

ANNUAL REPORT
OF
THE BOARD OF REGENTS
OF THE
UNIVERSITY OF MINNESOTA
TO THE GOVERNOR,
FOR THE
FISCAL YEAR ENDING NOVEMBER 30, 1876.

TRANSMITTED TO THE LEGISLATURE OF THE NINETEENTH ANNUAL
SESSION, 1877.

ST. PAUL:
PIONEER PRESS COMPANY.
1877.

December, 27th, 1876.

To his Excellency, John S. Pillsbury, Governor of Minnesota:

SIR:—In compliance with the law, I have the honor to forward herewith the annual report of the Board of Regents of the University of Minnesota, for the university year, ending June 30th, 1876; also financial statement of same for the current fiscal year. I have the honor to be

Your Obedient Servant,

HENRY H. SIBLEY,

President of the Board of Regents.

THE BOARD OF REGENTS.

The Hon. PARIS GIBSON, M. A., Minneapolis.....	1877.
The Hon. MORRIS LAMPREY, M. A., St. Paul.....	1877.
The Hon. RICHARD CHUTE, Minneapolis.....	1877.
The Hon. WILLIAM R. MARSHALL, St. Paul.....	1878.
The Hon. A. A. HARWOOD, Austin.....	1878.
The Hon. HENRY H. SIBLEY, St. Paul.....	1879.
The Hon. THOS. S. BUCKHAM, M. A., Faribault.....	1879.

And ex officio,

The Governor of the State,

The Hon. JOHN S. PILLSBURY, Minneapolis.

The State Superintendent of Public Instruction,

The Hon. D. BURT, M. A., St. Paul.

The President of the University,

WILLIAM W. FOLWELL, M. A., Minneapolis.

OFFICERS OF THE BOARD.

Hon. HENRY H. SIBLEY, President.

Hon. PARIS GIBSON, Recording Secretary and Treasurer.

WILLIAM W. FOLWELL, Corresponding Secretary.

REPORT.

OFFICERS OF INSTRUCTION.

WILLIAM W. FOLWELL, M. A., PRESIDENT,
Instructor in Political Economy and Librarian.

G. CAMPBELL, M. A., B. D., VICE PRESIDENT,
Professor of Mental and Moral Philosophy.

*VERSAL J. WALKER, M. A.,
Professor of the Latin Language and Literature.

JABEZ BROOKS, M. A., D. D.,
Professor of the Greek Language and Literature.

EDWIN J. THOMPSON, M. A.,
Professor of Mathematics and Astronomy.

NEWTON H. WINCHELL, M. A., STATE GEOLOGIST,
Professor of Geology and Mineralogy.

CHARLES N. HEWITT, M. D.,
Non-Resident Professor of Public Health.

MITCHELL D. RHAME, M. A.,
Professor of Civil and Mechanical Engineering.

STEPHEN F. PECKHAM, M. A.,
Professor of Chemistry and Physics.

JOHN G. MOORE, B. A.,
Professor of North European Languages.

MOSES MARSTON, M. A.,

Professor of the English Language and Literature.

RICHARD W. LAING, LL. D.,

Professor of History and Elocution.

HELEN SUTHERLAND, M. A., PRECEPTRESS,

Assistant Professor of Latin.

CHARLES Y. LACY, B. Agr.,

Assistant Professor in charge, of Theory and Practice of Agriculture.

LOUIS W. PECK,

Instructor in Physics and Drawing.

Mr. John C. Hutchinson of the Senior Class gave instruction in the department of Greek.

The following gentlemen were employed in the several capacities indicated :

Mr. Wm. T. Scott, Farm Superintendent ;

Mr. John S. Clarke, 1st Assistant Librarian ;

Mr. Graham C. Campbell, 2d Assistant Librarian ;

Mr. Clarke Stewart, Assistant in the Chemical Laboratory ;

Mr. J. Clarence Bryant, Janitor of Main Building ;

Mr. Stewart instructed a class in Elementary Astronomy in the third term to the satisfaction of the professor in charge.

OFFICIAL CHANGES.

During the year the following changes took place in the Board of Regents and the Faculty :

At the annual meeting in December last the Hon. John S. Pillsbury resigned the presidency of the Board of Regents which he had held continuously since the year 1864. This vacancy was filled by the unanimous choice, of his colleagues, of the Hon. Henry H. Sibley whose connection with the present Board dates from the re-organization of the University in 1868.

During the session of the Legislature the following appointments of Regents were made by the Governor, by and with the advice and consent of the Senate ;

The Hon. H. H. Sibley, to fill his own vacancy caused by the expiration of a previous term ;

The Hon. Thos. S. Buckham, of Faribault, to fill the vacancy caused by the retirement of the Hon. Chas. S. Bryant at the close of his second term ;

The Hon. Richard Chute, to fill the vacancy caused by the accession of the Regent Pillsbury to the governorship of the state, the governor being under the organic law a regent *ex-officio*.

At the annual election held on the 10th day of May, 1876, Assistant Professor Richard W. Laing, LL. D., was raised to the rank of professor, and the title of the chair occupied by Professor John G. Moore was changed from "German Language and Literature" to "North European Languages."

The professorship of Military Science and Tactics remained vacant through the year, notwithstanding efforts of the officers of the Board of Regents seconded by those of Senator McMillan to secure the detail of an officer by the War Department. The vacancy has however since been filled by the appointment of First Lieutenant John A. Lundeen of the Fourth U. S. Artillery, a graduate of the U. S. Military Academy and an appointee from our own state.

*During the past year the ranks of the corps of instruction were, for the first time, broken by death. On the 18th day of May, 1876, after a brief illness, Versal J. Walker, professor of the Latin language and literature, was suddenly taken out of this world. The University attended his funeral two days later, in a body. Addresses were made upon this occasion by the State Superintendent and by members of the Faculty. These addresses, together with a biographical sketch of the deceased, have been printed in a "memorial pamphlet" by a committee of the General Faculty.

Professor Walker came to the University with the prestige of many years successful work as a teacher and superintendent at the beginning of college work in the University in 1869. His career as a professor only added to his former reputation, and heightened the esteem in which he had been held by all who knew him, whether as teacher or man. The best part of his life was given to educational work in Minnesota ; his death was a great loss to the University and the State at large--and is keenly felt by the Faculty and students.

GRADUATES.

At the Commencement in June last, twelve degrees were conferred on ten graduates. Nine young gentlemen and one young

lady—making the whole number of graduates twenty-one, two being ladies.

These exercises were very interesting, the large University Hall being too small to accommodate the crowd in attendance.

General George Sykes, U. S. A., commanding Fort Snelling, detailed the Post Band to furnish music for the occasion, sending his Adjutant, Lieut. W. H. Ludlow, to represent him. The bearing and attainments of the graduating class furnished good evidence of the thorough and faithful training given by the Faculty.

ATTENDANCE.

The following tables show the attendance for the year (1875-6.)

SUMMARY—1875-6.

COLLEGE OR DEPARTMENT.	CLASS.	GENTLEMEN.	LADIES.	TOTALS.
Science, Literature and the Arts.....	{ Graduates...	5	.....	5
	{ Senior.....	8	1	9
	{ Junior.....	16	4	20—84
Mechanic Arts.....	{ Senior.....	3	.....	3
	{ Junior.....	1	.....	1
	{ Special.....	1	.....	1—5
Agriculture, { Advanced Course.....	{ Junior.....	1	.....	1
	{ Elementary Course.....	2	.....	2—3
Collegiate Department.....	{ First.....	24	6	30
	{ Second.....	32	16	48—78
	{ Third.....	31	11	42
	{ Fourth.....	49	20	69
	{ Special.....	23	18	36—147
Totals.....		196	71	267

OR BY CLASSES ONLY,

Graduates.....	5
Seniors—of all Departments.....	12
Juniors—of all Departments.....	22
Sophomores—First Class, Collegiate Department.....	30
Freshmen—Second Class, Collegiate Department.....	48—117
Preparatory, { Third Class, Collegiate Department.....	42
	{ Fourth Class, Collegiate Department.....	69
Special 37, Elementary Agriculture, 2.....	39—150
Total.....	267

BUILDINGS.

The University buildings at present are ample to accommodate the teachers and students for all class recitations, but the growing

demands of the work will soon require the erection of a separate hall for a Library and Museum.

A drill room and gymnasium is greatly needed now, and the work of the able Military professor cannot be carried on in the winter and spring months with any fair degree of satisfaction without suitable quarters. A hall costing from \$4,000 to \$5,000 would answer the purpose, and it should be erected at once.

The Agricultural College building is satisfactory in all respects—it affords ample class, lecture and collection rooms for the professors of agriculture and chemistry, with a plant house in the east wing and a chemical laboratory in the west wing, the latter being supplied with all needful appliances for making analyses of objects collected by the geological survey, the agricultural department, or by private parties; it is in daily use during the year for instruction or analysis. The plant house is now fairly started.

LIBRARY.

Over ten thousand bound volumes are catalogued and are freely used by students and professors. No material additions can be made for want of funds. The Board has been able to spend but \$500 per annum for the purchase of books, while \$2,000 could be profitably used, as many departments of instruction are embarrassed for want of them.

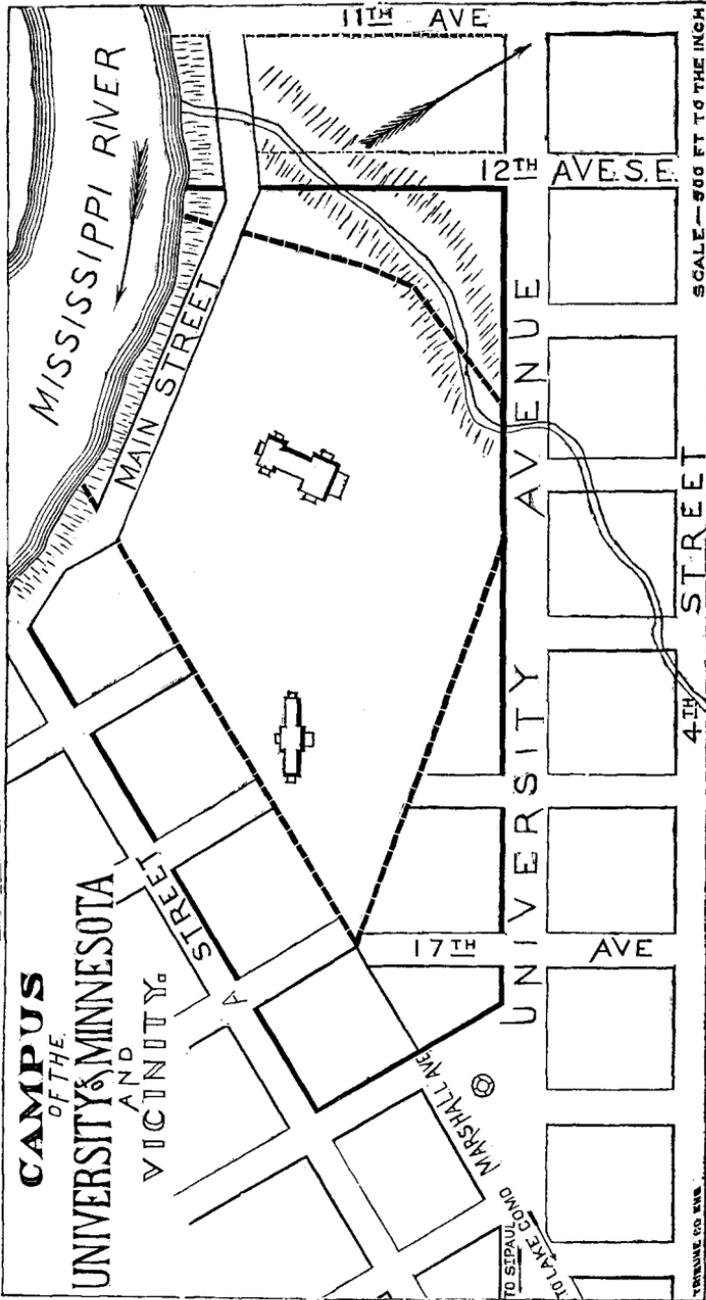
MUSEUM.

The year has been one of special activity in the Museum. Besides the display of the casts of fossils purchased of Prof. H. A. Ward, and the mammals obtained in the Custer Expedition to the Black Hills, in 1874, the invertebrates purchased of H. P. Woodman in 1872 has been examined, labeled and placed on exhibition. Considerable collections of plants have been made, including some fungi; about a hundred species of birds have been prepared for mounting, and several hundred specimens, illustrating the paleontology of the Trenton limestone, have been named, and await the construction of cases for exhibition. At the close of the Centennial Exhibition at Philadelphia, seven (7) boxes of ores and minerals were obtained by the Curator, from the various exhibits, mostly by donation, and have already been safely deposited in the storage

room in the basement of the University, where, along with more than forty other similar boxes and cases, they also await the construction of cases for their exhibition. In addition to these, a purchase was made at Hoboken, N. J., of a fine general collection of mineral species, with many duplicates, specially intended to illustrate the science of mineralogy. These consist very largely of crystalline forms. This collection will embrace at least 15 boxes in addition to those already enumerated.

UNIVERSITY CAMPUS.

By reference to the accompanying map it will be seen that the frontage of the grounds on University Avenue is limited to about twelve rods, while on the upper and lower sides it is completely cut off from streets by abutting private property. These considerations, together with the fact that the grounds in their present irregular shape are too limited for the erection of such buildings as the future wants of the University of a great State will require, and that for sanitary and mechanical reasons it is very desirable to control the waters of the spring brook now touching the campus, impelled the Board to commence proceedings in the Hennepin county District Court, under the law of the State, for the condemnation of sufficient lands to square out the grounds between 12th Avenue S. E., University Avenue and A. Street. The owners of the property have made no opposition to these proceedings, and generally manifest a disposition to take a fair valuation for their property; a recommendation is respectfully made that you request the Legislature to make an appropriation to pay therefor.



GEOLOGICAL SURVEY.

The work in the field was confined to Houston and Hennepin counties; the detailed report of the State Geologist is transmitted with the usual colored geological maps. The chemical report of Prof. Peckham accompanies that of Prof. Winchell, and contains analysis of lignites, peats, and mineral waters. The entomological report of Mr. Whitman gives facts as to the distribution of the grasshopper at present in this State; shows its former and late ravages, and furnishes much valuable data as to its habits and the proper means of combatting it in the future. This insect scourge is one that demands immediate and most thorough methods of dealing, and the State would do well to make a suitable appropriation to carry on this branch of the work under the general law. Dr. P. L. Hatch, of Minneapolis, has been appointed State Entomologist.

PREPARATORY INSTRUCTION.

New and sparsely settled States, desiring to give free education alike to all, must, through the appliances of their Universities, do more or less preparatory work.

One hundred and eighteen northwestern colleges report themselves to the Bureau of Education as teaching 37 per cent. of their students in proper college studies, and the remaining 63 per cent. in preparatory branches. Only 8 of these 118 colleges and universities of nine States report no preparatory students. In this number (8,) are included four (4) of the thirty-two (32) Ohio colleges. All the colleges of Illinois, Indiana, Nebraska and Wisconsin, without exception, instruct preparatory students. Of the remaining States of the Northwest, Iowa, Kansas, Michigan and Missouri, but one college in each *reports* no preparatory students. Of all the State Universities of the Northwest, that of Michigan alone has wholly discontinued preparatory work.

But it is desirable that as speedily as possible this be relegated to the high schools, where it properly belongs, hence on the 10th day of May last the Board of Regents adopted the following preambles and resolutions:

WHEREAS, The colleges and universities of the Northern States of the Mississippi Valley are, as a general rule, obliged to carry on preparatory classes or departments, and only one State University—that of Michigan—has, under favorable circumstances, been able wholly to dispense with preparatory work; and

WHEREAS, The high schools and academies of the State generally have

not as yet been developed so far and in such a manner as to offer suitable preparatory training to the youth of the State desiring to enter the University; and

WHEREAS, The Legislature has not yet made any provision by law for the encouragement of preparatory schools in our State; and

WHEREAS, A premature discontinuance of elementary instruction would be detrimental to that high grade of scholarship toward which the Board of Regents desire the University steadily to advance; therefore

Resolved, That the time heretofore named for the discontinuance of the fourth class of the collegiate department be, and the same hereby is, extended until further notice by this Board.

Resolved further, That in order to encourage preparatory work in the high schools and academies of the State, and co-operation by them with the University, no applicant shall be admitted to the collegiate department, to pursue the studies of any regular class or course, who is entitled to receive, and can actually receive, the same instruction in substance in the public schools of the school district in which he legally resides.

Thus the high schools of the cities, by adopting a proper curriculum, will be enabled to articulate with the University, leaving its doors still open to the sons and daughters of our farmers and others who have no such advantages—and giving to *all* a place where they may of *right* attend and fit themselves for college work.

AGRICULTURAL COLLEGE AND FARM.

Instruction in this college has been continued as heretofore, a few persons applying for the same. The library and museum of agriculture remain about the same as at the last report. But little planting has been done in the fruit garden and orchard, but numerous observations and some experiments have been made on the planting done last year. As usual, a large number of experiments with garden vegetables and farm crops have been carried on. Considerable quantities of hay, oats, corn and potatoes have been produced. Some improvements, in the way of planting and ditching, have been made. The plant house has been furnished with floor, heating apparatus and staging and a large number of plants collected. For further facts reference is respectfully made to the report of Assistant Prof. Lacy, in which attention is called, particularly to the recommendations concerning the lecture course for farmers.

RESOURCES OF THE UNIVERSITY.

These consist of lands granted by Congress for the endowment of an University, and those granted to the State under the act of

July 2d, 1862, donating lands for the benefit of agriculture and the mechanic arts.

The State Auditor reports additions to the permanent fund, during the yearly sales of land, as follows:

Acres sold in 1875.....	3,685.81
Amount of sales.....	\$20,166 79
Principal paid.....	3,407 40
Principal unpaid.....	16,759 39
Interest paid.....	702 06
Average per acre, 1876.....	5 47
Average per acre, 1875.....	5 49
Average all sales to date.....	5 62

And the total amount of accumulations of the Permanent University Fund at the close of the fiscal year, to be \$295,813.86, full details of which appear in his annual report.

Herewith, I hand you the Treasurer's financial statement for the current fiscal year, which shows fully in detail all the receipts and expenditures, made up with great care, and the items of which have been fully verified by the auditing committee of the Board of Regents.

GENERAL OUTLOOK.

The University is daily growing in favor with our people and is assuming its proper position amongst like institutions in our country; students are now in attendance from thirty-one counties in this State, and from thirteen states and counties. Public opinion in favor of the co-education of the sexes in this institution is now nearly unanimous—old prejudices have, by its favorable workings, been thoroughly dissipated.

By the extension of a net work of street railroads throughout the University City, and the very liberal concessions made by the company to students, on fares, easy and cheap access is had by them to their homes and boarding places; accommodations can now be had at low prices for all, while many students are enabled to supplement their resources (often scanty) by labor given in exchange for board.

With an enlightened realization of the needs of the State, and a generous support on the part of the authorities, Minnesota in her infancy has established an institution for higher education free to all the world, and invites all to participate, in its advantages. Her sons and daughters have now no need to leave its borders to obtain a

thorough classical or scientific education, and the hundreds now thronging her University Halls give proof that these advantages are in a good degree appreciated and understood by her people.

OFFICERS OF INSTRUCTION, UNIVERSITY YEAR 1876-7.

WILLIAM W. FOLWELL, M. A., PRESIDENT,
Instructor of Political Economy and Librarian.

G. CAMPBELL, M. A. B. D., VICE-PRESIDENT,
Professor of Mental and Moral Philosophy.

JABEZ BROOKS, M. A. D. D.,
Professor of Greek, and in charge of Latin.

EDWIN J. THOMPSON, M. A.,
Professor of Mathematics and Astronomy.

NEWTON H. WINCHELL, STATE GEOLOGIST,
Professor of Geology and Mineralogy.

CHARLES N. HEWETT, M. D.,
Non-Resident Professor of Public Health.

MITCHELL D. RHAME, M. A.,
Professor of Mechanical and Civil Engineering.

STEPHEN F. PECKHAM, M. A.,
Professor of Chemistry and Physics.

JOHN G. MOORE, B. A.,
Professor of North European Languages.

MOSES MARSTON, M. A.,
Professor of English Language and Literature.

RICHARD W. LAING, LL. D.,
Professor of History and Instructor in Elocution.

MRS. AUGUSTA NORWOOD SMITH,
Preceptress.

CHARLES Y. LACY, B. Agr.

Assistant Professor in charge of Theory and Practice of Agriculture.

LOUIS W. PECK,

Instructor in Physics and Drawing.

MR. J. B. CLARK,

Instructor in Latin.

MR. JOHN S. CLARK,

Assistant Librarian and Instructor in Mathematics.

MR. JOHN C. HUTCHINSON,

Instructor in Greek and Latin.

THE UNIVERSITY OF MINNESOTA, }
MINNEAPOLIS, MINN., }
December 1st, 1876. }

Hon. H. H. Sibley, President of the Board of Regents :

SIR:—I have the honor herewith to transmit the Tenth Annual Report of the condition and progress of the University.

I have the honor to be, Sir,

Very respectfully,

Your obedient servant,

WILLIAM W. FOLWELL,

President.

REPORT OF THE
PRESIDENT OF THE UNIVERSITY.

To the Honorable the Board of Regents:

The University year 1875-6 began on the 19th day of September, 1875, and ended on the 21st day of June 1876. I would respectfully refer you to the CALENDAR for the year for the names and residences of the officers and students, and for the usual routine information.

DEATH OF PROFESSOR WALKER.

I beg leave to record in this place a brief expression of the sentiments of myself and colleagues in regard to the sorrowful event which near the close of the year deprived the Board of Regents of an experienced and valued professor, and the Faculty of an esteemed and beloved friend and fellow-laborer. The General Faculty, by a committee, have published a memorial pamphlet, containing a biographical sketch of Professor Walker, and the addresses made at his funeral. I would respectfully recommend that an appropriation be made to defray the expense of this publication, and to secure a suitable portrait of their lamented officer.

THE WORK OF THE YEAR.

The following table exhibits the work of the several departments of instruction, in amount and kind. It does not, however, include the examinations, nor any account of the revision and correction of examination papers:

The first term began September 21st, 1875, and ended December 23d, 1875. The second term began January 4th, 1876, and ended March 22d, 1876. The third term began April 3d, 1876, and ended June 22d, 1876.

Subjects.	Instructor.	Class.	No. of Exercises	No. of Students.	Term.
MATHEMATICS.					
Algebra.....	Thompson.	Fourth.	50	65	II.
Algebra. advanced.....	"	Third.	55	40	III.
Plane Geometry.....	"	Third.	68	34	I.
Solid Geometry.....	"	Second.	12	40	I.
Plane Trigonometry.....	"	"	44	40	I.
Spherical Trigonometry.....	"	"	44	40	I.
Conic Sections.....	"	"	30	32	III.
Analytical Geometry.....	"	First.	52	21	I.
Surveying, in class room.....	Peck.	Second.	24	32	III.
Surveying, in field, by sections	Peck.	Second.	56	6 or 7	III.
Differential Calculus.....	Thompson.	Junior.	61	4	I.
Integral Calculus.....	"	"	50	4	II.
Modern Geometry.....	"	"	40	4	III.
Gen. Theory of Equations.....	"	"	20	4	III.
Elementary Astronomy.....	C. Stewart.	Fourth.	60	9	III.
Descriptive Astronomy.....	Thompson.	First.	50	26	II.
Practical Astronomy.....	"	Senior.	40	4	I.
CHEMISTRY.					
Agricultural Chemistry.....	Peckham.	Junior.	57	2	I.
Qualitative Analysis.....	"	First.	53	16	I.
" " " " " " " " " " " "	"	Junior.	53	5	I.
" " " " " " " " " " " "	"	Senior.	53	3	I.
" " " " " " " " " " " "	"	Graduates.	53	3	I.
Quantitative Analysis.....	"	First.	57	1	II.
" " " " " " " " " " " "	"	Junior.	57	5	II.
" " " " " " " " " " " "	"	Graduates.	57	2	II.
" " " " " " " " " " " "	"	Junior.	54	4	III.
" " " " " " " " " " " "	"	Graduates.	54	3	III.
General Chemistry.....	"	Second.	57	48	II.
Applied Chemistry.....	"	Second.	54	20	III.
PHYSICS.					
Mechanical Physics.....	Rhame.	First.	60	18	I.
Molecular Physics.....	Peck.	Second.	60	43	I.
Natural Philosophy.....	Peck.	Third.	60	27	I.
Natural Philosophy.....	Peck.	Fourth.	56	30	II.
GEOLOGY.					
Historical Geology.....	Winchell.	Junior.	56	4	III.
Historical Geology Lectures.....	"	Junior.	4	4	III.
Dynamical Geology.....	"	Third.	60	46	II.
Mineralogy and Blowpipe Analysis.....	"	Junior.	55d.h.	3	II.
BOTANY.					
Structural Botany.....	Winchell.	Third.	28	39	III.
Systematic Botany.....	"	Third.	28	28	III.
ZOOLOGY.					
Elements.....	Winchell.	Second.	58	4	II.
Elements.....	Lacy.	First.	56	7	III.
PHYSICAL GEOGRAPHY.					
Physical Geography.....	Lacy.	Fourth.	60	37	I.
ENGLISH, &C.					
English Literature.....	Marston.	Junior.	60	20	I.
" " " " " " " " " " " "	"	"	22	15	II.
" " " " " " " " " " " "	"	"	22	11	III.
Elements of Criticism.....	Laing.	Senior.	37	9	I.
Constitution, United States.....	"	"	40	10	II.
Constitution, Minnesota.....	"	"	10	10	II.
Logic.....	Marston.	First.	55	34	I.
Rhetoric.....	"	"	50	22	III.
Anglo-Saxon.....	"	Second.	60	10	I.
English Words.....	"	Fourth.	55	37	II.
Prose Composition.....	Laing.	" 2 §§.	55	67	I.
Rhetorical Exercises, (public).	Marston.	Senior.	70	10	I. II. III.
Rehearsals.....	"	Sen. and Jun.	250	30	I. II. III.

Subjects.	Instructor.	Class.	No. of Exercises	No. of Students.	Term.
ENGLISH--(Continued.)					
Essays and Orations, criticised	"	" "	230	30	I. II. III.
Rhetorical Exercises. (class) ..	"	Junior.	20	20	I.
" " (public) ..	"	"	55	15	II. III.
" " (class) ..	"	First	30	34	I. II. III.
Rehearsals ..	"	"	270	84	I. II. III.
Essays and Orations, criticised	"	"	300	34	I. II. III.
Rhetorical Exercises ..	Laing.	2d, 3d and 4th.	1694	292	I. II.
Rehearsals ..	"	2d and 4th.	141	104	I. II.
Elocution, Lectures ..	"	"	14	.....	II.
Essays, criticised ..	"	2d, 3d and 4th.	647	292	I. II.
History of England ..	"	Fourth.	55	33	I.
General History, outlines ..	"	"	52	53	III.
Modern History ..	"	Third.	95	9	II. III.
GERMAN.					
German Rudiments ..	Moore.	Junior & 3d.	60	31	I.
Jungfrau von Orleans ..	"	Second.	61	14	I.
Piccolomini and Lager ..	"	2d & Jun.	61	21	I.
Grammar and Reading ..	"	Junior & 3d.	34	25	II.
Hermann and Dorothea ..	"	Second.	35	25	II.
Literatur-Geschichte ..	"	Sen. & Jun.	35	15	II.
Nathan der Weise ..	"	Second.	54	16	III.
Jungfrau von Orleans ..	"	Junior & 3d.	33	21	III.
Deutsche Lyrik ..	"	Sen. & Jun.	33	12	III.
FRENCH.					
Grammar and Exercises ..	Campbell.	First.	65	34	I.
Dramatic Reading ..	"	Junior.	55	3	II.
Classical Prose Reading ..	"	"	55	5	III.
Fenelon's Telemaque ..	Folwell.	Sen. Jun. & c.	61	8	I.
Grammar and Reader ..	Laing	First.	54	20	II.
Grammar and Reader ..	"	"	51	6	III.
LATIN.					
Plautus ..	Walker.	Senior.	56	5	I.
Roman Literature, Lectures ..	"	"	14	4	I.
Juvenal ..	"	Junior.	40	8	III.
Tacitus, History ..	"	Junior.	56	14	II.
Horace, Odes, &c ..	"	First.	56	11	II.
Livy ..	"	Second.	112	27	II. III.
Virgil, Æneid ..	Walker.	Thrd.	56	18	III.
Cicero, Orations ..	"	"	60	13	I.
Roman History ..	"	Second.	"	27	II. III.
Roman Antiquities ..	"	Junior.	"	8	III.
Latin Composition ..	"	Third.	"	18	"
Virgil, Æneid ..	Sutherland.	"	56	34	II.
Cicero, Orations ..	"	Fourth.	60	84	III.
Cæsar, 2 Sections ..	"	"	136	34	I, II.
Latin Reader, 2 Sections ..	"	"	190	39	I, II, III.
Latin Composition ..	"	3d & 4th.	"	"	I, II, III.
GREEK.					
Aristotle ..	Brooks.	Senior.	55	4	II.
Essays on same ..	"	"	4	4	II.
Plato ..	"	Junior.	59	10	I.
Essays on same ..	"	"	30	10	I.
Greek Literature, Lectures ..	"	"	13	10	III.
Greek Literature, Reviews ..	"	"	12	10	III.
Demosthenes, Olynthiacs ..	"	First.	55	7	II.
History and Geography ..	"	"	15	7	II.
Æschylus, Prometheus ..	"	"	53	7	III.
Homer, Iliad ..	"	Second.	60	13	I.
Essays on same ..	"	"	29	13	I.
Homer, Iliad ..	"	"	55	13	I.
History ..	"	"	17	13	I. II.
Demosthenes, Olyn. and Phil ..	"	"	55	13	III.
History and Geography ..	"	"	8	13	III.
Xenophon, Anabasis ..	"	Third.	60	10	I.
Greek Composition ..	"	"	82I	10	I.
Xenophon and Herodotus ..	" (J.C.H.)	"	29	10	II.
Grammar and Reader ..	" (J.C.H.)	Fourth.	00I	19	I. II. III.

Subjects.	Instructor.	Class.	No. of Exercises	No. of Students.	Term.
PHILOLOGY (Theoretical).....	Campbell.	Junior.	24	18	II.
MENT. AND MOR. PHILOSOPHY.					
History of Philosophy	Campbell.	Senior.	40	11	I.
Ontology.....	"	"	25	11	I.
Ethics.....	"	"	40	10	II.
Evidences of Christianity.....	"	"	15	10	II.
Psychology.....	"	Junior.	55	17	III.
Natural Theology.....	"	Senior.	12	8	III.
HISTORY OF CIVILIZATION.....					
POLITICAL ECONOMY.					
Lectures.....	Folwell.	Junior.	34	22	II.
Lectures.....					
Lectures.....	Folwell.	Senior.	8	11	I.
Lectures.....	Folwell.	Senior.	45	10	III.
SANITARY SCIENCE.					
Lectures on Public Hygiene.....	Hewitt.	Senior.	6	10	III.
Physiology	Peck.	Fourth.	56	32	III.
INDUSTRIAL DRAWING.					
Free Hand, Drawing	Rhame.	Fourth.	55	23	III.
Plane Problems.....	"	Third.	55	42	II.
Projection and Isometric.....	Peck.	Second.	55	25	II.
Descriptive Geometry.....	Rhame.	First.	55	13	II.
Descriptive and Perspective..	"	"	55	12	III.
Mechanical Drawing.....	"	Special.	55	1	III.
CIVIL ENGINEERING, &c.					
Applied Mechanics.....	Rhame.	Senior.	60	2	I.
Railroad Work	"	"	40	2	I.
Stereotomy.....	"	"	55	2	II.
Bridge Building.....	"	"	55	3	II.
Building Materials.....	"	"	30	3	III.
Applied Mechanics (steam)...	"	"	33	2	III.
AGRICULTURE.					
Botany and Landscape Garden- ing, Lectures.....	Lacy.	Junior.	61	2	I.
Horticulture, Lectures.....	Lacy.	Junior.	56	3	II.
MILITARY SCIENCE.					
(Vacant.)					

NOTES:—(1.) The exercises in Analytical Chemistry, Blowpipe Analysis, Field Surveying and Drawing, occupied double hours.

(2.) Professor Lacy makes no report in this place of time spent in out-door instruction and in conducting labor and experiments on the experimental farm.

GRADUATIONS.

At the fourth annual commencement, held in the Assembly Hall on the 22nd day of June, 1876, the following degrees were, upon recommendation of faculties, by your authority duly conferred :

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

Bachelors in Arts.

John Sinclair Clarke.....	St. Mary's N. S.
John Corrin Hutchinson.....	Hastings.
William Edwin Leonard.....	Minneapolis.
John Aiken Sweat.....	Brownfield, Me.

Bachelors in Science.

Martha Appleton Butler.....	Franklin, Mo.
Robert Henry Crafts.....	Minneapolis.
Lewis Singer Gillette.....	Niles, Mich.
Eugene Alvin Hendrickson.....	St. Paul.
William Herod Locke.....	Minnetonka.

COLLEGE OF MECHANIC ARTS.

Bachelors in Civil Engineering.

Lewis Singer Gillette.....	Niles, Mich.
Eugene Alvin Hendrickson.....	St. Paul.
Charles Edward Thayer.....	Minneapolis.

A short address to the candidates is respectfully submitted as part of this report [Appendix A].

ATTENDANCE.

The following tables show the enrollment and classification of students in the various departments or colleges for the year (1875-6.)

COLLEGE OR DEPARTMENT.	CLASS.	GENTLEMEN.	LADIES.	TOTALS.
Science, Literature and the Arts.....	{ Graduates.....	5	.....	5
	{ Senior.....	8	1	9
	{ Junior.....	16	4	20—34
Mechanic Arts.....	{ Senior.....	3	.....	3
	{ Junior.....	1	.....	1
	{ Special.....	1	.....	1—5
Agriculture, { Advanced Course.....	{ Junior.....	1	.....	1
	{ Elementary Course.....	2	.....	2—3
Collegiate Department.....	{ First.....	24	6	30
	{ Second.....	32	16	48—78
	{ Third.....	31	11	42
	{ Fourth.....	49	20	69
	{ Special.....	23	13	36—147
Totals.....		196	71	267

OR BY CLASSES ONLY,

Graduates.....	5
Seniors—of all Departments.....	12
Juniors—of all Departments.....	22
Sophomores—First Class, Collegiate Department.....	30
Freshmen—Second Class, Collegiate Department.....	48—117
Preparatory, { Third Class, Collegiate Department.....	42
	{ Fourth Class, Collegiate Department.....	69
Special 87, Elementary Agriculturc, 2.....	39—150
Total.....	267

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CLASS.	COURSE.	GENTLEMEN	LADIES.	TOTAL.
GRADUATES.....	.....	5	.....	5—5
SENIOR.....	{ Classical.....	4	.....	4
	{ Scientific.....	3	1	4
	{ Modern.....	1	.....	1—9
JUNIOR.....	{ Classical.....	10	.....	10
	{ Scientific.....	6	.....	6
	{ Modern.....	.....	4	4—20
Totals.....	.....	29	5	34

COLLEGE OF THE MECHANIC ARTS.

CLASS.	COURSE.	GENTLEMEN	LADIES.	TOTAL.
SENIOR.....	Civil Engineering.....	3	.....	3
JUNIOR.....	{ Architecture.....	1	.....	1
	{ Special.....	1	.....	1
Totals.....	.....	5	.....	5

COLLEGE OF AGRICULTURE.

Advanced Course, Junior Class, Gentlemen.....	1
Elementary Course, Gentlemen.....	2
Total.....	3

COLLEGIATE DEPARTMENT.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
FIRST.....	{ Classical..... { Scientific..... { Modern.....	10	0	10
		13	3	16
		1	3	4
			24	6	30
SECOND.....	{ Classical..... { Scientific..... { Modern.....	12	1	13
		16	11	27
		4	4	8
			32	16	48
THIRD.....	{ Classical..... { Scientific..... { Modern.....	8	1	9
		20	6	26
		3	4	7
			31	11	42
FOURTH.....	{ Classical..... { Scientific..... { Modern.....	15	0	15
		29	6	35
		5	14	19
			49	20	69
SPECIAL STUDENTS.....		23	13	36
		159	66	225

Two hundred and forty-one (241) students were registered as residents of Minnesota, the following counties being represented :

Anoka, 1; Becker, 2; Blue Earth, 9; Brown, 2; Carver, 3; Cass, 1; Dakota, 2; Dodge, 1; Douglas, 1; Faribault, 1; Fillmore, 16; Freeborn, 1; Goodhue, 1; Hennepin West, 77; Hennepin East, 44; Le Sueur, 6; Meeker, 4; Mower, 2; Nicollet, 4; Olmsted, 4; Ramsey, 5; Rice, 5; Scott, 1; Sibley, 1; Stearns, 2; Steele, 3; Wabasha, 10; Washington, 11; Waseca, 1; Winona, 8; Wright, 10. 31 counties. Of the students from Hennepin East and Hennepin West 26 came from the country, and 20 were temporary residents of Minneapolis.

Twenty-six (26) students were registered from other States and countries, as follows :

Dakota Ter., 1; Illinois, 1; Iowa, 5; Maine, 3; Michigan, 1; Missouri, 2; Nova Scotia, 3; New York, 3; Ohio, 1; Pennsylvania, 1; Sandwich Islands, 1; Wisconsin, 4.

One hundred and fourteen (114) students engaged in some remunerative employment, and sixty-nine (69) are believed to have earned their whole living. Fifty-seven (57) had at some time been teachers.

ADMISSIONS.

The whole number of applicants for admission, during the year, was one hundred and thirty, (130,) of whom one hundred and fif-

teen (115) were examined on the elementary branches. Of those examined (115) thirty (30) failed, and eighty-five (85) passed.

Of the number not examined (15), one (1) was re-admitted to former standing, four (4) disappeared, and eight (8) were admitted as special students upon informal examinations, most of them being persons of advanced age desiring merely to pursue some specialty.

The average per cents. of merits for the elementary branches were: reading, 80 per cent.; writing, 78 per cent.; spelling, 82 per cent.; English grammar, 65 per cent.; arithmetic, 78 per cent. elementary algebra, 68 per cent.; geography, 68 per cent.; United States history, 60 per cent.

Although this report properly covers the year ending with the last commencement I deem it proper to apprise your honorable body of the effect of the important action had at the meeting of the Board on the 10th day of May last, touching the dropping of preparatory work. The first year of this work was dropped at the close of the University year 1873-4, and there was on record a formal resolution to dispense with that of the second year at the end of the year covered by this report (1875-76.) It is not necessary to recite the considerations which led the Board to reopen the question of dropping this second year. Some of these may be found in the last annual report, others in the able reports both for the present year and the previous one, of the State Superintendent of Public Instruction. The conclusion reached is clearly wise and judicious; the University now offers preparatory instruction to those who need it and can not of right freely obtain it elsewhere, while declining to receive all those who are entitled to receive the same instruction in their own towns or districts. The preparatory instruction thus offered is given in the main by young instructors, working under the the immediate direction of the professors. So long as the State needs to have this work done by the University, in no way can it be done so economically and efficiently.

The new regulation went into effect at the beginning of the year now passing. Contrary to expectation the number of applicants, instead of falling below that of former years, was considerably above them. The large number of applicants of low grade usually presenting themselves from the immediate neighborhood of the University were left to attend the excellent public schools open to them. The great bulk of those admitted to the preparatory classes are from the country and the country villages, being precisely the class intended by the board to be—for a short period it is hoped—thus accommodated.

The action of the board in respect to this matter appears to receive the general approval of those employed in the educational work in the State. There is reason to expect that the courses of study in the high schools will soon be so arranged as to "fit" aspirants to the University in a proper manner and in a reasonable time. But then these schools will, as now, only be FREE to those youth who actually reside within the several districts. Could an appropriation of public funds be made for the purpose of making

them also virtually free to the country boys and girls, by paying their tuition, there would be at length, in fact, what there is now but in name, a complete State system of public instruction. And I should also hope that whenever this may take place, that such of our promising academies, as shall be willing to come within the system, may receive a portion of the public support. I take pleasure in naming the academies at Afton, Wasioja and Caledonia, all of which have arranged courses of studies with reference to the University, and have sent many excellent students.

The resolutions adopted by the Board in the year 1873, authorizing the holding of examinations for entrance at different points in the State, has never gone into practical effect, chiefly for the reason that commencement has fallen so late in the season that the Faculty could not conveniently give their time to them. The change in the distribution of the University year, authorized by the Board in May last, will bring the commencement hereafter not much later than the 1st of June. This will give ample opportunity for holding the proposed examinations. Should the Board decide to leave the resolution referred to in force, the general Faculty will, without doubt, put it into operation at the close of the year now passing. I know of no means so likely to bring the University into healthful contact with the schools, and to encourage and stimulate youth to enter upon the higher education.

GENERAL PROGRESS.

The following table shows the progress of the institution so far as regards the number of students and instructors up to date:

Year ending in	No. of Instructors.	No. of College Students.	No. of Preparatory Students.	Total Students.	Remarks.
1868.....	3	.....	72	72	
1869.....	5	.....	146	146	
1870.....	9	18	194	212	Univ. Faculty or-
1871.....	9	24	221	245	[ganized.
1872.....	12	27	238	265	New Course of
1873.....	13	47	231	278	[study.
1874.....	13	75	212	287	
1875.....	14	90	147	237	Lowest yr. dropped.
1876.....	14	117	150	267	Mil. Prof'p vacant

In regard to the general status and prospects of the institution, I do not think I can do better than to submit for insertion at this point the communication which I had the honor to lay before the board at the meeting of May 10th, 1876.

THE UNIVERSITY OF MINNESOTA, }
 MINNEAPOLIS, May 9th, 1876. }

To the Honorable the Board of Regents:

In the hope that it may be convenient for the board to devote some considerable time at the present meeting to an examination of the condition and wants of the University, I beg leave to submit the accompanying memorandum. * * * * *

The University has at length fairly assumed her position on College or University ground. At the close of the current year she will count up an even score of graduates.

The buildings, apparatus, library and other appliances are, considering the age of the institution and the State, creditable for extent and usefulness. It would at first sight seem that the board might at length take a respite from the arduous labors incident to the founding and nurture of an infant university. Experience, however, forbids the indulgence of any such expectation. The older and larger the institution, the severer the labors and the heavier the responsibilities of the governing board.

Our university may fairly claim to have made a good beginning. Nearly a thousand young men and women have been under our instruction, and have gone out to the duties of life thankful for the free gift they have received.

We have, however, merely laid a foundation on which to build for the future. There will never be a time in our history when there will not be more instruction called for than we can impart; more buildings and appliances needed than we can afford, and more money demanded than can be accumulated.

It must be remembered that competition operates on public or State Universities as well as upon those controlled by corporations or religious denominations. A great revolution is at this time in progress in the higher education of the country. A few great and rich institutions, with their great buildings, libraries and collections, are attracting students by the hundreds from all parts of the country, and even from foreign countries. Traveling is cheap and rapid. The mail and the telegraph make it a matter of comparative indifference whether the college student is one hundred or ten hundred miles away from the paternal roof. As a matter of fact our institution is now actually in competition with Yale and Cornell and Amherst and Michigan. There are students now at those colleges from this State, who have gone there because they secure greater advantages than we can yet offer.

These great universities are using novel and strenuous efforts to attract students from a distance. Harvard University will hold this summer examinations for entrance in Cincinnati, and Yale College in Chicago. It will not be surprising if within five years examiners from Cornell, Harvard and other institutions, will be holding examinations in St. Paul.

The competition will thus be brought to our very doors. It must be met, if at all, in a vigorous, business-like manner. No sentiment nor palaver will be of the least avail.

We must build up and strengthen the University. We must "lengthen her cords and strengthen her stakes." We must enlarge the grounds and improve them. We must add new buildings. We must increase the teaching force. We must fill up the library. We must multiply instruments and means of instruction. Above all and as necessary to all others things, the revenue must be constantly augmented.

The argument for the existence of State Universities is, that the people, through the agency of the State, can provide for themselves means and facilities for higher education, better and ampler than any private or corporate agencies can possibly do for them. If the State University does not fulfill this just expectation it ought to be abolished.

It should be added that the wants above indicated, are not wants of the remote future. They are now confronting us. Some of these matters should, if possible, be made the subject of serious consideration before this board adjourns. * * * * *

THE UNIVERSITY GROUNDS.

These remain substantially in the same condition as at the time of the previous report. There seems to be no need of repeating the suggestions therein submitted. I would merely add that the subject might properly form a prominent topic of the annual report of the board, and that the map engraved for the last report might be inserted for the information of the legislature. I should regard the failure to secure the proposed additions as a calamity.

BUILDINGS.

I have the satisfaction of reporting the buildings in good repair, and to say for the student body that the damages resulting from intentional or even accidental injury at their hands is purely nominal. The supply of furniture is still scanty, barely sufficient for the comfortable prosecution of the work. I trust it may not be long before the means can be afforded for making some additions looking to the cultivation of the tastes and their rational gratification. Our professors can teach within any four walls, but no one will deny the propriety of making the class-rooms cheerful and attractive through tasteful ornamentation. Especially ought the rooms devoted to the general use, and most accessible to the public, such as the library, the museum and the reception rooms, to be becomingly furnished and decorated.

In regard to additional buildings, I do not venture in the present condition of affairs in our State, to do more than ask the attention of the board to representations heretofore made, of the need of a drill hall for the department of military science. Until such a building can be provided the University, no matter how competent and efficient the instructor may be, cannot compete with the boys' schools of the State in military tactics. Other buildings, such as a ladies' hall, a dining hall, an astronomical observatory, etc., which would add greatly to the resources and usefulness of the institution may remain in abeyance until the approach of better times, but the drill hall ought to be provided at once. A structure every way suitable ought not to cost over \$3,500.

The opening of the street railways of Minneapolis, the pioneer line terminating at the University, has had the effect to bring the institution heretofore isolated and remote, into easy communication with all parts of the city.

EXPERIMENTAL FARM.

The operations and improvements made upon the Experimental Farm are shown in detail in the report of Professor Lacy, herewith submitted. The remarks of that officer upon the desirability of securing additional lands seems to me deserving of immediate attention. In view of the objection, suggested by Professor Lacy, against a location remote from the other University establishments, it seems important that any changes really essential, ought

to be decided upon and consummated, before adjacent lands shall, by appropriation to other purposes, have got beyond reach.

LIBRARY.

The number of bound volumes added to the Library during the year was 281. Of this number 155 were purchases, the remainder donations. Appendix B. is a complete list of these additions. The following donations have been duly acknowledged on behalf of the Board of Regents :

LIST OF DONATIONS.

To the Library of the University of Minnesota during the University year 1875-6:

- C. H. Crane, Asst. Surgeon General U. S. A., Washington :
Circular No. 8. Hygiene of the U. S. Army.
Jones, U. A. N. W., Wyoming, including Yellowstone.
- J. H. C. Coffin, Washington :
American Ephemeris and Nautical Almanac, 1875.
- Mr. Clark Stewart, Minneapolis :
Nation, unbound, Nos. 467 to 529 inc., June 11, 1874 to Aug. 19, 1875.
- Regent Pillsbury, Minneapolis :
Eighty Miscellaneous Pamphlets. (9 bound.)
- Smithsonian Institution, Washington :
Annual Report Smithsonian Institution, 1873-4.
- R. Hale & Co., Chicago :
Geo. W. Dodd, Essay on Horse Shoeing—pamphlet
- Prof. R. W. Laing, LL. D., Minneapolis :
Beecher, H. W., Fruit, Flowers and Farming.
Turner, Elements of Chemistry.
Handbook on the Slavery Question.
- Prof. G. Campbell, M. A., Minneapolis :
Campbell, G., Elementary Course German Language.
- Prof. N. H. Winchell, M. A., Minneapolis :
Geological Survey of Ohio—Geology vol. 1.
" " " " —Paleontology, vol. 1.
- Hon. P. Cudmore, Le Sueur :
Cudmore's Constitutional History of the U. S.
- Hon. Wm. Windom, U. S. Senator, Winona :
Message and Documents, Abridgment, 1874-5.

U. S. Government, through Departments :

- Bartlett, R., The Soldiers' National Cemetery at Gettysburg.
 Report of a Reconnoissance to the Black Hills in 1874.
 Report of the Commissioner of Education, 1874.
 Report of an Expedition up the Yellowstone River, 1875.
 Preliminary Report of Exploration of Nebraska and Dakota.
 U. S. Cost Survey Report, 1872.
 Compendium IX Census, 1870
 Astronomical Observations, 1873.
 Hayden, U. S. Geological Survey. Wyoming, 1870.
 " " " " Montana, 1871.
 " " " " Montana, Idaho, Wy., Utah, 1872.
 " " " " Colorado, 1873.
 " " " " Birds of the N. W., 1874.
 " " " " Cape, Cretaceous Vertebrata.
 " " " " Lesquereux. " Flora.
- Powell, Exploration of the Colorado River, 1869-72.
 Patent Office Reports, 1869, vols. I, II, III.
 " " " " 1870, vols. I, II.
 " " " " 1871, vols I, II.
- Report of Comm. of Land Office 1868-71-72.
 Report of Comm. of Indian Affairs, 1861-3-6-7-8-70-71.
 Report of Comm. of Pension, 1865-6-7-72-3-4-5. Pamphlets.
 Welt Ausstellung, 1873, in Wein, Officieller Gen. Catalog.
 Monthly Reports of Dep. of Agriculture.
 Report of Chief of Engineers, 1867-70.
 " " Topographical Engineers, 1841-8-50-60-61-63.
 " " Chief of Engineers, 47-48-50-60-64-66-69.
 " " " " Appendix to '66. Certain public works.
- Annual Report of Commissioner of Agriculture, 1875.
 U. S. Geogr. Survey west of 100 Merid. vol. III, Geology.
 1st Session 43d Congress, Journal of House of Representatives.
 " " " " Executive Documents House of Rep.
 " " " " Miscellaneous " "
 " " " " Reports of Committees House of Rep.
 " " " " Journal of the Senate.
 " " " " Executive Doc. of the Senate.
 " " " " Miscellaneous Doc. of the Senate.
 " " " " Reports of Committees of the Senate.
 " " " " Report of the Census, 1870.
 " " " " Miscellaneous Documents.

Mr. Graham C. Campbell, Minneapolis :

- Chambers' Mathematical Tables
 " Practical Mathematics.

During the recess between the fall and winter terms the Library was removed from its former place of storage in the old part of the main building to the rooms set apart for it on the first floor of the new addition. These rooms are four in number, situated on the East side of the main corridor, and are assigned as follows: No. 18, 14x16 feet, Librarian's office; No. 20, 22x36 feet, reading room; No. 22, same size, storage of the books; No. 24, storage for pamphlets and working room.

Since the removal, the use of the books by the students has greatly increased. The following table shows the number and kinds of books drawn during the year :

LIST OF BOOKS ISSUED TO STUDENTS DURING THE YEAR 1875-6.

Class.	No.
Biography.....	147
History.....	300
Novels.....	446
Metaphysics.....	73
Belles Lettres, Prose.....	186
Belles Lettres, Poetry.....	143
Ancient Languages and Literature.....	68
Modern Languages and Literature.....	64
Natural History and Science.....	121
Mathematics.....	31
Travels.....	111
Political Science.....	45
Miscellaneous.....	169
Issued for home reading.....	1,904
Issued for reading room.....	1,656
Total.....	3,564

Hitherto the library has been conducted with very small cost. It has been possible for me as acting Librarian to give a good deal of personal attention, so that the management could be carried along by the employment of student assistants in the routine work. The opening of new and separate apartments for the library, to say nothing of the steady increase of executive duties, render it impracticable to give any consecutive attendance or labor to it. The need of a salaried assistant to have the immediate oversight, to keep the accounts and attend to cataloguing, is imperative. The last named duty is one of great importance. A store of books without catalogues is of little more worth than so many cubic feet of blank paper, or even straw. A small collection of books, with good catalogues, is much more useful than a large one without. The several lists of accessions, which have appeared in the annual reports have been of immense advantage to our students and instructors, by serving as a "Catalogue of Authors." By means of these lists a reader can ascertain in a moment whether any known author is represented by any of his works, and upon what shelf or shelves volumes on hand may be found. This is excellent so far as it goes. When however, a person comes inquiring what books there may be upon a certain subject no answer can be given beyond that which the librarian can venture from his personal memory. To take an example, a student can from our lists of authors ascertain at once, what books of Macaulay or DeFoe, or Isaac Taylor or Carey, or any authors known to him by name, there are and in what places they may be found; but if he desires to know what writings there are upon galvanism, the nebular hypothesis, the Olympic games, or the protective tariff, the library has no information; such information can only be furnished by a "catalogue of subjects." The cost of printing a catalogue of the subjects now embraced in our library would be not less than \$500.00. A large amount of copy has already been prepared and the remainder could be got ready with a small outlay

for copying. The question will at once arise, "Is it wise to expend so much upon catalogues while the need of new books is so pressing?" There can be no doubt as to the answer if the general principle regarding the value of catalogues just asserted is sound. Should the Board find it necessary to postpone the printing of the subject catalogue, then the preparation of a copy in manuscript should at once be authorized.

In regard to the increase of the library, I do not deem it necessary to do more than to refer to the representations of previous reports. There is no occasion to argue before this board in behalf of the library as the most prominent and indispensable part of your apparatus of instruction. I would respectfully ask that the question of increasing the annual appropriation be seriously considered at the annual meeting. I would also suggest that some proportion of the funds devoted to the increase of the library should be entrusted directly to the librarian for the purpose of collecting some of the more valuable serial publications, and of "picking up" valuable works needed in the library, as offered in the trade by second-hand dealers.

READING ROOM.

The following is a list of the periodicals supplied to the reading room, those marked with a star having been furnished gratuitously by the publishers.

Quarterlies:—The Journal of Speculative Philosophy, The New Englander, The North American Review, The Edinburgh Review, The British Review, The Westminster Review, The London Review, The International Review, (six times a year.)

Monthlies:—The American Journal of Science and Arts, The American Agriculturist, The Eclectic Magazine, Appleton's Popular Science Monthly, Scribner's Monthly, Harper's Magazine, Blackwood's Magazine, Van Nostrand's Engineering, The Contemporary Review.

Weeklies:—Littell's Living Age, The Nation, The New York Tribune, The Scientific American, Harper's Weekly, Ueber Land und Meer, The Farmers' Union,* The Prairie Farmer, The Canada Farmer, Official Gazette of the U. S. Patent Office.*

Semi-Weekly:—New York Evening Post.*

Daily:—The St. Paul and Minneapolis Pioneer-Pres,* The Minneapolis Tribune,* War Department Weather Map.*

MUSEUM.

This establishment has at length an existence in fact. During the year, a portion of the materials which have been accumulated have been put on exhibition in the room assigned for the purpose. They form a creditable opening. The report of the curator is referred to for details, and a memorandum kindly furnished by Prof. Winchell in advance of his reports, is respectfully placed at the disposal of the board. I share in the satisfaction of the Professor at the development of the scientific work of the institution, and I look to the museum that is or ought to grow up here, to greatly stimulate and extend that development. The museum

is not a mere show, it is an indispensable means of instruction. The sciences properly called "natural," cannot be taught without specimens, any more than the "physical" sciences can be taught without instruments. From written and oral descriptions, and from pictures, the student can learn many things *about* plants, animals, and rocks, etc., but he cannot be said to *know them*, until brought into contact with them through his senses. The museum therefore, as prerequisite to certain scientific study and research demands immediate reinforcement. This cannot be had without labor and money. Some additions can be made by means of exchanges, but those will serve mainly to "sort up." The main body of objects must be bought of the collectors. However in our case the immediate exigency is one requiring an outlay for cases in which to display for study the collections already made. Money is also needed to provide cases for the technological collection making by Professor Peckham for the illustration of applied chemistry, and for the industrial objects and implements which are accumulating in the colleges of agriculture and the mechanic arts.

APPARATUS.

No additions of importance were made during the past year. The departments of physics and civil and mechanical engineering are supplied with the more indispensable instruments, but that of astronomy is destitute of any. The University is indebted to T. B. Walker, Esq., of Minneapolis, for the loan of an excellent telescope of sufficient power and adaptability to enable the professor to illustrate his instruction. A celestial globe is much needed at the present moment.

"COLLEGES OR DEPARTMENTS."

The customary college or academical work of the University is at length well established and organized, and there seems to be no falling off in the demand for the traditional courses of instruction in spite of the adverse criticisms and denunciations of the past few years. In education people are conservative when it comes to action. They are likely to make sure of the good of the past before venturing in the case of their own children upon experiments. This consideration, and the fact that the great body of our students demand the traditional courses, will certainly justify the board in the prominence they have given to the customary classical and scientific studies. The board have simply conformed, as conform they must, to the "law of demand and supply." When the number of students desiring to pursue the technical courses of the colleges for agriculture and the mechanic arts shall have increased so as to form classes of respectable size, the board will be justified in expending more money upon their instruction. There is reason to expect that the revival of public improvements which must follow the general recovery from the late financial depression will, by the demand for engineering skill, fill up our engineering classes again. Trained architects and mechanical engineers will also be

in demand, and if this University shall be able to supply the necessary instructors and means of instruction, some proportion of the aspirants will be attracted hither. In regard to the training of scientific agriculturalists, the outlook is not specially encouraging. The experience of nearly all the institutions offering instruction in this specialty clearly proves that the demand for scientific instruction in agriculture, of a grade equivalent to that imparted to engineers, metallurgists, chemists, &c., in our polytechnic schools is not so great as they are prepared to supply, nor as the industrial interests of the country deserve. The majority of students in this institution have always been farmers' sons and daughters, but they as a body steadily demand the ordinary courses of study. The numbers of students pursuing agriculture as a distinctive and special line in the Universities of the Northwest, as shown by their reports, are very small indeed.

It is greatly to be regretted that the attendance upon the Agricultural Departments of this University is not commensurate with the provision which has been made for it, but the responsibility must rest upon the public and not upon the Board of Control, for their duty in the premises is clearly defined, and has been discharged with particular reference thereto, as well as to the best interests of the State. The profession of Agriculture should not longer neglect to fill up the classes of the college endowed and kept open for its special benefit.

In view of the facts it would be a suitable question for consideration whether so costly a department should be maintained for the benefit of the very few students who resort to it. Most fortunately the framers of the act of Congress, with a clear understanding of the condition of things present and prospective, so guided the legislation as to be sure to secure the beneficial aid aimed at. They legislated broadly for the benefit of the *industrial classes* in the *several pursuits and professions of life*, and while emphasizing the duty of teaching those "sciences relating to agriculture and the mechanic arts," they specially provided against the exclusion of "other scientific and classical studies." These liberal and well-considered provisions enable the National Schools of Science founded in pursuance of the act to adapt themselves precisely to the demands of the people. It appearing that general scientific training is what the public now need and exact; they have, without exception, arranged general scientific and classical courses of study, and collected faculties adapted to carry them on. Wherever a serious demand has appeared for technical instruction it has at once been furnished, often times at an expense disproportionate to its comparative importance.

There is one manner in which, in my opinion, your honorable body might be justified in adding to the expense, considerable as it now is, of carrying on the College of Agriculture, and that is by establishing the free course of Farmers' Lectures heretofore had under consideration. Professor Lacy strongly recommends this measure. My own views were fully presented in the annual report for 1874. While the first demand of our farmers is the general scientific and classical education of their children, the next

is reliable scientific information upon the numerous practical problems presenting themselves. The Lecture course might supply such information.

The establishment of new colleges, such as those of Medicine and Law, while it must doubtless be postponed, still should be kept in mind. The time spent in waiting may well be given to wise consideration and planning. A great revolution is now taking place in the law and medical colleges of the country. Instead of receiving, as a matter of course, all candidates who may drift to their doors, several institutions are holding examinations, sufficiently rigid to exclude the absolutely illiterate. The Harvard Law School requires a knowledge of Latin or French or German, in addition to a good common school training. These requirements for admission will, undoubtedly, be raised and multiplied, and by the time the revenues of this University are ample enough to warrant the opening of the law or the medical department, it may be feasible to require the candidate for a law or medical degree to present himself with a scholastic preparation equal to that required of architects, engineers and farmers.

PROFESSORSHIPS.

I would respectfully renew my previous recommendation to fill the chairs of Physics and Botany now attached to those of Chemistry and Geology respectively, as soon as may be practicable.

Not less important is the early employment of a specialist to devote his whole time and thought to Rhetoric and Elocution, which subjects are now in charge of the professor of English, by whom, and his colleague, the professor of History, they have been for the past two years efficiently taught. It is, however, highly desirable that those officers be liberated from a great burden of work carried on at the expense of their own proper departments—departments which in these times no University can afford to have placed at a disadvantage. The rhetorical and the elocutionary work requires for their successful performance—trained specialists. The ordinary scholarly professor cannot be expected to turn aside and teach by actual example—and in no other way can they be taught—these forensic arts. Further, the persons engaged in these duties must be free from the hearing of recitations in order to be able to meet the students for criticism and consultation. Without in the least disparaging the other departments of instruction I think that I may safely assert that no other work done in the institution will tell for or against the University so much as the instruction in writing and speaking, and this I say, notwithstanding my private conviction, is that we have a great deal too much of both in our time and country. The wise rhetorician, however, will teach his pupils when to hold their tongues.

GEOLOGICAL SURVEY.

The report of the State Geologist, herewith transmitted, contains the detailed reports on the counties of Houston and Henne-

pin, together with other important scientific information in the departments of Chemistry, Botany, Entomology and Ornithology. The report will commend itself to all who are interested in the development of the resources of our State and in the problems of science presenting themselves in the study of the natural features and life of the region.

I deem it a matter of regret that the scientific corps of the University is not able to perform a much larger part of the work on the survey, and it is partly on account of this reason that additional professors are needed. The Botany and the General Zoology ought, at an early day, to be placed in charge of competent chiefs, holding professorships in the University. In the meantime the arrangements made to secure contributions in outlying specialties should be continued and perhaps extended. I will add that, in my opinion, the University officers engaged upon the work of the survey should be associated in a board or commission under the authority of the Board of Regents. Such an arrangement would harmonize and concentrate the interests and efforts of all concerned.

SECRET SOCIETIES.

I beg leave to refer to paragraphs of the last report upon this topic, and to say that I have the satisfaction of finding myself borne out in my conclusions by the late able and exhaustive report of President Robinson, of Brown University, to the corporation of that institution. The present time does not seem suited to any general or definite action in the matter, but rather to a judicious and temperate agitation having in view the cultivation of a wholesome public sentiment regarding these organizations.

CONCLUSION.

With the period covered by this report closes the seventh year of college work in the University, and the ninth of its actual existence. I trust and believe that upon a review of this short history your honorable body will find much cause to congratulate yourselves and the people in whose behalf you exercise your trusts, as to the result, under Divine Providence, of your unpaid but ungrudged efforts.

And for the future I can renew the pledges of myself and my colleagues of the corps of instruction to labor on with all our powers to carry forward the work you have laid upon us.

All of which is respectfully submitted.

APPENDIX A.

ADDRESS TO THE CANDIDATES FOR GRADUATION AT THE ANNUAL COMMENCEMENT, JUNE 22, 1876, BY THE PRESIDENT OF THE UNIVERSITY.

For several reasons I have excused myself from making any such extended address as is sometimes expected on occasions like this. Whatever might be the interest of our guests, I am sure that any scholastic performance would be quite out of harmony with the present temper and feelings of our little academic community.

A short month ago there fell upon us like a thunder peal from a clear sky, an event* which, by its suddenness, shocked and paralyzed all. The shadow which then dropped down upon us has not been lifted.

I do not mean now to renew the grief of those sad hours during which our work stood still, and which closed with the committal of that honored dust to the grave. We can now at length with composure I trust, look back upon that event and gather up its lessons. There is one of these which I desire for a moment to emphasize, and to commend in particular to these candidates whose academic career is now closing.

There can be no one of our number who has failed to observe and to feel the air and spirit of sobriety which has pervaded this place since the time I mention. There has been a hush and a solemnity attending our most prosaic occupations. Seriousness and thoughtfulness, in an unusual degree, have marked and tinged all our acts and movements. Many a vow of devotion to higher and nobler life has, I doubt not, been registered; and there is no one of us who would not, I am sure, consent with all his heart, that "it is better to go to the house of mourning, than to the house of feasting."

This, then, is the lesson which I would commend to our young friends at this time, that sobriety is at all times most becoming and salutary to men.

It seems to me that one of the great overshadowing evils of our time, especially in American society is frivolousness—habitual, reckless, almost audacious levity in thought, word and deed.

* The death of Professor V. J. Walker, May 18, 1876.

This comes in a great degree in the way of reaction against the excessive austerity of our ancestors, and from the extraordinary accumulations of wealth, the extension of rapid transportation, and the importation of foreign luxuries, customs and sentiments. To "have a good time," seems to be now the greatest happiness, whether of the individual or of the community. Sustained by what appears to be a general sentiment, thousands of our young men give up all high purposes, all noble ambitions and sink into chronic, well-dressed and respectable sensuality. I wish there were just reason to believe that our young women could be wholly excepted from the same animadversion.

It is not, however, the young who are alone to blame. Everywhere there is the same light and volatile spirit, the same desperate clutching after present gratifications, the same apparent weakening of the sense and promonition of immortality. We note on all hands an unwholesome, feverish thirst for amusements. It seems as if we were in danger of turning our very holiest places into play houses, condoning the desecration by filling the Lord's treasury with the receipts of the lottery and the amateur stage.

I look to education, especially to the higher education as one means of correcting this spirit of weak, insipid, unmanly, frivolity, which has taken possession of American society. The natural effect of sound learning is sobering; it cultivates respect, modesty, reverence. The youth whose eyes have been opened to the treasures of the past and the possibilities of the future, to the revelations of science and the maxims of philosophy, is not likely to give up his life to mere play. This is the grandest argument for the higher education, that its aim and object is, by disclosing to men the divine and wonderful things of the soul, the world and of God, to wean them away from the cheap and the transitory, and the frivolous, to the permanent and everlasting. The true scholar is never a trifler; he needs no sport; his work, is itself the most glorious and exhilarating recreation.

To you, young scholars, about to take up the duties of life, I commend these things as worthy, at least, of reflection; they have been much on my mind during these last days. We dismiss you this day, then, not as to a holiday, but as to a new term of arduous, consecrated, and we trust, peaceful service. Go to this work earnestly, modestly, and hopefully.

We dismiss you, we say, to the duties of real life; I beg you at this last moment to be ever mindful of the whole life, and to live and labor for the whole future, rather than the part. Feed and strengthen your faith in immortality. If there is any glory to a man, it is that he can never die. Looking then to the whole life and living ever in full view of the greater part beyond, I know you must live soberly, righteously, and godly in this present life.

PROFESSOR LACY'S REPORT.

Wm. W. Folwell, President of the University of Minnesota :

SIR—I respectfully beg leave to submit the following report of the College of Agriculture :

INSTRUCTION.

Three students sought and received direct instruction in agriculture during the year 1875-6. Instruction was given in agricultural chemistry and agricultural chemical analysis by the Professor of Chemistry, while the Assistant Professor of Agriculture gave instruction in agricultural botany, landscape gardening and horticulture. Of these three students one attended the lectures on horticulture as an elective study, another left the University at the end of the winter term and the third received permission to change his course at the same time.

There appears to be little demand for direct instruction in agriculture by those qualified to profit by it. Some desire it whose present attainments are insufficient. They need instruction in composition, mathematics, geography and natural philosophy more than in agriculture. Up to a certain point these branches are far more important than any special instruction. Beyond this point it seems self evident that a knowledge of entomology, ornithology, agricultural chemistry, &c., &c., is of more value to the farmer than a corresponding knowledge of calculus, Greek and Latin. Two things appear to be necessary before our agricultural colleges can be filled. The sons of farmers must receive the elementary training necessary to fit them for intelligent citizenship and useful members of any occupation or profession and then they must realize the superior value of those studies relating to their chosen profession over those having no direct connection with it. Meanwhile the requirements of the law, both in letter and spirit, are filled and perhaps more than filled. Large classes receive instruction in physical geography, physiology, botany, natural philosophy and general chemistry, sciences related to the art of agriculture more or less closely, while instruction is offered in several sciences still more closely related. In addition to this many students find employment on the experimental farm, where some instruction in practical details is incidentally imparted.

LIBRARY.

Through donations and exchanges 10 reports of agricultural and horticultural societies have been received, increasing the number of these to 112. The following agricultural publications have been received regularly :

Farmer's Union, Prairie Farmer, Scientific Farmer, Progressive Farmer, Canada Farmer, American Agriculturist, National Live Stock Journal, Gardener's Monthly and Horticulturist.

MUSEUM.

The museum of agriculture remains about the same as at last report, only a few lithographs, photographs, colored plates and other specimens having been added. Samples in the straw of the wheat and oats grown on the farm have been saved and may be placed in the museum in the future.

ORCHARD.

No new planting in the orchard has been done this year, but numerous observations and some experiments on the trees already planted have been made. It having become necessary to clear the ground occupied by the Russian apples planted by Col. Robertson several years since, they were transplanted into the present site of the orchard. They have all lived but made only little growth.

NURSERY.

Part of the trees have been moved from their former place near the barn to the north side of the avenue. Over 400 have been sold. Seven hundred and sixty have been set in a belt designed to protect the barn and a portion of the farm. Six hundred and twenty-five silver maple and box elder seedlings have been transplanted. One thousand sugar maple seedlings have been bought and planted. A quantity of elm seed has been planted and has germinated well. It is the design to make constant additions by seeds, cuttings and purchase of trees.

FRUIT GARDEN.

Efforts were made to add several new varieties of small fruits to our collection but did not result in more than partial success. As in the orchard, observations have been made on those which were planted in 1875.

VEGETABLE GARDEN.

Experiments with the different varieties of garden vegetables have been continued on the same plan as in 1875, the object being, in general, to ascertain which are the most desirable for their earliness, productiveness, quality, &c. They embraced in all more

than 225 varieties. Those experiments which yielded results of any importance are given in the following pages :

DWARF BEANS.

Planted in drills on sandy soil May 20th. Land plowed and thoroughly harrowed shortly before planting. Manner of planting same as of peas. Fertilizer, bone dust and animal fertilizer, equal parts, sprinkled lightly on the row about the time of coming up.

Early Six Weeks.—Earliest by about three days. Fit for use July 11th, very productive and a good snap bean.

Early Rachel, Early China.—Three days later than Six Weeks, vigorous growers, of fair quality and productive.

Black Wax.—Three days later than Six Weeks, fairly productive, of extra quality. All things considered the best snap bean tried.

White Wax.—About five days later than Six Weeks ; bush very small, and sparse bearer ; pod small but of excellent quality. All things considered not desirable.

Early Mohawk.—Four days later than Six Weeks ; bush medium size and fairly productive ; quality fair.

Early Fejee.—Five days later than Six Weeks ; very prolific ; a very good snap bean.

Dun Cranberry.—Five or six days later than Six Weeks ; bush a vigorous grower and very productive ; quality good for snap, and extra for shelling.

Concord Bush.—Four days later than Six Weeks ; resembles Concord Pole bean ; bush vigorous grower, productive ; good for snap and excellent for shelling while green.

Early Valentine.—Medium early ; good for snap or shelling.

BEEETS.

Seed sown on sandy soil, April 20th. Fertilizer, bone dust and animal fertilizer, equal parts, applied on the row after coming up. Cultivated with cultivator and hoe sufficiently to keep the weeds out.

Early Bassano.—Earliest—fit for use July 12th ; flesh white circled with pink ; the best very early variety both for market and use, but not equal in quality to Dewing's. Early Blood Turnip when mature.

Egyptian.—Nearly as early as Bassano ; fit for use July 14th ; form rather flat ; color deep red ; very tender and sweet.

Dewing's Early Blood Turnip.—About 10 days later than Bassano; fit for use July 22d; for both early and late use, the best variety; tender when cooked and of good flavor.

EARLY CABBAGES.

Seed sown in hotbed March 24th; transplanted to light, sandy soil April 21st; land plowed in fall of 1875, and then manured with stable manure spread broadcast. After planting a little bone dust and animal fertilizer were applied around the plants and afterward mixed with the soil in hoeing.

Little Pixie.—Earliest and best to form heads; fit for use July 7th; heads small, but compact and of good quality. Most desirable early cabbage on the list for use or market.

Burnell's King of Dwarfs.—Fit for use July 7th; head half the size of Little Pixie, and compact; sure to head; too small to be profitable.

Early Wakefield.—Five to eight days later than Pixie; heads well; heads large for early cabbage, compact and of good quality.

Early Wyman.—Season about same as Wakefield; heads well; heads not so solid as Wakefield nor so large, but of good quality.

Early Wimigstodt.—Fourteen to seventeen days later than Little Pixie; sure to head; heads of good size, compact, crisp and of good quality; most desirable second early variety.

Early York.—Season between Pixie and Wakefield; heads well, but the season of heading is unusually long; head little larger than Pixie, medium compact, and of fair quality.

Early Ulm Savoy, Little Pixie Savoy and American Savoy.—No satisfactory results obtained. Plants grew well but did not form heads.

The early cabbages were much injured by a striped worm eating the leaves, and the late ones were nearly destroyed by the same insect.

CARROTS.

Seed sown on sandy soil April 21st; fertilizer, bone dust and animal fertilizer, equal parts, applied on row after plants came up.

Early Horn.—Small but of the finest texture and best quality.

Long Orange.—Later than Horn, much larger but not of so good quality.

Large Altringham.—Much like the last.

Danvers.—Of finer texture and better flavor than Orange or Altringham.

White Belgian.—Large and coarse, desirable only for stock.

CAULIFLOWER.

Seed sown in hotbed March 24th; transplanted to a sandy soil May 11th; fertilizer, guano applied broadcast before planting at rate of 300 pounds per acre.

Early Asiatic.—The earliest; heads small but formed freely; flavor good.

Early Paris.—But little later than Asiatic; heads white, large, compact; flavor good.

Extra Early Dwarf Erfurt.—Heads small but freely formed; flavor, very good.

Italian New Early Giant.—Heads large, but rather loose and not so freely formed as by Dwarf Erfurt.

Cauliflower prefers rich, moist soil and same varieties would undoubtedly give better results there than recorded above.

CORN.

Planted on sandy or light sandy soils, as nearly alike in all cases, as possible, and yet have the varieties sufficiently separated to prevent mixing. Fertilizer consisted of guano and bone flour, equal parts. A furrow was made with a single shovel plow, a small handful of fertilizer dropped at intervals of about three feet, a little dirt kicked over it, the seed dropped, and covered with a hoe. The cultivation was sufficient to destroy the weeds and was done with cultivator and hoe, finishing by throwing the dirt toward the rows with small plow.

Early Narragansett.—Planted May 16th; fit for use July 20th; earliest of all; stalks medium size, fairly productive; ears medium size; quality good; earliness is its good point. Objectionable on account of red cob.

Early Minnesota.—Planted May 18th; fit for use July 23rd; stalks small, fairly productive; ears small; quality very good; earliness and good quality are its good points.

Extra Early Dwarf.—Planted May 16th; fit for use July 26th; stalks very small, not very productive; ears very small; quality very good; desirable for its quality.

Adams' Early (not sweet corn).—Planted May 17th; fit for use July 26th; stalks medium size, productive; ears medium size; earliest dent corn; excellent variety for bread.

Early Selected Sweet.—Planted May 19th ; fit for use July 28th ; stalks small but very productive ; ears medium size and well filled ; quality very good for early corn.

Crosby's Early.—Planted May 19th ; fit for use August 11th ; stalks medium size, fairly productive ; ears medium size ; quality very good for early.

Moore's Early Concord.—Planted May 19th ; fit for use August 15th ; stalks large, fairly productive ; ears large ; quality very good for early ; fine either for table use or canning.

Stowell's Evergreen.—Planted May 18th ; fit for use August 21st ; stalks large, productive ; ears large ; quality very good.

Scott's No. 1 (crossed).—Planted May 17th ; fit for use August 20th ; stalks large, very productive ; ears and quality same as Stowell's.

Scott's No. 2 (selected).—Planted May 19th ; fit for use August 21st ; stalks large, very productive ; ears very large ; quality very good.

Marblehead Mammoth.—Planted May 19th ; fit for use August 30th ; stalks large, fairly productive ; ears very long with short kernel ; quality good ; valuable for its long season.

Russell's Prolific.—Planted May 24th ; stalks above medium size, fairly productive ; ears medium sized.

Improved Evergreen Broom.—Planted May 17th ; broken about September 15th and cut about September 25th. Good crop of long and good brush.

CUCUMBERS.

Planted on sandy, or light sandy soils, May 22nd. Fertilizer, bone dust and animal fertilizer, equal parts, a small handful put in the hill under the seed, a little dirt between ; hill elevated about four inches ; gypsum applied after plants came up.

Early Russian.—Earliest by eight days ; vine small, productive ; fruit about three inches long and borne in pairs, tender and crisp ; of medium quality for table use and excellent for pickling.

White Spine.—Next in earliness to Early Russian and eight days later ; vine medium size, a great bearer ; fruit light green with white prickles, tender and of good flavor ; very desirable for table use.

Early Cluster.—About ten days later than Early Russian, to which it is similar in vine and fruit except that the latter is prickly ; a great bearer.

Long Green.—Late ; vine large, a good bearer ; fruit large, not very good for the table but makes good pickles.

Tailby's Hybrid.—A little later than Long Green ; vine large and a good bearer ; fruit large, tender and crisp, and the best of any on the list for table use ; not tried for pickling.

Russian Netted.—More curious than useful.

Tender and True.—Destroyed by cucumber beetle.

Norbitan Giant, Snake and Swan Neck.—Failed to produce results.

EGG PLANTS.

Seed sown in hotbed March 27th ; transplanted to sandy soil May 24th ; fertilizer, bone dust and animal fertilizer, equal parts, applied in hill when the plants were set.

Very Early Dwarf.—Earliest, best in quality, and productive.

New York Improved.—A week later than Dwarf ; productive ; fruit of fair size and good quality.

White China.—Late and of delicate growth.

Scarlet China.—Plant tender ; fruit late and inferior but very ornamental.

Black Pekin.—Plant vigorous and productive ; fruit medium early and of good flavor.

Nothing is to be gained by transplanting to open ground too early. The last of May is in general a good time and then the plants should be protected from sun and wind for a week or ten days.

PEAS.

Peas were planted on two different soils at different times. We shall notice:

I. Peas planted on light sandy soil.

Land plowed in autumn of 1875, and well harrowed before planting. On a strip running entirely across the plat, and at right angles to the rows a coat of stable manure was applied soon after plowing. Peas were planted April 19th, about three inches deep, in rows three feet apart. Furrows were opened with a single shovel plow, seed distributed in the bottom with a seed drill, and covered by running the same plow along side the open furrow. Shortly before the peas came up a little guano was sprinkled on and a garden rake run over the rows to mix in the guano and destroy the weeds. The cultivator and shovel plow

with one hoeing completed the cultivation. The results of observations on time of "first picking," "yield," "table quality," "length of picking season" and "size of vine" are given in the table.

II. Peas planted on stiff loam.

Land a stiff loam with considerable vegetable matter. Plowed May 8th and harrowed. Peas planted May 9th in same manner as above. Had no fertilizer. Otherwise treated the same as above. The date of the first picking is given in the last column of the table.

Name.	First Picking.	Yield.	Table Quality.	Picking Season.	Size of vine. Inches.	First picking on Stiff Loam.
Early Caractacus.....	June 14	Good.	Very good.	Short.	15	June 22
Kentish Invicta.....	June 15	Best.	Good.	Medium.	16	June 25
William, 1st.....	June 15	Poor.	Fair.	Medium.	17	June 26
Philadelphia Extra Early.....	June 15	Poor.	Good.	Medium.	15	June 22
Extra Early Winship.....	June 15	Poor.	Good.	Medium.	17	June 24
Dexter.....	June 15	Poor.	Fair.	Medium.	15	June 24
Alpha.....	June 21	Very good.	Very good.	Long.	10	June 27
Nuttings No. 1.....	June 21	Very good.	Very good.	Long.	15	June 27
Early Kent.....	June 23	Good.	Fair.	Medium.	18	June 28
Carter's First Crop.....	June 23	Poor.	Poor.	Short.	17	June 28
Tom Thumb.....	June 23	Poor.	Fair.	Medium.	10	June 26
McLean's Little Gem.....	June 24	Poor.	Very good.	Medium.	10	June 26
McLean's Blue Peter.....	June 24	Good.	Very good.	Long.	12	June 26
Carter's Extra Early Premium Gem.....	June 25	Poor.	Very good.	Long.	11	June 26
McLean's Advancer.....	June 26	Very good.	Very good.	Long.	8	June 26
Dwarf Waterloo Marrow.....	July 8	Very good.	Good.	Long.	13	July 3
Eugenie.....	July 5	Best.	Very good.	Long.	24	July 5
Laxton's Prolific Early Long Pod.....	July 5	Poor.	Good.	Medium.	36	July 5
De Grace.....	July 5	Poor.	Very good.	Medium.		
Princess Royal.....	July 6	Very good.	Very good.	Long.	24	July 6
Napoleon.....	July 6	Very good.	Very good.	Long.	36	July 6
Yorkshire Hero.....	July 8	Good.	Very good.	Long.	20	
McLean's Premier.....	July 10	Good.	First.	Long.	24	
Champion of England.....	July 10	Poor.	Very good.	Long.	36	
Veitch's Perfection.....						
Dwarf Blue Imperial.....						
Carter's Surprise.....						

The hot and dry weather commencing about July 5th, so interfered with the development of the last three varieties on sandy soil, and of the last five on stiff loam, that no correct observations could be made upon them. The same cause did not allow us to make any observations on the stiff loam except the date of first picking. De Grace was not planted on stiff loam.

The following observations are borne out by the experiments of two years:

Early Caractacus is not only the very earliest but also a good pea in other respects.

Kentish Invicta coming from one to five days later, is superior to Caractacus in all respects save earliness.

McLean's Blue Peter, three to ten days later than Caractacus is good in all respects.

Coming later than these are so many good ones, as seen by the table, that it is needless to specify.

FALL AND WINTER SQUASHES

Planted on sandy, or light sandy soils. Fertilizer, guano and gypsum, equal parts, applied more with a view to keeping off the beetles than as a fertilizer.

Marblehead.—Planted May 6th; ripe September 1st; vine large and vigorous, and a much better bearer than the Hubbard; should be planted at least twelve feet apart; fruit more regular than the Hubbard in shape; of equally good quality; cooks more evenly, and is of a lighter color. An excellent keeper.

Butman.—Planted May 17th; ripe about ten days later than Marblehead; vine small compared with Hubbard, and not a very good bearer; fruit smaller than the Hubbard, but of the best quality, especially for baking.

Boston Marrow.—Planted May 18th; ripe about the middle of September; vine of medium size, but vigorous and a good bearer; fruit larger than the Hubbard; of dark yellow color, and fine for cooking or for pies; not good for baking nor a good keeper.

Turban.—Planted May 19th; ripe about the middle of September; vine of medium size and a good bearer; fruit of fair size and of very good quality. A medium keeper.

Hubbard.—Planted May 16th., ripe September 26th.

Vegetable Marrow.—Planted May 19th; found excellent for pies August 20th, but lost its good qualities after getting ripe; vine of medium size but the best bearer; fruit long, cylindrical and of light yellow color.

Mammoth Yellow Chili.—Planted May 19th; ripe October 1st;

vine of medium size; a poor bearer; fruit very large but of inferior quality.

SUMMER SQUASHES.

Two varieties were planted on light sandy soil May 13th.

Yellow Bush Scalloped—Proved the earliest by two weeks, while the

Summer Crookneck—Was of better quality.

TOMATOES.

Seed sown in the hotbed March 27th; transplanted to sandy soil May 15th; land plowed in fall of 1875, and manured with stable manure spread broadcast on the surface. Fertilizer, guano sprinkled around the plants about two weeks after planting, and mixed with the soil in hoeing. Pinching the vines was practiced upon a few vines, but it appeared to stimulate the growth of the vine and make ripening later.

Golden Gage.—Earliest; and also of best flavor; began to ripen August 4th; vine medium size, upright in growth and medium bearer; fruit smooth, of golded yellow color, rather smaller than *Canada Victor*, and requires careful handling because of tender skin; in flavor, superior to all others.

Conqueror.—Earliest red tomato; began to ripen August 5th; vine vigorous, very prolific; fruit rather above medium size, of excellent flavor, carries well: in way of ripening similar to *Victor*.

Canada Victor.—Began to ripen August 7th; vine rather small, prolific; fruit below medium size, of fine flavor, and smooth: inclined to crack in wet weather.

General Grant.—Began to ripen August 8th; vine a vigorous grower and extra bearer. fruit full medium size, carries well, of fine flavor and ripens better than any on the list except *Excelsior*; rather the best tomato tried.

Hathaway's Excelsior.—Began to ripen August 8th; has all the good points of the *Grant* except that the crop does not ripen so rapidly—the bearing season is longer.

Hubbard's Curled Leaf.—Began to ripen August 12th; has no points of superiority.

Large Smooth Red.—Began to ripen August 16th; much like *Excelsior* except that it ripens later.

Trophy.—Began to ripen August 20th; the best large late tomato; vine large, vigorous and fairly productive; fruit large, fairly smooth, very solid, excellent for cooking and sells more rapidly in our market than any other late variety.

Paragon, Robert, Arlington and Charter Oak.—Began to ripen August 20th; no points of superiority observed.

Strawberry, Persian and Currant.—Curious on account of their small fruit; no other merit.

Tomato de Laje.—Upright in growth; more ornamental than useful.

FARM EXPERIMENTS.

These also have been conducted on the same plan as in 1875 but more extensively. Some of these, from causes beyond our control, were entire failures. Others will be given in a future report when they may be compared with the results of another season. They embrace the following: (1) 20 kinds of fertilizers on wheat. (2) No. 1 and No. 3 wheat for seed. (3) thick and thin seeding of oats. (4) 12 varieties of wheat. (5) 8 varieties of oats. (6) 18 kinds fertilizers on corn on sandy soil. (7) 18 kinds fertilizers on corn on vegetable loam. (8) 18 kinds fertilizers on potatoes on sandy soil. (9) 18 kinds fertilizers on potatoes on vegetable loam. (10) 19 varieties potatoes on sandy soil. (11) 19 varieties potatoes on vegetable loam. (12) 5 varieties field corn.

FARM CROPS.

Land not otherwise occupied has been devoted to ordinary farm crops from which were obtained 134 bushels oats, and hay estimated at 50 tons. From the farm experiments there were also obtained 20 bushels wheat, 160 bushels corn and 350 bushels potatoes.

IMPROVEMENTS.

Here should be mentioned the planting of a belt containing 860 trees designed to protect the barn and a portion of the farm from severe winds. All spare time of the team has been employed in hauling manure from the city. Some ditches have been made with the expectation of laying tile in them next summer.

PLANT HOUSE.

It gives me great pleasure to report substantial progress here. A floor of "asbestine" stone has been laid in cement, a Hitchings heating apparatus put in, staging erected and a sufficient number of plants obtained to encourage hopes for the future, if not to make a very showy appearance at present.

DONATIONS.

The list of donors is not as long this year as last but their gifts have been no less acceptable. The following are some of the more valuable :

- Plants, Wyman Elliot, Minneapolis, Minn.
- Paradise Apple Tree, John Hart, Winona, Minn.
- Framed Picture of Short-horn, H. F. Brown, Minneapolis, Minn.
- Picture of Alderney Herd, C. A. De Graff, Janesville, Minn.
- Farmer's Union, W. J. Abernethy, Minneapolis, Minn.
- Samples for Museum, John Ott, Richmond, Va.
- Agricultural Reports, S. D. Fisher, Springfield, Ill.
- Discounts on Seeds and Implements, J. J. H. Gregory, R. H. Allen & Co., Jas. Vick, Ruble & Co., Woodville & Co., and others.
- Bulletins of the Bussey Institution, Dr. F. H. Storer, Jamaica Plains, Mass.
- Live Stock Journal, National Live Stock Journal Company, Chicago, Ill.

REMARKS.

Effort has constantly been made to bring about an intimate connection between this department and the farming interests of the state and to make the farmers of the state acquainted with our spirit, purposes and methods.

The State Grange, Patrons of Husbandry, held a session in Minneapolis in December, 1875, and accepted an invitation to visit the University in a body. At this session also members of the faculty accepted invitations to deliver addresses.

The annual meeting of the State Agricultural Society was held at the Agricultural college and University in February, 1876. A regular programme, prepared by the secretary, was carried out and the proceedings were of an unusually interesting character.

The State Horticultural Society held a summer meeting and exhibition at the Agricultural College in June, 1876. At the same time the ladies of Minneapolis spread on the University grounds a dinner for the members and guests of the Society. All regarded this meeting as highly successful.

The exhibition made by this department at the State Fair far surpassed that made in 1875, and drew from all who witnessed it the most favorable remarks. The credit of this exhibition is due entirely to Mr. Scott.

Respectfully submitted,

CHAS. Y. LACY.

November 27th, 1876.