

THIRD BIENNIAL REPORT

[No. 14 IN SERIES]

OF

THE BOARD OF REGENTS

OF

THE UNIVERSITY OF MINNESOTA,

TO THE GOVERNOR,

FOR THE

FISCAL YEARS 1883 AND 1884, ENDING JULY 31ST.

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TRANSMITTED TO THE LEGISLATURE AT THE TWENTY-FOURTH  
(THIRD BIENNIAL) SESSION, 1884.

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ST. PAUL, MINN:  
THE PIONEER PRESS COMPANY.  
1885.

The present University "charter" was enacted by the legislature February 18, 1868. The first annual report was that for 1868, transmitted to the legislature of 1869. The last annual report was that for 1878. There have, been accordingly eleven annual reports, and this third biennial report is No. 14 of the series.

The annual reports of progress of the GEOLOGICAL SURVEY of Minnesota will be found in the annual reports of the Board of Regents, beginning 1872. The annual report of the survey for 1881 was printed separately, no other reports of or to the board being printed in that year.

THE UNIVERSITY OF MINNESOTA,  
OFFICE OF THE BOARD OF REGENTS,  
December 31, 1884. }

SIR: In compliance with law I have the honor to forward  
herewith the third biennial report of the Board of Regents for  
the fiscal years 1883 and 1884, ending July 31st.

Very respectfully,

Your obedient servant,

HENRY H. SIBLEY,

President.

To the Hon. LUCIUS F. HUBBARD,

*Governor of Minnesota.*

## THE BOARD OF REGENTS.

The Board of Regents is composed at this date of the following gentlemen:

The Hon. GREENLEAF CLARK, M. A., St. Paul; term expires in.....	1886
The Hon. CUSHMAN K. DAVIS, St. Paul; term expires in.....	1886
The Hon. JOHN B. GILFILLAN, Minneapolis; term expires in.....	1887
The Hon. KNUTE NELSON, Alexandria; term expires in.....	1887
The Hon. JOHN S. PILLSBURY, Minneapolis; term expires in.....	1887
The Hon. HENRY H. SIBLEY, St. Paul; term expires in.....	1885
The Hon. THOS. S. BUCKHAM, M. A., Faribault; term expires in.....	1885

### AND EX-OFFICIO,

The Hon. LUCIUS F. HUBBARD, St. Paul,	The Governor of the State.
The Hon. DAVID L. KIEHLE, M. A., Minneapolis,	The State Superintendent of Public Instruction.
WILLIAM W. FOLWELL, LL.D., Minneapolis,	The President of the University.

### OFFICERS OF THE BOARD.

The Hon. HENRY H. SIBLEY, President.
The Hon. J. B. GILFILLAN, Recording Secretary.
WILLIAM W. FOLWELL, Corresponding Secretary.
R. A. DAVISON, Treasurer.

### EXECUTIVE COMMITTEE.

The Hon. JOHN S. PILLSBURY.
The Hon. JOHN B. GILFILLAN.
The Hon. GREENLEAF CLARK.
The Hon. D. L. KIEHLE.

### AUDITING COMMITTEE.

The Hon. GREENLEAF CLARK.
The Hon. THOMAS S. BUCKHAM.

### MEETINGS.

The annual meeting is fixed by the charter for the second Tuesday in December. There is a meeting on Commencement Day; other meetings occur as called by the president of the board.

The executive committee meet regularly on one of the last secular days of each month.

The following changes have taken place in the corps of instructors since the last biennial report:

On July 11, 1883, Professor Moses Marston, Ph. D., died from the effects of an accidental injury.

Capt. E. C. Bowen, U. S. A., Professor of Military Science, resigned his office in March, 1883.

Instructor Wm. A. Noyce, Ph.D., Assistant in Chemical Laboratory, resigned in June, 1883.

Professor John S. Clark, B. A., Assistant Professor of Latin, was granted in June, 1883, a leave of absence for two years for the study of his specialty in foreign universities.

Professor Alexander T. Ormond resigned the professorship of Mental and Moral Philosophy and History at the close of the year, 1882-83.

On Feb. 24, 1883, President Wm. W. Folwell, LL. D., after a faithful and arduous service of fourteen years, during the organization and establishment of the University, resigned his office, to take effect at the close of the passing year.

On March 8, following, the resignation was accepted, to take effect when his successor should be elected and qualified.

In undertaking the responsible duty of filling the position of President of the University made vacant by the resignation of Dr. Folwell, the board appointed a committee with instructions that by correspondence and by visitation they make every effort to find and to secure a man thoroughly fitted to discharge the duties of this position.

After much time and pains, the committee selected and recommended as in every way qualified for the position of President of the University, Professor Cyrus Northrop, of Yale College.

The report was accepted and Professor Northrop was unanimously elected to assume the duties of President at the beginning of the scholastic year, September, 1884.

There were also added to the corps of instructors —

Professor O. J. Breda, Ph. D., for the Chair of Scandinavian Languages and Literature, in conformity with the act of legislature passed in 1883.

In March, 1884, Rev. George Edwin MacLean, Ph. D., was employed to give instruction in the Department of English Language and Literature.

## THE GENERAL FACULTY.

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The membership of the general faculty at the present time is as follows:

WILLIAM W. FOLWELL, LL. D., PRESIDENT,  
*Instructor in Political Science.*

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

NEWTON H. WINCHELL, M. A., PROF. GEOL. AND MIN.,  
*State Geologist.*

CHARLES N. HEWITT, M. D.,  
*Professor of Preventive Medicine.*

JOHN G. MOORE, B. A.,  
*Professor of German.*

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

JOHN C. HUTCHINSON, B. A.,  
*Assistant Professor of Greek and Mathematics.*

JOHN S. CLARK, B. A.,  
*Assistant Professor of Latin.*

MATILDA J. WILKIN, B. L.,  
*Instructor in English and German.*

MARIA L. SANFORD,  
*Professor of Rhetoric and Elocution.*

WILLIAM A. PIKE, C. E.,  
*Professor of Engineering, and in charge of Physics.*

JOHN F. DOWNEY, M. A., C. E.,  
*Professor of Mathematics and Astronomy.*

JAMES A. DODGE, PH. D.,  
*Professor of Chemistry.*

CHARLES W. BENTON, B. A.,  
*Professor of French.*

EDWARD D. PORTER, M. A.,  
*Professor of Agriculture.*

WILBUR F. DECKER, B. M. E.,  
*Instructor in Shop Work, Drawing and Physics.*

HENRY M. WAITT, B. S.,  
*Instructor in Engineering.*

FRANKLIN STAPLES, M. D.,  
*Professor of the Practice of Medicine.*

DANIEL W. HAND, M. D.,  
*Professor of Surgery.*

WILLIAM H. LEONARD, M. D.,  
*Professor of Obstetrics and Diseases of Women and Children.*

PERRY H. MILLARD, M. D.,  
*Professor of Anatomy and Physiology.*

CLARENCE L. HERRICK, B. S.,  
*Instructor in Zoology.*

THOMAS PEEBLES, B. A.,  
*Instructor in Mental and Moral Philosophy and History.*

O. J. BREDÁ, PH. D.,  
*Professor of Scandinavian Languages.*

GEORGE EDWIN MACLEAN, PH. D.,  
*Professor of English.*

CHARLES E. SMITH, M. D.,  
*Professor of Materia Medica and Therapeutics.*

GEORGE W. WOOD, M. D.,  
*Professor of Diseases of the Nervous System and of Medical Jurisprudence.*

CHARLES SIMPSON, M. D.,  
*Professor of Pathology.*

The financial condition of the University, as obtained from the records of the State Auditor, is as follows :

1. The Permanent University Fund has been increased as follows:

In 1883 .....	\$36,378.20
In 1884 .....	64,752.51
Total increase.....	\$101,130.71

Making the present amount of that fund \$662,788.30.

2. The revenue from this fund which is named the General University fund, has been

For the eight months ending July 31, 1883.....	\$53,829.57
To which is to be added a balance of.....	12,499.98
Making an aggregate of.....	\$66,329.55
For the year ending July 31, 1884.....	46,435.12
Total for one year and eight months.....	\$112,764.67

The disbursements for this time have been as follows :

To JULY 31, 1883.	
Support of University.....	\$46,091.67
Fees of county treasurer.....	124.84
Total.....	\$46,216.51
To JULY 31, 1884.	
Support of University.....	\$59,706.83
Accrued interest on bonds bought.....	193.87
Fees of county treasurer.....	173.85
Total.....	60,074.55
Leaving a balance on hand of.....	6,473.61
	\$112,764.67

3. The fund styled Enlargement of University Campus, es-



established by law of 1879, appropriating \$20,000 to the purpose named, has been drawn and expended as follows :

In 1883 .....	\$12,000.00
In 1884 .....	8,000.00
	<u>\$20,000.00</u>

4. By statute of 1881, \$46,000 was set apart from the State Institutions Fund for the support of the University. Of this amount \$33,000 was drawn to July 31, 1884, leaving at the date of this report a balance of \$13,000.

5. By statute of 1879, \$1,000 was set apart for the purchase of furniture and apparatus. Of this fund nothing has been drawn.

6. By statute of 1881 a fund for the erection of buildings was set apart—\$30,000 for each of the years 1881, 1882, 1883, 1884 and 1885. Of this appropriation that of 1881 has been drawn, and of that of 1882, \$9,000 has been drawn, leaving a balance of \$12,000 of the appropriation of 1882, and the entire appropriations of 1883, 1884 and 1885 still to be drawn.

7. There remains the fund derived from the sale of the salt lands, the proceeds of which are appropriated to the support of the geological survey of the State. This fund is in the control of the Board of Regents, and will be reported in detail by the committee of the board.

#### THE GEOLOGICAL SURVEY.

The progress of the work of the geological survey has been satisfactory, and as rapid as the limited means and men employed would permit. The principal event of interest has been the completion and publication of the first volume of the final report, which will be laid before the legislature at its next session (1885). This should be distributed generously to parties who deserve it, and to all public libraries in the State, but it is evident that if no restriction be placed on its distribution, the edition will be at once exhausted. The value of the book to the State and to the University is attested by the unprecedented demand which has already been made for it. Another volume of similar character is nearly ready for publication, and also one on the ornithology and mammology of the State.

#### INSTRUCTION.

The prosperity of the University appears in the progress of its several departments. For the particulars of attendance, grad-

uations and character of work done, reference is made to the accompanying reports of departments.

#### CONCLUSION.

In concluding this report the board desire to express to the legislature their full confidence in the full and firm establishment of the university in all its relations and departments. In its close relations to the elementary schools of the State through the high schools, its courses of study are made accessible to the youth of every neighborhood. The complete organization of its several departments promises a high degree of culture to intelligence in every industry and calling. The generous endowment by the general government goes far toward meeting its current expenses. The board ask only for the generous appreciation accorded in the past, and such continued financial aid as seems to be required by the scope of its work, and by its necessary and natural growth.

## TREASURER'S REPORT.

FROM DECEMBER 1, 1882 TO AUGUST 1, 1883.

ROBERT A. DAVISON, *Treasurer.*

IN ACCOUNT WITH THE UNIVERSITY OF MINNESOTA.

## CURRENT EXPENSES.

1882.	<i>Dr.</i>		
Dec. 1.	To balance from last statement.....	\$5,330	85
1.	To transferred from Geol. survey account....	178	00
21.	To cash from state treasurer.....	6,538	35
23.	To cash from state treasurer.....	5,561	11
1883.			
Jan. 15.	To cash from Wm. W. Folwell.....	4	80
Feb. 14.	To cash from state treasurer.....	5,723	04
27.	To cash from state treasurer.....	4,500	00
March 30.	To cash from state treasurer.....	6,867	37
May 1.	To cash from state treasurer.....	5,308	67
29.	To cash from state treasurer.....	5,840	91
June 30.	To cash from state treasurer.....	5,752	22
July 31.	To Prof. Pike's book account charged to this account in error Nov. 30, 1882	109	85
31.	To balance brought from students fees ac- count .....	200	00
1883.	<i>Cr.</i>		
July 31.	By balance brought from chemical labora- tory account.....	\$101	19
31.	By balance brought from college of agri- culture account.....	1,077	61
31.	By balance brought from exp. farm and campus account.....	4,259	88
31.	Balance brought from employes, work- men account.....	2,740	00
31.	By balance brought from furniture ac- count .....	35	00

## BIENNIAL REPORT.

July	31.	By balance brought from heating account.	1,765 59
	31.	By balance brought from incidental account .....	3,493 80
	31.	By balance brought from library account	1,274 96
	31.	By balance brought from repairs accounts..	612 77
	31.	By balance brought from salaries for Instruction account.....	22,786 00
	31.	By experimental farm fund account carried to this account by error Nov. 30, 1882.....	671 87
	31.	By balance carried to new account.....	13,096 50
			<hr/>
			\$51,915 17
			<hr/>
			\$51,915 17

## SALARIES FOR INSTRUCTION.

		Cr.	Vchr.	
1882.	Dec. 13.	By H. M. Waitt, for salary.....	8	\$85 00
	21.	By faculty, pay roll for December.....	13	3,100 00
1883.	Jan. 8.	By E. D. Porter, house rent, two months	26	100 00
	16.	By H. M. Waitt, for salary.....	31	85 00
	19.	By Wm. H. Leib, for instruction.....	35	54 00
	31.	By faculty, pay roll for January.....	39	3,100 00
Feb.	1.	By E. C. Bowen, salary for one-half of October.....	40	50 00
	19.	By H. M. Waitt, for salary.....	67	85 00
	28.	By faculty, pay roll for February .....	69	3,100 00
March	13.	By H. M. Waitt, for salary .....	71	85 00
	14.	By E. D. Porter, house rent, two months	74	100 00
	31.	By faculty, pay roll for March.....	87	3,000 00
April	13.	By H. M. Waitt, for salary.....	95	85 00
	19.	By E. D. Porter, house rent.....	99	50 00
	30.	By faculty, pay roll for April.....	101	3,000 00
May	7.	By E. D. Porter, house rent.....	104	50 00
	12.	By H. M. Waitt, for salary.....	111	85 00
	31.	By faculty, pay roll for May.....	122	3,000 00
June	1.	By H. M. Waitt, for balance of salary	123	170 00
	5.	By E. D. Porter, house rent.....	125	50 00
	8.	By W. H. Leib, for instruction.....	127	102 00
	30.	By faculty, pay roll for June.....	154	3,000 00
July	7.	By E. D. Porter, house rent.....	157	50 00
	31.	By E. D. Porter, salary for July.....	167	200 00
<i>Dr.</i>				
July	31.	To balance carried to current expense account.....	22,786 00	
			<hr/>	
			\$22,786 00	\$22,786 00

## EMPLOYES AND WORKMEN.

		<i>Cr.</i>	<i>Vchr.</i>	
1882.				
Dec. 21.	By cash salaries for December.....	13		\$400 00
1883.				
Jan. 31.	By cash, salaries for January.....	39		400 00
Feb. 28.	By cash, salaries for February.....	69		400 00
March 31.	By cash, salaries for March.....	87		400 00
April 30.	By cash, salaries for April.....	101		400 00
May 31.	By cash, salaries for May.....	122		400 00
June 30.	By cash, salaries for June.....	154		265 00
July 31.	By cash, janitor's salary for July.....	167		75 00
			<i>Dr.</i>	
July 31.	To balance carried to current expense account.....		\$2,740 00	
			\$2,740 00	\$2,740 00

## COLLEGE OF AGRICULTURE.

		<i>Cr.</i>	<i>Vchr.</i>	
1883.				
March 14.	By cash, E. D. Porter, expense of Farmers' Lecture Course.....	73		\$1,077 61
			<i>Dr.</i>	
July 31.	To balance carried to current expense account.....		\$1,077 61	
			\$1,077 61	\$1,077 61

## CHEMICAL LABORATORY.

		<i>Cr.</i>	<i>Vchr.</i>	
1882.				
Dec. 28.	By cash, Jas. W. Queen & Co., mer- chandise.....	19		\$59 90
1883.				
Feb. 14.	By cash, Geo. Huhn & Co., merchan- dise.....	60		20 10
June 14.	By cash, Geo. Huhn & Co., merchan- dise.....	140		21 19
			<i>Dr.</i>	
July 31.	To balance carried to current expense account.....		\$101 19	
			\$101 19	\$101 19

## GEOLOGICAL SURVEY.

		<i>Cr.</i>	<i>Vchr.</i>	
1882.				
Dec. 1.	By balance from last statement.....			\$30,565 27
1.	By current expense.....	1		178 00
22.	N. H. Winchell, sundry expenses.....	10		85 45
22.	By pay roll, salaries for December.....	13		300 00

1883.			Vchr.	
Jan.	8.	By Jas. A. Dodge, analyzing stones....	24	178 00
	31.	By pay roll, salaries for January.....	39	300 00
Feb.	3.	By C. L. Herrick, salary for January	41	75 00
	5.	By N. H. Winchell, petty bills and expenses.....	42	50 32
	5.	By N. H. Winchell, sundry bills.....	43	13 73
	16.	By S. M. Williams, books blank.....	64	6 10
	28.	By pay roll, salaries for February.....	69	300 00
March	6.	By H. Mayhew, water for analysis....	70	5 80
	31.	By pay roll, salaries for March.....	87	450 00
April	5.	By Chas. E. Young, printing and let- ter heads.....	90	10 00
	30.	By pay roll, salaries for April.....	101	375 00
	30.	By N. H. Winchell, traveling ex- penses, etc.....	102	115 12
May	10.	By Jas. W. Queen & Co., goods for ex- periments.....	107	13 75
	26.	By N. H. Winchell, sundry bills.....	120	3 59
	31.	By pay roll, salaries for May .....	122	375 00
June	13.	By Wm. Howling, mounting birds.....	136	15 00
	19.	By H. H. Young, labor.....	143	30 00
	30.	By pay roll, salaries for June.....	154	300 00
July	21.	By A. H. Chester.....	165	100 00
	31.	By pay roll, salaries for July.....	167	300 00
<i>Dr.</i>				
	31.	To balance carried to new account.....		\$34,145 13
				\$34,145 13
				\$34,145 13

## INCIDENTALS.

1882.			Cr.	Vchr.	
Dec.	8.	By Emily L. Hough, writing, etc.....	3	\$21 00	
	8.	By Lane & Davis, labor and mdse.....	4	30 00	
	8.	By Wales & Co., picture frames and glass.....	5	91 21	
	8.	By Wales & Co., picture frames, etc....	6	20 10	
1883.					
Jan.	3.	By H. J. Cobb & Son, merchandise....	22	10 80	
	8.	By Bradner-Smith Paper Company, merchandise.....	23	43 14	
	8.	By W. W. Folwell, dinners for board of regents.....	25	6 00	
	16.	By Emily L. Hough, writing, etc.....	32	24 80	
	27.	By W. B. Dunnell, plans for building	36	75 00	
	31.	By Berry & Onion, merchandise.....	38	15 69	

1883.		Vchr.	
Feb.	10.	By C. W. Davison, directory.....	46 3 00
	13.	By B. Brown, carriage.....	50 6 00
	14.	By Minneapolis Tribune Co., papers...	52 8 00
	14.	By E. C. Pratt, expressage.....	55 5 50
	14.	By W. W. Parker, mounting picture	59 10 00
	15.	By Pioneer Press Co., advertising.....	62 3 40
	15.	By Berry & Onion, oil, etc.....	63 10 65
	19.	By W. F. Decker, sundry bills.....	66 15 20
March	13.	By Ariel Association, ensembling pros- pectus.....	72 75 00
	15.	By C. W. Hall, sundry expenses.....	76 41 85
	16.	By McMillan & Hastings, insuran e.	79 576 00
	16.	By Bradner-Smith Paper Co., envelopes	80 21 25
	16.	By Berry & Onion, oil.....	81 5 30
	20.	By Emily L. Hough, clerical services	84 15 60
	20.	By Emily L. Hough, clerical services	85 23 00
	27.	By St. Paul Fire and Marine Insur- ance Co., insurance.....	86 279 00
	31.	By American Express Co., express....	88 32 85
April	5.	By Berry & Onion, merchandise.....	89 6 30
	6.	By E. C. Pratt, expressage.....	91 2 50
	6.	By Evening Journal, advertising.....	92 10 00
	6.	By Gust. E. Stechert, merchandise...	93 6 24
	16.	By Wm. A. Pike, freight, etc.....	97 58 14
	26.	By Tinius Olson & Co., testing machine	100 500 00
May	1.	By E. E. White, music books.....	103 5 00
	8.	By Emily L. Hough, clerical services..	106 18 60
	11.	By Johnson, Smith & Harrison, printing	109 247 10
	12.	By Emily L. Hough, writing.....	110 26 60
	12.	By C. D. Whitall & Co., books.....	113 5 00
	15.	By Emily L. Hough, writing.....	114 4 85
	12.	By Geo. Kuhn, filing plat of R. add...	116 6 93
	17.	By Lockwood, Upton & Co., labor, etc.	118 7 75
	26.	By Tinius, Olsen & Co., balance due on testing machine.....	121 260 00
June	4.	By H. M. Waitt, sundry bills.....	124 6 24
	9.	By J. E. Gallow, freight paid.....	128 28 00
	9.	By J. E. Gallow, freight and cartage...	129 15 27
	13.	By Chas. D. Whitall & Co., merchandise	131 16 58
	13.	By Tribune job department, printing	132 45 50
	13.	By F. Engel, binding reports.....	133 48 50
	13.	By F. Danz, music at commencement	134 60 00
	13.	By Emily L. Hough, ribbons.....	137 3 00
	13.	By Emily L. Hough, writing.....	138 26 60
	13.	By Berry & Oniou, merchandise.....	139 3 70
	14.	By I. Monasch, diplomas.....	141 13 50
	19.	By Phelps & Bradstreet, use of chairs	144 7 30
	22.	By Nelson, Tenney & Co., lumber.....	147 22 99

1883.		Vchr.	
June	22. By Bardwell, Robinson & Co., moulding	148	3 00
	26. By Stone & Hulbert, insurance .....	149	90 00
	26. By W. F. Decker, sundry bills, etc....	150	28 48
	26. By W. F. Decker, sundry bills.....	151	30 10
	26. By W. F. Decker, sundry bills.....	152	23 31
	30. By M. W. Glenn, labor and repairs.....	153	14 55
July	6. By R. S. Davison & Co., sundry ex- penses .....	156	9 35
	9. By Tribune job department, calendars	158	355 98
	9. By Ariel Association, advertising.....	159	7 50

*Dr.*

July	31. To balance carried to current expense account.....	\$3,493 80	
		<hr/>	
		\$3,493 80	\$3,493 80

## LIBRARY.

1882.		Cr.	Vchr.	
Dec.	21. By O. M. Laraway, postmaster, books.....	14		85 47
	28. By E. and J. B. Young & Co., books.	17		85 54
	28. By Estes & Lauriat, books.....	18		162 75
1883.				
Jan.	10. By O. M. Laraway, postmaster, books..	29		95 35
	15. By O. M. Laraway, postmaster, maga- zine subscription.....	30		14 45
	29. By B. F. Stevens, foreign reviews....	37		5 60
Feb.	10. By O. M. Laraway, postmaster, books	44		19 35
	12. By Mrs. Allen Whitman, books.....	47		135 00
	12. By Jos. R. Osgood & Co., book index.....	48		16 50
	12. By W. O. Davis & Co., books.....	49		119 10
May	10. By Gust. E. Stechert, books.....	108		211 66
June	12. By Charlotte A. Rollit, paid out for labor.....	130		8 40
	20. By Gust. E. Stechert, books.....	145		281 18
	20. By S. A. Brown, clerk department of state, packing, etc.....	146		30 00
July	9. By Gust. E. Stechert, books.....	160		2 36
	10. By Johnson, Smith & Harrison, print- ing.....	162		2 25

*Dr.*

July	31. To balance carried to current expense account.....	\$1,274 96	
		<hr/>	
		\$1,274 96	\$1,274 96



## REPAIRS.

1883.		<i>Cr.</i>	<i>Vchr.</i>	
Jan.	17.	By George Gray, paints, varnish, etc.	33	\$9 75
	19.	By George Gray, painting.....	34	140 70
April	14.	By Sykes & Andrews, material and labor.....	96	314 49
June	18.	By John T. Lucas, repairing roof.....	142	2 00
July	10.	By Folds & Griffith, carpeting, curtains, etc.....	161	65 53
	14.	By Lister Bros., labor.....	163	80 30
<i>Dr.</i>				
July	31.	To balance carried to current expense account.....		\$612 77
				<u>\$612 77</u>
				\$612 77

## EXPERIMENTAL FARM AND CAMPUS.

1882.		<i>Cr.</i>	<i>Vchr.</i>	
Dec.	1.	By Geo. Huhn & Co., mdse.....	2	\$2 48
	11.	By E. D. Porter, labor, pay roll for November.....	7	382 46
	20.	By Miller Bros., mdse.....	9	286 78
	28.	By Jas. W. Queen & Co., mdse.....	15	14 15
	28.	By C. A. Smith & Co., wagon.....	16	60 00
	30.	By Merriman, Barrows & Co., lumber	20	122 47
	30.	By W. Q. Greeley, blacksmithing....	21	37 80
1883.				
Jan.	8.	By E. D. Porter, labor, pay roll for December.....	27	310 81
	9.	By Wyman Elliot, plants and seeds...	28	94 59
Feb.	10.	By Pike & Sturtevant, surveying and staking.....	45	33 50
	14.	By C. W. Shatto, bob sleds, etc.....	53	33 60
	14.	By Hobart & Chattendon, posts for fencing.....	54	43 92
	15.	By Chas. Robinson, abstract of Thatcher's addition.....	61	5 75
	17.	By Stammwitz & Schober, feed.....	65	14 87
	19.	By E. D. Porter, labor, pay roll for January.....	68	150 39
March	14.	By E. D. Porter, labor, pay roll for February.....	75	153 27
April	11.	By Jno. Leinen, rent of land, seed, etc.....	94	157 99
	19.	By E. D. Porter, labor, pay roll for March.....	98	206 40
May	7.	By E. D. Porter, labor, pay roll for April.....	105	350 41
	3			

## BIENNIAL REPORT.

		Vchr.		
1883.				
May	12. By Hull & Dyer, blacksmithing.....	112		30 95
	17. By Anthony Kelly & Co., mdse., cement.....	117		42 25
June	5. By E. D. Porter, labor, pay roll for May.....	126		818 43
July	5. By E. D. Porter, labor, pay roll for June.....	155		906 61
<i>Dr.</i>				
July	31. To balance carried to current expense account.....		4,259 88	
			<u>4,259 88</u>	<u>\$4,259 88</u>

## ENLARGEMENT OF CAMPUS.

		Dr.	Vchr.		
1882.					
Dec.	1. To balance from last statement.....		\$3,127 56		
1883.		<i>Cr.</i>			
March	20. By Geo. M. Hunt, release of tax title	83		\$35 00	
May	18. By Wetmore heirs, deed to lot in campus.....	119		500 00	
	11. By Tribune Printing Co., notices.....	115		72 00	
July	20. By J. E. Gallow, deed to lot in campus	164		350 00	
	30. By O. D. Thatcher, E. L. P. Thatcher and C. Dexter, deed to lot in campus	166		550 00	
	31. By balance carried to new account.....			1,620 56	
			<u>\$3,127 56</u>	<u>\$3,127 56</u>	

## FURNITURE.

		Cr.	Vchr.		
1883.					
March	17. By Wm. Glessner & Son, office desk...	82		\$35 00	
<i>Dr.</i>					
July	31. To balance carried to current expense account.....		\$35 00		
			<u>\$35 00</u>	<u>\$35 00</u>	

## HEATING.

		Cr.	Vchr.		
1882.					
Dec.	22. By Armstrong & Truesdell, fuel.....	11		\$894 37	
	22. By Armstrong & Truesdell, fuel.....	12		365 57	
1883.					
Feb.	14. By Ball & Naylor, work on boiler.....	51		1 25	
	14. By Sykes & Andrews, steam gauge.....	56		4 00	
	14. By Sykes & Andrews, labor and mdse	57		33 65	
	14. By Sykes & Andrews, stop valve.....	58		4 00	

1882.		Vchr.	
March 16.	By Armstrong & Truesdell, fuel.....	77	257 00
16.	By Armstrong & Truesdell, fuel.....	78	131 25
June 13.	By Armstrong & Truesdell, fuel.....	135	74 50
	<i>Dr.</i>		
July 31.	To balance carried to current expense account.....		
		\$1,765 59	
		<hr/>	<hr/>
		\$1,765 59	\$1,765 59

STUDENTS FEES.

1882.		<i>Dr.</i>	
Dec. 23.	To cash received from W. W. Folwell	\$200 00	
1883.		<i>Cr.</i>	
July 31.	By balance carried to current expense account.....		\$200 00
		<hr/>	<hr/>
		\$200 00	\$200 00

PROF. PIKE'S BOOK.

1882.		<i>Cr.</i>	
Dec. 1.	By balance from last statement.....	\$109 85	
1883.		<i>Dr.</i>	
June 25.	To Prof. W. A. Pike, from sale of 300 pamphlets .....		\$27 99
July 31.	To balance carried to new account....		81 86
		<hr/>	<hr/>
		\$109 85	\$109 85

SALT LAND SALES.

1882.			
Dec. 1.	To balance from last statement.....	\$17,501 37	
5.	To cash received from H. G. Stordock, deed to Tore Jorgenson of the N. $\frac{1}{2}$ , S. W. $\frac{1}{4}$ , and S. W. $\frac{1}{2}$ , S. W. $\frac{1}{4}$ , of sec- tions 28:136:44.....	\$600 00	
	and sundry interest payments, etc .....	334 21	
		<hr/>	
		\$934 21	
	less commission on sale.....	15 00	919 21
27.	To cash received from Chas. J. Wright, being interest due on cert. 14.....		11 90
1883.			
Jan. 18.	To cash received from H. G. Stordock in payment of E. $\frac{1}{2}$ , S. E. $\frac{1}{4}$ and S. $\frac{1}{4}$ , N. E. $\frac{1}{4}$ and N. W. $\frac{1}{4}$ , S. E. $\frac{1}{4}$ sec. 33:136: 45 .....	1,000	
	less commission.....	\$25	975 00

1883.			
Feb.	9.	To cash received from Chas. J. Wright, balance due on S. W. $\frac{1}{4}$ , N. W. $\frac{1}{4}$ sec. 24:133:44 .....	170 00
	14.	To cash received from First National bank, Fergus Falls, being interest payments on sundry certificates .....	1,238 15
March	10.	To cash received from H. G. Stordock, being payment on sale of E. $\frac{1}{2}$ , S. E. $\frac{1}{4}$ sec. 23:136:45..... 128 40 less commission on sale. .... 12 00	116 40
	13.	To cash received from H. G. Stordock, being payment on sale of N. $\frac{1}{2}$ , S. W. $\frac{1}{4}$ and S. E. $\frac{1}{4}$ , S. W. $\frac{1}{4}$ sec. 32:136:44 .....250 43 less commission on sale..... 19 00	231 43
April	17.	To cash received from H. G. Stordock, being payment on sale of S. $\frac{1}{2}$ , N. W. $\frac{1}{4}$ and S. W. $\frac{1}{4}$ , N. E. $\frac{1}{4}$ sec. 30:136:44 .....238 20 less commission on sale..... 22 60	215 60
June	9.	To cash received from First National bank Fergus Falls, as balance due on S. $\frac{1}{2}$ , N. W. $\frac{1}{4}$ and N. $\frac{1}{2}$ , S. W. $\frac{1}{4}$ sec. 13:133:44.....	764 32
	28.	To cash received from Theo. Otjen, being interest due on sec. 35 and $\frac{1}{2}$ of sec 34:136:45.....	228 48
	30.	To cash received from C. S. Otjen, being interest due on sec. 2 and W. $\frac{1}{2}$ of sec. 12:135:45 and $\frac{1}{2}$ of sec. 34:136:45.....	322 43
July	7.	To cash received from H. G. Stordock, being payments of interest on sundry certificates.....	1,116 13
	14.	To cash received from H. G. Stordock, being payments of interest on sundry certificates .....	246 68
	16.	To cash received from J. J. Hagerman, being balance due on sec. 27:136:45...	2,176 00
	26.	To cash received from H. G. Stordock, being payments on land and sundry interest payments.....	600 00
		By balance carried to new account.....	26,833 10
			<hr/>
			\$26,833 10
			\$26,833 10

## BUILDING ACCOUNT.

1882.		Dr.	
Dec.	1.	To balance from last statement .....	\$5,610 77

1883.	<i>Cr.</i>		
July 31.	By balance carried to new account .....		\$5,610 77
		\$5,610 77	\$5,610 77

## EXPERIMENTAL FARM FUND.

1882.	<i>Dr.</i>		
Dec. 1.	To balance from last statement.....	\$671 87	
1883.	<i>Cr.</i>		
July 31.	By balance carried to new account.....		\$671 87
		\$671 87	\$671 87

## LAND SALE FUND.

1882.	<i>Dr.</i>		
Dec. 1.	To balance from last statement.....	\$528 42	
1883.	<i>Cr.</i>		
July 31.	By balance carried to new account.....		\$528 42
		\$528 42	\$528 42

## WATER SUPPLY.

1882.	<i>Dr.</i>		
Dec. 1.	To balance from last statement.....	\$402 93	
1883.	<i>Cr.</i>		
July 31.	By balance carried to new account.....		\$402 93
		\$402 93	\$402 93

## SUMMARY OF ACCOUNTS.

1883.			
July 31.	Building account, to balance.....	\$5,610 77	
	31. Current expense account, to balance.....	13,096 50	
	31. Enlargement of campus account, to balance.....	1,620 56	
	31. Experimental farm fund account, to balance.....	671 87	
	31. Land sale fund account, to balance.....	528 42	
	31. Salt land sales account, to balance.....	26,833 10	
	31. Water supply account, to balance.....	402 93	
	31. Geological survey account, by balance...		\$34,145 13
	31. Prof. Pike's book account, by balance...		81 86
	Balance in treasurer's hands.....		14,537 16
		\$48,764 15	\$48,764 15

## TREASURER'S REPORT.

TREASURER DAVISON'S REPORT FOR YEAR ENDING AUG. 1, 1884.

*Robert A. Davison, Treasurer, in Account with University  
of Minnesota.*

### CURRENT EXPENSES.

		Dr.	
1883.			
Aug.	1.	To balance from last statement.....	\$13,096 50
Sept.	29.	To cash from state treasurer for July, August and September. ....	9,582 77
Oct.	8.	To cash from sale of pine edgings, books, etc.....	53 95
Nov.	1.	To cash from state treasurer.....	5,799 93
Dec.	8.	To cash from state treasurer.....	5,707 29
1884.			
Jan.	4.	To cash from state treasurer.....	6,312 52
Feb.	2.	To cash from state treasurer.....	5,022 56
March	7.	To cash from state treasurer.....	5,062 12
April	5.	To cash from state treasurer.....	4,691 67
May	1.	To cash from state treasurer.....	5,829 36
June	2.	To cash from state treasurer.....	6,685 00
	23.	To cash refunded to W. W. Folwell....	1 32
July	2.	To cash from state treasurer.....	7,013 61
	31.	To balance from students' fees account	1,571 00
1884.			
		Cr.	
July	31.	By balance transferred from apparatus account.....	\$674 57
	31.	By balance transferred from chemical laboratory account.....	529 55
	31.	By balance transferred from college of agriculture account .....	8,898 54
	31.	By balance transferred from employes account.....	2,480 00
	31.	By balance transferred from furniture account .....	8 00
	31.	By balance transferred from heating account.....	1,254 99

1884.			
July	31.	By balance transferred from incidental account.....	4,375 59
	31.	By balance transferred from library account.....	1,355 41
	31.	By balance transferred from repairs account.....	497 92
	31.	By balance transferred from salaries for instruction account .....	31,130 84
	31.	By balance transferred from workshop account.....	303 02
	31.	By balance carried to new account.....	24,921 17
		\$76,429 60	\$76,429 60

## SALARIES FOR INSTRUCTION.

		Cr.	Vchr.	
Aug.	15.	By E. D. Porter, house rent one and one-half months.....	5	\$75 00
	15.	By C. L. Herrick, work in July.....	6	100 00
	31.	By E. D. Porter, salary for August.....	11	200 00
Sept.	29.	By faculty pay roll for September.....	18	2,535 00
Oct.	31.	By faculty pay roll for October.....	55	2,760 00
Nov.	30.	By faculty pay roll for November.....	74	2,760 00
Dec.	21.	By faculty pay roll for December.....	97	2,760 00
	3.	By W. W. Folwell paid Prof. Brooks, instruction in Latin.....	78	225 00
	3.	By W. W. Folwell paid Prof. Hutchinson, instruction in Latin.....	78	150 00
	11.	By W. H. Leib, ten vocal lessons.....	88	60 00
1884.				
Jan.	31.	By faculty pay roll for January.....	122	2,760 00
Feb.	29.	By faculty pay roll for February.....	130	2,760 00
March	31.	By faculty pay roll for March.....	152	2,760 00
April	10.	By Geo. E. MacLean, salary for March	158	175 00
	30.	By J. C. Hutchinson, extra work in Latin.....	173	150 00
	30.	By faculty pay roll for April.....	174	2,935 00
May	28.	By faculty pay roll for May.....	189	3,010 00
June	5.	By Thomas Peebles, half of September, 1883.....	202	87 50
	14.	By Geo. E. MacLean, balance due for year.....	206	58 34
1 to	30.	By faculty pay roll for June.....	247	2,835 00
	17.	By Jabez Brooks, for balance of salary 1883 and 1884.....	208	250 00
	17.	By C. W. Hall, for balance of salary, 1883 and 1884.....	209	150 00
	18.	By C. W. Benton for balance of salary, 1883 and 1884.....	212	200 00

1884.		Vchr.	
June	19.	By J. C. Hutchinson for balance of salary, 1883 and 1884.....	213 100 00
	20.	By J. F. Downey, for balance of salary, 1883 and 1884.....	214 100 00
	20.	By Jabez Brooks for balance of salary, 1883 and 1884.....	215 225 00
	20.	By Jno. G. Moore for balance of salary, 1883 and 1884.....	216 200 00
	23.	By Emma F. Trussel, salary for September, 1883.....	237 50 00
	30.	By M. L. Sanford, extra instruction for two terms.....	246 500 00
	31.	By E. D. Porter, salary for July, 1884.	269 200 00
	31.	To balance carried to current expense account.....	31,130 84
			\$31,130 84
			\$31,130 84

## EMPLOYEES AND WORKMEN.

1883.		Cr.	Vchr.	
Aug.	31.	By J. E. Gallow, janitor work in August.....	11	\$ 75 00
Sept.	29.	By pay roll for month of September.	18	125 00
Oct.	31.	By pay roll for month of October.....	55	335 00
Nov.	30.	By pay roll for month of November.	74	235 00
Dec.	31.	By pay roll for month of December..	97	285 00
1884.				
Jan.	31.	By pay roll for month of January....	122	235 00
Feb.	29.	By pay roll for month of February....	130	235 00
March	31.	By pay roll for month of March.....	158	235 00
April	30.	By pay roll for month of April .....	174	235 00
May	28.	By pay roll for month of May .....	189	235 00
June	30.	By pay roll for month of June.....	247	175 00
July	31.	By pay roll for month of July.....	269	75 00
	31.	To balance carried to current expense account.....	2,480 00	
			\$2,480 00	\$2,480 00

## GEOLOGICAL SURVEY.

1883.		Cr.	Vchr.	
Aug.	1.	By balance from last statement.....		\$34,145 13
	31.	By Warren Upham, work in August.	11	100 00
Sept.	29.	By pay roll for month of September...	18	375 00
Oct.	27.	By A. Fuess, microscope and lenses...	51	127 34
	27.	By N. H. Winchell, petty expenses 6-28 to 9-18.....	52	33 15
	27.	By N. H. Winchell, field expenses for June.....	53	80 45
	31.	By pay roll for month of October.....	55	375 00



1883.		Vchr.	
Nov.	9.	By Lyman Bros., bottles and corks...	60 1 20
	23.	By Mrs. H. A. Wood, fawn skin.....	62 10 00
	28.	By N. H. Winchell, expenses for Oc- tober.....	70 29 68
	28.	By O. T. Sweet, cloth for charts.....	72 3 25
	30.	By pay roll for month of November...	74 375 00
Dec.	19.	By C. L. Herrick, six types of animal life.....	94 1 50
	21.	By pay roll for month of December...	97 375 00
	29.	By N. H. Winchell, expenses for No- vember.....	104 23 74
1884.			
Jan.	15.	By C. L. Herrick, salary for August, 1883.....	105 75 00
	31.	By pay roll for month of January ....	122 375 00
Feb.	29.	By pay roll for month of February....	130 375 00
March	7.	By W. Howling, mounting fawn, etc.	132 41 75
	8.	By C. H. Hitchcock, geological map of United States.....	136 42 00
	11.	By Paul & Sinsheimer, case of drawers	142 40 00
	14.	By S. M. Williams, stationery account	146 3 13
	14.	By S. M. Williams, stationery account	147 4 50
	22.	By N. H. Winchell, expenses and bills for January.....	149 31 35
	31.	By pay roll for month of March.....	152 375 00
April	9.	By H. G. Griswold, plats .....	155 8 40
	10.	By M. W. Connor, repairs on wagon.	156 5 75
	10.	By I. S. Kellogg, plats, 93.....	159 55 80
	10.	By Paul & Sinsheimer, two wall cases.	163 165 00
	30.	By Pay roll for month of April .....	174 375 00
May	16.	By Charles D. Whitall & Co., books.	181 27 55
	17.	By Charles E. Young & Co., label cards	184 3 00
	28.	By pay roll for month of May.....	189 300 00
	29.	By N. H. Winchell, expenses Febru- ary, March and April .....	192 46 31
June	13.	By L. Laramie, harness.....	204 25 00
	21.	By N. H. Winchell, expenses for May	218 11 65
	21.	By William J. Scott, lynx.....	231 2 00
	21.	By C. W. Hall, expenses on trip.....	235 6 92
	30.	By pay roll for month of June .....	247 300 00
July	3.	By Empire Distilling Company, bar- rel alcohol.....	250 28 50
	17.	By H. V. Winchell, work in laboratory	264 65 00
	26.	By N. H. Winchell, expenses in June	266 27 70
	30.	By C. L. Herrick, petty expenses.....	268 20 35
	31.	By pay roll for month of July.....	269 375 00
	31.	To bal. carried to new account.....	
			39,267 10
			<hr/>
			\$39,267 10 \$39,267 10

## INCIDENTAL ACCOUNT.

1883.		Cr.s	Vchr.	
Aug.	7.	By Gale & Co., insurance.....	1	\$225 00
	11.	By H. J. Fletcher, transcript of lectures.....	2	98 00
	22.	By J. C. Arthur, botanical work and expense.....	8	32 15
	25.	By O. M. Laraway, for postage.....	9	13 75
	27.	M. L. Sanford, work and expense in summer school.....	10	64 62
Sept.	1.	By Robert Barker, patching ceiling...	12	1 50
	19.	By Barnard & Cope, rent of chairs ...	13	7 50
	26.	By W. A. Pike, express, telegrams, etc.....	17	12 40
Oct.	6.	By J. E. Gallow, help in cleaning buildings.....	24	59 25
	6.	By M. L. Sanford, ribbon for college colors.....	26	6 50
	6.	By Delta Sigma Soc., use of piano....	27	7 00
	6.	By J. H. Locke, use of piano three months.....	28	7 80
	6.	By W. W. Folwell, petty expenses, freight, express, etc., for year 1881-82.....	29	146 76
	6.	By W. W. Folwell, petty expenses, freight, express, etc., for year 1882-83.....	31	145 26
	9.	By John E. Nealin, labor 3½ days.....	32	4 80
	10.	By Berry & Onion, merchandise .....	34	14 98
	11.	By Johnson, Smith & Harrison, printing.....	35	14 50
	11.	By St. Paul Fire and Marine Insurance Company, insurance.....	36	135 00
	13.	By Tribune Job Dep., printing .....	41	16 00
	13.	By Wales & Co., framing picture.....	43	2 70
	15.	By B. Brown, carriage Com. day.....	44	5 00
Nov.	28.	By Evening Journal, advertising.....	64	4 00
	28.	By Pioneer Press Co., advertising....	65	13 60
Dec.	1.	By Galpin & Emerson, material and labor.....	75	9 52
	3.	By Chas. D. Whitall & Co., mdse.....	79	10 37
	3.	By Chas. D. Whitall & Co., mdse.....	80	60 09
	4.	By Dyer & Howard, tuning piano and music.....	81	6 09
	5.	By McMillan & Hastings, insurance.	83	216 00
	7.	By Berry & Onion, mdse.....	84	5 50
	7.	By Berry & Onion, mdse .....	85	11 60

		Vchr.	
1883.			
Dec.	8.	By Kenyon & Lara, carpet and matting.....	86 17 60
	10.	By Ariel Association, advertising.....	87 75 00
	20.	By W. W. Folwell, expenses to Nat. T. Ass'n.....	96 67 90
	21.	By Frank A. Johnson, clerical work in December .....	98 10 75
	21.	By J. S. Pillsbury, traveling exp., com. on vacancies.....	99 159 63
	21.	By Minn. Tribune Co., advertising..	101 9 00
	24.	By Johnson, Smith & Harrison, printing.....	102 26 00
	28.	By F. C. Walker, cleaning carpets...	103 3 09
1884.			
Jan.	15.	By Greenleaf Clark, traveling exp., com. on vacancies .....	107 215 60
	22.	By J. B. Gilfillan, traveling exp., com. on vacancies .....	111 22 00
	25.	By Chas. D. Whitall & Co., mdse....	112 17 30
	25.	By J. E. Gallow, hired help in cleaning.....	114 14 25
Feb.	4.	By F. C. Berry & Co., mdse.....	124 3 15
	15.	By Kenyon & Lara, stair pads.....	128 3 00
March	8.	By Ginn, Heath & Co., books.....	137 6 72
	11.	By Johnson, Smith & Co., printing...	141 46 50
	13.	By Merriman, Barrows & Co., lumber.....	144 22 03
	13.	By Tribune Job Printing Co., printing.....	145 12 50
	10.	By Janney, Brooks & Co., mdse.....	140 13 87
	26.	By M. L. Sanford, express charges, etc.	150 2 25
April	10.	By MacClary & Quigley, work and material .....	157 18 60
	12.	By J. E. Gallow, help hired to clean wells .....	160 5 00
	12.	By Church & Graves, lumber.....	161 4 00
	12.	By Galpin & Emerson, materials and labor.....	162 33 25
	10.	By Wales & Co., framing pictures....	164 8 02
	16.	By Louis Dreka, diplomas.....	168 31 25
	17.	By W. F. Decker, petty expenses to February 23 .....	171 26 16
May	15.	By Commercial Bank, petty expenses from May 29, 1883, to April 12, 1884.....	177 15 00
	16.	By Junior Annual, advertising.....	179 20 00
	17.	By C. M. Palmer, publishing advertising.....	183 16 50

1884.		Vchr.	
May	24.	By Miller Bros., mdse.....	185 1 00
	29.	By Johnson, Smith & H., printing ...	190 65 00
	31.	By F. A. Johnson, office work in May.....	195 22 50
	31.	By H. M. Waitt, petty expenses for year.....	196 10 27
June	3.	By Wm. Fenwick, sprinkling street..	199 1 50
June	14.	By Mary Bowen, office and library work.....	205 37 00
	17.	By C. W. Hall, petty bills and ex- penses.....	210 6 38
	18.	By Frank A. Johnson, postage.....	211 55 00
	20.	By J. E. Galloway, petty bills and ex- penses.....	217 25 45
	21.	By I. Monasch, filling out diplomas..	219 10 50
	21.	By Minneapolis Tribune Co., adver- tising.....	222 17 50
	21.	By W. W. Folwell, petty bills and ex- penses.....	223 179 57
	21.	By F. A. Johnson, office work in April.....	224 14 10
	21.	By F. A. Johnson, office work in March.....	225 14 00
	21.	By F. A. Johnson, office work in February.....	226 15 75
	21.	By F. A. Johnson, office work in Jan- uary.....	227 14 75
	21.	By F. A. Johnson, office work in No- vember.....	228 11 75
	21.	By F. A. Johnson, office work in Oc- tober.....	229 11 50
	21.	By F. A. Johnson, office work in Sep- tember.....	230 10 50
	21.	By Mary Bowen, office work.....	232 6 16
	21.	By J. H. C. Hutchinson, work in library.....	233 13 20
	21.	By N. M. Baker, dusting books.....	234 19 00
	23.	By Wheaton, Reynolds & Co., hitch- ing posts.....	236 18 36
	23.	By Johnson, Smith & H., printing	238 670 00
	23.	By C. M. Palmer, pub., advertising..	239 5 50
	24.	By Chas. D. Whiteall & Co., merchand- ise.....	240 3 50
	25.	By F. Danz, Jr., music at comm.....	241 75 00
	26.	By Tribune Printing Co., postal cards	242 18 00
	26.	By W. F. Decker, petty bills and ex- penses.....	243 20 44
	27.	By Hobart & Chatterton, cedar posts..	244 12 50

1884.		Vehr.	
June	27.	By Bradner-Smith Paper Co., paper..	245 6 55
July	2.	By W. W. Folwell, postage bought...	249 50 00
	3.	By Louis Dreka, three diplomas.....	252 3 75
	5.	By Isaac McNair, insurance.....	255 192 50
	5.	By F. A. Johnson, office work, June and to July 5th.....	256 62 40
	9.	By Thompson & Worthington, insur- ance.....	259 175 00
	21.	By D. L. Kiehle, traveling expenses, etc.....	265 187 80
	30.	By Lettie M. Crofts, library and office work .....	267 28 75
	31.	To bal. to current expense amount...	\$4,375 59
			<hr/>
			\$4,375 59 \$4,375 59

## COLLEGE OF AGRICULTURE.

1883.		Cr.	
Aug.	11.	By E. D. Porter, July pay roll for labor.....	4 \$763 38
Sept.	25.	By E. D. Porter, August pay roll for labor.....	16 845 15
Oct.	2.	By John Leinen, cutting grain.....	19 147 75
	10.	By E. D. Porter, September pay roll for labor.....	33 468 40
	11.	By Sykes & Andrews, material and labor.....	37 89 87
Nov.	7.	By E. D. Porter, October pay roll for labor .....	57 585 74
	28.	By Dr. Geo. Sermon, doctoring horses	63 26 50
	28.	By Sykes & Andrews, repairing pipes, etc .....	69 5 25
	28.	By Geo. Huhn & Co., merchandise....	71 21 50
	30.	By Chas. Henry, stove, etc.....	73 20 10
Dec.	1.	By Robinson & Mead, tank and water	77 13 00
	15.	By E. D. Porter, November pay roll for labor.....	92 481 91
Nov.	8.	By Driscoll & Forsyth, blacksmithing	58 19 00
1884.			
Jan.	18.	By E. D. Porter, December pay roll for labor.....	108 669 45
Feb.	9.	By E. D. Porter, January pay roll for labor .....	127 558 07
March	5.	By E. D. Porter, February pay roll for labor.....	131 578 67
	10.	By Janney, Brooks & Co., merchan- dise .....	140 352 50

## BIENNIAL REPORT.

		Vchr.		
1884.				
April	9.	By E. D. Porter, March pay roll for labor.....	153	587 72
	14.	By Janney, Semple & Co., merchandise.....	165	3 53
May	5.	By E. D. Porter, April pay roll for labor.....	175	794 45
	28.	By E. D. Porter, May pay roll for labor .....	187	869 90
	28.	By H. Sibley & Co., horse lawn mower	188	144 00
	29.	By Driscoll & Forsyth, cutter, sleds and blacksmithing.....	193	100 50
July	1.	By John Schulte, harnesses.....	248	75 70
	7.	By E. D. Porter, June pay roll for labor .....	258	676 50
	31.	To bal. to current expense amount....		\$8,898 54
			\$8,898 54	\$8,898 54

## APPARATUS ACCOUNT.

		Cr.	Vchr.		
1883.					
Oct.	6.	By J. H. Ellis, air pump and appliances.....	20	\$125 00	
	16.	By Crocker, Pell & Boardman, testing machines.....	47	31 72	
Dec.	5.	By Wingate Bros., material and labor	82	8 00	
	18.	By Ashcroft Manufacturing Co., testing pump, boiler, etc.....	93	59 05	
1884.					
Jan.	14.	By Alfred P. Gage, merchandise.....	106	92 30	
	28.	By C. T. Milligan, cylinders, pumps, etc.....	118	132 62	
March	8.	By Alfred P. Gage, sundry rods, tubes, etc.....	135	21 38	
June	4.	By W. H. Walmsley & Co., microscope, etc.....	200	162 50	
July	3.	By P. Boeringer & Son, surveying instruments.....	254	42 00	
	31.	To balance carried to current expenses account.....		\$674 57	
			\$674 57	\$674 57	

## CHEMICAL LABORATORY.

		Cr.	Vchr.		
1884.					
Ost.	15.	By Geo. Huhn & Co., merchandise...	45	100 71	
	18.	By Richards & Co., merchandise.....	49	22 09	
	27.	By Richards & Co., chemicals.....	50	235 98	

UNIVERSITY OF MINNESOTA.

31

		Vchr.	
1283.			
Nov. 1.	By James A. Dodge, petty expenses for years 1882 and 1883.....	56	97 61
Dec. 21.	By Geo. Huhn & Co., merchandise.....	100	18 07
1884.			
March 8.	By Geo. Huhn & Co., merchandise.....	138	22 37
May 16.	By Geo. Huhn & Co., merchandise.....	180	18 72
16.	By Thomas Gardiner, scalpels, etc.....	182	14 00
July 31.	To balance carried to current expense account.....	\$529 55	
		<hr/>	<hr/>
		\$529 55	\$529 55

EXPERIMENTAL FARM FUND.

		Dr.	Vchr.	
1883.				
Aug. 1.	To balance from last statement.....		\$671 87	
1884.				
April 14.	By J. S. Pillsbury, chairman, to pay part of note of \$1,500 and interest given by the State University to B. F. Pillsbury. The balance of the amount being paid out of the account of J. S. Pillsbury, chairman of the ex-committee.....	166		\$671.87
			<hr/>	<hr/>
			\$671 87	\$671 87

FURNITURE ACCOUNT.

		Cr.	Vchr.	
1883.				
Nov. 22.	By Folds & Griffith, rug.....		61	\$8 00
1884.				
July 31.	To balance carried to current expense account.....		\$8 00	
			<hr/>	<hr/>
			\$8 00	\$8 00

HEATING AND LIGHTING.

		Cr.	Vchr.	
1883.				
Oct. 6.	By J. E. Gallow, firing for month of September .....		21	\$60 00
6.	By J. E. Gallow, firing up to October 16, 1882.....		22	50 00
29.	By Armstrong & Truesdell, fuel.....		54	20 00
Dec. 20.	By Littlefield & Son, pipe and repairs		95	10 95
Oct. 11.	By Sykes & Andrews, material and labor .....		37	158 20

1884.		Vchr.	
Jan.	29.	By J. S. Pillsbury, one car wood 9  cords.....	117 59 20
March	7.	By Berry & Onion, oil, wicks, etc.....	134 11 10
April	15.	By First Congregational Church, chandeliers.....	167 75 00
June	3.	By Berry & Onion, oil.....	198 1 80
July	10.	By Armstrong & Truesdell, fuel.....	261 808 74
	31.	To balance carried to current expense account.....	\$1,254 99
			<hr/>
			\$1,254 99      \$1,254 99

## STUDENTS FEES.

1883.		Dr.	
Aug.	8.	To paid in by Prof. J. A. Dodge.....	\$41 00
	27.	To paid in by C. L. Herrick.....	25 00
Oct.	8.	To paid in by W. W. Folwell.....	285 00
Dec.	1.	To paid in by Jas. A. Dodge.....	185 00
1884.			
June	3.	To paid in by Jas. A. Dodge.....	135 00
	23.	To paid in by W. W. Folwell.....	900 00
July	31.	By balance carried to current expense account.....	\$1,571 00
			<hr/>
			\$1,571 00      \$1,571 00

## LIBRARY.

1883.		Cr.	Vchr.	
Sept.	24.	By E. & J. B. Young & Co., books...	14	\$3 77
	24.	By G. E. Stechert, books.....	15	112 52
Oct.	6.	By Geo. H. Keith, order for books...	25	3 92
	6.	By W. W. Folwell, books, etc.....	30	25 65
Dec.	14.	By Commercial Bank, sundry drafts for books.....	90	179 35
	14.	By Leon Barritt, "Dore's Raven"....	91	10 00
Nov.	28.	By J. F. Travis, binding books.....	68	7 50
1884.				
Jan.	21.	By Commeraial Bank, drafts for books	109	16 05
	25.	By Commercial Bank, drafts for books	113	6 00
	30.	By G. E. Stechert, books.....	120	338 08
Feb.	27.	By Commercial Bank, drafts for books	129	27 90
March	12.	By Mrs. S. J. Hall, books.....	143	11 00
	26.	By G. E. Stechert, books.....	151	148 00
May	15.	By F. A. Johnson, books.....	178	3 26
June	4.	By Gustav E. Stechert, books.....	201	302 06
July	3.	By Gustav E. Stechert, books.....	251	160 95
	3.	By St. Paul Book and Stationery Co., books.....	253	6 00



*Dr.*

Feb. 16.	To paid by A. T. Ormond for books...	\$6 60	
	To balance carried to current expense account.....	1,355 41	
		<hr/>	<hr/>
		\$1,362 01	\$1,362 01

## REPAIRS ACCOUNT.

		<i>Cr.</i>	<i>Vchr.</i>	
1883.				
Oct. 6.	By Robert Barker, plastering.....	23		\$19 82
12.	By Nelson, Tenney & Co., lumber....	38		2 42
12.	By Galpin & Emerson, labor.....	39		15 80
13.	By Clough Bros., material.....	42		30 94
15.	By M. W. Glenn, work on boiler.....	46		28 60
Nov. 8.	By J. S. Symmonds, glazing and painting .....	59		66 62
Dec. 1.	By Merriman, Barrows & Co., lumber	76		78 50
1884.				
Jan. 26.	By B. Knowlton, plastering.....	115		4 95
31.	By Wales & Co., repairing pictures...	121		17 60
Feb. 4.	By Clough Bros., lumber.....	123		17 85
March 7.	By Sykes & Andrews, material and labor.....	133		149 90
April 16.	By John T. Lucas, on lead pipes.....	170		1 75
May 29.	By Sykes & Andrews, material and labor .....	191		25 28
29.	By John T. Lueus, material and labor	194		4 09
June 21.	By Galpin & Emerson, material and labor .....	220		33 80
July 31.	To balance to current expense account		\$497 92	
			<hr/>	<hr/>
			\$497 92	\$497 92

## WORK SHOP ACCOUNT.

		<i>Cr.</i>	<i>Vchr.</i>	
1884.				
March 10.	By Janney, Brooks & Co., tools.....	140		\$26 10
24.	By Robinson & Cary, saws.....	148		128 77
April 14.	By Janney, Semple & Co., tools, etc.	165		148 15
July 31.	To balance carried to current expense account.....		\$303 02	
			<hr/>	<hr/>
			\$303 02	\$303 02

## LAND SALES FUND.

		<i>Dr.</i>	
1883.			
Aug. 1.	To balance from last statement.....	\$528 42	
5			

## WATER SUPPLY.

1883.		<i>Dr.</i>	
Aug. 1.	To balance from last statement.....		\$402 93

## PROF. PIKE'S BOOK.

1883.		<i>Cr.</i>	
Aug. 1.	By balance from last statement.....		\$81 86

## BUILDING ACCOUNT.

1883.		<i>Dr.</i>	<i>Vchr.</i>	
Aug. 1.	To balance from last statement.....			\$5,610 77
Oct. 13.	To cash from state treasurer.....			4,000 00
Dec. 12.	To cash from state treasurer.....			5,000 00
1884.				
Jan. 25.	To cash from state treasurer.....			4,000 00
Feb. 7.	To cash from state treasurer.....			5,000 00
April 16.	To cash from state treasurer.....			12,000 00
May 5.	To cash from state treasurer.....			8,000 00
Jan. 10.	To cash from state treasurer.....			5,000 00
Credited by payments on "Military Building and Drill Hall," as follows:				
1883.				
Oct. 13.	By S. C. Cutter, payment on contract	40		\$4,000 00
Dec. 13.	By S. C. Cutter, payment on contract	89		5,000 00
Nov. 28.	By Evening Journal, advertising for bids.....	66	15	00
	28. By Pioneer Press Co., notices for bids	67	21	20
1884.				
Feb. 8.	By S. C. Cutter, payment on contract	125		5,000 00
	8. By Rust & Coolidge, part pay for roof	126		3,500 00
April 16.	By S. C. Cutler, payment on contract	169		6,000 00
	17. By Rust & Coolidge, bal. due on roof trusses.....	172		1,200 00
May 9.	By S. C. Cutter, payment on contract..	176		6,000 00
	28. By Crown Iron Works Co., iron rods and straps.....	186		123 04
June 3.	By Barnard & Cope, chairs.....	197		5,118 75
	7. By S. C. Cutter, payment on contract	203		4,000 00
	16. By M. H. Crittendon, skylights.....	207		900 00
	21. By Minn. Tribune Co., notices for bids	221		36 00
July 5.	By Crown Iron Works Co., iron plates	257		24 44
	10. By S. C. Cutter, payment on contracts	260		1,000 00
	15. By L. S. Buffington, part payment for work as architect.....	262		500 00
	15. By Rust & Coolidge, extra work on building.....	263		17 72
	By balance to new account.....			6,154 62
				\$48,610 77
				\$48,610 77

SALT LAND SALES.

*Dr.*

1883.			
Aug.	1.	To balance from old account.....	\$26,833 10
Nov.	2.	To interest, payment from S. L. Crocker on his cert .....	50 55
1884.			
Jan.	10.	To sundry payments of interest through First Nat. Bank, Fergus Falls.....	581 94
Feb.	19.	To balance of payment due from Chas. J. Wright .....	539 70
May	15.	To payment for 40 acres by Brede Thomp- son.....	240 00
June	7.	To sundry payments of int. through Citi- zens National Bank, Fergus Falls.....	325 20
July	3.	To interest payment from Theo. and C. S. Otjen on their certificates.....	550 91
	12.	To sundry payments and interest through H. G. Stordock, of Rothsay, Minn.....	597 06
	31.	By balance to new account. ....	29,718 46
			<hr/>
			\$29,718 46    \$29,718 46

ENLARGEMENT OF CAMPUS ACCOUNT.

1883.		<i>Dr.</i>	<i>Vchr.</i>	
Aug.	1.	To balance of old account .....	\$1,620 56	
		<i>Cr.</i>		
Oct.	16.	By Geo. Huhn, register, recording....	48	2 00
1884.				
Jan.	22.	By J. B. Gilfillan, commissioner's fees, abstracts, etc.....	110	158 22
	26.	By S. H. Baker notes, plats, etc.....	116	25 00
	29.	By Matt. Walsh, county treas., taxes.	119	91 97
March	8.	By Geo. Huhn, register, recording....	139	1 25
April	9.	By J. Guilford, chgs. and exp. as atty.	154	261 27
Feb.	7.	By Chas. Kittelson, state treas., state auditor's voucher, No. 22,826, re- turned.....	270	8,000 00
1883.				
Dec.	8.	To warrant No. 22,826 from state auditor .....	8,000 00	
July	31.	By balance to new account .....		1,080 85
			<hr/>	
			\$9,620 56	\$9,620 56

## SUMMARY OF ACCOUNTS.

1884.		<i>Dr.</i>	<i>Cr.</i>
July	31. By balance from building account.....		\$6,154 62
	31. By balance from current expense account.....		24,921 17
	31. By balance from enlargement of campus account.....		1,080 85
	31. By balance from land sale fund account		528 42
	31. By balance from Salt Spring lands account.....		29,718 46
	31. By balance from water supply account		402 93
	31. To balance from geological survey account.....	\$39,267 10	
	31. To balance from Prof. Pike's book account .....	81 86	
	31. To balance, cash on hand to new account	23,457 49	
		<hr/>	<hr/>
		\$62,806 45	\$62,806 45

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SEVENTEENTH ANNUAL REPORT  
(THIRD BIENNIAL REPORT)  
OF THE  
PRESIDENT  
OF THE  
UNIVERSITY OF MINNESOTA  
TO THE  
BOARD OF REGENTS.  
1882-'83 AND 1883-'84.

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THE UNIVERSITY OF MINNESOTA,  
MINNEAPOLIS, MINN., July 1, 1884.

*To the Honorable Henry H. Sibley, President of the Board of Regents,*

SIR: I have the honor, in accordance with law, herewith to transmit the third biennial report (No. 14 of the series) of the condition and progress of the university for the biennial period covering the university years 1882-83, 1883-84.

I have the honor to be,

Very respectfully,

Your obedient servant,

WILLIAM W. FOLWELL,  
President.

# REPORT.

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*To the Honorable Board of Regents:*

The changes in, and additions to your board and to the faculty, I have fully exhibited in my report of this date to the state superintendent of public instruction. As they will be likewise, without doubt, embraced in the report of the board to the governor, I do not deem it necessary to repeat them here.

I beg to remind the board of the extraordinary service rendered by the general faculty during the past year in carrying the work of the institution successfully under most discouraging circumstances. If no great advance has been made, it may still be claimed that there has been no step backward, in spite of the circumstances.

Since the last report two large classes have been graduated, and the ranks of the alumni correspondingly swelled. The degrees conferred since last report are:

	1883.	1884.
Bachelors of Arts.....	8	9
Bachelors of Science.....	7	9
Bachelors of Literature.....	7	3
Bachelors of Civil Engineering.....	2	3
Bachelor of Mechanical Engineering.....	1	...
Bachelors of Medicine.....	...	2
Totals.....	25	26

The names, with residences, of these graduates are given in Appendix "A."

The following table shows the number and kind of degrees which have been conferred by this university:

	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	Total.
B. A.....	2	1	3	3	9	5	8	4	10	11	8	9	73
B. S.....		1	2	5	3	8	10	9	10	9	7	9	73
B. L.....			1		4	1	6	4	7	11	7	3	44
B. C. E.....			3	3			2				2	3	13
B. M. E.....						1					1		2
B. Arch.....					1								1
B. Ag.....										1			1
M. A.....								1	1				2
M. S.....										1			1
B. M.....												2	2
Totals.....	2	2	9	11	17	15	26	18	28	33	25	26	212

The whole number of persons graduated is two hundred and four (204), five persons having received two degrees, those in science and engineering, and three bachelors having been awarded master's degrees, after passing the required examinations. No honorary degrees are conferred by this university.

The whole number of women who have been graduated is fifty-nine (59), viz.: bachelors of arts, 10; of science 18; of literature, 31; all of whom have completed the same courses of study as the gentlemen alumni, and undergone the same tests and examinations. So far as observed, the young women have preserved their health as well as the young men. The records of the registrar's office will show that they have not been inferior in any kind of studies. Their degrees, therefore, are of precisely the same value as those received by the young men.

#### ATTENDANCE.

A summary statement has already been furnished, to be embodied in the report of the board. For the classification and distribution of students during the two years covered by this report, 1882-83 and 1883-84, see Appendix "B." The only remark of importance to be made upon these tables is the continued diminution in the numbers, especially of the lower classes. The reasons for this were discussed in the last report, to which reference is respectfully made. The increased cost of living in the city of Minneapolis may be mentioned as an additional reason.



## ADMISSIONS.

The examinations of the High School Board having been resumed, it was not thought necessary for the faculty to hold any "local examinations" in the summer of 1882. Although 1,039 certificates had been granted in the previous year, but three were presented at the university.

The number of applicants for admission in 1882-83 was much greater than in either of the two previous years, but the results of the examinations were not very encouraging. The record for the year 1882-83 is as follows:

## RECORD FOR 1882-83.

	Whole No.	Gentlemen.	Ladies.
Examined.....	87	46	41
Rejected.....	24	10	14
Admitted.....	63	36	27
Passed to regular courses.....	19	14	5
Passed to special studies.....	10	6	4
On probation to regular courses.....	21	12	9
On probation to special courses.....	13	4	9

The distribution of applicants admitted to the different courses of study is as follows:

	Whole No.	Gentlemen.	Ladies.
To the classical course.....	6	2	4
To the scientific course.....	26	24	2
To the modern course.....	8	0	8
To selected studies.....	23	10	13
Total.....	63	36	27

Five gentlemen and one lady of mature age were admitted to take selected studies without examinations, and fifteen or more young men were admitted to shop work, without taking examinations.

## RECORD FOR 1883-84.

	Whole No.	Gentlemen.	Ladies.
Examined.....	104	61	43
Rejected.....	17	8	9
Admitted.....	87	53	34
Passed to regular courses.....	7	4	3
Passed to special courses.....	5	3	2
On probation to regular courses.....	58	38	20
On probation to special studies.....	17	8	

The distribution to courses of study was as follows:

	Whole No.	Gentlemen.	Ladies.
To the classical course.....	8	7	1
To the scientific course.....	33	20	3
To the modern course.....	24	5	19
To selected studies.....	22	11	11
	—	—	—
	87	53	34

One lady and one gentleman of mature age were admitted without examinations to pursue selected studies. No examinations were required of students in divisions "C" and "D" of the Artisans' Training School, fifty-six in number.

The number of certificates granted by the high school board in the year ending in 1883, was 2,483. There were presented at the university by applicants, 166 certificates, as follows: arithmetic, 5; elementary algebra, 7; geography, 5; United States history, 7; Latin grammar, 6; natural philosophy, 12; physical geography, 7; elementary astronomy, 12; general history, 10; plane geometry, 14; physiology, 13; Cæsar, 11; elementary chemistry, 12; botany, 4; ancient history, 3; elementary algebra, 7; solid geometry, 5; Cicero, 7; Virgil, 6; Greek grammar, 1.

The different towns were represented as follows:

Anoka, 11; Austin, 8; Faribault, 13; Hastings, 9; Kasson, 8; Lake City, 22; Minneapolis (Academy), 27; Monticello, 12; Red Wing, 23; Rochester, 4; St. Peter, 4; Shakopee, 3; Spring Valley, 1; Stillwater, 1; Zumbrota, 20.

These figures indicate a good ground for hope that, at no distant day, the high schools of the State may form a broad and direct avenue from the common schools to the university. It is not merely important, however, that they be so, but that they be known to be so. The people of the State, and all the youth in particular, need to understand that the regular path to the university is through the public high schools of the State.

## INSTRUCTION.

Appendix "C" contains the usual tables exhibiting the work of instruction in the several departments.

Attention is respectfully called to the following items of instruction additional to that indicated in the tables, and accordingly outside of the regular work of the institution:

## I. THE EVENING DRAWING SCHOOL.

This school was opened by Professor Pike, in 1880. The course includes twenty-five free lessons in mechanical drawing, varied to suit the wants of different classes of young artisans. The number of attendants in 1882-83 was fifty-one, in 1883-84 forty-six. This school is under the direction of Professor Pike, but the instruction has been chiefly given by Instructors Waitt and Decker. This school has been continued in operation and during the past year has been merged with other work, under your authority, into a department of the college of mechanic arts, called the Artisans' Training School, an account of which appears below.

## II. THE COURSE IN SHOP WORK.

For an account of the beginning of this work, reference is respectfully made to the last report. The work has been carried on in an efficient manner and now forms part of the artisans' training school, mentioned above.

## III. SUMMER SCHOOL OF SCIENCE AND LETTERS.

Reference is respectfully made to my last report, page 59, for an account of the opening of this school and its work in the years 1881 and 1882. This school was reopened in the summer of 1883, according to the following announcement:

## THE UNIVERSITY OF MINNESOTA.

## SUMMER SCHOOL FOR TEACHERS, 1883.

The following courses of instruction for teachers and others will be opened at the University of Minnesota on July 10th, to continue four weeks.

*I. Zoology—Mr. C. L. Herrick.*

- a. Lectures on animal morphology, or the various forms of structure exhibited by the prominent subdivisions of the animal kingdom.
- b. Laboratory study of types of animal forms illustrating this structure, and the physiological functions and development of the same.
  1. Cells as organic units— their growth and modification.

2. Distribution of labor in the animal body—organs.
3. Grouping of organs—systems.
4. The animal body as a motor—organs of swimming, creeping, walking, flying.
5. The animal body as a chemical and physical laboratory—organs of nutrition, respiration, circulation.
6. The animal body as a tool of the mind organs of sense and the nervous system.

Illustrations, preparations and specimens will be freely used. The laboratory is equipped with compound microscopes and modern appliances. Some instruction in taxidermy and dissection may be offered.

### *II. Chemistry—Professor J. A. Dodge.*

1. In the forenoon, daily, general chemistry, with experiments performed by those taking this part of the subject, and by Prof. Dodge.

2. In the afternoon, daily, analytical chemistry, qualitative and quantitative.

Either part, or both parts, of the above may be taken.

### *III. French—Professor C. W. Benton.*

The course will be adapted to the needs of those in attendance. For beginners, a small book, Chardenal's First French Course, will be used. For advanced students a special class can be formed, in which the work will be conducted in the French language.

### *IV. English—Professor M. Marston.*

The course will occupy four hours per week, and consist of lectures on the history, philology and grammar of the English language, with illustrative examples and exercises. The design will be to put the student in the way of learning the facts which afford the correct data for explaining the grammatical forms and idioms of the English language.

The equipment for carrying on the work of this summer school will be ample. The laboratories, the museums, the library and the conservatory of the university will be brought into constant use.

The only charge for attendance will be a laboratory fee of \$1 per week. The lectures are wholly free, and any one or all of the courses may be attended.

Good board can be obtained in the vicinity of the University for from \$4 to \$6 per week.

Although the courses are undertaken principally to offer the teachers of Minnesota the advantages of the State University and its equipment, all others who love study well enough to come and work with us will be heartily welcomed, and helped.

Lectures and laboratory work will begin Tuesday, July 10th, at 9 A. M., and close Saturday, August 4th.

For further information or aid in securing board, address either of the professors named in this circular, at Minneapolis.

MINNEAPOLIS, April 20, 1883.

The sudden death of Prof. Marston deprived the attendants of the expected instruction in English. The place of this was supplied partly by a few lessons in rhetoric by Prof. Sanford, but chiefly by an admirable course in didactics by Prof. William H. Payne, of the University of Michigan, whose services were secured by the intervention of the department of public instruction. The number of attendants was 105, a considerable increase on that of previous years.

#### IV. THE FARMERS' LECTURE COURSE.

Reference is respectfully made to the report of Professor Porter, for information in regard to this course.

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### THE EQUIPMENT.

#### BUILDINGS.

Under the head of this department I have nothing to add to the statements and suggestions of the last report, to which I would respectfully refer.

#### THE EXPERIMENTAL FARM.

The condition and progress of this department is fully set forth in the report of Professor Porter, herewith transmitted, to which reference is respectfully made.

#### THE FRUIT FARM.

The report of Superintendent Gideon is herewith transmitted, to whose suggestions the board will doubtless give due attention.

#### THE GEOLOGICAL SURVEY.

The progress of the geological survey, since the last biennial statement, is shown by the issue of two annual reports, the eleventh and the twelfth, and the completion of the first volume

of the final report. The former are for the years 1882 and 1883; and the last covers the entire period from 1872 to 1882, but is confined to the work in the southern and central portions of the State. It is with much satisfaction, and some pride, that the university is thus able to make so substantial a contribution to the literature and the geology of the state. The exact description of the geology and natural resources of each county, and the careful mapping of its natural features, in the method adopted, will ultimately give the state of Minnesota one of the most thorough and satisfactory surveys ever executed by any of the states of the Union. The printing of the report has been very slowly carried on, but this is not the fault of the geologists. It might all have been finished in six months, as expected, when it was placed in the printers' hands; but it has been delayed so that it has now occupied over sixteen months. It is finally printed, but has yet to be bound, which will require a few months' further time. According to the orders of the secretary of state, it will be distributed to the public schools and libraries of the state and to the other states, and the remainder of the edition will be sold for the price of actual cost to the state.

Professor Winchell now designs to engage in active field-work in the remaining more northern portion of the state, preparatory to the completion of the second final volume.

Dr. P. L. Hatch, who has been some years engaged on the ornithology, expects to complete his work and tender his final report in a few months.

Mr. C. L. Herrick, has been appointed to examine the mammals of the state, and to make collections of the same for the museum, and will, in about two years, render a final report on the same.

The survey is in a satisfactory condition, and is progressing as rapidly as the small corps of employes can push it.

#### THE LIBRARY.

The whole number of volumes added in the year 1882-83 was 840, in the year 1883-84, 897. The titles of these accessions are herewith submitted to be printed for the information of the legislature (See Appendix "D.") I beg to refer to the last report for remarks upon the importance of the increase of the library.

The following donations have been received and duly acknowledged on behalf of the university:

## 1882-83.

## UNITED STATES GOVERNMENT.

## Through TREASURY DEPARTMENT:

- Bayley, National Loans of United States.
- Annual Report of Secretary of Treasury, 1882.
- Finance Report, 1882.
- Synopsis of Decisions, 1882.

## Through DEPARTMENT OF INTERIOR:

- Report of Board of Indian Commissioners, 1881.
- Official Register, Vol. ii., 1881.
- Report of Commissioner of Education, 1880.
- Bulletin U. S. Geological and Geographical Survey, Vol. vi, No. 3.
- Report of Eighth Census, 1860. Agriculture, Vol. ii.
- Senate Misc. Documents, Vol. i, Forty-sixth Congress, second session.
- House Exec. Docts., Vol. vii, Forty-sixth Congress, second session.
- Senate Journal, Forty-sixth Congress, third session.
- Exec. Docts., Vols. i and iii, Forty-sixth Congress, third session.
- Reports of Committees, Vols. i and ii, Forty-sixth Congress, third session.
- House Journal, Forty-sixth Congress, third session.
- House Executive Documents, Paris Exposition, 5 vols., Forty-sixth Congress, third session.
- House Executive Documents, Public Lands, 2 vols., Forty-sixth Congress, third session.
- House Executive Documents, Carrying Mails, Forty-sixth Congress, third session.
- House Report of Committees, 2 vols.
- Senate Executive Documents, No. 13, Coast Survey 1878, Forty-fifth Congress, third session.
- House Executive Documents, Vols. ii, x and xix, Forty-sixth Congress, second session.
- Senate Miscellaneous Documents, Vols. i and ii (two parts), Forty-sixth Congress, third session.
- House Executive Documents, Vols. iii, iv, xii, xiv, xviii and xix, Forty-sixth Congress, third session.
- House Misc. Documents, Vol. i, Forty-sixth Congress, third session.
- Senate Journal, special and first, Forty-seventh Congress.
- House Journal, special and first, Forty-seventh Congress.
- United States Map.
- Planting Trees in School Grounds.
- Bureau of Education — its Work and History.
- Annual Report of Committee of Patents, 1881.
- Barometric Hypsometry.
- Eaton, Illiteracy.

## Through WAR DEPARTMENT:

Powell, United States Geological and Geographical Survey, Vol. iv.  
 Professional Papers, Corps of Engineers, U. S. A., No. 24.  
 Report of Chief of Engineers, 1881, 3 vols.  
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 United States Coast Survey, Hilgard, Annual Report, 1880.  
 United States Coast Survey, 1878, 1879, 2 vols.  
 Symons, Upper Columbia River, 1881.  
 Wheeler, United States Survey West of the 100th Meridian, Vol. iii,  
 1881.

## Through NAVY DEPARTMENT:

Instructions for Observing Transit of Venus, 1882.  
 Longitude of Observatory at Princeton, N. J.  
 Meteorological and Astronomical Observations, 1878, 2 vols.  
 Transit of Mercury, 1677, 1881.

## Through DEPARTMENT OF STATE:

Foreign Relations of United States, 1881.  
 Foreign Relations of United States, 1882.

## Through DEPARTMENT OF AGRICULTURE:

Atwater, Field Experiments with Fertilizers, 3 vols.

## Through SMITHSONIAN INSTITUTION:

Belfast, Naturalists' Field Club, 3 vols.  
 Contributions to Knowledge, Vols. xx and xxi., 2 vols.  
 Miscellaneous Collections, Vols. xiii, xiv and xv.  
 Powell, Report of Bureau of Ethnology, Vol. i.

## Through BUREAU OF EDUCATION:

Bulletins 1, 2 and 3, 1882.  
 Bulletins, High Schools in Sweden.  
 Bulletins, Circular No. 5, 1882, Schools in France.  
 Circulars of Information, No. 6, 1882.  
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 Report of Commissioner of Education, 1880.

## Through BUREAU OF ETHNOLOGY:

Annual Report, Powell. 1879-80.

## Through HON. W. D. WASHBURN, M. C.:

Burchard, Gold and Silver in United States, 1880.  
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 Report of Fish Commission, 1879.  
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 Memorial Address, Fernando Wood.  
 Messages and Documents, 1880-81. Abridgment.  
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 Record of the Rebellion, first series, Vol. v.  
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 Record of the Rebellion, first series, Vol. vii.  
 Statutes of United States, first session, Forty-seventh Congress,  
 1881-82.

Through HON. WM. WINDOM, U. S. Senator:

Senate Journal, Forty-fourth Congress, first session, 1875-76.  
 Senate Journal, Forty-fourth Congress, second session.  
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 Senate Journal, Forty-sixth Congress, third session.  
 House Journal, Forty-fourth Congress, first session.  
 House Journal, Forty-fourth Congress, second session.  
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Through HON. R. D. CUTTS:

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Through HON. H. C. BURCHARD:

Annual Report of Director of the Mint, 1880-1-2, 3 vols.

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CANADA:

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Fifty-third Annual Report of Board of Education, 1881-82.

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**MICHIGAN:**

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**NEW JERSEY STATE LIBRARY, TRENTON:**

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**HON. DAVID MURRAY, Secretary, Regents, University of the State of New York:**

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**TEXAS AGRICULTURAL AND MECHANICAL COLLEGE:**

Roberts' Description of Texas.

**HOUGHTON FARM, MOUNTAINVILLE, N. Y.:**

Diseases of Plants, 1882.

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Bulletin, Vol. xii, No. 3.  
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Seaman's Refutation of Free Trade Maxims.

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Missionary Review, 1882.

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Temperance Tracts, 1-194, bound.  
Hargrave, Alcohol and Science.  
Story, Alcohol, 2 vols.

Guthrie, Temperance Physiology.  
 Moody, Talks on Temperance.  
 Pitman, Alcohol and the State, 2 vols.  
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 Hargrave, Our Wasted Resources.  
 Lees and Burns, Temperance Bible Commentary.  
 Sampson, Divine Law as to Wines.  
 Brown, Physiology and Hygiene.  
 Hitchcock, Zoological Temperance Convention.  
 Richardson, Researches on Alcohol, 2 vols.  
 Dodge, The Church and Temperance.  
 Hughey, Beer as a Beverage.  
 Cook, Alcohol and the Human Brain.  
 Stewart, Christianity against Liquor.  
 Blair, Constitutional Amendment.  
 Warren, Scientific Certificates about Alcohol.  
 Sewall, Pathology of Drunkenness.  
 Davis, Intemperance and Crime.  
 Pitman, Alcohol and the Church.  
 Allen, Heredity of Alcohol.  
 Howie, Stimulants and Narcotics.  
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 Willard, Address.  
 Sixth Annual Report, 1882.  
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 Stearns, Prohibition does Prohibit.

**CLARKE & Co., CINCINNATI :**

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Review of Prof. Sumner's Speech.

**DONNELL, E. J., NEW YORK :**

Slavery and Protection.

**FAY, W. E., MINNEAPOLIS :**

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FRAZER, PROF. PERSIFOR, PHILADELPHIA :  
 Iron Ores of Middle James River.  
 Cleopatra's Needle.

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 Celebrated Caverns of America.

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 Transactions American Institute of Homeopathy, Vol. i.

PEYTON, J. S., STAUNTON, VA. :  
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1883-84.

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- Report of Secretary of Interior, Vol. iii, 1881.  
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House Executive Documents, Vols. v and ii, pt. 3, Forty-seventh Congress, first session.  
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House Executive Documents, Vol. xiii, Forty-seventh Congress, first session.  
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House Executive Documents, Vol. xxiv, Forty-seventh Congress, first session.  
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Senate Executive Documents, Forty-seventh Congress, special session.  
Senate Miscellaneous Documents, Vol. ii, Forty-seventh Congress, first session.

- Senate Reports, Vol. i, Forty-seventh Congress, first session.  
 Senate Reports, Vol. ii, Forty-seventh Congress, first session.  
 Senate Reports, Vol. iii, Forty-seventh Congress, first session.  
 Senate Executive Documents, Vol. iv, Forty-seventh Congress, first session.  
 House Executive Documents, Vol. xv, Forty-seventh Congress, second session.  
 House Executive Documents, Vol. xxii, Forty-seventh Congress, second session.  
 House Miscellaneous Documents, Vol. ii, Forty-seventh Congress, second session.  
 House Miscellaneous Documents, Vol. iii, Forty-seventh Congress, second session.  
 House Miscellaneous Documents, Vol. vi, Forty-seventh Congress, second session.  
 House Miscellaneous Documents, Vol. ix, Forty-seventh Congress, second session.  
 House Miscellaneous Documents, Vol. x, Forty-seventh Congress, second session.  
 House Miscellaneous Documents, Vol. xi, Forty-seventh Congress, second session.  
 House Miscellaneous Documents, Vol. xiii, Forty-seventh Congress, second session.  
 Senate Executive Documents, Vol. iii, Forty-seventh Congress, second session.  
 Senate Executive Documents, Vol. v, Forty-seventh Congress, second session.

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- Distribution and Consumption of Corn, March, 1884.  
 Grasses of United States.  
 Investigation of Sorghum Sugar Industry, 1882.  
 Mississippi, its Soil and Climate.  
 Number and Values of Farm Animals, Feb., 1884.  
 Report on Area of Corn, Potatoes and Tobacco, in United States and Europe.  
 Report on Area of Winter Grain.  
 Report on Condition of Crops, 1883.  
 Report on Crops of the Year, Dec., 1883.  
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 Report of United States Entomological Commission, 1880—2.  
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Through TREASURY DEPARTMENT :

- Arctic Cruise of Revenue Steamer Corwin, 1861.  
 Commerce and Navigation of United States, 1882.  
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 Report of Director of Mint, on Precious Metals, 1882.

Report of Secretary of Treasury.  
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 Synopsis of Decisions, 5,505 to 6,096.

Through DEPARTMENT OF STATE :

Foreign Relations of United States, 1876-77.  
 Petroleum and Kerosene Oil in Foreign States.  
 Reports of the Consuls, No. 32, Aug., 1883.  
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 Reports of the Consuls, No. 34, Oct., 1883.  
 Reports of the Consuls, No. 36, Dec., 1883.  
 Reports of Consuls, No. 38, Feb., 1884.  
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Through BUREAU OF EDUCATION :

Circulars of Information, No. 2, 1882.  
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 Circulars of Information, No. 4, 1883.  
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 Preliminary Circular, Exhibition of Education, New Orleans.

Through WAR DEPARTMENT :

War of the Rebellion, Series i, Vol. 8.  
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Through NAVY DEPARTMENT :

American Ephemeris and Nautical Almanac, Vol. i, pts. 1 and 2 ; Vol.  
 ii, pt. 3, 1882; 3 vols.  
 Report of Secretary of Navy, Vol. iii, 1882.  
 Report of Secretary on Astronomical Instruments.

Through SMITHSONIAN INSTITUTION :

Miscellaneous Collections, Vol. xxvii.  
 Report for 1880.  
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Through HON. W. D. WASHBURN, M. C. :

Congressional Record and Index, Forty-seventh Congress, second ses-  
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 Decisions of First Comptroller, Vol. iii, 1882.  
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## NEW JERSEY STATE LIBRARY:

New Jersey Archives, first series, vols. v, vi and vii, 3 vols.

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## PENNSYLVANIA STATE COLLEGE:

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## MINNEAPOLIS, MINNESOTA:

City Charter and Ordinances, 1883.

## MR. ROBERT HALE, MINNEAPOLIS:

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## NATIONAL ACADEMY OF SCIENCES:

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Bulletin, Vol. xiii, No. 3.

## PEABODY MUSEUM, CAMBRIDGE:

Sixteenth and Seventeenth Reports of Trustees, Vol. iii, Nos. 3 and 4.

## WASHINGTON UNIVERSITY, ST. LOUIS:

Waterhouse, An Unobstructed Mississippi.

Waterhouse, Educated Labor in Missouri.

Waterhouse, Resources of Missouri.

Twenty-fifth Anniversary.

## CATHWELL, D. W., BALTIMORE:

The Physician Himself.

## HAZARD, THOMAS R., VANCLUSE, R. I.

Miscellaneous Essays and Letters.

## JOHNSON, FRANKLIN, CAMBRIDGE, MASS.:

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## LEONARD, DR. W. E., MINNEAPOLIS:

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SLOCUM, CHAS. E., SYRACUSE, N. Y.:

History of the Slocums in America.

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PERIODICALS.

The following have been supplied by purchase:

*Quarterlies*—

American Antiquarian,  
American Journal of Mathematics,  
Bibliotheca Sacra,  
British Review,  
Edinburgh Review,  
Geological Society's Quarterly (Eng.)

London Review,  
Journal of Philology,  
Journal of Speculative Philosophy,  
Mind,  
Westminster Review.

*Bi-Monthlies*—

American Law Review,  
Education,  
New Englander,

Princeton Review,  
The Analyst,  
Ueber Land und Meer.

*Monthlies*—

American Agriculturist,  
American Chemical Journal,  
American Journal of Science and Art,  
American Naturalist,  
American Microscopical Journal,  
Annals of Mathematics,  
Atlantic,  
Blackwood,  
Botanical Gazette,  
Canadian Entomologist,  
Catholic World,  
Century,  
Contemporary Review,  
Contra-blatt für Bibliothekswesen,  
Deutsche Revue,  
Fortnightly Review,

Harper's Monthly,  
Journal of the Franklin Institute,  
Library Journal,  
Literary News,  
Magazine of Art,  
Minnehahan,  
Modern Age,  
Monthly Reference Lists,  
Nineteenth Century,  
North American Review,  
Observatory,  
Popular Science Monthly,  
Portfolio,  
Siderial Messenger,  
Van Nostrand's Engineering Magazine.

*Weeklies*—

Academy,  
American Architect,  
American Machinist,  
Athenæum,  
Chemical News,  
Chicago Mining Journal,  
Harper's Weekly,  
Le Canadien,  
Littell's Living Age,  
Nation,

National Journal of Education,  
National Labor Tribune,  
Nature,  
New York Home Journal,  
Revue Politique et Littéraire,  
Sanitary Engineer,  
Saturday Review,  
Science,  
Scientific American and Supplement,  
The Current.

*Semi-Weekly*—New York Tribune, New York Evening Post, Inter Ocean.

*Semi-Monthly*—Literary World.

Received gratuitously from publishers, to whom the thanks of the board are due:

*Monthlies*—War Department Weather Report.

*Weeklies*—Glencoe Register, Glencoe Enterprise, Staats Tidning, N. Y. Witness, Christian Statesman, Svenska Folkets Tidning, Folkebladet, Skandinavien, Lake City Review, Fargo Republican, Saturday Evening Spectator, Official Gazette of Patent Office, Justice, Present Age.

*Dailies*—Minneapolis Tribune, Minneapolis Evening Journal.

## NEW DEPARTMENTS.

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### COLLEGE OF MEDICINE.

The most important event in university affairs since the last report is probably the opening of the College of Medicine upon a plan novel to our country. There can be little or no doubt that if the plan shall be patiently and consistently carried out, a great advantage will have been gained for professional education in America. I offer for insertion here the following extracts from the special announcement, published by your authority, near the close of the past university year.

The work of the college has already been begun. In the past year ('83-'84) three candidates were examined, two of whom were recommended to you for graduation, and were awarded their diplomas of bachelor of medicine (M. B.) at the last commencement. Their names are Hugo Speier and James Kidd Simpson.

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### HISTORICAL.

The organic law of the State establishing the university, enacted by the legislature, February 18, 1868, as amended by the act of 1872 authorizes the opening of any desired number of departments or colleges, specifying, however, the following:

- “A department of elementary instruction;
- “A department of science, literature and the arts;
- “A college of agriculture;
- “A college of mechanic arts;
- “A college or department of medicine;
- “A college or department of law.”

The first four had a provisional organization as early as 1868 and have since remained in operation. The limited revenues of the institution for many years put it beyond the power of the regents to organize other departments.

At the time of the last revision of the by-laws, by the board of regents, in 1874, the following section was inserted in chapter VI:

"SECTION 1. The organization of the other colleges of the university, to wit, of the college of medicine and the college of law, is hereby referred to the president of the university, who is authorized to report at any subsequent meeting of the board."

The subject of the organization of the college of medicine was frequently discussed by the officer referred to with members of the medical profession, and in particular with Dr. Charles N. Hewitt, professor of public health in the university from the year 1873.

The result was an understanding that Professor Hewitt should draw up a communication to be laid before the board of regents, asking their consideration of a plan which they believed would now be found practicable and useful. This communication, forwarded to the president of the university, was by him submitted in lieu of other report, June 29, 1882.

The record of the proceedings of the board of regents of that date contains the following passage:

PROCEEDINGS OF THE BOARD OF REGENTS.

[Extract.]

ST. PAUL, June 29, 1882.

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"A communication from Dr. Charles N. Hewitt, secretary of the state board of health, was read, giving the outline of a plan for the organization of the medical department of the University of Minnesota. By invitation of the board, Dr. Hewitt supplemented this communication by remarks in open board. After a lengthy interchange of views concerning the present necessity of such a department, the following resolution was unanimously adopted:

*Resolved*, That Dr. Hewitt, of Red Wing, and Dr. Leonard, of Minneapolis, and the president of the university be requested to present to this board a plan of organization so proposed, together with a syllabus of examination for medical students."

A true copy,

*Attest*:

J. B. GILFILLAN,  
Recording Secretary.

At a meeting of the board of regents held Jan. 5, 1883, the committee mentioned above submitted the following report, prepared by Dr. Hewitt:

THE UNIVERSITY OF MINNESOTA,  
Dec. 28, 1882.

*To the Honorable the Board of Regents:*

Your committee instructed to present a working plan for the college of medicine of the university, respectfully submit the following report:

We are fully aware of the importance of the work committed to us; its influence on the future of medicine in Minnesota, and its relations to efforts now being made for a higher standard of medical education in other states.

We have left no source of information at home or abroad unsought, but have carefully searched the history of medicine for precedents and aids in our work. We have to submit a working plan for the college of medicine which, not behind any in its demands for scholarly and practical acquirements on the part of candidates for licenses or degrees, shall be fully abreast in methods and means of growth with other departments of science and art in our country.

Had further stimulus than your instructions been necessary, we have found it in the urgent need felt and expressed by educated physicians for just such an organization as you have instructed your committee to provide for.

Never before has there been such unanimity among medical men in demanding that examinations for degrees in medicine be separated entirely from the teaching of its theory and practice. You have undertaken this thoroughly practical and necessary work none too soon. Throughout our country the number of colleges legally empowered to teach medicine and confer degrees upon their own pupils is increasing with reckless rapidity. The competition for students so engendered has reduced the standard of qualification of faculties, students and graduates alike, far below the minimum of the reputable colleges who, following the lead of Harvard, are struggling to maintain reasonable requirements for degrees. But all these schools are hampered with the double and difficult duty of teaching and then sitting in judgment on their own work, and are heavily handicapped, as many of their best men admit, in the struggle with other schools, who by that very combination of functions control so largely the number and education of the multitudes of graduates yearly qualified as doctors of medicine. The recent case of the so-called "Bellevue College" in Boston, neither teaching nor examining, but existing only for fees, sustained, however, by the

courts as legally authorized by the legislature of Massachusetts, is the last and one of the lowest developments of the mad effort to drag degrees in medicine so low that their value is hardly that of the certificate of a popular quack. To honest and faithful men, whether professors in colleges or practitioners of medicine, as well as to all men and women who know what medicine as an art ought to be, your action will bring welcome relief. In the plan we submit, the aim has been that while the essentials of qualifications for the degrees in medicine are secured in the by-laws organizing this college, matters of detail not so important are put into the more pliable form of regulations, till such time as experience shall determine their proper form and value. The fundamental principles of the organization your committee have to propose are:

1st. To provide a thoroughly competent and independent faculty, whose duty shall be to examine all candidates for licenses and degrees in medicine of the university, who shall be in no way connected with the preparation of such candidates for such examination, and whose sole aim shall be to maintain a standard of qualification fully equal to the highest, and fully in accord with the needs and demands of the people and the time.

2d. That said faculty shall insist upon a clearly-defined preliminary literary and scientific qualification.

3d. That the professional examinations shall, under rigid but reasonable rules, consist of such written, oral and clinical tests as shall fully develop the fitness of candidates, and that stenographic reports of such oral and clinical examinations be taken and preserved.

4th. That for the degree of doctor of medicine, in addition to all other qualifications, there shall be required the preparation and defense of an original thesis upon a professional topic.

Trusting that their labors may be found acceptable and useful toward the great enterprise in hand, they now respectfully submit this, their report, including the attached drafts of by-laws and regulations.

W. H. LEONARD, President.

CHARLES N. HEWITT, Secretary.

WILLIAM W. FOLWELL.

This report was accepted and ordered spread upon the record of the board. The by-laws and regulations were adopted substantially as reported and as printed in the announcement of

May, 1884. A committee of regents was appointed to nominate professors. Their nominations were confirmed at subsequent meetings, and the faculty filled up as follows:

### THE FACULTY OF THE COLLEGE.

WILLIAM W. FOLWELL, LL. D., PRESIDENT.	<i>Minneapolis.</i>
CHARLES N. HEWITT, M. D., Professor of Preventive Medicine.	<i>Red Wing.</i>
WILLIAM H. LEONARD, M. D., Professor of Obstetrics and Diseases of Women and Children.	<i>Minneapolis.</i>
FRANKLIN STAPLES, M. D., Professor of the Practice of Medicine.	<i>Winona.</i>
DANIEL W. HAND, M. D., Professor of Surgery.	<i>St. Paul.</i>
PERRY H. MILLARD, M. D., Professor of Anatomy and Physiology.	<i>Stillwater.</i>
CHARLES E. SMITH, M. D., Professor of Materia Medica and Therapeutics.	<i>St. Paul.</i>
GEORGE W. WOOD, M. D., Professor of the Diseases of Nervous System, and of Medical Jurisprudence.	<i>Faribault.</i>
CHARLES SIMPSON, M. D., Professor of Pathology.	<i>Minneapolis.</i>
JAMES A. DODGE, Ph. D., Professor of Medical Chemistry.	<i>Minneapolis.</i>

[It needs at this point to be clearly understood that this college is organized as above expressed as an examining and graduating institution. No instruction whatever is offered or proposed. The idea is to have degrees in medicine granted by a faculty who shall not be sitting in judgment on their own pupils, and shall have no interest in graduating candidates except upon ascertained merit.]

### TERMS.

In the college of medicine there are two terms in each year: the September term, beginning with the opening of the university year; the April term, beginning on the third Monday in April.

The entrance and scientific examinations take place in the September term; the professional examinations, in the April term.



## ENROLLMENT.

Enrollment regularly takes place at the September term upon completion of the entrance examination, but candidates entitled to be excused from this and the scientific examination may be enrolled at the opening of the April term.

No person not enrolled is admitted to the professional examinations. All enrolled students are expected to report in person or in writing, at the beginning of every April term, until graduation. Candidates not so reporting may be dropped from the rolls.

## EXAMINATIONS.

These are

- (1) THE ENTRANCE EXAMINATION.
- (2) THE SCIENTIFIC EXAMINATION.
- (3) THE PROFESSIONAL EXAMINATIONS.

## I. THE ENTRANCE EXAMINATION.

The entrance examination takes place at the September term in connection with the general examinations conducted under direction of the general faculty for admission to the university.

The entrance examination embraces the following subjects:

- (1) The English language, including writing, spelling, grammar, analysis and composition.
- (2) Arithmetic, elementary algebra and plane geometry.
- (3) Geography, United States history and the outlines of general history.
- (4) Latin grammar and Cæsar's Commentaries (or any one Latin author), or an equivalent knowledge of German, French or one of the Scandinavian languages.

The examination certificates of the state high school board are accepted for any of the above subjects, and the holder is accordingly excused from further examination therein.

After passing the entrance examination, the candidate is entitled to apply for enrollment in the college of medicine.

## II. THE SCIENTIFIC EXAMINATION.

The scientific examination follows immediately after enrollment in the September term and embraces the following subjects:

- (1) Physical geography.
- (2) Natural philosophy.
- (3) Elementary botany.
- (4) Chemistry.
- (5) Drawing, free-hand or mechanical.

This examination is conducted by a committee of the general faculty, one of whom must be a professor of this college.

The certificates of the state high school board are accepted for any of the above subjects except chemistry, in which greater proficiency is required.

Applicants who bring a final certificate for the scientific course of the collegiate department (end of sophomore year,) are excused from the scientific examination as well as the entrance examination.

Applicants who bring a final certificate for the classical or modern courses of the collegiate department are excused from the entrance examination and the scientific examination, except in chemistry.

Baccalaureates of the colleges of science, literature and the arts, of mechanic arts and of agriculture of this university, and graduates of any reputable college or university are excused from the entrance and scientific examinations and receive a credit of one year on professional study.

The entrance and scientific examinations are conducted in writing, according to the rules and methods in use in the collegiate department of the university.

### III. THE PROFESSIONAL EXAMINATION.

#### FIRST:—*Examinations for Bachelor of Medicine.*

These take place only in the April term of each year. They are divided among the following nine departments:

- (1) Anatomy and physiology.
- (2) Pathology.
- (3) *Materia Medica* and therapeutics.
- (4) Medical chemistry.
- (5) Preventive medicine, personal and public hygiene.
- (6) Practice of medicine.
- (7) Surgery.
- (8) Obstetrics and diseases of women and children.
- (9) Diseases of the nervous system, and medical jurisprudence.

The examinations have for their object to test:

1st. The candidate's familiarity with the literature of the subject;

2d. His clinical and laboratory experience. For this purpose, properly authenticated specimens of his work in any department will be examined, and he may submit certificates and the other evidence thereof;

3d. His skill in the actual use of physical, chemical and other tests in diagnosis and the use of remedies and instruments.

It is understood in all cases, that the candidate is prepared for examination on the text-books advised for each department; for which see list of text and reference books in the special announcement of May, 1884.

In the same announcement are summarized the requirements in each of the nine general departments into which the whole science and art of medicine are divided.

In addition to the examinations above an opportunity will be given for special examinations in diagnosis and treatment of diseases of the eye, ear, skin, nervous system, and in forensic medicine, as departments of general practice.

A special examination is provided for such graduates in medicine as wish to prepare themselves for the functions of health officers in the state. It will include the use of a text-book and collateral reading, and will demand on the part of the candidate a familiarity with the subjects of the examination for preventive medicine, as above noted, and greater actual experience in the control of preventible disease, the processes of water, air and food analysis, and the principles and construction of systems of water supply, sewage disposal, and the administration of sanitary law.

The examinations for the degree of bachelor of medicine are conducted in writing, but may be supplemented, at the discretion of the examiner in any case, by oral interrogation.

As prerequisite to admission to the professional examinations of the first year, each candidate must furnish—

(1) A certificate of attendance upon one full course of lectures upon the subjects of each study of this course in some recognized college of medicine or in a school of medical instruction;

(2) A certificate of dissection of the muscular, nervous and circulatory systems, with the contents of the cavities of the head, throat and abdomen.

**STANDING PROGRAM FOR WRITTEN EXAMINATIONS.  
FOR DEGREE OF BACHELOR OF MEDICINE.**

	First Year.	Second Year.	Third Year.
Hour.	Monday.	Wednesday.	Friday.
9 A. M.	Anatomy and Physiology.	Pathology.	Surgery.
2½ P. M.	Medical Chemistry.	Obstetrics and Diseases of Women and Children.	Practice.
7½ P. M.	Materia Medica and Therapeutics.	Medical Jurisprudence.	Preventive Medicine and Pub- lic Health.

Written examinations are in such form as to admit of convenient preservation. The detailed regulations for conducting these examinations are made known at the opening.

Examinees conform to requirements intended to protect them against suspicion or suggestion of having submitted answers not their own productions on the spot.

Any person detected in any dishonesty in his examination is at once stricken from the roll of candidates.

The final examinations for the degree of M. B. begin on Tuesday in the second week of the April term at 9 A. M.

These examinations are oral, and a stenographic report of them is made. They include practical and clinical tests and use of instruments and apparatus, intended to assure the examiners of the candidate's qualifications for the practice of his profession.

*2.—Examinations for the degree of Doctor of Medicine.*

This examination consists in each case essentially of a thesis and its defense, but the faculty will demand in all cases clinical and practical tests and operations, which shall enable the examiners to decide not merely upon the scholastic proficiency of the candidates but upon their actual professional skill.

All theses must be upon subjects approved by the faculty, must be founded on original work and certified as the unaided productions of the candidates. Twenty-five printed copies of each thesis must be furnished to the faculty before reading and defense.

All theses to be defended in the April term must be submitted to the dean of the faculty on or before the second Monday in

March. It is advised that the type-writing machine be used for making the copy. The printed copies required to be made after approval of the theses, shall be on the same sized paper as this pamphlet, and the paper shall be white and of the quality as good as that used by the State of Minnesota. The size of page shall be 22 x 38 ems, pica.

The faculty will make a calendar of theses, and publish the same on the fourth Monday in April term (second Monday of term).

#### GRADUATION.

Graduation takes place at the annual commencement of the university, near the first of June.

All candidates who pass the entrance, scientific and professional examinations including the appropriate clinical and experimental tests incidental thereto, and give satisfactory evidence of having pursued professional studies as required by the by-laws, being twenty-one years of age or upwards, and of good moral character, are recommended by the faculty of the college to the board of regents to receive the degree of bachelor of medicine (M. B.), which degree duly conferred is the warrant of the university of Minnesota for the practice of medicine and surgery.

All candidates for the first degree must furnish satisfactory evidence that they have severally pursued the study of medicine for four years in the office of and under the personal direction of a physician in active practice, who is a graduate of some college or school of medicine recognized by the board of regents, upon the recommendation of the faculty of this college.

*Provided*, however, that

(1) One course of lectures with other work incidental thereto in a college of medicine recognized as above shall be reckoned as equivalent to eight months of such study.

(2) One term of six months in a school of medical instruction, organized and conducted in conformity with the by-laws shall be equivalent to one year of such study under a preceptor.

(3) Three courses of lectures with work incidental thereto in colleges of medicine recognized as above shall be equivalent to three years of study under a preceptor. One year at least must in all cases have been passed in a preceptor's office.

(4) Graduates of colleges and universities receive a credit of one year on professional study, in consideration of superior literary and scientific attainments.

Any bachelor of medicine of this university who furnishes satisfactory evidence that he has been actively engaged in professional practice for three years after his graduation, and who presents and defends a thesis in the manner prescribed is recommended to receive the degree of doctor of medicine (M. D.).

Whenever the examinations for the bachelor's degree in any case evince great proficiency in the literature, theory and practice of medicine the faculty of the college permit the candidate to present and defend a thesis; this being done to their satisfaction they recommend the candidate to receive at once the full degree of doctor of medicine (M. D.).

Doctors of medicine of other colleges of medicine recognized by the board of regents upon the recommendation of the faculty of this college are recommended to receive the degree of doctor of medicine of this university upon successfully defending a thesis in the manner prescribed.

Any graduate so desiring may receive a statement showing the credit marks obtained by him in his several examinations.

#### SCHOOLS OF MEDICAL INSTRUCTION.

The general character to be assumed by these schools in order to entitle their pupils to credit for their time spent in them, is fixed by the by-law of the board of regents.

The by-law requires (1) a faculty of at least four professors, doctors of medicine graduated from approved colleges; (2) a public hospital of at least twenty beds under the professional control of the professors; (3) instruction for such periods and in such manner as may be satisfactory to the faculty of this college.

In pursuance of their supervisory power the faculty have established the following regulations regarding the instruction in schools of medical instruction:

(1) There shall be at least one hundred and twenty full days of instruction in each year.

(2) The text-book instruction shall be from the following works, or from others fully equivalent:

Anatomy, Gray.

Physiology, Dalton.

Pathology, Wagner.

Materia Medica and Therapeutics, Wood or Bartholow.

Medical Chemistry, Greene.

Practice, Flint.  
Surgery, Agnew.  
Obstetrics, Lusk.  
Women and Children, Thomas and Smith.  
Medical Jurisprudence, Taylor.  
Preventive Medicine. Parks.  
Nervous System, Hamilton A. McL.

(3) Text-book instruction must be illustrated and supplemented by sufficient oral and clinical exercises and demonstrations. Students should be required to preserve careful notes of clinics attended by them.

OF THE FACULTY OF THE COLLEGE OF MEDICINE AS THE  
STATE MEDICAL EXAMINING BOARD.

The matter of establishing an examining board to pass upon the qualifications of persons wishing to practice medicine and surgery, for the protection of the people against imposture, had been agitated repeatedly in Minnesota, but no legislation was effected till 1883.

To the Hon. W. L. Hollister, of Austin, Minn., senator for the third district, belongs the credit of drafting and securing the passage of an act constituting the faculty of the college of medicine of the university of Minnesota the State medical examining board. It needs to be borne in mind that the functions of the examining board are additional to and entirely separate from those of the same persons constituting a university faculty. The examining board deal with all persons practicing medicine in the State; the faculty, with those desiring to receive the degrees of the university in medicine and surgery.

The full text of the law will be found in the General Laws of Minnesota for 1883, chapter 125, entitled "An act to regulate the practice of medicine in the State of Minnesota."

In accordance with the law, the faculty was duly organized as a "State board of medical examiners," April 19, 1883. Up to May 10, 1884, five hundred and seventy-nine physicians, being graduates of approved colleges of medicine, have complied with the provisions of law and received the certificate of the board accordingly:

The board has held two public examinations for the benefit of persons not graduates of the medical colleges desiring to practice medicine: one at the capitol in St. Paul, Oct. 11, 1883; the

other at the university in Minneapolis, Dec. 27 and 28, 1883. Forty-six persons underwent the examinations, of whom twenty-four were successful, and accordingly received the certificate of the board authorizing them to practice.

The board has issued no licenses to undergraduates not affected by the retroactive clause. It is plainly the intent of the act that we should exercise a discreet supervision over any medical college whose curriculum is sufficiently lax to send forth partially educated men in the profession. It is a duty we owe to the profession, to the alumni of such colleges desiring to practice in Minnesota, and the public alike, to require such persons to pass the board examination before commencing practice in the State.

By an opinion rendered by Attorney General Hahn, the last clause of section twelve exempts all parties of five years' practice previous to March 5, 1883, from the obligatory necessity of complying therewith. The intention of the framers of the act was to exempt the five-year men from the penalties only, but the clause was misworded in drafting or engrossing. The board accordingly deems it inexpedient to issue any more exemption certificates. Where the question of time of practice is raised, the party will be required to furnish affidavit. The reason for this action is that some of the parties obtaining this form of certificate have misinterpreted its import.

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## THE ARTISAN'S TRAINING SCHOOL.

### A DEPARTMENT OF THE COLLEGE OF MECHANIC ARTS.

In order to give definite organization and articulation to a considerable amount and variety of work, which for some years had been carried on by the professor of engineering and his assistants, it was thought best at the beginning of the year to group the evening drawing school and three classes in shop work and drawing and the day work in mathematics and drawing, etc., into a separate department of the college of mechanic arts under the above title. The arrangement proved as was expected, a great convenience in administration.

On account of the great importance of the subject and of industrial education, and to secure due credit to the university as the pioneer institution of this education in our state, I request



the insertion of a larger part of a special announcement published by your authority at the beginning of the year 1883-84.

This school is the outgrowth of the experiment made during the last three years in giving instruction in shop work, drawing and mathematics to young men intending to become artisans, and to those already at work in the trades.

#### METHOD OF INSTRUCTION.

The instruction in shop work is given by means of a series of exercises carefully planned, so as to cover in a systematic manner the usual operations in use in the various trades. This course is designed entirely with a view to giving instruction in the use of tools, and not with the object of constructing any article of commerce. For example, in the course in vise work the work begins with a simple exercise in removing the scale from a piece of cast iron, and afterwards filing it to a true plane surface between two lines marked on the sides. During this exercise the student learns how to hold his file and how to move it without rocking, as well as the method of testing a plane surface with a straight edge. From this exercise he passes to more difficult ones, in each of which he applies what he has previously learned, and is taught something new. The course in vise work includes filing to line, filing to template, free-hand filing, fitting, and chipping straight and curved surfaces in cast iron, wrought iron and steel. A similar series of exercises is worked out in the course in forge work, which includes bending, upsetting, drawing, welding, shaping, punching, tempering in water and oil, and with pine wood test.

The course in wood work also is upon the same plan, and includes exercises in sawing, planing, jointing, chiseling, marking, etc., etc.

Experience has shown that young men taking courses similar to the above become expert in the use of such tools as are covered by the courses in a very short time, and that they are able readily to master the special details of the various trades into which these operations enter.

In drawing, beginners are first given a course covered by a text-book prepared by officers of this school. After finishing this work, and becoming reasonably expert in the use of instruments, the student is given practice in making such finished and working drawings as are best suited to his special case.

In mathematics the instruction covers algebra, solid geometry and trigonometry, taught with special reference to the needs of this class of students, and giving many applications to practical matters. Students may also receive instruction in land surveying during the third term.

#### EQUIPMENT.

The vise shop is furnished with benches, on which are ten vises, with as many complete sets of the tools used in this course, such as files, squares, calipers, chisels, etc. In the forge-shops are eight fixed and one portable forge. The fixed forges are supplied with blast by a Sturtevant pressure blower, and the smoke carried off by means of a Sturtevant exhaust fan, both of which were presented by Mr. B. F. Sturtevant, of Boston. These fans are run by a small Haskins vertical engine set up in this shop. The pulleys and shafting used here were presented by O. A. Pray, of Minneapolis. There are eight anvils, with as many complete sets of tongs and other tools required in the course. The wood shop has benches and the necessary tools for the course. The drawing room is provided with desks for sixty students, and has a collection of drawings and "blue prints," which is constantly increasing.

#### OFFICERS.

William W. Folwell, President of the University.

William A. Pike, Professor of Engineering.

John F. Downey, Professor of Mathematics.

Wilbur F. Decker, Instructor in Shop Work and Drawing.

Henry M. Waitt, Instructor in Surveying and Drawing.

#### ORGANIZATION.

The students of this school are separated into four divisions, viz.: (A) Those who wish to devote themselves wholly to shop-work and industrial drawing as a preparation for entering upon active life. (B) Those desiring to receive instruction in mathematics, as well as in shop-work and drawing. (C) Those whom circumstances prevent from taking either of these courses, and who wish day instruction in drawing. (D) The evening drawing class for working artisans.

## COURSES OF INSTRUCTION.

## A DIVISION.

<i>I. Term.</i>	<i>II. Term.</i>	<i>III. Term.</i>
Vise Work.	Forge Work.	Wood Work.
Drawing.	Drawing.	Drawing.

## B DIVISION.

<i>I. Term.</i>	<i>II. Term.</i>	<i>III. Term.</i>
Vise Work.	Forge Work.	Wood Work.
Drawing.	Drawing.	Drawing.
Algebra.	Trigonometry.	Solid Geometry or Surveying.

## C DIVISION.

Industrial Drawing, beginning at any time, but to be pursued consecutively.

## D DIVISION.

Twenty five evening lessons in Mechanical Drawing, beginning in November.

## CONDITIONS OF ADMISSION.

For any division, candidates must be at least fifteen years of age and must pass examinations as follows: A Division—In reading, writing and arithmetic. B Division—In reading, writing, arithmetic, plane geometry and elementary algebra. Members of this division who pass examination in geography and United States history may be allowed to select studies from the Collegiate department under direction of the faculty. C and D Divisions—no examinations required.

All members of this school are required to deposit \$5 with the treasurer of the university or his agent, which will be returned to members of divisions A, B, and C when connection with the school ceases, less such charges as may be made for damage to tools or other property, and to members of division D when their connection ceases, if they have been regular in attendance, less such charges for damages as may be made. Divisions A, B and C will come under general regulations as to attendance, etc.

## TIMES FOR ENTERING.

Students of the B Division should if possible, enter at the beginning of the year; of the A Division at the beginning of terms, of the C Division preferably at the beginning of terms; and of D Division according to notice.

## GENERAL INFORMATION.

Students in this school have access to the library, under the usual rules.

Tools and materials for use in the shops are furnished free. Each student furnishes his own drawing instruments and materials. A list and description of these may be found in Pike and Decker's Mechanical Drawing, pages three to seven.

Students can obtain board in private families in the neighborhood at \$4 a week and upwards, and in clubs for \$2 a week and upwards.

For any further information apply personally, or by letter, to Prof. Wm. A. Pike, at the university.

## CONCLUSION.

Having resigned the executive office in the middle of the year 1882-83 and having since by the desire of the board performed the routine duties, I naturally, long since, ceased to concern myself less about the general interests of the institution and to give my attention chiefly to that department of instruction, political science, to which the board were good enough at the time of accepting my resignation to elect me. I have therefore no occasion to submit further suggestions, but may content myself with referring to the last report, pages seventy-two to seventy-four, where may be found a number of recommendations which seemed to me to be of importance at the time they were made, and may still be worthy of your attention.

All of which is respectfully submitted.

## APPENDIX "A."

## GRADUATIONS.

At the eleventh annual commencement, held May 31, 1883, the following twenty-five degrees were conferred:

## COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

*For Bachelor of Arts.*

Edward Payson Baldwin.....	Tower City, D. T.
William Eastman Fay.....	Cambridge, Mass.
Edson Starr Gaylord.....	Minneapolis.
David Percy Jones.....	Minneapolis.
Joseph Henry Locke.....	St. Cloud.
Helen Louise Pierce.....	Minneapolis.
Martha Alma Sheldon.....	Excelsior.
Sumner Lincoln Trussell.....	Champlin.

*For Bachelor of Science.*

Robert Mowry Bell.....	Minneapolis.
Frederic Henry Clarke.....	Boston, Mass.
Louise Elma Hollister.....	Marshfield.
Edward Corydon Jones.....	Minneapolis.
George Nelson Salisbury.....	Faribault.
Charles Frederic Sidener.....	Red Wing.
Emma Jane Ware.....	Browndale.

*For Bachelor of Literature.*

Samuel Doak Catherwood.....	Austin.
Annie Harriet Jefferson.....	Minneapolis.
Kate Louise Kennedy.....	Minneapolis.
Sarah Pierrepont McNair.....	Minneapolis.
Anna Calista Marston.....	Minneapolis.
Janet Nunn.....	Dodge Centre.
Emma Frances Trussell.....	Champlin.

## COLLEGE OF MECHANIC ARTS.

*For Bachelor of Civil Engineering.*

William George Peters .....	Minneapolis.
<b>THESIS:</b> Minnehaha Bridge.	
Louis Orville Smith .....	Le Sueur.
<b>THESIS:</b> Minneapolis Water Works.	

*For Bachelor of Mechanical Engineering.*

John Henry Barr .....	Mankato.
<b>THESIS:</b> Design for an Automatic Cut-off Steam Engine.	
A certificate in Civil Engineering was granted to	
Alexander Martin Holcomb .....	Minneapolis.
<b>THESIS:</b> Iron Railway Bridge in Minneapolis.	

The graduations, twenty-six in number, at the twelfth annual commencement, held May 29, 1884, were as follows :

## COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

*For Bachelor of Arts—9.*

Elmer Ellsworth Adams .....	Morrisville, Vt.
Patrick Joseph Butler .....	Minneapolis.
Oscar Firkins .....	Minneapolis.
Joseph Henry Capper Hutchinson .....	Hastings.
Anthony Johnson .....	Newburg.
Eli Larson .....	Bratsburg.
Hannah Robie Sewall .....	St. Paul.
Susan Winifred Sewall .....	St. Paul.
Zenas Newton Vaughn .....	Austin.

*For Bachelor of Science—9.*

Nathan Morton Baker, Jr. ....	St. Peter.
Jeremiah Ignatius Donohue .....	Pilot Mound.
George Lorenzo Hendrickson .....	St. Paul.
George Horace Klepper .....	Albert Lea.
Bessie Laythe .....	Chatfield.
James Eugene Manchester .....	Blooming Prairie.
Henry Hastings Sibley Rowell .....	Minneapolis.
Charles Christian Schmidt .....	Sleepy Eye.
Emma Zwinggi .....	St. Peter.

*For Bachelor of Literature—3.*

Anna Helen Bonfoy.....	Minneapolis.
Belle Marion Bradford.....	Empire.
Adalyna Kingsbury.....	Cassopolis, Mich.

## COLLEGE OF MECHANIC ARTS.

*For Bachelor of Civil Engineering—3.*

William Ricketson Hoage.....	Rochester.
George John Loy.....	Chaska.
Irving Webber Matthews.....	Luverne.

## COLLEGE OF MEDICINE.

*For Bachelor of Medicine—2.*

James Kidd Simpson.....	Virden, Manitoba.
Hugo Speier.....	Belle Plaine.

## APPENDIX "B."

## ATTENDANCE.

The following tables exhibit the enrollment and classification of the students:

## SUMMARY, 1882-83.

COLLEGE OR DEPARTMENT.	CLASS.	Gentlemen.	Ladies.	Total.
Science, Literature and Arts.....	{ Senior.....	13	10	23
	{ Junior.....	13	6	19-42
Mechanic Arts.....	{ Senior.....	3	.....	3
	{ Junior.....	2	.....	2
	{ Specials.....	20	.....	20-25
Agriculture.....	Specials.....	10	.....	10-10
Collegiate Department.....	{ I.....	21	9	30
	{ II.....	16	11	27
	{ III.....	35	18	53
	{ Specials.....	24	22	46-156
Deduct, twice counted.....	.....	157	76	233
	.....	10	.....	10
Totals .....	.....	147	76	223

## BY CLASSES ONLY.

Seniors of all departments.....	26
Juniors of all departments.....	21
Sophomores—Collegiate Department.....	30
Freshman—Collegiate Department.....	27
Sub-Freshman—Collegiate Department.....	53
Specials of all departments.....	76
Total (less 10 specials twice counted).....	223
Candidates for masters' degrees.....	9
Attending Summer School of Science and Letters.....	73
Attending Evening Drawing School.....	51
Attending Farmers' Lecture Course.....	281
Grand total.....	637



The distribution of students in the various departments, classes and courses is shown as follows:

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Senior.....	{ Classical.....	6	2	8
	{ Scientific.....	7	2	9
	{ Modern.....	.....	6	6
Totals.....	.....	13	10	23
Junior.....	{ Classical.....	6	2	8
	{ Scientific.....	6	2	8
	{ Modern.....	1	2	3
Totals.....	.....	13	6	19

COLLEGE OF MECHANIC ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Senior.....	{ Civ. Eng.....	2	.....	2
	{ Mech. Eng.....	1	.....	1
Totals.....	.....	3	.....	3
Junior.....	Civ. Eng.....	2	.....	2
Specials.....	{ Civ. Eng.....	7	.....	7
	{ Mech. Eng.....	2	.....	2
	{ Shop Work.....	6	.....	6
	{ Drawing.....	5	.....	5
Totals.....	.....	20	.....	20

## COLLEGIATE DEPARTMENT.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Sophomore, I .....	{ Classical .....	5	1	6
	{ Scientific.....	13	2	15
	{ Modern.....	3	6	9
Totals .....		21	9	30—
Freshman, II .....	{ Classical .....	8	1	9
	{ Scientific.....	7	3	10
	{ Modern.....	1	7	8
Totals.....		16	11	27—
Sub-Freshman, III.....	{ Classical .....	4	3	7
	{ Scientific.....	29	4	33
	{ Modern.....	2	11	13
Totals.....		35	18	53—
Specials .....		24	22	46—
Total.....				156

One hundred and eighty-nine students were enrolled as residents of Minnesota, the following counties being represented:

Anoka, 1; Blue Earth, 5; Carver, 2; Chippewa, 1; Clay, 1; Dakota, 6; Dodge, 2; Faribault, 2; Fillmore, 4; Freeborn, 2; Goodhue, 11; Hennepin East, 41; Hennepin West, 59; Le Sueur, 4; Lincoln, 1; Lyon, 1; Martin, 1; Meeker, 2; Mower, 4; Nicollet, 3; Olmsted, 6; Ramsey, 9; Rice, 3; Rock, 1; Stearns, 4; Steele, 4; Stevens, 1; Wabasha, 4; Wright, 4.

Thirty-four were registered from other states and countries, to wit: Canada, 1; Dakota Territory, 8; Florida, 1; Illinois, 6; Indiana, 1; Iowa, 5; Massachusetts, 3; Michigan, 2; Montana Territory, 2; New York, 2; Ohio, 2; Vermont, 1.

SUMMARY, 1883-84.

COLLEGE OR DEPARTMENT.	CLASS.	Gentlemen.	Ladies.	Totals.	
Science, Literature and Art.....	{ Senior .....	14	7	21	
	{ Junior.....	7	6	13-34	
	{ Senior.....	3	.....	3	
Mechanic Arts.....	{ Junior.....	4	.....	4	
	{ Special.....	1	.....	1-8	
	Art. Tr. Sch... {	A	4	.....	4
		B	4	.....	4
		C	8	.....	8
D		47	.....	47-63	
Medicine.....	Candidate for B. M....	2	.....	2-2	
Agriculture.....	Special.....	1	.....	1-1	
	I.....	17	10	27	
Collegiate Department.....	II.....	19	10	29	
	III.....	38	21	59	
	Specials.....	36	21	57-172	
Deduct, twice counted.....		205	75	280	
		1	.....	1	
Totals.....		204	75	279	

BY CLASSES ONLY.

Seniors of all departments .....	24
Juniors of all departments .....	17
Sophomores—Collegiate Department.....	27
Freshmen—Collegiate Department .....	29
Sub-Freshmen—Collegiate Department.....	59
Specials of all departments.....	58
Artisans' Training School.....	63
Candidates for degree B. M.....	2
Total.....	279
Candidates for masters' degrees.....	10
Attending Summer School of Science.....	105
Attending Farmers' Lecture Course.....	1, 118

The distribution of students in the various departments, classes and courses, was as follows :

## COLLEGE OF SCIENCE, LITERATURE AND ART.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Senior.....	{ Classical.....	7	2	9
	{ Scientific.....	7	2	9
	{ Modern.....	.....	3	3
Total.....	.....	14	7	21
Junior.....	{ Classical.....	2	1	3
	{ Scientific.....	3	1	4
	{ Modern.....	2	4	6
Totals.....	.....	7	6	13

## COLLEGE OF MECHANIC ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Senior.....	Civ. Eng.....	3	.....	3
Junior.....	{ Civ. Eng.....	2	.....	2
	{ Mech. Eng.....	1	.....	1
	{ Arch.....	1	.....	1
Total.....	.....	4	.....	4
Special.....	Mech. Eng.	1	.....	1
Artisans' Training School.....	{ A.....	4	.....	4
	{ B.....	4	.....	4
	{ C.....	8	.....	8
	{ D.....	47	.....	47
Totals.....	.....	63	.....	63

## COLLEGE OF MEDICINE.

		Gentlemen.		Total.
Candidates for.....	B. M.	2	.....	2

## COLLEGIATE DEPARTMENT.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Sophomore .....	{ Classical.....	6	1	7
	{ Scientific .....	9	3	12
	{ Modern.....	2	6	8
Totals.....		17	10	27
Freshman.....	{ Classical.....	8	3	11
	{ Scientific .....	8	2	10
	{ Modern.....	3	5	8
Totals.....		19	10	29
Sub-Freshman.....	{ Classical.....	6	.....	6
	{ Scientific .....	29	2	31
	{ Modern.....	3	19	22
Totals.....		38	21	59
Specials .....		36	21	57

Two hundred and forty-five (245) were enrolled as residents of Minnesota, the following counties being represented:

Anoka, 3; Blue Earth, 1; Brown, 1; Carver, 3; Chippewa, 1; Clay, 1; Dakota, 6; Dodge, 6; Faribault, 2; Fillmore, 7; Goodhue, 16; Hennepin East, 62; Hennepin West, 71; Jackson, 1; Le Sueur, 2; Lyon, 5; McLeod, 1; Martin, 2; Meeker, 2; Mower, 6; Nicollet, 4; Olmsted, 6; Ramsey, 7; Rice, 3; Rock, 1; Scott, 2; Stearns, 3; Steele, 3; Stevens, 1; Wabasha, 6; Washington, 3; Winona, 1; Wright, 6.

Thirty-four students were enrolled from other states and countries, as follows:

Canada, 2; Dakota Territory, 4; Florida, 1; Illinois, 3; Indiana, 2; Iowa, 5; Massachusetts, 1; Maine, 4; Michigan, 3; New York, 2; Ohio, 2; Pennsylvania, 1; Vermont, 1; Wisconsin, 3; fourteen states and countries.

## APPENDIX "C."

## WORK OF THE YEAR 1882-83.

THE YEAR BEGAN SEPTEMBER 5, 1882, AND ENDED MAY 31, 1883.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term.
<b>MATHEMATICS. PROFESSOR J. F. DOWNEY.</b>						
Higher Algebra.....	Olney.....	Downey.....	28	Freshm'n	26	I.
Analytic Geometry.....	".....	".....	53	Junior....	10	I.
Higher Algebra.....	".....	Hutchinson.....	29	Freshm'n	26	I.
Trigonometry.....	".....	Downey.....	34	Freshm'n	36	II.
Differential Calculus.....	".....	".....	54	Junior....	9	II.
Higher Algebra, 1 1/2.....	".....	Hutchinson.....	51	Sub Fresh	21	II.
" " 2 1/2.....	".....	".....	26	"	22	II.
Conic Sections.....	".....	Downey.....	34	Sophom....	23	III.
Integral Calculus.....	".....	".....	57	Junior....	10	III.
Solid Geometry, 1 1/2.....	Wentworth.....	Hutchinson.....	53	Sub Fresh	17	III.
" " 2 1/2.....	".....	".....	55	"	13	III.
Conic Sections.....	Olney.....	".....	33	Sophom....	8	III.
<b>ASTRONOMY. PROFESSOR J. F. DOWNEY.</b>						
Descriptive.....	Loomis.....	Downey.....	53	Senior.....	3	I.
Practical.....	".....	".....	54	"	4	II.
".....	".....	".....	50	"	7	III.
<b>CHEMISTRY. PROFESSOR J. A. DODGE.</b>						
Elementary.....	Barker's.....	Dodge.....	55	SubFresh	27	I.
Applied.....	Lectures.....	".....	55	Sophom....	12	I.
Analytical.....	Appleton's.....	Dodge & Noyes.	55	Jun., Sen.	9	I.
Analytical.....	Appleton's, etc.	" " "	55	"	14	II.
Analytical.....	".....	".....	30	Sophom....	9	II.
General.....	Avery's.....	Dodge.....	55	Freshm'n	19	III.
Elementary.....	Barker's.....	Dodge & Noyes..	55	Freshm'n	13	III.
Analytical.....	Appleton's.....	".....	55	Jun., Sen.	9	III.
Analytical.....	".....	".....	22	Sophom....	8	III.
<b>PHYSICS. PROFESSOR WM. A. PIKE, in charge.</b>						
Light and Electricity.....	Ganot.....	Decker.....	57	Sophom....	10	I.
Elementary.....	Peck's, Ganot....	".....	57	Sophom....	9	I.
Sound and Heat.....	Ganot.....	".....	48	Freshm'n	13	II.
Practical Physics.....	".....	Pike & Decker..	50	Senior.....	4	III.
<b>BOTANY. PROFESSOR C. W. HALL.</b>						
Elementary.....	Gray's.....	Hall.....	57	SubFresh.	23	III.
Advanced.....	Gray's.....	".....	57	Freshm'n	21	III.
".....	Lectures.....	".....	57	Fresh Sci.	13	III.
".....	Laboratory.....	".....	57	Freshm'n	13	III.
<b>ZOOLOGY. PROFESSOR C. W. HALL.</b>						
Comparative.....	Lectures.....	Hall.....	55	Junior....	11	I.
".....	Laboratory.....	".....	50	"	11	I.
Elementary.....	Lectures and	".....	20	Sophom....	10	III.
".....	Laboratory.....	Herrick.....	25	"	10	III.

Subjects.	Text Books.	Instructors.	No of Exercises.	Classs.	No. of Students.	Term
<b>GEOLOGY AND MINERALOGY.</b>		<b>PROFESSOR C. W. HALL.</b>				
Geology, general.....	Le Conte.....	Hall.....	55	Senior.....	24	I.
Geology, economic.....	Lectures.....	".....	47	".....	10	II.
Mineralogy.....	Lectures.....	".....	57	Junior.....	17	II.
".....	Laboratory.....	".....	36	".....	17	II.
<b>ENGLISH.</b>		<b>PROFESSOR M. MARSTON.</b>				
American Authors, etc.....	Royce's.....	Mrs. Wilkin.....	55	SubFresh.....	14	I.
How to Write Clearly.....	Abbott's Manual.....	".....	55	Freshm'n.....	10	I.
History of the English Language.....	Lectures.....	Marston.....	53	Sophom.....	9	I.
Reading of Chaucer.....	Carpenter.....	".....	53	".....	9	I.
British Eloquence.....	Goodrich and Lectures.....	".....	53	Senior.....	11	I.
Addison, etc.....	Hudson.....	Mrs. Wilkin.....	53	SubFresh.....	16	II.
Books and Reading.....	Lectures.....	Marston.....	6	".....	55	II.
Milton.....	Sprague & Lect.....	".....	53	Freshm'n.....	9	II.
Anglo-Saxon.....	Carpenter.....	".....	53	Sophom.....	14	II.
Macaulay, Scott, etc.....	Harper Series.....	Mrs. Wilkin.....	56	SubFresh.....	11	III.
Shakspeare.....	Rolle & Abbott.....	".....	56	Freshm'n.....	7	III.
Anglo-Saxon.....	Carpenter.....	Marston.....	50	Sophom.....	4	III.
English Literature.....	Lect'res & Ward.....	".....	46	Junior.....	17	III.
English Criticism.....	Lectures.....	".....	24	Senior.....	17	III.
<b>GERMAN.</b>		<b>PROFESSOR J. G. MOORE.</b>				
Goethe's Faust.....	Hart.....	Moore.....	56	Sen & Jun.....	16	I.
Grammar.....	Whitney.....	".....	56	".....	16	I.
Reader.....	Boisen.....	".....	56	Junior.....	14	I.
Schiller's Egmont, etc.....	Buchheim.....	".....	56	Freshm'n.....	15	I.
Grammar.....	Comfort.....	Mrs. Wilkin.....	56	SubFresh.....	18	I.
".....	".....	".....	56	".....	14	I.
Schiller's Wilhelm Tell, etc.....	Buchheim.....	Moore.....	54	Sen & Jun.....	10	II.
Grammar.....	Whitney.....	".....	54	Junior.....	10	II.
Reader.....	Boisen.....	".....	54	".....	10	II.
German History.....	Taylor.....	".....	54	Freshm'n.....	14	II.
Historical Ballads.....	Wagner.....	".....	54	".....	14	II.
Grammar.....	Whitney.....	Mrs. Wilkin.....	54	SubFresh.....	14	II.
Reader.....	Boisen.....	".....	54	".....	14	II.
Grammar.....	Whitney.....	".....	54	".....	13	II.
Reader.....	Boisen.....	".....	54	".....	13	II.
Laocoon.....	Lessing.....	Moore.....	58	Sen & Jun.....	9	III.
Deutsche Lyrik.....	Buchheim.....	".....	58	".....	9	III.
Hermann and Dorothea.....	Hart.....	".....	58	Junior.....	9	III.
Minna von Barnhelm.....	Buchheim.....	".....	58	Freshm'n.....	17	III.
Grammar.....	Whitney.....	Mrs. Wilkin.....	57	SubFresh.....	20	III.
Reader.....	Boisen.....	".....	57	".....	20	III.
<b>FRENCH.</b>		<b>PROFESSOR C. W. BENTON.</b>				
Literature; age of Louis XIV.....	Corneille, etc.....	Benton.....	55	Senior.....	17	I.
Grammar and Reader, §1.....	Bocher's Otto.....	".....	56	Sophom.....	14	I.
Grammar and Reader, §2.....	".....	".....	56	".....	13	I.
La Grammaire.....	Sauveur.....	".....	53	Senior.....	18	II.
Modern Drama.....	Feuillet.....	".....	53	".....	18	II.
History of France.....	Fleury.....	".....	53	".....	18	II.
Hist. Novel: Cinq Mars.....	Vigny.....	".....	53	".....	18	II.
Art.....	Taine's.....	".....	53	".....	18	II.
Grammar and Reader, § 1.....	Bocher.....	".....	50	Sophom.....	14	II.
Grammar and Reader, § 2.....	".....	".....	50	".....	13	II.
Translations into French.....	Lectures.....	".....	55	Senior.....	15	III.
Literature of 18th Century.....	".....	".....	55	".....	15	III.
Grammar and Reader.....	Bocher.....	".....	55	Sophom.....	20	III.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term
<b>LATIN. PROFESSOR J. BROOKS, in charge.</b>						
Horace and Hist. Rom. Lit.....	Chase & Stuart.	Clark.....	53	Sophom.....	13	I.
Essays on the above.....	"	"	24	"	12	I.
Livy.....	Lincoln.....	"	52	Freshm'n	25	I.
Cicero.....	Chase & Stuart.	"	106	Sub Fresh	21	I.
Exam. on Entrance and Cond.		Brooks & Clark			47	I.
Plautus, Cicero, Pliny.....						
Livy.....	Lincoln.....	Clark.....	52	Junior.....	9	II.
Virgil.....	Frieze.....	"	52	Freshm'n	19	II.
Exam. on Condition.....	"	"	52	Sub Fresh	18	II.
		"			12	II.
Tacitus & Cicero.....		"	54	Sophom.....	10	III.
Virgil.....	Frieze.....	"	54	Sub Fresh	15	III.
Exam. on Condition.....		"			24	III.
<b>GREEK. PROFESSOR J. BROOKS, D. D.</b>						
Homer's Odyssey, etc.....	Weale Series.....	Brooks.....	60	Junior.....	12	I.
Lectures on Homer.....	"	"	3	"	12	I.
Xenophon's Memorabilia.....	Winans.....	Hutchinson.....	54	Freshm'n	9	I.
Grammar and Reader.....	Brooks.....	Brooks.....	61	Sub Fresh	5	I.
Exam. of Cond. Students.....		Brooks & H.			4	I.
Æschylus' Prometheus.....						
Essays on Prometheus.....	Mather.....	Brooks.....	43	Sophom.....	3	II.
Xenophon's Memorabilia.....	"	"	9	"	3	II.
Gram. and Reader and Anabasis.....	Winans.....	Hutchinson.....	47	Freshm'n	8	II.
Exam. of Cond. Students.....	Brooks.....	Brooks.....	53	Sub Fresh	6	II.
		"			4	II.
Plato's Apology, Crit. & Phædo.....	Weale.....	"	40	Sophom.....	3	III.
Demosthenes' Orations.....	Heslop.....	Hutchinson.....	51	Freshm'n	5	III.
Xenophon's Anabasis.....	Brice.....	Brooks.....	53	Sub Fresh	5	III.
Exam. of Cond. Students.....		"			4	III.
<b>MENTAL AND MORAL PHILOSOPHY. PROFESSOR A. T. ORMOND.</b>						
History of Philosophy.....	Lectures.....	Ormond.....	54	Senior.....	21	I.
Ethics.....	"	"	54	"	24	II.
Psychology.....	"	"	54	Junior.....	22	II.
Natural Theology.....	"	"	19	Senior.....	19	III.
Logic.....	Jevons and Lect.	"	55	Junior.....	20	III.
<b>HISTORY. PROFESSOR A. T. ORMOND in charge.</b>						
Ancient.....	Schmitz.....	Ormond.....	54	Sub Fresh	26	I.
Medieval.....	Swinton.....	"	21	Freshm'n	27	II.
Modern.....	Swinton & Lect.	"	21	Sophom.....	20	III.
<b>POLITICAL SCIENCE, ETC. MR. WM. W. FOLWELL.</b>						
History of Civilization.....	Guizot.....	Folwell.....	37	Junior.....	26	I.
General Philosophy.....	Lectures.....	"	17	"	26	I.
Civil Government.....	De Tocqueville.	"		Senior.....	23	II.
Constitution U. S.....	Lectures.....	"	24	"	23	II.
" Minn.....	"	"	9	"	23	II.
International Law.....	"	"	10	Seniors.....	12	II.
Political Economy.....	"	"	40	"	24	III.
National Economy.....	"	"	9	"	24	III.
<b>RHETORIC AND ELOCUTION. PROFESSOR M. L. SANFORD.</b>						
Orations.....		Sanford.....	60	Senior.....	20	I.
Elocution.....		"	80	"	20	I.
Orations.....		"	69	Junior.....	23	I.
Elocution.....		"	46	"	23	I.
"		"	71	Sophom.....	27	I.
Compositions.....		"	10	Sub Fresh	37	I.
Orations.....		"	69	Senior.....	23	II.
Elocution.....		"	92	"	23	II.



Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term.
<b>RHETORIC AND ELOCUTION.</b>		<b>PROFESSOR M. L. SANFORD.</b>				
<i>(Continued.)</i>						
Orations .....		" .....	75	Junior.....	25	II.
Elocution .....		" .....	50	" .....	25	II.
Rhetoric .....	Hepburn .....	" .....	60	Sophom.....	30	II.
Compositions .....		" .....	12	Freshm'n ..	34	II.
Elocution .....		" .....	12	Sub Fresh ..	36	II.
Orations .....		" .....	57	Senior .....	19	III.
Elocution .....		" .....	76	" .....	19	III.
Orations .....		" .....	30	Junior .....	10	III.
Elocution .....		Sanford.....	45	Sophom.....	15	III.
Compositions .....		" .....	45	" .....	15	III.
Elocution .....		" .....	12	Freshm'n ..	42	III.
<b>PUBLIC HEALTH AND HYGIENE.</b>		<b>PROFESSOR C. N. HEWITT, M. D.</b>				
Sanitary Science.....	Lectures .....	Hewitt .....	6	Senior .....	20	III.
School Hygiene.....	" .....	" .....	6	Sub Fresh..	60	I.
<b>INDUSTRIAL DRAWING.</b>		<b>PROFESSOR WM. A. PIKE.</b>				
Projections .....	Pike & Decker..	Waitt.....	60	Freshm'n ..	24	I.
Geometrical .....	" .....	Pike & assis'nts:	55	Sub Fresh..	29	II.
Descriptive Geometry.....	Pike (notes) .....	" .....	55	Sophom.....	12	II.
Miscellaneous .....	Pike & Decker.....	" .....	25	Evening.....	51	II.
Miscellaneous .....	" .....	Waitt.....	58	Special.....	7	III.
<b>AGRICULTURE.</b>		<b>PROFESSOR E. D. PORTER.</b>				
No instruction in 1882-3. Old experimental farm sold and new one purchased.						
<b>CIVIL &amp; MECH. ENGINEERING.</b>		<b>PROFESSOR WM. A. PIKE.</b>				
Curves, Leveling & Earthwork..	Lectures.....	Waitt .....	50	Jun. C. E..	4	I.
Field Work and Drawing .....		" .....	50	" .....	4	I.
Machinery .....	Unwin.....	Pike & Decker..	50	Sen. M. E..	1	I.
Drawing.....		" .....	60	" .....	1	I.
Arches, Retaining Walls, etc.....	Lectures .....	Waitt.....	55	Sen. C. E..	3	I.
Stereotomy .....		" .....	60	" .....	3	I.
Railroad Work and Drawing .....	Field Work.....	" .....	60	" .....	4	I.
Shop Work .....		Decker .....	55	Special.....	3	I.
Mechanic's (Statics).....	Rankine .....	Waitt.....	54	Jun. C. E..	6	II.
Drawing (Desc. p. Geom.etry)...	Watson .....	" .....	55	" .....	6	II.
Roofs, Trusses & Motive Power...	Lectures .....	Pike .....	55	Sen. C. E..	4	II.
Drawing .....		" .....	55	" .....	3	II.
Steam Engine.....	Goodere .....	Pike .....	50	Sen. M. E..	1	II.
Mechanics and Strength Mater'ls	Rankine .....	Pike .....	55	Jun. C. E..	5	III.
Topography and Drawing .....		Waitt.....	58	" .....	7	III.
Designs and Specifications .....		Pike & Waitt ..	58	Sen. C. E..	3	III.
Designs and Specifications.....		Pike .....	58	Sen. M. E..	1	III.
Drawing on Designs.....		Waitt.....	58	Sen. C. E..	3	III.
Drawing on Designs.....		Pike .....	58	Sen. M. E..	1	III.
Surveying .....		Waitt.....	22	Freshm'n ..	15	III.
Strength of Materials .....		" .....	50	Sr C&ME ..	4	III.
<b>MILITARY SCIENCE.</b>		<b>PROFESSOR E. C. BOWEN, U. S. A.</b>				
Squad and Company Drill .....	Upton.....	Bowen .....	30	3 Lower....	85	I.
Officers' Drill .....	" .....	" .....	25	Sophom.....	20	II.
<b>MUSIC.</b>		<b>PROFESSOR WM. H. LEIB.</b>				
Vocal Lessons .....	Selections .....	Leib .....	20	At Large..	50	All.

## WORK OF THE YEAR 1883-4.

THE YEAR BEGAN SEPT. 4, 1883, AND ENDED MAY 29, 1884.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term.
<b>MATHEMATICS. PROFESSOR J. F. DOWNEY.</b>						
General Geometry.....	Olney.....	Downey.....	54	Junior.....	6	I.
Higher Algebra.....	".....	".....	55	Fresh.....	47	I.
Differential Calculus.....	Olney.....	Downey.....	55	Junior.....	4	II.
Trigonometry.....	".....	".....	31	Fresh.....	45	II.
Higher Algebra.....	".....	".....	54	Sub Fresh	60	II.
Integral Calculus.....	Olney.....	Downey.....	55	Junior.....	4	III.
Conic Sections.....	".....	".....	35	Sophom.....	25	III.
Solid Geometry, 1 ½.....	Wentworth.....	Hutchinson.....	56	Sub Fresh	31	III.
Solid Geometry, 2 ½.....	".....	".....	56	Sub Fresh	32	III.
<b>ASTRONOMY. PROFESSOR J. F. DOWNEY.</b>						
Descriptive Astronomy.....	Newcomb.....	Downey.....	54	Senior.....	10	I.
Practical Astronomy.....	Loomis.....	Downey.....	50	Senior.....	6	III.
<b>CHEMISTRY. PROFESSOR J. A. DODGE.</b>						
Elementary.....	Eliot & Storer.....	Dodge.....	55	Sub Fresh	28	I.
Applied.....	Lectures.....	".....	55	Sophom.....	7	I.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	55	Jun & Sen	12	I.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	50	Jun & Sen	17	II.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	30	Soph.....	7	II.
General.....	Avery.....	Dodge.....	55	Freshm.....	26	III.
Elementary (Continued).....	Eliot & Storer.....	".....	55	Freshm.....	25	III.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	55	Jun & Sen	13	III.
Analytical.....	Appleton, etc.....	Dodge, Sidener.....	22	Soph.....	6	III.
<b>PHYSICS. PROFESSOR W. A. PIKE, in charge.</b>						
Mechanics.....	Peck.....	Decker.....	55	Junior.....	5	I.
Light and Electricity.....	Ganot.....	".....	55	Sophom.....	8	I.
General Physic.....	Gage.....	".....	55	Sophom.....	11	I.
Sound and Heat.....	Ganot.....	".....	49	Freshm'n	24	II.
Testing Materials.....	".....	Pike.....	"	Sen C Eng	3	II.
<b>BOTANY. PROFESSOR C. A. HALL.</b>						
Elementary.....	Gray's.....	Hall.....	56	Subfresh.....	24	III.
Elementary.....	".....	".....	56	Freshman	26	III.
Advanced.....	Lectures.....	".....	50	"	28	III.
Advanced.....	Laboratory.....	".....	62	"	28	III.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Term.
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ZOOLOGY.

PROFESSOR C. W. HALL.

Comparative.....	Lectures.....	Hall.....	56	Junior.....	10	I.
Comparative.....	Laboratory.....	".....	56	".....	10	I.
Elementary.....	Lectures.....	Herrick.....	56	Sophom.....	5	III.
Elementary.....	Laboratory.....	".....	56	".....	5	III.

GEOLOGY AND MINERALOGY.

PROFESSOR C. W. HALL.

General.....	Le Conte.....	Hall.....	56	Senior.....	23	I.
Economic.....	Lectures.....	".....	44	".....	10	II.
Mineralogy, Elementary.....	".....	".....	55	Junior.....	10	II.
Mineralogy, Determinative.....	Laboratory.....	".....	55	".....	10	II.

ENGLISH.

PROFESSOR M. L. SANFORD AND PROF. G. E. MACLEAN in charge.

British Eloquence.....	Goodrich.....	Sanford.....	55	Senior.....	9	I.
Chaucer.....	".....	".....	55	Sophom.....	7	I.
American Authors.....	".....	Mrs. Wilkin.....	56	Subfresh.....	24	I.
Criticism.....	Abbott's.....	".....	53	Freshm'n.....	10	I.
Burke and Wordsworth.....	Hudson's.....	".....	53	Freshm'n.....	10	I.
Anglo-Saxon.....	Corsen.....	Sanford.....	55	Sophom.....	9	II.
Milton.....	".....	".....	55	Freshm'n.....	6	II.
Burns, Goldsmith.....	Hudson's.....	Mrs. Wilkin.....	52	Subfresh.....	20	II.
Anglo-Saxon.....	Corsen.....	McLean.....	55	Sophom.....	3	III.
English Literature.....	Shaw.....	".....	55	Junior.....	14	III.
English Literature.....	Bascom & Iet's.....	".....	32	Senior.....	11	III.
Scott and Macaulay.....	Harper's.....	Mrs. Wilkin.....	56	Subfresh.....	15	III.
Shakspeare.....	Hudson's.....	".....	57	Freshm'n.....	16	III.

GERMAN.

PROFESSOR J. G. MOORE.

Goethe's Faust.....	Hart.....	Moore.....	56	Sen.&Jun.....	13	I.
Grammar and Reader.....	Whitney.....	".....	56	Junior.....	13	I.
Schiller's Egmont, etc.....	Buchheim.....	".....	56	Freshm'n.....	18	I.
Grammar.....	Whitney.....	".....	56	Subfresh.....	30	I.
Grammar, 1st 2/3.....	Macmillan.....	Mrs. Wilkin.....	56	".....	21	I.
Grammar, 2d 2/3.....	".....	".....	56	".....	21	I.
Schiller's Wallenstein.....	Schaefer.....	Moore.....	51	Sen.&Jun.....	13	II.
Lessing's Nathan der Weise.....	Whitney.....	".....	51	Junior.....	11	II.
Grammar and Reader.....	".....	".....	51	Junior.....	11	II.
History and Historical Ballads.....	Taylor.....	".....	51	Freshm'n.....	15	II.
Grammar and Reader.....	Wagner.....	Mrs. Wilkin.....	51	Subfresh.....	20	II.
Grammar, 2d 2/3.....	Whitney.....	".....	51	".....	28	II.
History of German Literature.....	Lectures.....	Moore.....	54	Sen.&Jun.....	14	III.
Deutsche Lyrik.....	Buchheim.....	".....	55	Freshm.....	20	III.
Goethe's Hermann & Dorothea.....	Hart.....	".....	55	Freshm.....	20	III.
Grammar.....	Whitney.....	".....	55	Subfresh.....	27	III.
Reader.....	Boisen.....	".....	55	Subfresh.....	27	III.
Grammar and Reader.....	".....	Mrs. Wilkin.....	56	".....	17	III.

FRENCH.

PROFESSOR C. W. BENTON.

Grammar and Reader.....	Bocher's Otto.....	Benton.....	54	Sophom.....	29	I.
Classical French Literature.....	Racine, etc.....	".....	55	Senior.....	13	II.
Compositions.....	La Fontaine.....	".....	55	Senior.....	13	II.
History of France.....	Fleury.....	".....	55	Senior.....	13	II.
Grammar and Reader, 1st 2/3.....	Bocher.....	".....	53	Sophom.....	15	II.
Grammar, 2d 2/3.....	".....	".....	53	Sophom.....	11	II.
Philosophy of Art.....	Taine.....	".....	54	Senior.....	11	II.
History of Art in Italy.....	".....	Benton.....	54	Senior.....	11	II.
Modern Drama.....	Scribe.....	".....	54	Senior.....	11	II.

Subjects.	Text Books.	Instructors.	No. of Exercises.	Class.	No. of Students.	Time.
FRENCH.—Continued.		PROF. C. W. BENTON.				
Grammar and Reader.....	Bocher.....	Benton.....	55	Sophom....	20	III
Fables.....	La Fontaine.....					
Musiciens Celebres.....	Clement.....	".....	50	Senior.....	8	III
Compositions.....	Victor Hugo.....					
The Romantic School.....	Vigny.....					
Cinq Mars.....	Lectures.....					
Literature of the XIX Century						
LATIN.		PROF. J. BROOKS in charge.				
Horace.....	Chase & Stuart.....	Hutchinson.....		Sophom....	13	I.
Livy and History.....	Lincoln.....	Brooks.....	57	Freshm....	23	I.
Cicero.....	Chase & Stuart.....	Hutchinson.....		Sub Fresh	23	I.
Exam. on Ent. and Condition.....		Brooks and Hutchinson.....			117	I.
Plautus.....	Harrington.....	Hutchinson.....	50	Junior....	6	II.
Sallust.....		".....	50	Freshm....	26	II.
Virgil.....	Frieze.....	".....	50	Sub Fresh	25	II.
Examination on Condition.....		Brooks and Hutchinson.....			46	II.
Tacitus and Plautus.....	Harrington.....	Brooks.....	56	Sophom....	8	III.
Virgil.....	Frieze.....	Hutchinson.....	56	Sub Fresh	21	III.
Examination on Condition.....		".....			3	III.
GREEK.		PROF. J. BROOKS, D. D.				
Homer's Iliad, Etc.....	Boise.....	Brooks.....	55	Junior....	3	I.
Lectures on Homer.....		".....	3	".....	3	I.
Xenophon's Memorabilia.....	Winans.....	Hutchinson.....	55	Freshm....	8	I.
Grammar and Reader.....	Brooks.....	".....	60	Sub Fresh	6	I.
Exam. for Ent. and Condition.....		Brooks and Hutchinson.....			20	I.
Æschylus' Prometheus.....		Brooks.....	48	Sophom....	7	II.
Essays on Prometheus.....	Mather.....	".....	21	".....	7	II.
Xenophon's Memorabilia.....		Hutchinson.....	50	Freshm....	8	II.
Grammar and Anabasis.....	Winans.....	Brooks.....	53	Sub Fresh	6	II.
Examination on Conditions.....	Brooks.....	".....			10	II.
Plato's Apologue, Crito, etc.....	Neale.....	".....	50	Sophom....	7	III.
Essays on Plato.....		".....	14	".....	7	III.
Demosthenes' Orations.....	Heslop.....	Hutchinson.....	56	Freshm....	7	III.
Xenophon's Anabasis.....	Boise.....	Brooks.....	57	Sub Fresh	4	III.
Examination on Conditions.....		".....			2	III.
MENTAL AND MORAL PHILOSOPHY.		MR. T. PEEBLES.				
History of Philosophy.....	Lectures.....	Peebles.....	50	Senior.....	21	I.
Ethics.....	Calderwood.....	".....				
	Lectures, $\frac{1}{2}$ .....	".....	53	Senior.....	21	II.
Logic.....	McCosh.....	".....	54	Junior.....	19	II.
Natural Theology.....	Lectures.....	".....	18	Senior.....	10	III.
Psychology.....	Lectures.....	".....	54	Junior.....	15	III.
HISTORY.		MR. T. PEEBLES in charge.				
Ancient, sections.....	Barnes.....	Peebles.....	90	Sub Fresh	48	I.
Mediæval.....	Thalheimer.....	".....	22	Freshm....	42	II.
Modern.....	Lectures.....	".....	22	Sophom....	23	II.
POLITICAL SCIENCE, ETC.		MR. WM. W. FOLWELL.				
History of Civilization.....	Guizot.....	Folwell.....	35	Junior.....	18	I.
General Philology.....	Lectures.....	".....	20	".....	18	I.
Civil Government.....	De Tocqueville.....	".....		Senior.....	17	II.
Constitution of the U. S.....	Lectures.....	".....	29	".....	17	II.
Constitution of Minnesota.....	".....	".....	10	".....	17	II.
International Law.....	".....	".....	10	".....	17	II.
Political Economy.....	".....	".....	41	".....	24	III.
National Economy.....	".....	".....	6	".....	24	III.

Subjects.	Text Books.	Instructors.	No. of Exercise.	Class.	No. of Students.	Term.
<b>RHETORIC AND ELOCUTION. PROFESSOR M. L. SANFORD.</b>						
Orations .....		Sanford .....	55	Senior .....	20	I.
Elocution .....		" .....	80	" .....	20	I.
Orations .....		" .....	39	" .....	13	I.
Elocution .....		" .....	26	" .....	13	I.
Elocution .....		" .....	60	Sophom.....	30	I.
Compositions.....		" .....	10	Sub Fresh	66	I.
Orations .....		Sanford .....	63	Senior .....	21	II.
Elocution .....		" .....	84	" .....	21	II.
Orations .....		" .....	30	Junior.....	10	II.
Elocution .....		" .....	20	" .....	10	II.
Rhetoric.....	Hill.....	" .....	60	Sophom.....	24	II.
Compositions.....		" .....		" .....	39	II.
Elocution .....		" .....		Sub Fresh	67	II.
Orations .....		Sanford .....	92	Senior .....	23	III.
Elocution .....		" .....	92	" .....	23	III.
Orations .....		" .....	60	Junior.....	20	III.
Elocution .....		" .....	60	" .....	20	III.
Compositions.....		" .....	84	Sophom.....	28	III.
Elocution .....		" .....	12	Freshm.....	32	III.
<b>PUBLIC HEALTH. PROFESSOR C. N. HEWETT, M. D.</b>						
Sanitary Science.....	Lectures.....	Hewitt.....	6	Senior .....	21	III.
School Hygiene.....	" .....	" .....	6	Sub Fresh	65	I.
<b>INDUSTRIAL DRAWING. PROFESSOR W. A. PIKE in charge.</b>						
Draughting.....	Pike and Decker	Pike, Decker and Waitt.....	55	Freshm....	26	I.
Descriptive Geometry.....	Pike Prints.....	Pike, Waitt and Decker.....	57	Sophom....	7	II.
Drawing .....	Pike and Decker	Pike, Waitt and Decker.....	51	Sub Fresh	35	II.
Drawing .....	Pike and Decker	Pike.....	51	Artisans..	12	II.
Drawing .....		Pike and Waitt	57	" .....	10	III.
Drawing .....		" " "	57	Special....	3	III.
Drawing .....	Pike and Decker	" .....	49	Artisan,D	47	III.
<b>AGRICULTURE. PROFESSOR E. D. PORTER.</b>						
No regular instruction this year. One student was directed in his studies.						
<b>CIVIL AND MECHANICAL ENGINEERING AND ARCHITECTURE. PROFESSOR WM. A. PIKE.</b>						
Elements of Mechanics.....	Goodive.....	Pike.....	53	Jun'r M E	1	I
Curves, Leveling, Etc.....	Henck.....	Waitt.....	54	" C E	5	I
Architecture.....		Pike.....		" Arch	1	I
Field Work.....		Waitt.....	54	Junior.....	4	I
Arches and Hydraulics .....	Cain and Box...	Pike.....	54	Sen. C E	3	I
Stereotomy.....		Waitt.....	54	" " "	3	I
Drawing .....		Pike.....	47	" " "	3	I
Mechanics .....	Rankine.....	Waitt.....	7	Junior....	4	II.
Descriptive Geometry.....	Watson.....	" .....	51	" .....	5	II.
Roofs, Etc.....	Pike Prints.....	Pike.....		Senior.....	3	II.
Drawing .....		" .....	54	" .....	3	II.
Mechanics, Dynamics.....	Rankine.....	" .....	54	Junior....	2	II.
Mechanics, Statics.....	Rankine.....	Waitt.....	1	Junior....	2	III.
Drawing .....		Pike.....	57	" .....	2	III.
Topography, Etc.....		Waitt.....	50	" .....	2	III.
Designs, Etc.....		Pike and Waitt	47	Senior.....	3	III.
Drawing .....		Pike.....	47	" .....	3	III.
Surveying.....	Lect. & field w..	Waitt.....	20	Fresh.....	37	III.
<b>SHOP WORK. PROFESSOR WM. A. PIKE in charge.</b>						
Vise Work.....		Decker.....	55	Art. & M E	4	II.
Forge Work.....		" .....	25	" " "	7	II.
Wood Work.....		" .....	56	" " "	8	III.
<b>MILITARY SCIENCE. Professorship vacant.</b>						
<b>MUSIC. MR. WM. H. LEIB.</b>						
Choral Lessons.....	Lectures.....	Leib.....	20	[At Large..]	57	I & II

## APPENDIX "D."

STATE EXPERIMENTAL FRUIT FARM,  
EXCELSIOR, MINN., Nov. 1, 1884.

*To the President of the State University,*

SIR: The law requires that I, as superintendent of State fruit farm, report to you, on or before the first day of November of each year, the progress in fruit culture on said farm.

I am happy to state that this year has been a fruitful year and that the yield of apples was about seventy bushels, all of which we cut and planted the seed—the object being to grow new hardy varieties adapted to our climate, and especially long-keepers of good quality and hardy in tree, of which we now have a lack—this being the third planting. The trees of the first planting are now two years old, and those deemed worthy will be ready to reset a year from next spring, as we grow them until three years old to cull out the tender and unpromising ones. And yet after the most careful culling, it is not to be expected that the most promising ones will all produce first-class fruit—say one in fifty, as that will about tally with our gain from our own growing of seed; though the chances will be a little better from seed grown in the State orchard, as there are no inferior varieties there to adulterate.

Though but one in ten thousand should prove a success, the State could well afford to foot the bill. I lost more than fifty thousand before I got the Wealthy apple, and all at my own expense. Those, however, were from Eastern and Southern seed; but from our own growing of seed the results have been truly encouraging, some forty varieties worthy of culture in any State, so that the outlook yearly brightens for the horticultural future of Minnesota.

But I am sorry to report that the trees from the second planting of seed were mostly lost, cut off near the ground when they

first came up, and no trace left as to what did it, whether worms or animals.

The pear culture with us thus far is a failure. No American or European pear has stood our extreme winters, nor have we been able to devise any process of culture which has helped in this matter. As a last resort we have top-grafted some of the most hardy of the Russian pears on the American mountain ash, that being the stock on which the pear has done best in time past, and has stood when all else failed. But the last winter took off all the trees grafted with other than the Russian pears; we then regrafted with Russian pears, and now await the result of another extreme winter.

Grapes and other small fruits are with us a success where soil, location and proper care are combined. I shall not stop to pass judgment as to which of each class is the best. \* \* \* \*  
As to the peach we have grown and fruited it successfully, but the winter protection required makes it a dear luxury.

With respect,

PETER M. GIDEON,  
Superintendent of State Fruit Farm.