Morse, heating and ventilating drill hall.....	886	521.77
Manual Training Building, Total.....			\$30,524.01
Library and Assembly Hall.....			77,288.66
Balance undrawn.....			97,187.33
			<u>\$205,000.00</u>

DEPARTMENT OF MEDICINE.

Disbursements.

		No. Voucher.	
1893.	June 1. John Fagan, 302 loads earth.....	4	54.36
1892.	May 23. S. Kixmoller, grading and filling around med. building.....	5	121.95
Dec. 1.	Erick Lund, labor and material, med. building.....	708	2,838.32
1893.	Jan. 4. Erick Lund.....	709	642.80
1892.	Dec. 31. Fagan Bros., excavating for med. building.....	710	104.75
Nov. 30.	Taylor Craig Corporation, partition in med. building.....	711	297.00
1893.	April 1. Harry W. Jones, architect's fees, chem. laboratory.....	712	50.00
Mar. 31.	W. F. Porter & Co., steam fitting, labor and material.....	102	300.59
Dec. 29.	W. F. Porter & Co., steam fitting, labor and material.....	103	920.50
April 14.	W. W. Sykes & Co., steam fitting, labor and material.....	105	627.16
Nov. 11.	Reed & Stem, architects' fees, med. building.....	671	500.00
Total.....			\$6,517.43

SPECIAL APPROPRIATIONS.

FOR LIBRARY.

Balance in Treasury August 1st, 1893.....	\$99.30		
Disbursements.			
1893.	Nov. 20. Gustav E. Stechert, books.....	548	\$99.30

FOR EQUIPMENT OF PHARMACY.

Balance in Treasury August 1st, 1893.....	\$1,859.41		
Disbursements.			
Oct. 30.	F. J. Wulling, advertising, stamps and supplies.....	410	45.90
Oct. 9.	Minneapolis Office and School Furniture Co., furniture.....	411	125.00
Nov. 25.	Noyes Bros. & Cutler, supplies.....	543	181.92

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		No. Voucher.	
Nov. 13.	Melendy & Lyman, apparatus and supplies.....	544	70.27
Nov. 25.	W. W. Sykes & Co., work on tables and connections.....	545	54.58
Nov. 14.	Minneapolis Office and School Furniture Co., furniture.....	546	329.00
Nov. 1.	D. O. Haynes & Co., advertising.....	547	24.00
Dec. 2.	Bausch & Lomb Opt. Co., apparatus and instruments.....	677	316.80
Dec. 20.	D. O. Haynes & Co., library, stationery and printing.....	678	26.00
Dec. 13.	Crollius, Tucker & Allen Co., apparatus.....	679	9.60
Dec. 23.	The Druggists' Circular, sub. and advt. 1 year.....	680	34.84
Dec. 15.	Noyes Bros. & Cutler, apparatus and supplies.....	681	155.80
Jan. 30.	F. J. Wulling, supplies.....	706	5.20
Dec. 23.	F. J. Wulling, postage, apparatus, supplies.....	707	36.45
Jan. 23.	Noyes Bros. & Cutler, supplies.....	708	194.10
Feb. 26.	Noyes Bros. & Cutler, supplies.....	883	145.11
Feb. 14.	Jno. A. Schlener & Co., furniture, stationery.....	884	16.67
Feb. 17.	McDonald Bros., 6 5-gal. jars.....	885	3.75
April 30.	F. J. Wulling, postage and supplies.....	1,082	4.18
April 13.	Noyes Bros. & Cutler, supplies.....	1,083	29.20
Total.....			\$1,808.46
Balance undrawn.....			50.95
			<u>\$1,859.41</u>

THE GEOLOGICAL AND NATURAL HISTORY SURVEY.

Balance in Treasury August 1st, 1893..... \$9,513.67

Disbursements.

		No. Voucher.	
Aug. 3.	N. H. Winchell, salaries of employes, miscellaneous.....	6	\$327.32
July 3.	Pay roll, salaries of employes.....	7	1,962.66
July 1.	H. Mayhew, supplies.....	8	244.98
July 12.	Frank Schur, supplies.....	9	95.52
June 28.	A. D. Meeds, pocket voucher.....	10	26.59
July 21.	Anderson & Korb, supplies.....	11	71.07
July 31.	J. E. Spurr, transportation, board and supplies.....	12	153.55
July 25.	The Gun Flint Lake Iron Co., supplies.....	13	36.49
July 25.	V. Pellitier, one canoe.....	14	10.00
June 22.	Chas. T. Leonard, equipment and repairs.....	15	36.15
June 7.	M. Dyke, 3 long pack straps.....	16	3.40
July 1.	S. M. Williams, stationery.....	17	1.15
April 22.	N. W. Lith. and Pub. Co., 300 township plats—Lith.....	18	10.50
July 17.	C. A. Hoffman, repairs and miscellaneous.....	19	12.50
Aug. 2.	Henry F. Nachtrieb, sundry petty accounts.....	20	245.37
Aug. 3.	J. W. Erf, salary of employes.....	21	50.00
May 13.	Gustav E. Stechert, books for library.....	90	78.58
May 31.	Library bureau, furniture and supplies.....	91	30.00
June 24.	Noah Johnson, salary of employes.....	92	16.00
June 28.	L. H. Chapman, salary of employes.....	93	28.50
June 24.	L. C. Lawrence, salary of employes.....	94	26.00
June 19.	Henry F. Nachtrieb, supplies.....	95	6.98
Feb. 10.	K. E. Koehlers, antiquarium, books for library.....	96	23.38
June 2.	Kennedy Bros., equipment.....	97	44.00
June 1.	A. B. Seymour, library.....	98	12.20
June 9.	Minneapolis Paper Co., stationery and printing.....	99	6.70
May 5.	Henry F. Nachtrieb, 5 hatching jars.....	100	25.00
Aug. 31.	Pay roll, salaries of employes.....	107	804.99
Aug. 20.	Gun Flint Lake Iron Co., supplies.....	108	40.38
Aug. 30.	James C. O'Brien, salary of employes.....	109	86.00
Aug. 19.	Ralph D. Cleveland, supplies.....	110	13.18
Aug. 28.	Pay roll, salaries of employes.....	111	415.00
Aug. 28.	Pay roll, salaries of employes.....	112	440.00
Aug. 15.	Conway MacMillan, salary of employes, supplies.....	113	76.04
Jan. 22.	Bausch & Lomb Opt. Co., 12 doz. compressors.....	114	3.69
July 1.	Warner Bros., supplies.....	115	20.74
June 16.	Benjamin LaMere, museum.....	116	30.50
June 27.	Noyes Bros. & Cutler, apparatus supplies.....	117	93.77
June 22.	Chas. T. Leonard, supplies.....	118	54.26
Aug. 15.	Caswell A. Ballard, salary of employe.....	119	80.00
July 3.	Journal Printing Co., 500 old papers and postage.....	120	1.85
Aug. 31.	N. W. Winchell, salaries, freight, miscellaneous.....	121	460.52
Aug. 3.	Gustav E. Stechert, books for library.....	122	84.23
Aug. 28.	R. B. Lees, repairs, supplies, miscellaneous.....	123	24.25
Aug. 11.	Minneapolis Paper Co., supplies.....	124	50.00
Aug. 30.	A. R. Miller & Sons, supplies.....	125	5.16
Aug. 15.	Conway MacMillan, miscellaneous.....	126	41.10
May 5.	R. Friedlander & Sohn, books for library.....	127	912.47
June 4.	Dr. Thos. S. Roberts, miscellaneous expenses on trip.....	128	50.45
Aug. 31.	N. H. Winchell, salaries of employes, freight, supplies.....	129	92.18
Aug. 15.	Alex. P. Anderson, salary of employes.....	130	80.00
Sept. 28.	W. R. Hoag, services as state topographer.....	291	181.94
Sept. 30.	J. E. Spurr, salary of employes, transportation and supplies.....	292	154.78

		No. Voucher.	
Sept. 5.	L. F. Knox, supplies.....	293	146.04
Sept. 7.	Warren Upham, expenses incurred in field work.....	294	110.34
Oct. 1.	N. H. Winchell, salaries of employes, miscellaneous.....	295	94.17
Oct. 1.	J. E. Spurr, salaries of employes.....	296	198.33
Oct. 1.	Anderson & Korb, supplies.....	297	9.49
Sept. 25.	J. E. Spurr, pocket voucher.....	298	7.88
Sept. 30.	Pay roll, geological survey.....	299	603.46
Aug. 8.	Benjamin La Mere, specimens for museum and expenses.....	300	75.00
Sept. 30.	Edmund P. Sheldon, salaries of employes and miscellaneous.....	301	112.79
Sept. 4.	Josephine E. Tilden, salary of employes.....	302	100.00
Sept. 7.	Conway MacMillan, salary of employes, supplies.....	303	42.50
Sept. 27.	Marder, Luce & Co., supplies.....	304	19.99
Sept. 5.	C. H. Topping, salary of employes.....	305	15.00
Aug. 21.	Lyman Eliel Drug Co., supplies.....	306	1.95
Sept. 12.	The Journal Printing Co., 800 old papers.....	307	2.80
Sept. 14.	Gustav E. Stechert, books for library.....	308	79.81
Total.....			\$9,506.71
Balance undrawn.....			6.96
			<u>\$9,513.67</u>

SCHOOL OF MINES.

Balance in Treasury August 1st, 1893.....	\$4,213.88
Disbursements.	
May 31. W. R. Appleby, expenses to Chicago and return.....	\$33.40
Balance undrawn.....	1,183
	<u>\$4,180.48</u>
	<u>\$4,213.88</u>

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

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

		No. Voucher.	
Sept. 30.	Wm. R. Appleby, salary.....	290½	220.00
Sept. 30.	Geo. D. Shepardson, salary.....	290½	180.00
Sept. 30.	Peter Christianson, salary.....	290½	25.00
Sept. 30.	Chas. P. Berkey, salary.....	290½	25.00
Oct. 31.	W. R. Appleby, salary.....	420½	220.00
Oct. 31.	Geo. D. Shepardson, salary.....	420½	180.00
Oct. 31.	Peter Christianson, salary.....	420½	25.00
Oct. 31.	Chas. P. Berkey, salary.....	420½	25.00
Nov. 30.	W. R. Appleby, salary.....	549	220.00
Nov. 30.	Geo. D. Shepardson, salary.....	549	180.00
Nov. 30.	Peter Christianson, salary.....	549	25.00
Nov. 30.	Chas. P. Berkey, salary.....	549	25.00
Dec. 31.	Wm. R. Appleby, salary.....	682	220.00
Dec. 31.	Geo. D. Shepardson, salary.....	682	180.00
Dec. 31.	Peter Christianson, salary.....	682	25.00
Dec. 31.	Chas. P. Berkey, salary.....	682	25.00
Jan. 31.	Wm. R. Appleby, salary.....	801	220.00
Jan. 31.	Geo. D. Shepardson, salary.....	801	180.00
Jan. 31.	Peter Christianson, salary.....	801	25.00
Jan. 31.	Chas. P. Berkey, salary.....	801	25.00
Feb. 28.	Wm. R. Appleby, salary.....	887	220.00
Feb. 28.	Geo. D. Shepardson, salary.....	887	180.00
Feb. 28.	Peter Christianson, salary.....	887	25.00
Feb. 28.	Chas. P. Berkey, salary.....	887	25.00
Mar. 31.	Wm. R. Appleby, salary.....	987	220.00
Mar. 31.	Geo. D. Shepardson, salary.....	987	180.00
Mar. 31.	Peter Christianson, salary.....	987	25.00
Mar. 31.	Chas. P. Berkey, salary.....	987	25.00
April 30.	Wm. R. Appleby, salary.....	1,084	220.00
April 30.	Geo. D. Shepardson, salary.....	1,084	180.00
April 30.	Peter Christianson, salary.....	1,084	25.00
April 30.	Chas. P. Berkey, salary.....	1,084	25.00
May 31.	Wm. R. Appleby, salary.....	1,176	220.00
May 31.	Geo. D. Shepardson, salary.....	1,176	180.00
May 31.	Peter Christianson, salary.....	1,176	25.00
May 31.	Chas. P. Berkey, salary.....	1,176	25.00
June 30.	Wm. R. Appleby, salary.....	1,185	220.00
June 30.	Geo. D. Shepardson, salary.....	1,185	180.00
June 30.	Peter Christianson, salary.....	1,185	25.00
June 30.	Chas. P. Berkey, salary.....	1,185	25.00
Total.....			<u>\$4,500.00</u>

SUMMARY OF DISBURSEMENTS UNDER SPECIAL
APPROPRIATIONS.

For Library	\$99.30
For Building and Equipment.....	114,330.10
For Geological and Natural History Survey.....	9,513.67
For Equipment of Pharmacy.....	1,859.41
For Equipment of School of Mines.....	33.40
For salaries School of Mines and Electrical Engineering...	4,500.00
Total.....	<u>\$130,335.88</u>