

BIENNIAL REPORT

(NO. 12 IN SERIES)

OF

THE BOARD OF REGENTS

OF

THE UNIVERSITY OF MINNESOTA,

TO THE GOVERNOR,

FOR THE

FISCAL YEARS 1879 AND 1880, ENDING NOVEMBER 30.

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TRANSMITTED TO THE LEGISLATURE AT THE TWENTY-SECOND  
(FIRST BIENNIAL) SESSION, 1881.

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ST. PETER :  
J. K. MOORE, STATE PRINTER.  
1881.

The present University "charter" was enacted by the legislature Feb. 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 first biennial report is No. 12 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 1879 was printed separately, no other reports of or to the Board being printed in that year.

LIBRARY  
of the  
Division of Horticulture,  
U. M.

THE UNIVERSITY OF MINNESOTA,  
OFFICE OF THE BOARD OF REGENTS,  
December 10, 1880. }

*To His Excellency John S. Pillsbury,  
Governor of Minnesota.*

SIR:—In compliance with law I have the honor to forward herewith the first biennial report of the Board of Regents for the fiscal years 1879 and 1880, ending November 30.

Very respectfully,

Your obedient servant,

HENRY H. SIBLEY,  
President.

## THE BOARD OF REGENTS.

The HON. WM. R. MARSHALL, St. Paul.....	1881
The HON. A. J. EDGERTON, M. A., Kasson.....	1881
The HON. RICHARD CHUTE, Minneapolis.....	1881
The HON. HENRY H. SIBLEY, St. Paul.....	1882
The HON. THOMAS S. BUCKHAM, M. A., Faribault.....	1882
The HON. GREENLEAF CLARK, M. A., St. Paul.....	1883
The HON. O. V. TOUSLEY, M. A., Minneapolis.....	1883

*and ex officio,*

The Governor of the State,

The HON. JOHN S. PILLSBURY, Minneapolis.

The State Superintendent of Public Instruction,

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

The President of the University,

WM. W. FOLWELL, M. A., Minneapolis.

### THE OFFICERS OF THE BOARD ARE:

President—The HON. H. H. SIBLEY.

Recording Secretary and Treasurer—The HON. RICHARD CHUTE.

Corresponding Secretary—WILLIAM W. FOLWELL.

### THE STANDING COMMITTEES ARE:

Executive Committee—Regents PILLSBURY, CHUTE and MARSHALL.

On Faculty and Courses of Study—Regents SIBLEY, TOUSLEY, BURT, BUCKHAM and EDGERTON.

On College of Agriculture—Regents MARSHALL, BUCKHAM and EDGERTON.

Auditing Committee—Regents MARSHALL and CLARK.

### MEETINGS.

The annual meeting is fixed by law for the second Tuesday in December. Other meetings occur in the spring recess and on Commencement Day.

The executive committee meets regularly near the close of each month.

# THE GENERAL FACULTY.

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WILLIAM W. FOLWELL, INSTRUCTOR,  
*Political Science.*

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

NEWTON H. WINCHELL, PROFESSOR,  
*State Geologist.*

CHAS. N. HEWITT, M. D., PROFESSOR, (non-res.),  
*Public Health and Hygiene.*

JOHN G. MOORE, PROFESSOR,  
*German.*

MOSES MARSTON, PH. D., PROFESSOR,  
*English.*

CHRISTOPHER W. HALL, PROFESSOR,  
*Geology, Mineralogy and Biology.*

JOHN C. HUTCHINSON, ASS'T PROFESSOR,  
*Greek and Mathematics.*

JOHN S. CLARK, ASS'T PROFESSOR,  
*Latin.*

MATILDA J. CAMPBELL, INSTRUCTOR,  
*German and English.*

MARIA L. SANFORD, ASS'T PROFESSOR,  
*Rhetoric and Elocution.*

WM. A. PIKE, C. E., PROFESSOR,  
*Engineering and Physics.*

JOHN F. DOWNEY, PROFESSOR,  
*Mathematics and Astronomy.*

JAMES A. DODGE, PH. D., PROFESSOR,  
*Chemistry.*

ALEXANDER T. ORMOND, PROFESSOR,  
*Mental and Moral Philosophy and History.*

CHAS. W. BENTON, PROFESSOR,  
*French.*

WM. H. LEIB, INSTRUCTOR,  
*Vocal Music.*

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*Military Science.*

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*Agriculture.*

The Board expects to fill the chair of Agriculture at a very early day with a person eminently fitted for the position. Also to secure a satisfactory detail to the department of Military Science.

EMPLOYEES.

C. M. TERRY, Assistant State Geologist.  
 WARREN UPHAM, Assistant State Geologist.  
 CLARENCE L. HERRICK, Assistant, Museum and Survey.  
 CHARLOTTE A. ROLLIT, Assistant Librarian.  
 THOMAS BUDDS, Farm Hand.  
 FRED. C. BOWMAN, Assistant in Chemical Laboratory, 1879-80.  
 ALBERT W. RANKIN, " " " " "  
 C. F. SIDENER, " " " " 1880.  
 J. F. BRYANT, Janitor, Main Building, 1879.  
 WM. C. BRYANT, " " " 1880.  
 WM. H. CHAMBERS, Fireman, Main Building.

The Chair of Agriculture has since been filled by the election of Prof. Edward D. Porter, of Delaware College, Newark, Del.

HORACE B. GREBLEY, Janitor, Agricultural College,	1879.
ALEX. H. NUNN, " " "	1880.
WM. H. SAVIDGE, Carpenter.	
GEORGE S. GRIMES, Superintendent Exp. Farm.	1880.
W. J. BARRETT, in charge of Plant House.	

Most of the above are or have been students.

Many other students were employed by the month, day or hour, on the Experimental Farm and elsewhere.

Such changes as have been made in the Faculty since the last printed report are specified in the report of President Folwell to the Superintendent of Public Instruction.

#### CHANGES IN THE BOARD OF REGENTS.

Several changes have been made in the Board since the last report in 1878.

In December, 1878, Hon. A. A. Harwood, of Austin, resigned his office, and the Hon. A. J. Edgerton, of Kasson, was appointed by the Governor to fill the vacancy. During the session of the Legislature of 1879, Regents Sibley and Buckham were re-appointed for the term of three years.

On the 9th day of April, 1879, the Hon. Morris Lamprey, a regent in the third year of his office, suddenly died. At a meeting of the Board of Regents held April 18, 1879, suitable resolutions of regret and condolence were adopted.

The Hon. Greenleaf Clark, of St. Paul, was appointed by the Governor on the 15th of December, 1879, to fill the vacancy occasioned by the death of Regent Lamprey.

The Hon. Paris Gibson resigned on the 27th of December, 1879, when near the end of his second term of service. On the 28th of February, 1880, the Hon. O. V. Tousley was appointed for the term of three years and the Board is now full.

#### GRADUATES.

At the seventh annual commencement held June 5, 1879, degrees were conferred upon twenty-six persons, and at the eighth annual commencement, June 3, 1880, seventeen graduates received their appropriate degrees. The degree of Master of Arts was also conferred upon Graham Cox Campbell, a former baccalaureate of the University. The total number of the Alumni is ninety-four, of whom twenty-one are women.

You are respectfully referred to the annexed report of the President of the University for information as to enrolment, attendance and classification of students during the time covered by this report.

#### BUILDINGS.

No new buildings have been erected, but the growth and increasing wants of the University imperatively demand additional accommodations.

Among the most pressing wants of this kind is a building for mechanical and industrial instruction. As military science is required to be taught, the rigor of our winters demands the erection of a suitable building for drill and military exercises, which could also be used as a gymnasium for the students.

The general museum has outgrown the capacity of the two rooms allotted to it, and in order to place it in a condition of efficiency, as well as to facilitate the acquisition and classification of new specimens, there should be provided without delay, a special fire proof building, for these invaluable collections. Insurance can pay for the mere loss of buildings, but it cannot compensate the State for the loss of specimens that can never be replaced.

It is apparent that to give Astronomy the prominence it should have in the curriculum of the University, there must be an observatory. The erection of such a structure would doubtless secure co-operation and aid from citizens of our own and of other States, who are devotees of this noble science, and pecuniarily able to contribute to the leading institution of the State such assistance as would place it abreast of other Universities and colleges of the first rank.

The library, now consisting of fourteen thousand volumes, is in need of more space, and this should be provided by the construction of a separate fire proof building, where this valuable collection would be secure against accident.

The main building and agricultural college require to be supplied with sewers and gas.

Water has been introduced into the building, and the stand pipes with hose for fire protection have been provided.



## THE CAMPUS.

The proceedings for the condemnation of grounds for the enlargement of the campus, as authorized by law, have been prosecuted to such an extent that the commissioners have made their awards. Some appeals therefrom have been taken, but the parties generally are satisfied with the decision of the commissioners, and settlements will be made with parties concerned as soon as conflicting claims can be adjusted. The appropriation made by the last legislature will not be sufficient to liquidate the claims that have been allowed. Precisely what additional amount may be required cannot be determined until after the decisions of the Court have been made public. This beautiful site, surpassing any other in the Union, will for all time to come evince the wisdom and foresight of the legislature that provided for its enlargement.

## GEOLOGICAL AND NATURAL HISTORY SURVEY.

The assignment of Prof. Winchell solely to this work, and the appointment of assistants in the field and museum, have secured the important results that were anticipated. For full particulars you are respectfully referred to the report of the State Geologist.

## AGRICULTURAL COLLEGE AND FARM.

The report of Prof. Lacy for 1879 details the work of that year. Since he vacated the chair, Mr. Geo. S. Grimes has been temporarily in charge of the farm. A part of the ground occupied by this farm has become too valuable for such use, and the extension of the Chicago, Milwaukee & St. Paul Railway diagonally through it, has materially diminished its availability for farming purposes. It would be well for the Legislature to authorize the Regents to sell certain portions of this farm and invest the proceeds in lands better adapted to experiments in the agricultural department. The question of damage to the farm by the railroad company is now before the courts.

## THE FRUIT FARM ON LAKE MINNETONKA.

The report of the superintendent, Mr. Peter M. Gideon, is herewith respectfully transmitted. The tract of one hundred and seventeen acres purchased under direction of the Legislature has proved a very valuable investment. The experiments already commenced promise good results.

## FINANCES.

The reports of the treasurers of the University for the past two years are herewith transmitted. All the items have been examined and compared with the vouchers by the auditing committee, and have been found to be correct. These exhibits show the receipts and disbursements in detail. The total sales of land pertaining to the various University funds, exclusive of the salt spring lands, as reported by the State Auditor, amount to \$524,668.94.

The interest on this fund, together with the tax of one-tenth of a mill, and the five dollar fee paid by students for incidentals, constitute the resources of the University for current expenses. Since the annual appropriation for the payment of the salary of State Geologist ceased, the expenses of the geological and natural history survey have been paid entirely from the sales of salt spring lands. Full particulars of the receipts and disbursements will be found in the several reports of the treasurers.

## PROSPECTS OF THE UNIVERSITY.

The Board of Regents is composed of citizens appointed by the Governor, by and with the consent of the Senate. Some of the present members have held that position for many years, while others have been lately appointed. All have been selected by the Chief Executive of the State for their supposed fitness to manage and control the affairs of the University. They receive no compensation for their services, and having in view solely the interests of the institution, their unanimous recommendations to the Legislature through your Excellency, are surely entitled to a favorable consideration. Heretofore the State has not been in a condition financially to appropriate more money than was necessary to meet the current expenses of the University. The Board has been, consequently, unable to respond to the demands of the professors, for means and appliances requisite to ensure the advancement of the students in their respective departments. In the judgment of the Board, there cannot be longer delay in liberal appropriations for the buildings hereinbefore recommended, and for a general enlargement of the operations of the institution, without remanding it to a lower rank than it now holds in the public estimation.

With the rapid advance of Minnesota in population and wealth, there must be furnished to her sons and daughters, all the facilities for higher education that are offered by the Universities and Col-

leges of the older States. To say nothing of the great University of Michigan, which is the pride and glory of that State, our immediate neighbor, Wisconsin, is expending eighty thousand dollars annually for the current expenses of her leading educational institution, while the buildings are on an extensive scale, and adapted to the wants of the several branches of study.

The University has made good progress from year to year, and is in a prosperous condition. The co-education of the sexes, which is a special feature, has proved a complete success. The changes made in the *personnel* of the faculty during the past year have conduced to more perfect harmony and, the Board believes, efficiency in every department.

Drawings of the buildings recommended in this report are being prepared, and will be transmitted to your Excellency as soon as completed, with estimates of cost for the information of the Legislature at the approaching session.

Respectfully submitted,

HENRY H. SIBLEY,

President, Board of Regents.

# TREASURERS' REPORTS.

## I.

### TREASURER GIBSON'S REPORT FOR 1879.

PARIS GIBSON, *Treasurer, in account with the Board of Regents of the University of Minnesota.*

#### CURRENT EXPENSE.

		DR.	
		To balance from last statement.....	\$ 294 28
1878.	Dec. 23.	To cash from State Treasurer.....	3,000 00
1879.	Jan. 29.	To cash from State Treasurer.....	2,800 00
	Feb. 15.	To cash from State Treasurer.....	1,000 00
	Feb. 25.	To cash from State Treasurer.....	2,800 00
	April 1.	To cash from State Treasurer.....	3,000 00
	April 18.	To cash from State Treasurer.....	1,000 00
	April 30.	To cash from State Treasurer.....	2,800 00
	June 28.	To cash from State Treasurer.....	9,000 00
	Sept. 8.	To cash from State Treasurer.....	2,500 00
	Oct. 2.	To cash from State Treasurer.....	3,000 00
	Oct. 24.	To cash from State Treasurer.....	2,500 00
	Nov. 8.	To cash from State Treasurer.....	4,200 00
	Dec.	To cash from State Treasurer.....	3,500 00
	Dec.	To cash from State Treasurer.....	2,500 00
		CR.	
1879.		No. Voucher.	
	Feb. 7.	By cash, interest..... 54	\$ 42 84
	Mar. 13.	By cash, interest..... 63	10 54
	April 2.	By cash, interest..... 102	6 23
	July 10.	By cash, interest..... 230	121 51
	Dec. 3.	By cash, interest..... 424	68 59
		By balance, incidentals.....	2,022 26
		By balance, salaries for instruction.....	26,192 10
		By balance, employes and workmen.....	1,162 80
		By balance, experimental farm.....	1,449 11
		By balance, advertising.....	336 81
		By balance, repairs.....	1,482 88
		By balance, fuel.....	889 33
		By balance, plant house.....	180 42
		By balance, chemical laboratory.....	579 64

By balance, museum of technology.....		15 68
By balance, department of physics.....		84 80
By balance, library expense.....		500 00
By balance, library faculty fund.....		859 80
By balance, librarian's fund.....		2 65
By balance, reading room.....		186 93
By balance, condemned lands.....		200 00
By balance, furniture.....		569 22
To balance, students' fees.....	1,280 00	
To balance.....		8,220 14
		<hr/>
	\$45,174 28	\$45,174 28

SALARIES FOR INSTRUCTION.

		CR.	No. Voucher.	
1878.				
Dec. 22.	By cash, Thompson.....		3	\$ 8 00
Dec. 22.	By cash, Thompson.....		6	12 20
Dec. 23.	By cash, faculty, Dec. payment.....		7	2,530 00
Dec. 23.	By cash, Bowman.....		8	15 00
1879.				
Jan. 31.	By cash, faculty, Jan. payment.....		24	2,565 00
Jan. 31.	By cash, Bowman.....		25	15 00
Feb. 28.	By cash, faculty, Feb. payment.....		36	2,565 00
Feb. 28.	By cash, Bowman.....		37	15 00
Feb. 28.	By cash, Miss Campbell.....		45	150 00
Jan. 15.	By cash, President Folwell.....		49	500 00
March 11.	By cash, Laing.....		62	40 00
Feb. 15.	By cash, Thompson.....		71	5 90
March 15.	By cash, Thompson.....		77	41 00
March 31.	By cash, faculty, March payment.....		89	2,565 00
March 31.	By cash, Bowman.....		90	15 00
April 30.	By cash, faculty, April payment.....		121	2,565 00
April 30.	By cash, Bowman.....		122	15 00
May 12.	By cash, Moore.....		134	60 00
April 30.	By cash, Miss Campbell.....		153	100 00
May 31.	By cash, faculty, May payment.....		157	2,565 00
May 31.	By cash, Bowman.....		158	15 00
June 5.	By cash, faculty, June payment.....		174	2,565 00
June 5.	By cash, Marston.....		175	40 00
June 5.	By cash, Miss Campbell.....		176	50 00
June 5.	By cash, Bowman.....		177	15 00
June 12.	By cash, Thompson.....		183	30 00
Sept. 30.	By cash, faculty, Sept. payment.....		316	2,295 00
Oct. 9.	By cash, Rankin.....		326	15 00
Oct. 31.	By cash, faculty, Oct. payment.....		373	2,295 00
Oct. 31.	By cash, Rankin.....		374	15 00
Nov. 29.	By cash, faculty, Nov. payment.....		422	2,295 00
Nov. 29.	By cash, Rankin.....		423	15 00
Nov. 29.	By cash, Miss Chidester.....		426	50 00
Dec. 15.	By cash, advanced salary, Thompson.....		474	150 00
	Balance, current expense.....			\$26,192 10
				<hr/>
				\$26,192 10 \$26,192 10

EMPLOYES AND WORKMEN.

		CR.	No. Voucher.	
1878.				
Dec. 23.	By cash, Chambers.....		13	\$ 45 00
Dec. 23.	By cash, Wood.....		14	18 00
Dec. 23.	By cash, Bryant.....		15	65 00

1879.		No. Voucher.	
Jan. 31.	By cash, Chambers.....	27	45 00
Jan. 31.	By cash, Bryant.....	28	65 00
Feb. 28.	By cash, Greeley.....	41	18 00
Feb. 28.	By cash, Chambers.....	42	45 00
Feb. 28.	By cash, Bryant.....	43	65 00
Feb. 7.	By cash, Greeley.....	53	18 00
Feb. 14.	By cash, Bryant.....	70	13 20
March 31.	By cash, Greeley.....	95	18 00
March 31.	By cash, Chambers.....	96	45 00
March 31.	By cash, Bryant.....	97	65 00
April 30.	By cash, Bryant.....	126	65 00
April 30.	By cash, Greeley.....	127	18 00
May 17.	By cash, Chambers.....	144	36 50
May 31.	By cash, Bryant.....	160	65 00
May 31.	By cash, Greeley.....	161	18 00
June 5.	By cash, Bryant.....	179	65 00
June 5.	By cash, Greeley.....	180	18 00
Sept. 30.	By cash, Greeley.....	319	18 00
Sept. 30.	By cash, Bryant.....	320	63 70
Oct. 8.	By cash, Chambers.....	354	13 00
Oct. 31.	By cash, Bryant.....	380	63 70
Nov. 7.	By cash, Chambers.....	396	36 00
Oct. 31.	By cash, Greeley.....	405	18 00
Nov. 29.	By cash, Bryant.....	418	63 70
Nov. 29.	By cash, Greeley.....	419	18 00
Nov. 29.	By cash, Chambers.....	420	48 00
Balance to current expense.....			\$1,152 80
			<u>\$1,152 80</u>
			\$1,152 80

## EXPERIMENTAL FARM.

## DR.

1879.		
June 30.	To cash, sales.....	\$315 82
Dec. 10.	To cash, sales.....	414 58
Dec. 16.	To cash, fuel account.....	103 79
Dec. 16.	To cash, incidentals account.....	40 99

## CR.

1878.		No. Voucher	
Dec. 23.	By cash, Eustis.....	55	55 00
1879.			
Jan. 31.	By cash, Budds.....	31	\$ 41 00
Feb. 28.	By cash, Budds.....	44	41 00
March 31.	By cash, Budds.....	94	41 00
April 30.	By cash, Budds.....	124	41 00
April 30.	By cash, Pemberton.....	125	36 00
May 31.	By cash, Budds.....	162	41 00
May 31.	By cash, Pemberton.....	163	45 00
June 13.	By cash, printing.....	198	6 50
June 13.	By cash, printing.....	200	10 50
June 27.	By cash, Calladine.....	204	14 50
July 3.	By cash, Heath.....	206	12 00
July 3.	By cash, Nunn.....	209	29 96
July 3.	By cash, Schmidt.....	211	25 58
June 30.	By cash, account current.....	213	441 69
June 30.	By cash, sundries.....	215	19 17
June 30.	By cash, sundries.....	216	18 45
June 30.	By cash, horse.....	218	105 00
June 30.	By cash, Larraway & King.....	223	12 00

		No. Voucher.		
June	30.	By cash, Pemberton.....	226	45 00
June	30.	By cash, Budds.....	227	41 00
July	10.	By cash, Greeley.....	235	8 00
Aug.	9.	By cash, Pemberton.....	245	45 00
Aug.	9.	By cash, Budds.....	246	41 00
Aug.	12.	By cash, Schmidt.....	248	38 73
Aug.	12.	By cash, Nunn.....	249	39 46
Aug.	12.	By cash, West.....	250	31 25
Aug.	13.	By cash, Richards & Cooley.....	255	21 46
Sept.	10.	By cash, West.....	281	8 75
Sept.	10.	By cash, Nunn.....	282	38 00
Sept.	10.	By cash, Masters.....	283	10 50
Sept.	11.	By cash, Wilcox, Dimond & Co.....	284	8 00
Sept.	11.	By cash, Wilcox, Dimond & Co.....	285	11 00
Sept.	12.	By cash, Budds.....	292	41 00
Sept.	12.	By cash, Wilson.....	293	24 00
Sept.	12.	By cash, Barrett.....	294	24 75
Sept.	12.	By cash, Pemberton.....	295	45 00
Sept.	13.	By cash, Schmidt.....	296	29 23
Sept.	30.	By cash, Budds.....	317	41 00
Sept.	30.	By cash, Pemberton.....	318	45 00
Oct.	8.	By cash, Barrett.....	353	13 50
Oct.	10.	By cash, Nunn.....	362	6 87
Oct.	10.	By cash, Nunn.....	363	9 86
Oct.	10.	By cash, Wilson.....	364	18 70
Oct.	11.	By cash, Masters.....	365	10 20
Oct.	13.	By cash, Wilcox, Dimond & Co.....	367	7 30
Oct.	14.	By cash, Schmidt.....	368	9 49
Oct.	16.	By cash, Aultman & Co.....	369	120 00
Oct.	31.	By cash, Pemberton.....	378	45 00
Oct.	31.	By cash, Budds.....	379	41 00
Nov.	29.	By cash, Budds.....	342	41 00
Dec.	10.	By cash, account current.....	439	325 66
Dec.	10.	By cash, incidental.....	442	2 53
Balance to current expense .....			1,449 11	
			\$2,324 29	\$2,324 29

PLANT HOUSE.

DR.

1879.	June	30.	To cash.....	\$ 70 45
	Dec.	10.	To cash.....	31 75

CR.

		No. Voucher.		
1879.	Jan.	29.	By cash, Wood.....	\$31 39
	Feb.	6.	By cash, Barrett.....	8 06
	March	6.	By cash, Barrett.....	12 76
	March	10.	By cash, Roe.....	11 81
	April	9.	By cash, Roe.....	11 85
	April	9.	By cash, Barrett.....	13 35
	May	14.	By cash, Barrett.....	15 00
	May	15.	By cash, Roe.....	9 15
	June	5.	By cash, Barrett.....	14 18
	June	5.	By cash, Roe.....	10 40
	July	3.	By cash, Barrett.....	20 70
	July	3.	By cash, Roe.....	9 30
	Aug.	12.	By cash, Roe.....	10 50
	Aug.	12.	By cash, Barrett.....	17 78
	Sept.	10.	By cash, Roe.....	10 25

		No. Voucher.		
Sept.	12. By cash, Barrett .....	289	4	95
Oct.	8. By cash, Barrett .....	351	9	45
Oct.	8. By cash, Roe .....	352	11	40
Nov.	7. By cash, Roe .....	389	10	20
Nov.	7. By cash, Barrett .....	394	10	50
Dec.	5. By cash, Barrett .....	435	10	88
Dec.	5. By cash, Roe .....	436	6	00
Dec.	10. By cash, account current .....	441	12	77
Balance current expense .....			180	42
			<u>\$282</u>	<u>\$282</u>
			62	62

## LIBRARY EXPENSE.

		CR.	No. Voucher.		
Dec.	23. 1878. By cash, Rollit .....		11	\$50	00
Jan.	31. 1879. By cash, Rollit .....		26	50	00
Feb.	28. By cash, Rollit .....		40	50	00
Mar.	31. By cash, Rollit .....		93	50	00
April	30. By cash, Rollit .....		123	50	00
May	31. By cash, Rollit .....		159	50	00
June	5. By cash, Rollit .....		178	50	00
Sept.	30. By cash, Rollit .....		321	50	00
Oct.	31. By cash, Rollit .....		377	50	00
Nov.	29. By cash, Rollit .....		417	50	00
To balance to current expense .....				500	00
				<u>\$500</u>	<u>\$500</u>
				00	00

## LIBRARY (FACULTY FUND.)

		DR.		
Feb.	1879. To cash .....		79	50

  

		CR.	No. voucher.		
May	15. 1879. By cash, books, Stechert .....		140	\$	4 40
April	12. By cash, books, Colton & Son .....		109	55	39
July	5. By cash, books, Bean, Wistar & Wales .....		234	4	43
Sept.	23. By cash, books, Peckham .....		302	3	85
Oct.	6. By cash, books, Pott, Young & Co. ....		325	847	73
Oct.	7. By cash, books, Peckham .....		348	15	00
Oct.	7. By cash, books, Sidney & Rider .....		350	8	50
To balance current expense .....				850	80
				<u>\$939</u>	<u>\$939</u>
				30	30

## LIBRARIAN'S FUND.

		DR.		
Dec.	10. 1879. To cash .....		\$12	00

  

		CR.	No. voucher.		
April	22. 1879. By cash, books, Colton & Son .....		219	\$8	65
Dec.	11. By cash, books, Winsor .....		463	4	00
Dec.	16. By cash, books, Mrs. Smith .....		480	2	00
To balance to current expense .....				2	65
				<u>\$14</u>	<u>\$14</u>
				65	65



READING ROOM.

		CR.	No. voucher.	
1879.	Jan. 9.	By cash, periodicals.....	45	\$63 42
	Jan. 9.	By cash, periodicals.....	46	35 81
	Jan. 9.	By cash, periodicals.....	47	60 55
	Mar. 18.	By cash, Guth. German paper .....	82	5 00
	June 4.	By cash, Pioneer Press .....	172	6 00
	Dec. 11.	By cash, Guth, German paper .....	464	5 50
	Dec. 11.	By cash, Truesdall & Boutell.....	465	3 65
	Nov. 22.	By cash, Leyoldt.....	450	7 00
		To balance to current expense.....		186 93
				\$186 93      \$186 93

REPAIRS.

		DR.	
1879.	Feb. 14.	To cash, State.....	\$200 00

		CR.	No. Voucher.	
1878.	Dec. 23.	By cash, Savidge .....	4	\$ 8 25
1879.	Feb. 19.	By cash, Bicknell.....	35	2 53
	Feb. 4.	By cash, Savidge .....	50	47 70
	April 1.	By cash, Savidge .....	99	5 40
	April 2.	By cash, Cauvet & Reid .....	101	17 07
	April 12.	By cash, Savidge .....	111	28 21
	April 23.	By cash, Cauvet & Ried .....	117	11 50
	April 23.	By cash, Cauvet & Reid .....	118	3 00
	May 17.	By cash, Savidge .....	143	11 44
	June 10.	By cash, Peck.....	196	18 55
	June 9.	By cash, Savidge.....	221	9 07
	July 25.	By cash, Pond .....	240	84 13
	July 31.	By cash, Savidge .....	241	37 81
	Aug. 13.	By cash, Hoy .....	256	42 93
	Aug. 15.	By cash, Speedy .....	261	3 60
	Sept. 10.	By cash, Savidge .....	278	7 40
	Sept. 10.	By cash, Savidge .....	279	86 70
	Sept. 11.	By cash, Talbert & Whitef.....	286	89 18
	Sept. 16.	By cash, brick .....	297	10 00
	Sept. 18.	By cash, Boysen .....	299	120 00
	Sept. 25.	By cash, Wheaton, Reynolds & Co.....	311	250 00
	Sept. 25.	By cash, Kirkbride, Whittall & Wales.....	312	193 50
	Sept. 27.	By cash, Lyons .....	313	19 25
	Sept. 30.	By cash, Bisbee.....	336	28 78
	Oct. 3.	By cash, Jones & Johnson.....	340	124 05
	Oct. 7.	By cash, Cauvet & Reid .....	347	20 42
	Oct. 8.	By cash, Chambers .....	355	15 90
	Oct. 8.	By cash, Savidge .....	356	59 56
	Oct. 8.	By cash, Savidge .....	357	53 74
	Oct. 9.	By cash, Cauvet & Reid.....	358	41 85
	Oct. 9.	By cash, Clausen & Christensen.....	359	59 50
	Nov. 7.	By cash, Savidge .....	390	7 75
	Nov. 7.	By cash, Savidge .....	391	43 29
	Nov. 9.	By cash, Ball & Naylor.....	397	30 55
	Dec. 3.	By cash, Savidge .....	427	13 20
	Dec. 4.	By cash, Hoy .....	428	56 25
	Dec. 4.	By cash, Cauvet & Reid.....	429	14 35
	Dec. 11.	By cash, Bryant .....	467	6 40
		Balance to current expense .....		1,482 88
				\$1,682 88      \$1,682 88

## ADVERTISING.

CR.

1879.		Cr.	No. Voucher.	
Feb.	6.	By cash, Ariel.....	52	13 33
May	17.	By cash, postal orders for newspapers.....	142	52 50
May	28.	By cash, postal orders for newspapers.....	145	18 90
June	4.	By cash, Ariel.....	188	26 69
Aug.	19.	By cash, Wilcox, Dimond & Co.....	262	150 19
Nov.	7.	By cash, Pioneer Press.....	393	72 70
Nov.	20.	By cash, Crist.....	449	2 50
Balance to current expense.....			\$ 336 81	
			\$ 336 81	\$ 336 81

## FUEL.

CR.

1879.		Cr.	No. Voucher.	
Jan.	15.	By cash, Lane.....	19	43 75
Feb.	15.	By cash, Gibbs.....	55	26 00
Feb.	22.	By cash, Lane.....	57	45 00
April	14.	By cash, Mulford.....	112	297 00
March	28.	By cash, Lane.....	120	32 50
May	28.	By cash, Mulford.....	184	17 50
June	11.	By cash, Mulford.....	203	5 00
Dec.	5.	By cash, Armstrong & Truesdale.....	434	318 19
Dec.	10.	By cash, hauling wood.....	443	60
Dec.	16.	By cash, hauling wood.....	475	103 79
Balance to current expense.....			\$889 33	
			\$889 33	\$889 33

## MUSEUM OF TECHNOLOGY.

CR.

1879.		Cr.	No. Voucher.	
Sept.	23.	By cash, Peckham.....	304	8 06
Sept.	23.	By cash, Laura Linton.....	305	7 62
Balance to current expense.....			\$15 68	
			\$15 68	\$15 68

## DEPARTMENT OF PHYSICS.

CR.

1879.		Cr.	No. Voucher.	
March	4.	By cash, Henry & Co.....	58	11 75
Sept.	23.	By cash, Peck.....	300	3 05
Sept.	23.	By cash, Peckham.....	308	70 00
Balance to current expense.....			\$84 80	
			\$84 80	\$84 80

## CHEMICAL LABORATORY.

CR.

1879.		Cr.	No. Voucher.	
June	10.	By cash, account current.....	233	579 64
To balance current expense.....			\$579 64	
			\$579 64	\$579 64

BUILDING ACCOUNT.

DR.	
To balance from last statement.....	6,291 10

EXPERIMENTAL FARM FUND.

DR.	
To balance from last statement.....	671 87

LAND SALES FUND.

DR.	
To balance from last statement.....	813 42

SALT LAND SALES.

DR.		
1879.	To balance from last statement.....	2,893 46
July 7.	To cash, interest.....	17 72
	Balance .....	2,911 36
		<hr/> \$2,911 36    \$2,911 36

HEATING AND FURNISHING.

DR.	
To balance from last statement.....	129 41

CR.		No. voucher.	
1879.	Oct. 1.	By cash, Thos. Phillips & Co.....	422 46
	Dec. 5.	By cash, Ball & Naylor.....	7 48
		Balance .....	300 53
			<hr/> \$429 94    \$429 94

WATER SUPPLY.

DR.			
1879.	July 16.	To cash from State Treasurer .....	\$ 400 00
	Aug. 15.	To cash from State Treasurer .....	600 00
	Sept. 8.	To cash from State Treasurer .....	2,000 00

CR.		No. Voucher.	
1879.	Sept. 31.	By cash, Farmers' & Mechanics' Savings B'k.....	45 55
	Sept. 8.	By cash, Johnson .....	236 62
	Sept. 8.	By cash, Johnson .....	95 87
	Sept. 8.	By cash, Johnson .....	380 66
	Sept. 8.	By cash, MacRitchie & Nichols.....	74 52
	Aug. 21.	By cash, pay roll.....	176 62
	Aug. 25.	By cash, hydrants, &c.....	1,138 45
	Aug. 25.	By cash, Hunter .....	125 61
	Aug. 25.	By cash, pay roll.....	528 50
		Balance .....	197 60
			<hr/> \$3,000 00    \$3,000 00

## FURNITURE.

		CR.	No. Voucher.	
1879.				
Sept.	10.	By cash .....	276	146 33
Sept.	10.	By cash .....	277	53 78
Nov.	11.	By cash, Kirkbride, Whitall & Wales.....	399	18 86
Nov.	25.	By cash, A. H. Jones & Co .....	425	82 00
Dec.	4.	By cash, Barnard & Cope.....	430	241 20
Dec.	4.	By cash, Stees Bros.....	431	17 00
Dec.	8.	By cash, Speedy .....	438	10 00
		To balance to current expense .....		
			<u>\$569 22</u>	
			\$569 22	<u>\$569 22</u>

## CONDEMNED LANDS.

		DR.	
1879.			
Dec.		To cash, from State Treasurer.....	\$315 00
CR.			
1877.			
Dec.		By cash, Perkins .....	\$315 00
1879.			
Aug.	26.	By cash, Leland .....	200 00
		To balance to current expense .....	200 00
			<u>\$515 00</u>
			\$515 00

## GEOLOGICAL SURVEY.

			No. Voucher.	
		By balance from last statement.....		\$10,069 15
1878.				
Dec.	20.	By cash, Winchell, field expenses.....	2	25 00
Dec.	23.	By cash, Winchell, salary.....	9	200 00
Dec.	23.	By cash, Hall, salary.....	10	100 00
1879.				
Jan.	8.	By cash, Juni.....	17	9 00
Jan.	29.	By cash, Mayhew.....	21	15 00
Jan.	31.	By cash, Hall, salary.....	29	100 00
Jan.	31.	By cash, Winchell, salary.....	30	200 00
Feb.	28.	By cash, Hall, salary.....	38	100 00
Feb.	28.	By cash, Winchell, salary.....	39	200 00
Feb.	17.	By cash, Mayhew.....	56	10 00
Feb.	4.	By cash, repairs.....	66	7 00
March	15.	By cash, Rowley.....	76	1 87
March	31.	By cash, Winchell, salary.....	91	200 00
March	31.	By cash, Hall.....	92	100 00
April	2.	By cash, Geo. Huhn & Co .....	100	4 05
April	19.	By cash, labels.....	114	4 00
April	19.	By cash, letter head.....	115	2 00
April	22.	By cash, expense account.....	116	24 35
April	28.	By cash, Savidge.....	119	14 95
April	30.	By cash, Hall, salary.....	128	100 00
April	30.	By cash, Winchell, salary.....	129	200 00
May	8.	By cash, hammers.....	131	3 00
May	9.	By cash, Mayhew.....	132	8 25
May	13.	By cash, Hagan & Kelly.....	136	10 55
May	15.	By cash, Julien.....	139	140 00
May	15.	By cash, Whitall, Tatum & Co.....	156	69 21

		No. Voucher.	
May	31.	By cash, Winchell, salary.....	164 200 00
May	31.	By cash, Hall, salary.....	165 100 00
June	5.	By cash, Winchell, salary.....	181 200 00
June	5.	By cash, Hall, salary.....	182 100 00
May	28.	By cash, Rowley.....	185 3 15
June	10.	By cash, Herrick.....	197 50 00
June	13.	By cash, printing.....	202 12 00
June	28.	By cash, Geo. Huhn & Co.....	222 1 00
June	6.	By cash, Baldwin.....	231 22 00
July	22.	By cash, Hall.....	239 100 00
Aug.	1.	By cash, Winchell, salary.....	243 200 00
Aug.	1.	By cash, Winchell, field expenses.....	244 50 00
Aug.	12.	By cash, Herrick.....	253 24 75
Aug.	14.	By cash, Paul.....	259 10 50
Aug.	14.	By cash, Winchell, field expenses.....	260 50 00
Sept.	3.	By cash, Mayhew.....	265 49 76
Sept.	3.	By cash, Winchell, field expenses.....	266 83 80
Sept.	3.	By cash, Winchell, field expenses.....	267 50 00
Sept.	3.	By cash, Winchell, field expenses.....	268 50 00
Sept.	3.	By cash, Winchell, salary.....	269 200 00
Sept.	3.	By cash, Winchell, field expenses.....	270 35 50
Sept.	6.	By cash, Hall, salary.....	274 100 00
Sept.	9.	By cash, Dunlap.....	275 22 22
Sept.	18.	By cash, Boysen.....	298 20 00
Sept.	23.	By cash, Peckham.....	301 45 00
Sept.	23.	By cash, Peckham.....	307 65 00
Sept.	24.	By cash, Hall.....	310 76 43
Sept.	27.	By cash, Liedel.....	314 27 50
Sept.	29.	By cash, Wieland & Co.....	315 2 80
Oct.	4.	By cash, Whitall, Tatum & Co.....	322 56 05
Sept.	30.	By cash, Hall.....	327 100 00
Sept.	27.	By cash, Sawyer & Morrison.....	333 79 93
Sept.	27.	By cash, Sawyer & Morrison.....	334 4 88
Oct.	1.	By cash, Winchell, salary.....	338 200 00
Oct.	1.	By cash, Winchell, field expenses.....	339 100 00
Oct.	28.	By cash, Morrison, field expenses.....	370 20 00
Oct.	23.	By cash, Mallman, field expenses.....	371 72 48
Oct.	28.	By cash, Winchell, field expenses.....	372 50 00
Oct.	31.	By cash, Winchell, salary.....	375 200 00
Oct.	31.	By cash, Hall, salary.....	376 100 00
Nov.	1.	By cash, Mayhew.....	381 68 05
Nov.	1.	By cash, Mayhew.....	382 6 22
Nov.	1.	By cash, Morrison.....	383 5 00
Nov.	1.	By cash, Fillison.....	384 5 00
Nov.	5.	By cash, Peckham.....	387 62 79
Nov.	7.	By cash, Savidge.....	392 11 00
Nov.	12.	By cash, Boysen.....	400 15 65
Nov.	13.	By cash, Herrick.....	401 6 00
Nov.	25.	By cash, Winchell, field expenses.....	403 150 00
Nov.	28.	By cash, Sullivan & Co.....	404 3 50
Nov.	29.	By cash, Winchell, salary.....	415 200 00
Nov.	29.	By cash, Hall.....	416 100 00
Dec.	6.	By cash, Chambers.....	437 13 01
Dec.	8.	By cash, account current.....	439 680 00
Dec.	11.	By cash, Savidge.....	446 35 91
Dec.	13.	By cash, minerals.....	468 100 00
Dec.	15.	By cash, Howling.....	471 30 00
Dec.	15.	By cash, aerolite.....	472 75 30
Dec.	15.	By cash, aerolite.....	473 118 00
		By balance, museum.....	78 90

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 \$16,616 46

## MUSEUM.

		CR.	
1878.			
Dec. 30.	By cash.....		\$14 65
1879.			
March 20.	By cash.....		14 00
March 20.	By cash.....		10 00
March 22.	By cash.....		25 00
April	By cash.....		8 25
April 3.	By cash.....		7 00
	To balance to geological survey.....	78 90	
		<u>78 90</u>	<u>\$78 90</u>

## STUDENTS' FEES.

		DR.	
1879.			
Feb.	To cash.....	\$ 70 00	
Oct. 2.	To cash.....	1,000 00	
Nov.	To cash.....	130 00	
Dec. 11.	To cash.....	85 00	
		CR.	
1879.			
Dec. 11.	By cash, Randall's fees returned, No. 466.....	\$ 5 00	
	To balance current expense.....	1,280 00	
		<u>\$1,285 00</u>	<u>\$1,285 00</u>

## INCIDENTALS.

		DR.	
1879.			
Feb.	To cash, Prof. Walker's photograph.....	50	
July 24.	To cash, use of shed.....	2 50	
Sept. 19.	To cash, use of shed.....	2 50	
Sept. 20.	To cash, use of telephone.....	50	
Dec. 10.	To cash, from campus.....	13 12	
		CR.	No. Voucher.
1878.			
May 1.	By cash, lunch, regents.....	1	18 00
Dec. 31.	By cash, lunch, regents.....	16	6 25
1879.			
Jan. 13.	By cash, Bull & Naylor.....	18	25 75
Jan. 18.	By cash freight.....	20	12 54
Jan. 29.	By cash, Wood.....	22	3 27
Feb. 6.	By cash, Rockwood.....	32	17 90
Feb. 6.	By cash, Rockwood.....	33	12 00
Feb. 6.	By cash, Rockwood.....	34	8 20
March 11.	By cash, Rockwood.....	61	9 80
Jan. 18.	By cash, cartage.....	64	75
Jan. 25.	By cash, Williams.....	65	4 00
Feb. 4.	By cash, express.....	67	1 30
Feb. 4.	By cash, Janney, Brooks & Eastman.....	68	2 95
Feb. 4.	By cash, stamps.....	69	1 50
Feb. 19.	By cash, Brooks Bros.....	72	7 60
Feb. 19.	By cash, stamps.....	73	16 20
Feb. 19.	By cash, spirometer.....	74	5 00
Feb. 19.	By cash, freight.....	75	1 43

	No. Voucher.	
March 15.	By cash, Hawes & Smith.....	78 5 51
March 18.	By cash, sundries.....	79 2 20
March 18.	By cash, oil, &c.....	80 1 00
March 18.	By cash, Ball & Naylor.....	81 1 25
March 18.	By cash, stamps.....	82 5 00
March 24.	By cash, casts.....	87 40 28
March 27.	By cash, registry of deeds.....	88 75
April 3.	By cash, Hawes & Smith.....	103 8 47
April 7.	By cash, express.....	105 29 30
April 11.	By cash, Brooks Bros.....	108 10 45
April 12.	By cash, stationery.....	110 2 28
April 14.	By cash, Hensted.....	113 8 40
May 3.	By cash, organ.....	130 125 00
May 9.	By cash, Rockwood.....	133 14 00
May 12.	By cash, organ rental.....	135 8 12
May 15.	By cash, Julien.....	138 4 66
March 3.	By cash, Colton & Son.....	146 6 55
March 18.	By cash, freight.....	147 1 40
March 18.	By cash, stamps.....	148 5 90
March 18.	By cash, freight.....	149 6 61
March 31.	By cash, freight.....	150 3 85
April 11.	By cash, Rockwood.....	151 10 20
April 11.	By cash, Mattison.....	152 5 00
May 8.	By cash, express.....	154 75
May 8.	By cash, diplomas.....	155 2 28
June 4.	By cash, Tripp.....	166 6 71
June 4.	By cash, stamps.....	167 6 00
June 4.	By cash, freight.....	168 3 85
June 4.	By cash, stamps.....	169 11 00
June 4.	By cash, Tribune Co.....	170 40
June 4.	By cash, Keith.....	171 1 60
June 4.	By cash, sundries.....	173 6 10
May 29.	By cash, Brooks Bros.....	186 6 10
June 3.	By cash, Bean, Wales & Co.....	187 12 74
June 4.	By cash, Chambers.....	189 24 00
June 4.	By cash, Lundeen.....	190 30 40
June 4.	By cash, Rockwood.....	191 14 90
June 5.	By cash, Tribune Co.....	192 28 50
June 5.	By cash, Tribune Co.....	193 1 75
June 13.	By cash, printing.....	199 31 60
June 13.	By cash, printing.....	201 3 50
July 3.	By cash, Heath.....	205 4 50
July 3.	By cash, Rockwood.....	207 16 40
July 3.	By cash, Rockwood.....	207 9 45
June 30.	By cash, work on campus.....	214 6 43
June 30.	By cash, work on campus.....	217 58 66
April 22.	By cash, Colton.....	219* 3 74
June 9.	By cash, Dake.....	220 1 56
July 5.	By cash, Brooks Bros.....	224 2 50
July 5.	By cash, Prof. Brooks.....	225 2 75
July 8.	By cash, printing.....	228 16 50
July 8.	By cash, printing.....	229 2 50
March 1.	By cash, Chute.....	232 75
July 10.	By cash, Bean, Wales & Co.....	236 5 51
July 14.	By cash, Barnard & Cope.....	237 9 75
July 22.	By cash, N. W. Telephone Exchange.....	238 3 00
July 31.	By cash, Bryant.....	242 20 00
Aug. 9.	By cash, Seibert.....	247 60 00
Aug. 12.	By cash, Barrett.....	254 2 00
Aug. 13.	By cash, N. W. Telephone Exchange.....	257 3 00
Aug. 13.	By cash, Tribune Co.....	258 6 75
Aug. 19.	By cash, Bryant.....	263 13 87

		No. Voucher.	
Aug.	22.	By cash, Hawes & Smith .....	264 4 70
Sept.	4.	By cash, Bryant .....	271 50 00
Sept.	4.	By cash, Bryant .....	272 25 00
Sept.	4.	By cash, Bryant .....	273 8 30
Sept.	12.	By cash, N. W. Telephone Exchange .....	287 9 10
Sept.	12.	By cash, Barrett .....	288 2 00
Sept.	12.	By cash, Rankin .....	290 7 68
Sept.	12.	By cash, Rankin .....	291 2 92
Sept.	23.	By cash, Peckham .....	303 10 95
Sept.	23.	By cash, Peckham .....	306 5 00
Sept.	23.	By cash, Peckham .....	309 2 75
Oct.	4.	By cash, classical museum .....	323 25 30
Oct.	4.	By cash, Steiger .....	324 14 85
Aug.	9.	By cash, Bradley & Phillips .....	328 4 20
Aug.	9.	By cash, Rockwood .....	329 3 40
Aug.	9.	By cash, Davidson .....	330 3 00
Sept.	22.	By cash, Smith .....	332 16 20
Sept.	30.	By cash, Moore .....	335 2 00
Oct.	7.	By cash, stamps .....	341 20 00
Oct.	7.	By cash, Smith .....	342 6 70
Oct.	7.	By cash, stamps .....	343 10 00
Oct.	7.	By cash, stamps .....	344 10 00
Oct.	7.	By cash, Pioneer Press .....	345 4 00
Oct.	7.	By cash, Jennison .....	346 10 23
Oct.	7.	By cash, Rankin .....	349 9 60
Oct.	9.	By cash, Tribune .....	360 18 50
Oct.	9.	By cash, N. W. Telephone Exchange .....	361 3 90
Oct.	13.	By cash, Young & Co. ....	366 9 00
Nov.	1.	By cash, Kirkbride, Whitall & Wales .....	385 4 75
Nov.	5.	By cash, Express, etc. ....	386 3 03
Nov.	7.	By cash, Jennison .....	388 12 50
Nov.	7.	By cash, Wilcox, Dimond & Co. ....	395 8 00
Nov.	11.	By cash, Tribune .....	398 5 50
Nov.	19.	By cash, N. W. Telephone Exchange .....	402 3 15
Dec.	4.	By cash, N. W. Telephone Exchange .....	432 4 10
Dec.	10.	By cash, treasurer's salary .....	444 300 00
Dec.	11.	By cash, secretary's salary .....	445 100 00
Nov.	19.	By cash, Heath & Backus .....	448 12 50
Dec.	5.	By cash, Seager .....	451 5 00
Dec.	6.	By cash, Yale locks .....	452 2 60
Dec.	10.	By cash, stationery, &c. ....	453 12 00
Dec.	11.	By cash, stamps .....	454 15 00
Dec.	11.	By cash, Dake .....	455 2 58
Dec.	11.	By cash, Herrick .....	456 2 00
Dec.	11.	By cash, freight, &c. ....	457 3 25
Dec.	11.	By cash, stamps .....	458 9 00
Dec.	11.	By cash, Bryant .....	459 2 00
Dec.	11.	By cash, Chambers .....	460 1 65
Dec.	11.	By cash, Jennison .....	461 4 10
Dec.	11.	By cash, Laing .....	462 2 00
Dec.	12.	By cash, Campbell .....	469 41 25
Dec.	15.	By cash, examination expenses, Thompson .....	470 98 90
Dec.	16.	By cash, experimental farm .....	476 40 99
Dec.	16.	By cash, examination expenses, Moore .....	477 68 90
Dec.	16.	By cash, examination expenses, Brooks .....	478 75 85
To balance current expense .....			\$2,022 26
			<hr/>
			\$2,041 38    \$2,041 38



SUMMARY OF ACCOUNTS.

Building account, to balance.....	\$6,291 10	
Heating and furnishing, by balance.....		\$ 300 53
Experimental farm fund, to balance.....	671 87	
Land sales fund, to balance.....	813 42	
Salt land sales, to balance.....	2,911 36	
Water supply, to balance.....	197 60	
Geological survey, by balance.....		16,616 46
Current expense, to balance.....	8,220 14	
Balance in treasurer's hand.....		2,188 50
	<u>\$19,105 49</u>	<u>\$19,105 49</u>
Balance.....	\$2,188 50	
By error voucher 88.....	75	
By error voucher 93, in 1878.....	9 30	
Balance in treasurer's hands.....		\$2,198 55

II.

TREASURER GIBSON'S REPORT FOR DECEMBER, 1879,  
AND JANUARY, 1880.

PARIS GIBSON, *Treasurer, in Account with the University of Minnesota:*

CURRENT EXPENSE.

		CR.	
	By balance.....		\$8,220 14
1880.	Jan. 12. By cash, State Treasurer, warrant, Aug. 25, 1879.....		280 00
		DR.	
1880	Jan. 12. To cash, interest.....	No. Voucher 23	\$ 280 00
	To balance, incidentals.....		22 80
	To balance, employes and workmen.....		129 70
	To balance, salaries for instruction.....		2,670 00
	To balance, librarian's fund.....		49 20
	To balance, library expense.....		50 00
	To balance, experimental farm.....		44 25
	To balance, plant house.....		22 25
	To balance, repairs.....		40 00
	Balance.....		5,191 94
			<u>\$8,500 14</u> <u>\$8,500 14</u>

## ANNUAL REPORT.

## WATER SUPPLY.

		CR.	
By balance.....			197 60
		DR.	No. Voucher
To cash, interest.....			21 12
Balance.....			176 48
			<u>\$197 60</u> <u>\$197 60</u>

## INCIDENTALS.

		DR.	No. Voucher.	
1880.				
Jan. 9.	To cash, Heath .....		17	\$ 7 80
Jan. 9.	To cash, N. W. Telephone Exchange.....		18	3 60
Jan. 9.	To cash, Dake .....		19	3 70
Jan. 19.	To cash, Rhame .....		31	5 25
Jan. 19.	To cash, treasurer's salary ½ month.....		33	12 50
		CR.		
By error vouchers 232 and 113 (in 1878)....				\$10 05
Balance to current expense.....				22 80
				<u>\$32 85</u> <u>\$32 85</u>

## EMPLOYES AND WORKMEN.

		DR.	No. Voucher.	
1879.				
Dec. 20.	To cash, Bryant.....		8	\$63 70
Dec. 20.	To cash, Greeley.....		9	18 00
Dec. 20.	To cash, Chambers .....		10	48 00
Balance to current expense .....				129 70
				<u>\$129 70</u> <u>\$129 70</u>

## SALARIES FOR INSTRUCTION.

		DR.	No. Voucher.	
1879.				
Dec. 20.	To cash, December payment.....		4	\$2,245 00
Dec. 20.	To cash, Rankin .....		11	15 00
1880.				
Jan. 10.	To cash, house rent.....		21	250 00
Jan. 17.	To cash, Clarke.....		27	80 00
Jan. 17.	To cash, Hutchinson.....		28	80 00
Balance to current expense .....				\$2,670 00
				<u>\$2,670 00</u> <u>\$2,670 00</u>

## LIBRARIAN'S FUND.

		DR.	No. Voucher.	
1879.				
Dec. 18.	To cash, Laing.....		4	\$49 20
Balance to current expense.....				\$49 20
				<u>\$49 20</u> <u>\$49 20</u>

## LIBRARY EXPENSE.

		DR.	No. Voucher.	
	To cash, Rollit .....		7	\$50 00
	Balance to current expense.....			\$50 00
				<hr/>
				\$50 00      \$50 00

## GEOLOGICAL SURVEY.

		CR.	
1879.	Dec.	By cash.....	\$2,000 00

		DR.	No. Voucher.	
		To balance.....		\$16,616 46
1879.	Dec. 18.	To cash, Upham.....	1	130 68
	Dec. 18.	To cash, field expenses.....	3	15 76
	Dec. 20.	To cash, Winchell.....	5	200 00
	Dec. 20.	To cash, Hall.....	6	100 00
1880.	Jan. 7.	To cash, Savidge.....	13	54 15
	Jan. 8.	To cash, Terry.....	16	100 00
	Jan. 10.	To cash, Hennig.....	22	7 50
	Jan. 16.	To cash, Hashow, Maish & Davis.....	24	75 55
	Jan. 17.	To cash, Savidge.....	25	33 90
	Jan. 17.	To cash, Savidge.....	26	8 00
	Jan. 19.	To cash, Boysen.....	29	7 40
		Balance.....		15,349 40
				<hr/>
				\$17,349 40      \$17,349 40

## EXPERIMENTAL FARM.

		DR.	No. Voucher.	
1879.	Dec. 20.	To cash, Budds.....	12	\$41 00
1880.	Jan. 19.	To cash, Rhame.....	30	3 25
		Balance to current expense.....		\$44 25
				<hr/>
				\$44 25      \$44 25

## PLANT HOUSE.

		DR.	No. Voucher.	
1880.	Jan. 7.	To cash, Barrett.....	14	\$13 50
	Jan. 7.	To cash, Roe.....	15	8 75
		Balance to current expense.....		\$22 25
				<hr/>
				\$22 25      \$22 25

## REPAIRS.

		DR.	No. Voucher.	
1880.	Jan. 9.	To cash, Buffington.....	20	\$40 00
		Balance to current expense.....		40 00
				<hr/>
				\$40 00      \$40 00

### III.

## TREASURER CHUTE'S REPORT FOR 1880.

RICHARD CHUTE, *Treasurer, in Account with the University of Minnesota:*

1880.

#### CURRENT EXPENSE.

##### DR.

1880.		
Jan. 19.	To balance from last statement of Paris Gibson, treas..	\$5,191 94
Jan. 20.	To cash of State Treasurer on Auditor's warrant.....	4,000 00
March 5.	To cash of State Treasurer on Auditor's warrant.....	2,500 00
March 31.	To cash of State Treasurer on Auditor's warrant.....	3,500 00
May 1.	To cash of State Treasurer on Auditor's warrant.....	3,000 00
May 28.	To cash of State Treasurer on Auditor's warrant.....	3,000 00
June 28.	To cash of State Treasurer on Auditor's warrant.....	3,000 00
Aug. 5.	To cash of State Treasurer on Auditor's warrant.....	2,000 00
Sept. 15.	To cash of State Treasurer on Auditor's warrant.....	3,000 00
Oct. 21.	To cash of State Treasurer on Auditor's warrant.....	1,500 00
Oct. 25.	To cash of State Treasurer on Auditor's warrant.....	2,000 00
Nov. 27.	To cash of State Treasurer on Auditor's warrant.....	4,000 00
Nov. 30.	To balance students' fees.....	1,010 00

*Same.*

##### CR.

1880.		
Nov. 30.	By balance, heating account.....	\$2,118 08
	By balance, furniture account.....	628 85
	By balance, experimental farm account.....	512 21
	By balance, fruit farm account.....	62 33
	By balance, incidentals account.....	1,372 45
	By balance, library fund account.....	538 18
	By balance, library expense account.....	496 00
	By balance, campus account.....	121 69
	By balance, repairs account.....	585 49
	By balance, salaries for instruction account.....	22,743 33
	By balance, employees and workmen account.....	1,251 43
	By balance, plant house account.....	90 07
	By balance, printing, advertising, post. & sta'y. account.....	845 83
	By balance, chemical laboratory account.....	209 20
	By balance, apparatus account.....	150 00
	By balance, to new account current expense.....	5,976 50
		\$37,701 94
		\$37,701 94

## SALARIES FOR INSTRUCTION.

		CR.	No. Voucher.	
1880.				
Jan.	28.	By M. J. Campbell, on salary.....	13	\$ 40 00
Jan.	28.	By faculty pay roll, salaries.....	20	2,411 67
Feb.	28.	By faculty pay roll, salaries.....	45	2,411 67
March	26.	By W. W. Folwell, for house rent.....	77	250 00
March	31.	By faculty pay roll, salaries.....	86	2,411 67
April	17.	By G. Campbell, on salary.....	95	250 00
April	31.	By faculty pay roll, salaries.....	98	2,461 67
May	18.	By S. F. Peckham, on salary.....	130	200 00
May	29.	By faculty pay roll, salaries.....	134	2,461 66
July	15.	By faculty pay roll, salaries.....	217	2,511 67
July	8.	By R. H. Tripp, balance salary.....	212	350 00
Aug.	18.	By C. W. Hall, on account salary.....	262	116 66
Sept.	4.	By C. W. Hall, on account salary.....	282	116 66
Sept.	28.	By faculty pay roll, salaries.....	310	2,250 00
Oct.	28.	By faculty pay roll, salaries.....	339	2,250 00
Nov.	30.	By faculty pay roll, salaries.....	379	2,250 00
				<u>\$22,743 33</u>

Same.

		DR.	
1880.			
Nov.	30.	To current expense, amount to balance.....	\$22,743 33
			<u>\$22,743 33</u>
			\$22,743 33

## EMPLOYES AND WORKMEN.

		CR.	No. Voucher.	
1880.				
Jan.	31.	By J. F. Bryant, for janitor main building.....	16	\$63 70
Jan.	31.	By H. B. Greeley, for janitor ag. col.....	17	18 00
March	2.	By H. B. Greeley, for janitor ag. college...	47	18 00
March	4.	By J. F. Bryant, for janitor main building.....	50	63 70
March	22.	By Paris Gibson, for balance salary.....	74	8 33
March	31.	By H. B. Greeley, janitor agricultural col..	82	18 00
March	31.	By J. F. Bryant, for janitor main building.....	85	63 70
May	1.	By J. F. Bryant, for janitor main building.....	102	63 70
May	1.	By H. B. Greeley, for janitor ag. college...	103	18 00
May	29.	By J. F. Bryant, for janitor main building.....	139	63 70
May	29.	By H. B. Greeley, for janitor ag. college...	140	18 00
June	4.	By H. B. Greeley, for janitor ag. college...	151	18 00
June	30.	By J. F. Bryant, for janitor main building.....	191	63 70
Aug.	2.	By W. C. Bryant, for janitor main building.....	253	20 00
Aug.	11.	By W. C. Bryant, for labor.....	256	16 05
Aug.	13.	By W. J. Barrett, for janitor ag. college....	258	2 00
Sept.	14.	By W. C. Bryant, for labor.....	291	94 90
Sept.	15.	By W. J. Barrett, for janitor ag. college...	299	2 00
Sept.	30.	By W. C. Bryant, for janitor main building.....	316	63 70
Sept.	30.	By A. H. Nunn, for janitor ag. college.....	317	18 00
Oct.	4.	By W. C. Bryant, for janitor main building.....	323	22 85
Oct.	28.	By W. C. Bryant, for janitor main building.....	345	63 70
Oct.	28.	By A. H. Nunn, for janitor ag. college.....	346½	18 00
Nov.	30.	By W. C. Bryant, for janitor main building.....	385	63 79
Nov.	30.	By A. H. Nunn, for janitor ag. college.....	386	18 00
Nov.	30.	By Richard Chute, for salary secretary and treasurer.....	410	350 00
				<u>\$1,251 43</u>

*Same.*

DR.

1880.			
Nov. 30.	To current expense, amount to balance.....	\$1,251 43	
		<u>\$1,251 43</u>	\$1,251 43

## EXPERIMENTAL FARM.

DR.

1880.			
June 10.	To produce sold by Lacy .....	356 17	
Aug. 14.	To produce sold by Grimes.....	55 66	
Sept. 20.	To produce sold by Grimes.....	180 00	
Nov. 11.	To produce sold by Grimes.....	100 00	
Nov. 24.	To produce sold by Grimes .....	82 90	
Nov. 30.	To amount to balance carried to current expense.....	512 21	
		<u>\$1,286 94</u>	

*Same.*

CR.

1880.		No. Voucher.	
Feb. 9.	By Thos. Budds, salary.....	22	\$ 45 00
Feb. 9.	By Kirkbride, W. & W., frames, etc.....	30	4 78
Mar. 2.	By T. Budds, salary.....	46	45 00
Mar. 8.	By Fairbanks, M. & Co., tester and filler...	51	20 00
Mar. 31.	By T. Budds, salary.....	81	45 00
May 1.	By T. Budds, salary.....	104	45 00
May 29.	By T. Budds, salary.....	142	45 00
May 29.	By C. Y. Lacy, Manitoba wheat.....	144	90 83
June 2.	By Z. N. Vaughn, labor .....	147	10 50
June 2.	By A. L. Roe, labor.....	148	5 85
June 2.	By W. J. Barrett, labor.....	149	16 95
June 10.	By C. Y. Lacy, sundries.....	157	178 65
June 10.	By C. Y. Lacy, sundries .....	160	58 15
June 11.	By W. Q. Greeley, blacksmithing.....	167	4 00
June 11.	By Hagerty Bro. & Co., glassware.....	173	18 38
June 12.	By H. F. Nachtrieb, labor.....	178	6 75
June 14.	By J. J. Donahue, labor.....	179	11 55
June 18.	By Richards & Cooley, fees.....	184	7 38
July 5.	By W. Savidge, carpenter work.....	201	3 50
July 5.	By T. Budds, salary .....	202	45 00
July 5.	By W. J. Barrett, labor .....	205	23 03
July 10.	By J. J. Donahue, labor .....	214	3 00
July 21.	By Farnham & Lovejoy, lumber.....	249	8 17
July 21.	By De Sinclair, advertising seeds.....	250	1 50
Aug. 7.	By B. Phillips, labor .....	254	42 75
Aug. 13.	By W. J. Barrett, labor .....	260	23 70
Aug. 27.	By T. Budds, salary.....	264	45 00
Aug. 27.	By J. C. Wilson, labor .....	265	30 00
Aug. 27.	By G. S. Grimes, labor.....	266	112 50
Aug. 27.	By G. S. Grimes, labor.....	267	9 00
Sept. 14.	By W. J. Phillips, labor.....	290	9 75
Sept. 15.	By T. Budds, salary.....	300	45 00
Sept. 15.	By G. S. Grimes, sundries.....	301	20 80
Sept. 16.	By J. C. Wilson, labor .....	306	24 75
Sept. 17.	By W. Q. Greeley, blacksmithing.....	307	7 25
Sept. 30.	By T. Budds, salary.....	315	45 00
Oct. 4.	By G. S. Grimes, salt and bran.....	324	4 85

		No. Voucher.	
Oct.	4.	By G. S. Grimes, labor.....	325
Oct.	28.	By T. Budds, salary.....	344
Nov.	11.	By G. S. Grimes, labor.....	374
Nov.	30.	By T. Budds, salary.....	384
Nov.	30.	By F. W. Holbrook, traps.....	404
			\$1,286 94

## PLANT HOUSE.

## DR.

1880.			
June	10.	To C. Y. Lacy, for flowers sold .....	\$23 60
July	28.	To W. J. Barrett, for flowers sold .....	17 10
Aug.	12.	To W. J. Barrett, for flowers sold .....	6 45
Nov.	1.	To W. J. Barrett, for flowers sold .....	19 60
Nov.	29.	To W. J. Barrett, for flowers sold .....	3 60
Nov.	30.	To current expense, amount to balance.....	90 07
			\$160 42

*Same.*

## CR.

1880.		No. Voucher.	
Feb.	9.	By W. J. Barrett, for labor.....	24
Feb.	9.	By A. L. Roe, for labor.....	25
March	20.	By W. J. Barrett, for labor.....	66
March	20.	By A. L. Roe, for labor.....	67
April	15.	By A. L. Roe, for labor.....	93
April	15.	By W. J. Barrett, for labor.....	94
May	5.	By A. L. Roe, for labor.....	115
May	5.	By W. J. Barrett, for labor.....	116
June	3.	By S. Hunter, for repairs.....	150
June	10.	By C. Y. Lacy, for sundries.....	159
Sept.	15.	By W. J. Barrett, for labor.....	297
Sept.	15.	By W. J. Barrett, for labor.....	298
Nov.	1.	By W. J. Barrett, for labor.....	351
Nov.	30.	By W. J. Barrett, for labor.....	399
			\$160 42

## FRUIT FARM.

## CR.

1880.		No. Voucher.	
June	11.	By P. M. Gideon, clearing land.....	176
Sept.	25.	By F. Slocum, treasurer, redemption .....	309
Nov.	1.	By P. M. Gideon, clearing and plowing....	361
			\$62 33

*Same.*

## DR.

1880.			
Nov.	30.	To amount to balance to credit of current expense.....	\$62 33
			\$62 33
			\$62 33

## LIBRARY FUND.

## DR.

1880.			
April 26.	To amount refunded by Little & Gay.....	6	40
April 26.	To amount refunded by Harper's Weekly .....	3	20
April 26.	To one binder sold.....		30
April 26.	To balance old fund .....	3	75
April 30.	To post office order returned.....	2	00
Nov. 30.	To old books sold.....		85
Nov. 30.	To amount to balance to current expense .....	538	18
			<u>\$554 68</u>

*Same.*

## CR.

1880.		No. Voucher.	
Jan. 21.	By Jansen, McClurg & Co .....	1½	\$ 34 35
Feb. 21.	By Pott, Young & Co., for books.....	21	110 35
Feb. 21.	By G. H. Keith, for periodical orders.....	40	14 30
March 20.	By R. W. Laing, for books.....	65	21 75
May 6.	By St. Paul Book Co., for books .....	120	3 20
May 18.	By S. F. Peckham, for books.....	131	30 50
June 25.	By Pott, Young & Co., for books .....	189	50 69
July 15.	By G. H. Keith, for publication orders .....	241	4 40
July 15.	By G. H. Keith, for newspaper orders .....	230	144 62
Nov. 1.	By Yale College, for books.....	354	138 50
Nov. 1.	N. O. Picayune, for papers .....	357	2 12
			<u>\$554 68</u>

## LIBRARY EXPENSE.

## CR.

1880.		No. Voucher.	
Jan. 31.	By C. A. Rollit, as assistant librarian.....	18	\$50 00
Feb. 28.	By C. A. Rollit, as assistant librarian.....	44	50 00
March 31.	By C. A. Rollit, as assistant librarian.....	80	50 00
May 1.	By C. A. Rollit, as assistant librarian.....	101	50 00
May 29.	By C. A. Rollit, as assistant librarian.....	138	50 00
June 9.	By C. A. Rollit, as assistant librarian.....	155	50 00
June 24.	By C. A. Rollit, as assistant librarian.....	187	31 00
Sept. 30.	By C. A. Rollit, as assistant librarian.....	319	50 00
Oct. 28.	By C. A. Rollit, as assistant librarian.....	347	60 00
Nov. 30.	By C. A. Rollit, as assistant librarian.....	388	55 00
			<u>\$496 00</u>

*Same.*

## DR.

1880.			
Nov. 30.	To amount to balance to credit current expense....	\$496	00
			<u>\$496 00</u>
			<u>\$496 00</u>



REPAIRS.

		CR.	No. Voucher.	
1880.				
Jan. 28.	By Bufton & Scott, for plumbing.....	7		\$ 26 75
Jan. 28.	By G. Mensel & Co., for iron column.....	8		46 00
Feb. 10.	By Cauvet & Reid, for repair chemical lab.	33		4 15
Feb. 16.	By W. Savidge, for carpenter work.....	37		38 03
March 20.	By Cauvet & Reid, for plumbing.....	62		9 07
March 22.	By C. A. Bicknell, for repairs chem. lab....	71		4 50
March 22.	By W. Savidge, for carpenter work.....	75		15 55
May 11.	By W. Savidge, for carpenter work.....	126½		16 30
May 29.	By W. Savidge, for carpenter work.....	143		13 75
Aug. 11.	By W. Savidge, for carpenter work and material.....	257		102 96
Sept. 15.	By S. H. Rushford, for repairing furnace..	392		40 25
Sept. 15.	By M. L. Sanford, for reslating blackboards	294		11 25
Sept. 24.	By W. Savidge, for carpenter work.....	308		5 10
Oct. 4.	By W. Savidge, for carpenter work.....	321		18 75
Nov. 1.	By W. Savidge, for material.....	348½		38 74
Nov. 1.	By Gallison & Gowan, for repairing conductors .....	349		42 93
Nov. 1.	By Cauvet & Reid, for plumbing .....	350		16 45
Nov. 2.	By W. J. Honeycomb, for work on furnace	358		6 00
Nov. 3.	By G. & G. by Chambers, for hardware....	359		3 73
Nov. 3.	By M. W. Glenn, for repairing boilers .....	360		67 05
Nov. 6.	By W. Savidge, for carpenter work.....	372		29 50
Nov. 30.	By Utley Hare, for grate.....	392		6 08
Nov. 30.	By W. H. Chambers, for work on boilers...	396		13 95
Nov. 30.	By C. C. Boyson, for painting.....	398		5 50
Nov. 30.	By Janney, Brooks & E. for glass .....	405		3 15
				\$585 49

Same.

DR.

1880.				
Nov. 30.	To amount to balances to credit, current expense.....		\$585 49	
			\$585 49	\$585 49

PRINTING, STATIONERY, ADVERTISING AND POSTAGE.

		CR.	No. Voucher.	
1880.				
Feb. 9.	By Ariel association, for advertising.....	27		60 00
Feb. 9.	By Kirkbride, W. W., for stationery.....	29		7 87
Feb. 25.	By G. H. Keith, for stamped envelopes....	41		16 20
March 20.	By Kirkbride, W. & W., for stationery ...	56		2 15
March 20.	By Wilcox & Dimond, for printing.....	59		12 00
April 9.	By Pioneer-Press Co., for advertising.....	87		4 00
May 6.	By Ariel association, for advertising.....	119		30 00
May 8.	By Brooks Bros., for printing.....	123		5 80
June 11.	By Tribune Co., for printing calenders, &c.	163		363 45
June 11.	By Johnson, Smith & H., for printing .....	164		77 05
June 11.	By Johnson, Smith & H., for printing.....	165		39 50
June 24.	By E. Nash, for postage stamps.....	188		20 00
June 30.	By Pioneer-Press Co., for advertising .....	194		24 30
July 15.	By Brooks Bros., for printing.....	218		4 80
July 15.	By E. Nash, for stamps and wrappers.....	227		7 12
July 15.	By E. Nash, for stamps and postals.....	230		25 00

		No. Voucher.	
July	15.	By Geo. H. Keith, for postal orders .....	231
July	15.	By E. Nash, for postage stamps.....	236
July	15.	By G. H. Keith, for postage stamps .....	250
Sept.	15.	By Tribune Co., for printing.....	357
Oct.	5.	By Kirkbride, W. & W., for stationery.....	327
Oct.	5.	By Pioneer-Press Co., for advertising.....	329
Oct.	9.	By Tribune Co., for printing.....	337
Nov.	1.	By Chicago Inter Ocean, for advertising...	355
Nov.	30.	By Tribune Co., for reports.....	390
Nov.	30.	By E. E. Shunmay, for stamps.....	397
Nov.	30.	By F. M. Laraway, for stamps.....	400
Nov.	30.	By G. H. Keith, for stamps and envelopes.	401
			\$845 83

*Same.*

## DR.

1880.			
Nov.	30.	To current expense, amount to balance.....	\$845 83
			\$845 83
			\$845 83

## HEATING.

## DR.

1880.			
April	26.	To gas pipe sold by W. W. Folwell.....	\$ 26
Nov.	30.	To amount to balance, carried to current expense.....	2,118 08
			\$2,118 34

*Same.*

## CR.

		No. Voucher.	
1880.			
Jan.	27.	By S. F. Peckham, wood.....	5
Jan.	27.	By S. F. Peckham, wood.....	6
Jan.	28.	By Bifton & Scott, plumbing.....	7
Feb.	9.	By W. H. Chambers, fireman and engineer	23
Feb.	9.	By L. T. Rowley, hauling wood.....	26
Feb.	10.	By Cauvet & Reid, plumbing.....	32
Feb.	10.	By Armstrong & Truesdall, coal .....	34
Feb.	10.	By Armstrong & Truesdall, coal.....	35
Feb.	25.	By M. M. Chatfield, wood.....	39
March	2.	By W. H. Chambers, fireman and engineer	43
March	20.	By Grove & Rowe, wood.....	54
March	20.	By N. W. Fuel Co., wood and coal .....	68
March	22.	By Armstrong & Truesdell, wood and coal.	72
March	22.	By Armstrong & Truesdell, wood and coal.	73
March	31.	By W. H. Chambers, fireman and engineer	83
May	4.	By Grove & Rowe, wood.....	108
May	4.	By Grove & Rowe, wood.....	109
May	4.	By W. H. Chambers, fireman and engineer	110
May	7.	By A. D. Mulford, wood.....	121
May	13.	By N. W. Fuel Co., wood.....	127
June	1.	By Robert Muir, wood.....	145
June	10.	By C. Y. Lacy, hauling wood.....	161
June	17.	By W. H. Chambers, fireman and engineer	182
July	1.	By W. H. Chambers, sundries .....	196
July	6.	By G. A. Brackett, wood .....	210
			23 83
			12 75
			62 08
			48 00
			5 38
			2 00
			223 58
			158 29
			23 25
			48 00
			68 20
			61 00
			227 58
			84 30
			48 00
			172 16
			61 22
			37 50
			5 50
			11 00
			10 84
			3 12
			20 00
			9 98
			9 60

		No. Voucher.		
July	15.	By Cauvet & Reid, plumbing.....	216	1 30
Sept.	3.	By Armstrong & T., wood.....	275	49 88
Sept.	3.	By Armstrong & T., wood.....	276	525 00
Oct.	7.	By W. H. Chambers, fireman and engineer	332	35 00
Oct.	28.	By W. H. Chambers, fireman and engineer	348	35 00
Nov.	30.	By W. H. Chambers, fireman and engineer	389	35 00
				<hr/>
				\$2,118 34

## CHEMICAL LABORATORY.

## DR.

1880.				
June	10.	To amount received from S. F. Peckham for University property shipped to Fort Benton.....	76	02
June	10.	To amount received from S. F. Peckham for balance due on settlement of chemical laboratory account, including student's accounts for chemicals.....	91	65
Nov.	30.	To current expense, amount to balance.....	209	20
				<hr/>
				\$376 87

## Same.

## CR.

1880.				
Jan.	31.	By A. W. Rankin, for salary 1 month.....	19	15 00
Mar.	3.	By A. W. Rankin, for salary 1 month.....	49	15 00
Mar.	31.	By A. W. Rankin, for salary 1 month.....	84	15 00
May	5.	By A. W. Rankin, for salary 1 month.....	118	15 00
May	29.	By A. W. Rankin, for salary 1 month.....	141	15 00
June	17.	By Elmore & Richards, chemicals.....	183	49 81
July	12.	By A. W. Rankin, salary 1 month.....	215	15 00
July	19.	By Noyes Bros. & Co, chemicals.....	245	9 25
Sept.	15.	By Chas. Henry, merchandise.....	293	21 60
Sept.	15.	By Geo. Huhn & Co., chemicals.....	302	31 94
Sept.	30.	By A. W. Rankin, for salary 1 month.....	318	15 00
Oct.	5.	By A. W. Rankin, for chemicals.....	330	12 55
Oct.	7.	By Whitall, Tatum & Co., for glassware.....	333	18 37
Oct.	9.	By A. A. Pond, for apparatus.....	336	6 00
Oct.	28.	By C. F. Sidener, for salary 1 month.....	346	15 00
Nov.	1.	By Noyes Bros. & Cutler, for chemicals.....	352	5 25
Nov.	1.	By Noyes Bros. & Cutler, for chemicals.....	353	2 25
Nov.	1.	By E. B. Benjamin, for chemicals.....	356	84 85
Nov.	30.	By C. F. Sidener, for salary 1 month.....	387	15 00
				<hr/>
				\$376 87

## EXPERIMENTAL FARM FUND.

1880.				
Jan.	19.	By balance from last statement of Parls Gibson, treasurer.....		\$671 87

## HEATING AND FURNISHING, OLD ACCOUNT.

1880.				
Jan.	19.	To balance from last statement of Paris Gibson, treasurer.....		\$300 53

## BUILDING ACCOUNT.

1880.			
Jan.	19.	By balance from last statement of Paris Gibson, treasurer.....	\$6,291 10

## WATER SUPPLY.

1880.			
Jan.	19.	By balance from last statement of Paris Gibson, treasurer.....	\$176 48

## LAND SALES FUND.

		CR.	No. Voucher	
1880.				
Nov.	6.	By B. F. Pillsbury, for interest on note.....	368	210 00
Nov.	13.	By A. Barnard, for locating land.....	376	75 00
Nov.	30.	By amount to balance to new account .....		528 42

*Same.*

		DR.		
1880.				
Jan.	19.	To balance from last statement of Paris Gibson, treasurer.....	\$813 42	
			<u>\$813 42</u>	<u>\$813 42</u>

## SALT LAND SALES.

		DR.		
1880				
Jan.	19.	To balance from last statement of Paris Gibson treas'r..		\$2,911 36
Feb.	5.	To amounts received of Gov. Pillsbury on account of sales in Otter Tail county--		
		Jens Dunham, sw $\frac{1}{4}$ se $\frac{1}{4}$ , sec. 32, T. 136, R. 44 .....	\$ 42 90	
		Nels Olsen Moe, sw $\frac{1}{4}$ , sec. 19, town 136, range 44.....	153 49	
		Tosten O. Mo, w $\frac{1}{2}$ sw $\frac{1}{4}$ , sec. 20, town 136, range 44 .....	85 16	
		J. Gregory Smith, s $\frac{1}{2}$ sw $\frac{1}{4}$ and sw $\frac{1}{4}$ se $\frac{1}{4}$ , sec. 24, town 133, range 44.....	211 94	
		Geo. B. Wright, n $\frac{1}{2}$ and se $\frac{1}{4}$ ne $\frac{1}{4}$ and ne $\frac{1}{4}$ nw $\frac{1}{4}$ and ne $\frac{1}{4}$ se $\frac{1}{4}$ , sec. 13, town 133, range 44.....	153 81	
			<u>\$647 30</u>	
		Less 2 $\frac{1}{2}$ per cent. commission to Chas. J. Wright.....	77 90	
				<u>\$569 40</u>

## IN WILKIN COUNTY.

J. J. Haggeman, sections 27, 34, 35 and 2, town 136, range 45, 15 per cent down and interest.....	\$2,039 50
C. J. Otzen, ne $\frac{1}{4}$ , sec. 10, town 135, range 45, \$5 per acre ; 15 per cent. down and interest.....	147 72
	<u>\$2,756 62</u>

LESS PAID OUT—

	H. G. Stordock, comm. on sales .....	\$376 00	
	H. G. Stordock, appraising.....	60 00	
	J. W. Blanding, appraising.....	60 00	
	Thom. Knudson, appraising.....	84 00	
	Balance due O'Brian.....	25 00	\$605 00
			\$2,151 62
	Interest received .....	988 82	\$3,140 44
April 24.	To amount received of J. J. Haggeman, for C. J. Otzen and J. C. Parks, on sale Sec. 11 and w $\frac{1}{4}$ sec. 12, T. 135, R. 45 @ \$5 per acre—15 per cent. down and interest.....		\$957 92
			\$7,009 72
	To amount of J. Gregory Smith for se $\frac{1}{4}$ of se $\frac{1}{4}$ , sec. 13, T. 133, R. 44.....	200 00	
	And se. $\frac{1}{4}$ of nw. $\frac{1}{4}$ , Sec. 24, T. 133, R. 44.....	200 00	
		\$400 00	
	Less 2 $\frac{1}{2}$ per cent. com.....	\$10 00	\$390 00
July 2.	To amount of J. J. Haggeman, for interest paid on sec. 25, town 136, range 45, for J. J. Haggeman.....	152 32	
	On sec. 2, town 135, range 45, for J. J. Haggeman.....	151 07	
	On sec. 34, town 136, range 45, for J. J. Haggeman.....	152 32	
	On sec. 27, town 136, range 45, for J. J. Haggeman.....	152 32	
	On sec. 11, town 135, range 45, for Otzen & Parks.....	190 40	
	W $\frac{1}{2}$ sec. 12, town 135, range 45, for Otzen & Parks.....	95 20	
	Ne $\frac{1}{4}$ sec. 10, town 135, range 45, for C. J. Otzen.....	47 60	\$941 23
Aug. 5.	To amount of C. J. Wright, check Dec. 1, 1879, to order — & Trowbridge on account Kalness.....		67 40
Aug. 7.	To amount Jno. Oleson, for 1 year interest on sw $\frac{1}{4}$ ne $\frac{1}{4}$ sec. 31, town 132, range 42, paid by Nels Swanson, assignee .....		17 73
			\$8,426 08

FURNITURE.

Dr.

1880.			
April 26.	To desks sold by Col. Folwell.....	\$25 00	
June 11.	To 24 old desks sold by W. B. Williams, et al.....	48 00	
Nov. 30.	To amount to balance carried to current expense.....	628 85	
			\$701 85

Same.

Cr.

1880.		No. Voucher.	
Jan. 22.	By Folds & Griffith, merchandise.....	3	\$447 15
Jan. 28.	By Barnard & Co., chairs.....	11	32 50
Feb. 20.	By Gilmore & Mc, stools.....	38	4 75
March 20.	By Kenyon & Jeffrey, merchandise.....	60	103 50
April 14.	By B. B. Marshall, clock.....	92	10 00
July 15.	By J. Speedy, paper hanging.....	222	1 00
Nov. 11.	By J. A. Lovejoy, one safe.....	373	87 15
Nov. 20.	By Barnard & Cope, stools.....	378	3 30
Nov. 30.	By E. A. Harmon & Co., chandelier.....	391	9 50
Nov. 30.	By B. B. Marshall, repairing clock.....	407	3 00
			\$701 85

## ENLARGEMENT OF CAMPUS.

		CR.	No. Voucher.	
1880.				
Jan. 27.	By W. C. Allen, lot 4, B. 2, Thatcher's addition .....		4	\$160 00
Aug. 28.	By J. Gullford, services and costs.....		270	153 09
Nov. 15.	By P. D. McMillan, tax title.....		377	52 28
				<hr/>
				\$365 37

## CAMPUS.

		CR.		
1880.				
June 10.	By C. Y. Lacy, for labor .....	158		\$11 21
June 11.	By P. Herzog, for hitching posts.....	169		24 00
June 18.	By H. M. Thomas, for labor .....	185		10 50
July 5.	By W. Savidge, for trimming trees.....	200		21 75
July 15.	By P. Fitzgerald, for labor .....	234		3 00
July 15.	By L. T. Rowley, for labor.....	235		1 20
Aug. 13.	By W. J. Barrett, for labor.....	259		4 65
Aug. 30.	By P. C. Heath, for labor and team .....	272		29 10
Nov. 11.	By G. S. Grimes, for labor.....	375		16 58
				<hr/>
				\$121 99

*Same.*

		DR.		
1880.				
Nov. 30.	To amount to balance to current expense .....		\$121 99	
			<hr/>	
			\$121 99	\$121 99

## APPARATUS.

		CR.	No. Voucher.	
1880.				
June 4.	By E. J. Thompson, one telescope.....		153	\$150 00

*Same.*

		DR.		
1880.				
Nov. 30.	To current expense, amount to balance .....		\$150 00	
			<hr/>	
			\$150 00	\$150 00

## GEOLOGICAL SURVEY.

		CR.		
1880.				
Jan. 19.	By balance from Paris Gibson's, late treasurer, books as per his report.....			\$15,349 40
			No. Voucher.	
Jan. 19.	By N. H. Winchell, for expense account...	1		50 00
Jan. 28.	By Bufton & Scott, for material and labor,	7		31 17
Jan. 28.	By N. H. Winchell, for January salary....	9		200 00
Jan. 28.	By C. m. Terry, for January salary.....	10		100 00
Jan. 28.	By Lyon & Moran, for setting up motor. . .	12		16 07

		No. Voucher.	
Jan.	28.	By Tuerk Bros. & Johnson, for motor.....	14 76 90
Jan.	28.	By A. Julien for slides and covers.....	15 4 80
Feb.	1.	By Pott, Young & Co., for publications ....	21 30 65
Feb.	10.	By Cauvet & Reid, for plumbing.....	33 4 44
Feb.	28.	By C. M. Terry, for February salary.....	42 100 00
Feb.	28.	By N. H. Winchell, for February salary... ..	43 200 50
March	20.	By J. M. Sherwood, for museum trays.....	60 12 00
March	20.	By J. M. Sherwood, for museum trays.....	61 8 40
March	20.	By Cauvet & Reid, for plumbing.....	63 3 89
March	20.	By H. F. Nachtrieb, for work on meteorite	70 12 90
March	29.	By Whitall, Tatum & Co., for glassware....	77½ 39 98
March	29.	By Whitall, Tatum & Co., for glassware....	77½ 8 00
March	31.	By N. H. Winchell, for March salary. ....	78 200 00
March	31.	By C. M. Terry, for March salary.....	79 100 00
April	9.	By P. L. Hatch, for merchandise.....	88 6 25
April	12.	By Q. J. Rowley, for labor.....	89 5 70
April	12.	By W. H. Chambers, for labor.....	90 4 70
April	13.	By J. H. Paul, for museum cases.....	91 196 25
April	19.	By W. Upham, for April salary .....	96 100 00
April	19.	By C. W. Hall, for sundries.....	97 11 00
May	1.	By N. H. Winchell, for April salary.....	99 200 00
May	1.	By C. M. Terry, for April salary.....	100 100 00
May	4.	By Wilcox & Dimond, for printing.....	106 5 00
May	4.	By Wheaton & Reynolds, for museum blks	107 13 50
May	4.	By C. F. Nachtrieb, for museum labor.....	113 6 45
May	5.	By C. W. Hall, for 1879, salary unpaid.....	114 100 00
May	10.	By N. H. Winchell, balancee current ex- pense.....	124 24 03
May	11.	By Hashaw, M. & Davis, fittings and labor.	125 11 20
May	11.	By Hashaw, M. & Davis, for maeninery....	126 2 40
May	13.	By Elmore & Richards, for merchandise....	129 15 88
May	29.	By J. W. Queen & Co., for apparatus.....	133 19 60
May	29.	By N. H. Winchell, for May salary.....	135 200 00
May	29.	By C. M. Terry, for May salary .....	136 100 00
June	2.	By L. T. Rowley, for museum labor.....	146 9 90
June	14.	By A. A. Julien, for slides and covers.....	156 6 30
June	11.	By W. Q. Greeley, for angle, irons & braces.	166 18 50
June	11.	By Wm. Howling, for taxiderny.....	168 71 50
June	11.	By Kruckeberg & Co., for printing.....	170 7 50
June	11.	By Empire Dis. Co., for alcohol.....	171 22 55
June	15.	By A. A. Julien, for slides and covers ....	172 6 20
June	11.	By I. Paulte, for show case.....	175 25 00
June	12.	By C. F. Nachtrieb, for museum work.....	177 8 15
June	14.	By S. F. Heath, for collecting specimens ..	180 20 35
June	16.	By N. H. Winchell, for current expense....	181 8 53
June	22.	By C. M. Terry, for June salary.....	186 100 00
June	25.	By Pott, Young & Co., for publications and books .....	189 32 55
June	30.	By C. W. Hall, for freight, &c.....	192 4 11
June	30.	By G. L. Dickinson, for museum trays ....	195 5 00
July	5.	By W. Savidge, for furniture.....	201 7 30
July	5.	By W. Upham, for May salary.....	203 100 00
July	5.	By G. L. Dickinson, for museum trays.....	204 8 00
July	6.	By N. H. Winchell, part payment July sal- ary.....	207 100 00
July	6.	By W. Upham, for June salary.....	208 100 00
July	7.	By C. F. Nachtrieb, for museum work.....	211 6 00
July	28.	By C. M. Terry, for July salary .....	243 100 00
July	19.	By B. C. Baldwin, 101 township plats .....	246 50 50
July	19.	By E. B. Benjamin, for chemicals, etc.....	247 2 50
July	28.	By N. H. Winchell, for bal. July salary ...	251 100 00

		No. Voucher.	
July	28.	By C. L. Herrick, for July salary.....	252 75 00
Aug.	11.	By W. Savidge, for labor.....	235 36 00
Aug.	21.	By W. Upham, for July salary.....	263 100 00
Aug.	28.	By N. H. Winchell, for current expense...	268 22 68
Aug.	28.	By N. H. Winchell, for sundries....	269 14 25
Aug.	31.	By J. H. Paul, museum cases.....	273 288 25
Aug.	31.	By J. H. Paul, for museum cases.....	274 164 95
Sept.	3.	By J. M. Sullivan, for cutting stone.....	277 13 00
Sept.	3.	By Ryan, Wales & Co., for paper.....	279 3 45
Sept.	4.	By C. C. Boyson, for labor and material...	281 20 25
Sept.	4.	By N. H. Winchell, for Aug. salary.....	283 200 00
Sept.	4.	By C. M. Terry, for Aug. salary.....	284 100 00
Sept.	4.	By Whitall, Tatum & Co., for glassware ...	285 20 76
Sept.	4.	By C. L. Herrick, for Aug. salary.....	286 75 00
Sept.	7.	By N. H. Winchell, for one aneroid.....	287 45 00
Sept.	16.	By Burrichter & Harris, for minerals.....	304 50 00
Sept.	30.	By C. M. Terry, for Sept. salary.....	311 100 00
Sept.	30.	By N. H. Winchell, for Sept. salary.....	312 200 00
Sept.	30.	By W. Upham, for Sept. salary.....	313 100 00
Sept.	30.	By C. L. Herrick, for Sept. salary.....	314 75 00
Oct.	5.	By Kirkbride, W. & Co., for draughting materials.....	328 18 25
Oct.	7.	By N. H. Winchell, for current expenses...	334 31 09
Oct.	9.	By Folds & Griffith, merchandise.....	338 4 84
Oct.	28.	By N. H. Winchell, for Oct. salary.....	340 200 00
Oct.	28.	By C. M. Terry, for Oct. salary.....	341 100 00
Oct.	28.	By W. Upham, for Oct. salary.....	342 100 00
Oct.	28.	By C. L. Herrick, for Oct. salary.....	343 75 00
Nov.	5.	By N. H. Winchell, sundries.....	363 5 80
Nov.	5.	By N. H. Winchell, postage.....	364 4 98
Nov.	5.	By N. H. Winchell, sundries.....	365 4 26
Nov.	5.	By H. Mayhew, transportation.....	366 3 00
Nov.	5.	By Janney, Brooks & Co., hardware.....	367 1 56
Nov.	6.	By N. H. Winchell, books.....	369 7 35
Nov.	6.	By Kruckeberg & L., printing.....	370 2 00
Nov.	6.	By Kruckeberg & L., circulars.....	371 6 75
Nov.	30.	By N. H. Winchell, salary.....	380 200 00
Nov.	30.	By C. M. Terry, salary.....	381 100 00
Nov.	30.	By W. Upham, salary.....	382 100 00
Nov.	30.	By C. L. Herrick, salary.....	383 75 00
Nov.	30.	By N. H. Winchell, sundries.....	395 12 36
			<u>\$21,347 42</u>

## STUDENTS' FEES.

## Dr.

1880.			
April	26.	To amount of W. W. Folwell, for fees received.....	\$ 51 67
Sept.	23.	To amount of W. W. Folwell, for fees received.....	600 00
Oct.	4.	To amount of W. W. Folwell, for fees received.....	200 00
Nov.	30.	To amount of W. W. Folwell, for fees received.....	158 33
			<u>\$1,010 00</u>

## Same.

## Cr.

1880.			
Nov.	30.	By current expense, amount to balance.....	\$1,010 00
			<u>\$1,010 00</u>
			<u>\$1,010 00</u>



INCIDENTALS.

DR.

1880.			
Nov. 30.	To telephone, per W. W. Folwell .....	\$	15
Nov. 30.	To amount to balance, to credit current expense .....		1,372 45
			<hr/>
			\$1,372 60

Same.

CR.

1880.		No. Voucher.	
Jan. 21.	By Hawes & Smith, for janitor's supplies ..	2	13 95
Feb. 9.	By J. Jennison, for writing.....	28	9 65
Feb. 9.	By G. Stechert, for charts.....	31	10 84
Feb. 16.	By G. B. Dake, for shovel.....	36	1 25
March 20.	By J. G. Moore, for examination expenses.	52	75 00
March 20.	By L. Dreka, for diplomas.....	53	22 50
March 20.	By Kirkbride, W. & W., for frames .....	55	4 75
March 20.	By E. C. Belote, for regents' dinners .....	57	6 25
March 20.	By Telephone Ex., for telephone.....	58	6 70
March 20.	By R. W. Laing, for examination expenses	64	75 00
March 22.	By Pioneer Press, for papers.....	76	6 00
May 4.	By G. B. Dake, for janitor's supplies..	105	3 58
May 5.	By Telephone Ex., for telephone.....	111	4 50
May 5.	By Telephone Ex., for telephone.....	112	3 50
May 5.	By E. J. Thompson, for clock and book....	117	6 50
May 8.	By Tribune Co., for labels .....	122	4 25
May 13.	By Kirkbride, W. W., for sundries.....	128	4 15
May 29.	By M. D. Rhame, for sundries.....	137	10 22
June 4.	By J. Jennison, for writing.....	152	21 58
June 9.	By Hawes & Smith, for janitor's supplies..	154	13 58
June 11.	By Kirkbride, W. & W., for sundries .....	162	5 96
June 11.	By W. R. Willard, for engraving.....	174	12 00
June 11.	By J. Jennison, for writing.....	181 <sup>1</sup> / <sub>2</sub>	17 18
June 29.	By G. Seibert, for band.....	190	60 00
June 30.	By C. W. Hall, for examination expenses..	193	34 95
July 2.	By A. N. Smith, for examinations.....	197	8 00
July 2.	By J. S. Clarke, examinations.....	198	22 60
July 2.	By M. Marston, examinations.....	199	31 80
July 5.	By W. Savidge, repairing furniture.....	201	2 20
July 6.	By Ball & Naylor, hose and fittings.....	206	29 25
July 6.	By H. A. Smith, writing.....	209	4 65
July 9.	By Barnard & Cope, rent of chairs.....	213	10 00
July 12.	By J. C. Hutchinson, examinations .....	215 <sup>1</sup> / <sub>2</sub>	46 60
July 15.	By Kirkbride, W. & W., crayons, &c.....	219	2 99
July 15.	By W. C. Bryant, labor.....	220	85
July 15.	By J. Jennison, writing.....	221	15 05
July 15.	By J. Jennison, writing.....	223	4 70
July 15.	By G. J. Backus, music stand .....	224	1 00
July 15.	By C. Robinson, recording deeds.....	225	4 75
July 15.	By G. J. Backus, fees returned.....	226	5 00
July 15.	By J. Jennison, writing.....	228	9 65
July 15.	By J. Jennison, writing.....	229	13 00
July 15.	By L. R. Williams, fees returned .....	232	5 00
July 15.	By R. F. King, fees returned.....	233	5 00
July 15.	By A. N. Smith, diplomas .....	237	3 80
July 15.	By H. A. Smith, examinations .....	238	4 05
July 15.	By W. W. Folwell, petty expenses .....	242	21 26
July 19.	By Telephone Ex., telephone.....	248	5 00

		No. Voucher.	
Aug.	16.	By E. W. Eddy & Son, commencement exp	261 3 50
Aug.	28.	By Ball & Naylor, hose .....	271 6 60
Sept.	3.	By C. J. Rockwood, examination exp.....	278 6 40
Sept.	3.	By G. E. Stechert, charts.....	280 9 36
Sept.	6.	By S. B. Ramaley, regent expenses .....	288 15 70
Sept.	14.	By Telephone Ex., telephone .....	289 8 75
Sept.	15.	By G. B. Aiton, writing .....	295 1 60
Sept.	15.	By G. B. Aiton, writing .....	296 18 00
Sept.	15.	By Telephone Co., telephone.....	303 4 00
Oct.	2.	By R. Chute, sundries.....	320 20 10
Oct.	4.	By W. C. Bryant, janitor's supplies.....	322 16 34
Oct.	4.	By B. Phillips, writing.....	326 9 60
Oct.	5.	By Telephone Ex., telephone .....	331 4 15
Oct.	3.	By O. V. Tousley, expenses east to secure professors .....	335 219 25
Nov.	4.	By W. W. Folwell, expenses east to secure professors.....	362 286 59
Nov.	30.	By Telephone Co., telephone .....	393 4 00
Nov.	30.	By Kirkbride, W. & W., sundries.....	394 3 25
Nov.	30.	By J. Jennison, writing .....	402 4 45
Nov.	30.	By J. Jennison, writing .....	403 12 35
Nov.	30.	By A. N. Smith, writing.....	406 1 63
Nov.	30.	By C. St. P. & M. R. R., freight.....	408 18 82
Nov.	30.	By W. W. Folwell, sundries.....	409 8 12
			\$1,372 60

## SUMMARY OF ACCOUNTS.

		DR.	CR.
1880.			
Nov.	30.	Heating and furnishing, old account, to balances....	\$300 53
		Geological survey, to balances.....	21,347 42
		Enlargement of campus, to balances.....	365 37
		Building account, by balances.....	\$6,291 10
		Expense farm fund, by balances.....	671 87
		Salt land sales, by balances.....	8,426 08
		Land sales fund, by balances.....	528 42
		Water supply, by balances.....	176 48
		Current expense, by balances.....	5,976 50
		Balance, cash on hand to new account.....	57 13
		\$22,070 45	\$22,070 45

FOURTEENTH ANNUAL REPORT  
(FIRST BIENNIAL REPORT)

OF THE

PRESIDENT

OF THE

UNIVERSITY OF MINNESOTA

TO THE

BOARD OF REGENTS.

1878-9 AND 1879-80.

THE UNIVERSITY OF MINNESOTA, }  
MINNEAPOLIS, MINN., }  
DECEMBER 14, 1880. }

SIR: I have the honor, in accordance with law, herewith to transmit the fourteenth annual report of the condition and progress of the University. The thirteenth annual report was duly submitted at the annual meeting in December, 1879. In order to preserve in the printed reports of the Board a continuous history of the University, the statistical portions of that report are embodied in this.

I have the honor to be,

Very respectfully,

Your obedient servant,

WM. W. FOLWELL,

President.

To the HON. HENRY H. SIBLEY,

President of the Board of Regents.

# REPORT OF THE PRESIDENT OF THE UNIVERSITY.

*To the Honorable the Board of Regents:*

As indicated in the foregoing letter of advice the statistics for the year 1878-9 are embodied herein.

**PERSONS AND DUTIES.**

**ATTENDANCE.**

The following tables exhibit the enrollment and classification of students:

**SUMMARY.**

**1878-9.**

COLLEGE OR DEPARTMENT.	CLASS.	Gentlemen.	Ladies.	Total.
Science, Literature and Arts.....	Senior .....	16	8	24
	Junior .....	11	4	15— 39
Mechanic Arts.....	Senior .....	3	.....	3
	Junior.....	0	.....	0— 3
Agriculture .....	El. Course .....	1	.....	1
	Special .....	3	.....	3— 4
Collegiate Department.....	First .....	19	12	31
	Second .....	37	20	57— 88
	Third .....	52	33	85
	Fourth .....	73	32	105—190
	Special .....	38	24	62— 62
Totals.....		253	133	386

## OR BY CLASSES ONLY.

Seniors of all departments .....	27
Juniors of all departments .....	15
Sophomores—First Class, Collegiate Department .....	31
Freshmen—Second Class, Collegiate Department .....	57—130
Preparatory } Third Class, Collegiate Department .....	85
} Fourth Class, Collegiate Department .....	105—190
Special and Agricultural .....	66— 66
Total .....	386

## COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Senior .....	{ Classical .....	7	1	8
	{ Scientific .....	6	4	10
	{ Modern .....	3	3	6
Total .....		16	8	24
Junior .....	{ Classical .....	5	1	6
	{ Scientific .....	4	2	6
	{ Modern .....	2	1	3
Total .....		11	4	15

## COLLEGE OF MECHANIC ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Senior .....	{ Civil Engineering .....	2	.....	2
	{ Mechanical Engineering .....	1	.....	1
Total .....		3	.....	3

## COLLEGE OF AGRICULTURE.

Elementary Course—Gentlemen .....	1
Specials .....	3
Total .....	4

## COLLEGIATE DEPARTMENT.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
First.....	Classical.....	11	1	12
	Scientific.....	7	3	10
	Modern.....	1	8	9
		19	12	31
Second.....	Classical.....	12	4	16
	Scientific.....	15	2	17
	Modern.....	10	14	24
		37	20	57
Third.....	Classical.....	18	2	20
	Scientific.....	31	8	39
	Modern.....	3	23	26
		52	33	85
Fourth.....	Classical.....	22	2	24
	Scientific.....	47	16	63
	Modern.....	4	14	18
		73	32	105
Special Students.....		38	24	62
Total.....		219	121	340

Three hundred and forty-seven (347) students were registered as residents of Minnesota, the following counties being represented:

Anoka, 2; Becker, 2; Brown, 4; Blue Earth, 14; Carleton, 1; Carver, 4; Chisago, 2; Dakota, 4; Dodge, 6; Fillmore, 19; Freeborn, 6; Goodhue, 21; Hennepin East, 58; Hennepin West, 79; Houston, 3; Le Sueur, 6; Lincoln, 1; Lyon, 1; McLeod, 5; Meeker, 3; Mower, 3; Nicollet, 10; Olmsted, 7; Ramsey, 14; Rice, 6; Scott, 2; Sibley, 1; Stearns, 11; Steele, 10; Stevens, 1; St. Louis, 3; Wabasha, 13; Waseca, 3; Washington, 10; Winona, 5; Wright, 7.—Thirty-six counties.

Thirty-nine were registered from other States and countries, as follows:

Georgia, 1; Illinois, 2; Iowa, 9; Maine, 3; Massachusetts, 1; Montana, 1; New York, 3; Nova Scotia, 2; Ohio, 3; Pennsylvania, 3; Sweden, 1; Vermont, 2; Wisconsin, 7; Wyoming, 1.

## SUMMARY, 1879—80.

COLLEGE OR DEPARTMENT.	CLASS.	Gentlemen.	Ladies.	Total.
Science, Literature and Arts.....	{ Senior.....	13	6	19
	{ Junior.....	12	7	19—38
Mechanic Arts.....	{ Senior.....	0	0	0
	{ Junior.....	1	0	1
	{ Special.....	1	0	1—2
Agriculture.....	{ El. Course.....	1	0	1
	{ Special.....	1	0	1—2
Collegiate Department.....	{ Sophomore....	39	19	58
	{ Freshman....	37	25	62—120
	{ Sub-freshman	73	30	108—108
	{ Special.....	28	10	38—38
Totals.....		211	97	308

## OR, BY CLASSES ONLY.

Seniors—of all Departments.....	19
Juniors—of all Departments.....	20
Sophomore—Collegiate Department.....	58
Freshmen—Collegiate Department.....	62—159
Sub-Freshmen.....	108—108
Special and Agricultural.....	41—41
Total.....	308

## COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total..
Senior.....	{ Classical.....	4	2	6
	{ Scientific.....	7	2	9
	{ Modern.....	2	2	4
Total.....		13	6	19
Junior.....	{ Classical.....	9	0	9
	{ Scientific.....	3	2	5
	{ Modern.....	0	5	5
Totals.....		12	7	19—38



COLLEGE OF MECHANIC ARTS.

Junior .....	Mechanical Engineering. Special.....	1 1	0 0	1 1
Total.....		2	0	2

COLLEGE OF AGRICULTURE.

Elementary Course—Gentlemen.....	1
Special Students—Gentlemen.....	1
Total .....	2

COLLEGIATE DEPARTMENT.

CLASS.	COURSE.	Gentlemen.	Ladies.	Total.
Sophomore .....	Classical .....	15	4	19
	Scientific.....	16	2	18
	Modern .....	8	13	21
		39	19	58
Freshman .....	Classical .....	9	3	12
	Scientific.....	24	4	28
	Modern .....	4	18	22
		37	25	62
Sub-freshman.....	Classical .....	28	2	30
	Scientific.....	47	13	60
	Modern .....	3	15	18
		78	30	108
Special Students.....		28	10	38
Totals.....		182	84	266

Two hundred and seventy-nine (279) students were registered as residents of Minnesota, the following counties being represented:

Blue Earth, 14; Brown, 3; Carver, 3; Dakota, 4; Dodge, 3; Douglas, 1; Fillmore, 18; Freeborn, 5; Goodhue, 19; Grant, 1; Hennepin East, 49; Hennepin West, 66; Houston, 2; Le Sueur, 5; Lincoln, 1; Lyon, 1; McLeod, 5; Meeker, 1; Mower, 7; Nicollet, 11; Olmsted, 7; Polk, 2; Ramsey, 10; Rice, 4; St. Louis, 1; Scott, 2; Sibley, 1; Stearns, 8; Steele, 6; Wabasha, 7; Waseca, 1; Washington, 4; Winona, 2; Wright, 5.—Thirty-three counties.

Twenty-nine were registered from other States and countries, as follows:

Dakota, 4; England, 1; Illinois, 1; Iowa, 7; Maine, 3; Massachusetts, 1; Montana, 1; New York, 1; Nova Scotia, 2; Ohio, 3; Pennsylvania, 1; Vermont, 1; Wisconsin, 3.

#### ADMISSIONS.

The plan of holding "local examinations" in different parts of the State, authorized by the Board as early as 1873, was first put into operation in the summer of 1877. The results may be seen in the previous report. In June, 1878 and 1879, such examinations were again held under well ordered regulations of the General Faculty, which were stated in detail in the report of the Superintendent of Public Instruction for 1878.

The record for 1878-9 gives the following results:

Southeast district, Professor Edwin J. Thompson in charge. Applicants examined: Lake City, 6; Zumbrota, 9; Rochester, 16; Winona, 9; Rushford, 4; Spring Valley, 6; Austin, 11; Owatonna, 5; Faribault 9; Dodge Center, 6; Wabasha, 2.

Southwest district, Professor John G. Moore in charge. Applicants examined: Chaska, 8; Le Sueur, 6; Albert Lea, 2; Wells, 7; Mankato, 4; New Ulm, 1; Marshall, 1; Excelsior, 6, (by Prof. Thompson.)

Northwest district, Prof. Richard W. Laing in charge. Applicants examined: St. Cloud, 6; Alexandria, 2.

At the University, in June there were examined 28; in September, 55; in the course of the year, 33. The whole number of examinees was 242. Of this number 41 did not complete the work and received no mark. Of the 201 fully examined 125 were passed and 76 were found deficient. Sixteen of the last number were afterward re-examined and passed. Total passed, 141.

Six gentlemen were admitted to pursue special studies in chemistry or agriculture without examination.

The whole number of new students admitted to instruction in the year 1878-9 was 124. They selected their course of study as follows :

	Gentlemen.	Ladies.	Total.
Classical.....	27	3	30
Scientific.....	43	13	56
Modern.....	5	7	12
Selected Studies.....	17	9	26
Total.....	92	32	124

The record for 1879-80 is as follows :

Southeast district, Professor Jabez Brooks in charge. Applicants examined: Red Wing, 4; Lake City, 5; Wabasha, 4; Winona, 7; Eyota, 4; Rochester, 13; (Duluth 2.)—39.

Southwest district, Professor Edwin J. Thompson in charge. Applicants examined: Faribault, 6 and 19; Owatonna, 3; Austin, 10; Spring Valley, 15; Mankato, 3; Le Sueur, 8; Chatfield, 16; Lanesboro, 4; Wells, 7; Blue Earth City, 7.—97.

Northwest district, Prof. John G. Moore in charge. Applicants examined: St. Cloud, 2; Sauk Center, 3; Alexandria, 1; Fergus Falls, 1; Glencoe, 2; Willmar, 3.—12.

At the University there were examined, in June, 20; in September, 30; and in the course of the year 6 more. Total, 56. The whole number of examinees was 204. One hundred of these availing themselves of the regulations of the Faculty permitting the division of examinations, underwent only those of the common branches with the occasional addition of those of higher studies. Fifteen took examinations in continuation of those of previous years. Of the remainder, 89, not one was able to obtain admission entirely free of conditions. Thirty-three were admitted with conditions.

There were admitted as special students without examination: 1 gentleman in agriculture, 2 in draughting and 2 in other studies. Total, 5.

The whole number of new students admitted to instruction in 1879-80 was 38, and they selected their courses of study as follows:

	Gentlemen.	Ladies.	Total.
Classical.....	6	.....	6
Scientific.....	19	.....	19
Modern.....	2	4	6
Agricultural.....	1	.....	1
Special.....	4	2	6
Total.....	32	6	38

The immense decrease in the number of students admitted from that of previous years is explained by the fact that at the close of the previous year (1878-9) the Fourth Class of the Collegiate Department was discontinued, leaving the Third or Sub-freshman Class then as the lowest. Accordingly, the requirements for admission were increased by a full year's work in all the courses.

## GRADUATIONS.

Since the last printed report the number of graduate alumni has been materially increased.

At the seventh annual Commencement, held June 5, 1879, the largest class, 26 in number, received the degrees indicated below:

1879.

## COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

*Bachelors of Arts.*

John Franklin Collom .....	Minneapolis.
Etta Medora Elliot .....	Minneapolis.
John Finley Goodnow .....	Minneapolis.
Frank Smith McKean .....	Lakeland.
Robert William Rhames .....	Rochester.
Chelsea Joseph Rockwood .....	Garden City.
George Burt Thompson .....	Minneapolis.
Willis Mason West .....	St. Cloud.

*Bachelors of Science.*

Walter Barrett .....	Wasioja.
Fred Capin Bowman .....	Litchfield.
Catharine Amelia Burnes .....	Minnetonka.
Timothy Edward Byrnes .....	Kingston.
Evelyn May Champlin .....	Maple Grove.
Addison Gage, Jr. ....	Anoka.
Allen J. Greer .....	Lake City.
Laura Alberta Linton .....	Cook's Valley.
George Henry Partridge .....	Winona.
Etta Thompson .....	Minneapolis.

*Bachelors of Literature.*

William Lincoln Bassett .....	Minneapolis.
Alvin Hildreth .....	Summer.
William Winchester Keysor .....	Mankato.
Marion Hooker Roe .....	Afton.
Caroline Rollit .....	Minneapolis.
Martha Isabel West .....	Minneapolis.

## COLLEGE OF MECHANIC ARTS.

*Bachelors of Civil Engineering.*

William Sanborn Dawley .....	Lake City.
Pierce Power Furber .....	Cottage Grove.

1880.

The graduations at the eighth annual commencement, held June 3, 1880, were as follows:

## COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

*Masters of Arts.*

Graham Cox Campbell .....	Nova Scotia.
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*Bachelors of Arts.*

James Francis Bryant .....	St. Peter.
Cora Inez Brown .....	Minneapolis.
Albert William Rankin .....	St. Peter.
William Wadsworth Williams .....	Lime Springs, Ia.

*Bachelors of Science.*

Frederick Gerald Berry .....	Brooklyn.
Horace Burnham Greeley .....	Mapleton.
Clarence Luther Herrick .....	Minneapolis.
Robert Peter Andrew Nix .....	New Ulm.
Minnie Aurora Reynolds .....	Crookston.
Alva Lucius Roe .....	Afton.
Gilman Walter Smith .....	Red Wing.
Harvey Page Smith .....	Red Wing.
Lillian Sanborn Todd .....	Minneapolis.

*Bachelors of Literature.*

Andrew Holt .....	Carver.
Joseph Elisha Horton .....	Preston.
Lizzie Augusta House .....	Minneapolis.
Bessie Sumner Lawrence .....	Minneapolis.

The programmes of these two commencements are given in Appendix A.

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

	1873	1874	1875	1876	1877	1878	1879	1880	Tot.
Bachelor of Arts.....	2	1	3	4	9	5	8	4	36
Bachelor of Science.....		1	2	5	3	8	10	9	38
Bachelor of Literature.....			1	.....	3	2	6	4	16
Bachelor of Civil Engineering.....			3	3	.....		2	.....	8
Bachelor of Mechanical Engineering.....						1	.....	.....	1
Bachelor of Architecture.....					1	.....	.....	.....	1
Bachelor of Agriculture.....									
Master of Arts.....								1	1
Total.....	2	2	9	12	16	16	26	18	101

The whole number of Alumni is 94, six persons having received two degrees, those in Science and Civil Engineering, and one, Mr. Graham C. Campbell, B. A., of 1877, the Master's degree as above stated. It is proper to remark here that this degree was conferred upon examinations according to the regulations adopted by the Board of Regents in 1878, which may be seen in the annual calendar for 1877-8, or any subsequent year. No honorary degrees are conferred by this University. There are several candidates duly enrolled for Master's degrees and it is known that many more of the alumni are engaged in their studies for the same.

The whole number of women who have been graduated is 21, viz: 2 B. A.; 9 B. S.; 10 B. L.

#### INSTRUCTION.

The customary tables, showing the work actually performed in the various departments as reported by the officers in charge, are submitted:

WORK OF THE YEAR 1878-9.

Subjects.	Text Books.	Instructor.	No. of Exercises	Class.	No. of Students.	Term.
<b>ASTRONOMY.                      PROF. E. J. THOMPSON.</b>						
Advanced.....	Loomis.	Thompson.	55	Senior.	14	I.
Descriptive.....	Snell.	"	35	First.	30	III.
Elementary.....	Kiddle.	"	57	Fourth.	28	III.
<b>MATHEMATICS.                      PROF. E. J. THOMPSON.</b>						
Calculus, Diff.....	Olney.	Thompson.	58	Junior.	10	I.
Int.....	"	"	55	"	6	II.
Anal. Geometry.....	"	"	35	Second.	28 70	II.
Theory of Equations.....	Todhunter.	"	50	Junior.	5	III.
Trigonometry.....	Olney.	"	165	Second.	38 75	I.
Plane Geometry.....	"	Hutchinson.	62	Fourth.	24	II.
"	"	"	62	"	19	II.
Algebra.....	"	"	58	Third.	27	I.
"	"	"	58	"	28	I.
"	"	Lundeen.	58	"	24	I.
"	"	Hutchinson.	58	"	58	III.
<b>CHEMISTRY.                      PROF. S. F. PECKHAM.</b>						
Gen. Chemistry.....	Barker & Peckham.	Peckham.	55	Second.	85	I.
Applied Chemistry.....	Lecture.	"	51	"	25	III.
Analytical Chemistry.....	Lectures.	"	56	First.	13	II & III.
"	"	"	56	Senior.	3	I.
"	"	"	56	Junior.	4	I.
"	"	"	56	Special.	1	I.
"	"	"	54	Senior.	4	II.
"	"	"	54	Junior.	2	II.
"	"	"	54	Special.	5	II.
"	"	"	47	Senior.	4	III.
"	"	"	53	Junior.	1	III.
"	"	"	53	Special.	2	III.
Correlation of Sciences.....	Lectures.	"	10	Senior.	20	III.
} 3 hrs. 3 hrs. 2 hrs.						
<b>PHYSICS.                      PROF. L. W. PECK.</b>						
Mechanics.....	Snell.	Peck.	54	First.	15	I.
"	"	"	"	"	28	"
Natural Philosophy.....	Ganot.	"	54	Fourth.	53	I.
Practical Physics.....	Laboratory.	"	53	Senior.	3	II.
Sound and Heat.....	Atkinson.	"	53	Third.	40	II.
Mechanics.....	Peck.	"	20	First.	18	II.
Light and Electricity.....	Atkinson.	"	59	Second.	33	III.
General Physics.....	Ganot.	"	59	Second.	21	III.
<b>GEOLOGY.                      PROF. C. W. HALL.</b>						
Dynamical Geology.....	Dana.	Hall.	53	Third.	45	II.
"	"	"	52	"	36	II.
Historical Geology.....	Lectures.	"	56	Junior.	11	III.
Mineralogy.....	"	"	53	"	9	II.
Blowpipe Analysis.....	Brush.	"	50	"	9	II.
<b>ZOOLOGY.                      PROF. C. W. HALL.</b>						
Comparative.....	Orton	Hall.	56	First.	23	III.

Subjects.	Text Books.	Instructor.	No. of Exercises	Class.	No. of Students.	Term.
<b>BOTANY.</b>						
<b>PROF. C. W. HALL.</b>						
Lessons and Analysis.....	Gray.	Hall.	56	Third.	66	III.
" " " " " " " " " " " "	"	Herrick.	58	"	66	III.
<b>PHYSICAL GEOGRAPHY.</b>						
<b>PROF. C. W. HALL.</b>						
Elements.....	Cornell, &c	Lacy	50	Fourth.	29	II.
<b>PHYSIOLOGY.</b>						
<b>PROF. C. W. HALL.</b>						
Elements.....	Dalton.	Lacy.	58	Fourth.	37	III.
<b>ENGLISH.</b>						
<b>PROF. M. MARSTON.</b>						
Criticism.....	Goodrich.	Marston.	55	Senior.	5	I.
" " " " " " " " " " " "	Lectures.	"	30	"	6	III.
Anglo-Saxon.....	Carpenter.	"	30	First.	8	I.
" " " " " " " " " " " "	"	"	53	"	8	II.
" " " " " " " " " " " "	"	"	30	"	1	III.
English Literature.....	Sweet.	"	55	Junior.	19	II.
Rhetoric.....	Lectures.	"	55	First.	42	II.
Logic.....	Hepburn.	"	55	"	38	I.
Historical Grammar.....	Jevons, &c	Folwell.	55	"	1	III.
Critical Readings.....	Morris.	M'sCampbell	54	Second.	14	I.
Higher Grammar.....	Shaksp're &c	"	51	"	12	II.
Readings, &c.....	Whitney.	"	54	Third.	14	I.
American Literature.....	Burns, &c.	"	51	"	13	II.
Old English History.....	Freeman.	"	56	2d & 3d	9	III.
" " " " " " " " " " " "	"	"	54	Fourth.	29	I.
English Composition.....	Gilmore.	Mrs. Smith.	51	2 sec.		
" " " " " " " " " " " "	"	"	"	Fourth.	61	I.
English Words.....	Haldeman.	"	57	2 secs.		
" " " " " " " " " " " "	"	"	"	Fourth.	36	II.
<b>RHETORICAL EXERCISES.</b>						
<b>PROF. M. MARSTON.</b>						
Orations.....		Marston.	25	Senior.	25	I.
Essays.....		"	25	"	25	I.
Orations and Essays.....		"	48	"	24	II.
Commencement Parts.....		"	24	"	24	III.
Orations and Essays.....		"	36	Junior.	18	I.
" " " " " " " " " " " "		"	40	"	20	II.
" " " " " " " " " " " "		"	40	"	20	III.
Essays (with Rhetoric).....		"	86	First.	43	II.
Declamations.....		"	80	"	40	III.
Essays (with Logic).....		"	107	"	39	I.
Essays (with Eng. Comp.)..		Folwell.	120	"	61	I.
Declamations.....		Mrs. Smith.	"	Fourth.	61	I.
Vocal Culture.....		Mr. Reeve.	"	Second.	81	II.
Essays (with Chemistry).....		"	10	Third.	81	I.
Essays (with Geology).....		Peckham.	170	Second.	85	I.
Essays (with History).....		Hall.	156	Third.	81	II.
" " " " " " " " " " " "		Laing.	63	Fourth.	21	III.
" " " " " " " " " " " "		Mrs. Smith.	141	"	47	III.
<b>GERMAN.</b>						
<b>PROF. J. G. MOORE.</b>						
German Literature.....	Adler	Moore.	56	Sen & Jun	17	I.
Minna von Barnhelm.....	Buchheim.	"	56	Second.	40	I.
German Course.....	Comfort.	"	56	Third.	26	I.
" " " " " " " " " " " "	"	MJCampbell	56	Jun, &c.	12	I.
Faust and Hist. Lit.....	Whitney.	Moore.	55	Sen & Jun	12	II.
Grammar and Reader.....	"	"	55	Junior.	13	II.
Hermann und Dorothea, } with Germ. Hist. ....	Hart.	"	55	Second.	36	II.
German Course.....	Comfort.	"	55	Third.	26	II.
" " " " " " " " " " " "	"	"	55	"	25	II.
Grammar and Reader.....	Whitney.	MJCampbell	59	"	27	III.
" " " " " " " " " " " "	"	Moore.	59	"	20	III.
Deutsche Lyrik and Hist.....	Buchheim.	MJCampbell	59	Sen & Jun	11	III.
Wilhelm Tell.....	"	Moore.	59	Second.	16	III.
" " " " " " " " " " " "	"	"	59	"	24	III.



Subjects.	Text Books.	Instructor.	Number of Exercises	Class.	No. of Students.	Term.
<b>FRENCH. PROF. R. W. LAING, LL. D.</b>						
Advanced.....	{ Classical Theater.	Laing.	60	Senior.	13	I.
Grammar and Reading.....	Principia.	"	60	First.	44	I.
French Literature.....	Demogot.	"	53	Senior.	12	II.
Grammar, &c.....	Principia, &c	"	50	First.	47	II.
French Literature.....	Demogot, &c	"	38	Senior.	9	III.
Grammar, &c.....	Souvestre.	"	56	First.	26	III.
<b>LATIN. PROF. R. H. TRIPP.</b>						
Horace.....	Lincoln.	Tripp.	52	First.	19	I.
" Essays and History.....	"	"	24	"	19	I.
Cicero, Orations, 1§.....	{ Chase & Stewart.	"	55	Third.	25	I.
" History.....	Liddell.	"	5	"	25	I.
" Orations, 2§.....	{ Chase & Stewart.	"	55	"	22	I.
" History.....	Liddell.	"	5	"	22	I.
Cæsar, Commentaries, 1§.....	{ Chase & Stewart.	Clarke.	53	Fourth.	13	I.
" " 2§.....	"	"	53	"	17	I.
" " 3§.....	"	"	53	"	22	I.
Cicero, De Amicitia.....	"	Tripp.	52	Junior.	6	II.
" Essays.....	"	"	6	"	6	II.
Virgil, Æneid, 1§.....	Searing.	"	55	Third.	21	II.
" History.....	Liddell.	"	6	"	21	II.
" Æneid, 2§.....	Searing.	"	55	"	24	II.
" History.....	Liddell.	"	6	"	24	II.
Livy, 1§.....	Lincoln.	Clarke.	51	Second.	18	II.
" History.....	Liddell.	"	10	"	18	II.
" 2§.....	Lincoln.	"	51	"	26	II.
" History.....	Liddell.	"	10	"	26	II.
Cæsar, 1§.....	{ Chase & Stewart.	"	51	Fourth.	27	II.
" 2§.....	"	"	51	"	27	II.
Cicero, Tusculan.....	"	Tripp.	58	Junior.	6	III.
" ".....	Lectures.	"	2	"	6	III.
" ".....	Essays.	"	6	"	6	III.
Normal Class.....	"	"	21	Senior.	5	III.
Virgil, Æneid, 1§.....	Searing.	"	58	Third.	18	III.
" History.....	Liddell.	"	7	"	18	III.
" Æneid, 2§.....	Searing.	"	58	"	20	III.
" History.....	Liddell.	"	7	"	20	III.
Cæsar and Cicero.....	{ Chase & Stewart.	Clarke.	56	Fourth.	19	III.
Tacitus, History.....	Tyler.	MJ Campbell	58	"	22	III.
Livy, 1§.....	Lincoln.	Clarke.	54	First.	13	III.
" History.....	Liddell.	"	55	Second.	13	III.
" 2§.....	Lincoln.	"	55	"	13	III.
" History.....	Liddell.	"	10	"	35	III.
" ".....	"	"	10	"	35	III.
<b>GREEK. PROF. J. BROOKS, D. D.</b>						
Greek Literature.....	Lectures.	Brooks.	21	Senior.	8	I.
Exam. and Reviews.....	"	"	21	"	8	I.
Plato, Apology and Crito.....	Tyler.	"	50	Junior.	6	I.
" Papers.....	"	"	18	"	6	I.
Homer.....	Boise.	"	53	Second.	21	I.
" Papers.....	"	"	60	"	21	I.
Anabasis.....	Boise.	Hutchinson.	54	Third.	16	I.
Grammar and Reader.....	{ Hadley & Boise.	"	54	Fourth.	14	I.
Plato, Phædo.....	Davies.	Brooks.	54	Senior.	8	II.
Demosthenes.....	{ Heslop & Tyler.	"	56	First.	13	II.
Homer.....	Boise.	"	59	Second.	19	II.
Anabasis.....	"	Hutchinson.	50	Third.	16	II.
Grammar and Reader.....	{ Hadley & Boise.	"	50	Fourth.	14	II.
New Testament.....	"	Brooks.	20	Senior.	2	III.
Æschylus.....	Woolsey.	"	55	First.	11	III.
" Papers.....	"	"	33	"	11	III.
Herodotus.....	"	"	56	Second.	15	III.
Grammar and Reader.....	{ Hadley & Boise.	Hutchinson.	52	Fourth.	11	III.

Subjects.	Text Books.	Instructor.	No. of Exercises	Class.	No. of Students.	Term.
<b>COMPAR. PHILOLOGY. PROF. G. CAMPBELL.</b>						
Philology (theoretical).....	Lectures.	Campbell.	24	Junior.	16	I.
<b>MENTAL PHILOSOPHY. PROF. G. CAMPBELL.</b>						
Anthropology.....	Hickok.	Campbell.	10	Junior.	20	III.
Psychology, (empirical)....	"	"	45	"	20	III.
" Essays.....	"	"	3	"	20	III.
History of Philosophy.....	Lectures.	"	30	Senior.	26	I.
Ontology.....	"	"	15	"	26	I.
Psychology (rational).....	"	"	15	"	26	I.
Essays.....	"	"	3	"	26	I.
<b>MORAL PHILOSOPHY. PROF. G. CAMPBELL.</b>						
Practical Ethics.....	Lectures.	Campbell.	10	Second.	70	II.
History of Ethics.....	"	"	18	Senior.	24	II.
Philosophy of Ethics.....	"	"	22	"	24	II.
Evidences of Christianity..	"	"	9	"	24	II.
Discussions.....	"	"	5	"	24	II.
Essays.....	"	"	3	"	24	II.
History of Nat. Theology...	"	"	10	"	20	III.
Philosophy of Nat. Theology	"	"	10	"	20	III.
<b>HISTORY. PROF. R. W. LAING.</b>						
History of Civilization.....	Guizot.	Laing.	33	Junior.	16	I.
Mediaeval History, 2 secs...	Green.	"	23	Second.	72	II.
Modern History.....	Thalheimer.	"	25	First.	29	III.
General History.....	Swinton.	"	56	Fourth.	19	III.
" " 2 secs.....	"	Mrs. Smith.	54	"	47	III.
<b>SOCIAL SCIENCE. MR. WM. W. FOLWELL.</b>						
Civil Government.....	DeToquev'e	Folwell.	33	Senior.	20	II.
" ".....	Papers.	"	100	"	20	II.
" ".....	Const. U. S.	"	8	"	20	II.
" ".....	Const. Minn.	"	4	"	20	II.
Political Economy.....	Lectures.	"	48	"	24	III.
International Law.....	Woolsey, &c.	Laing.	20	"	4	III.
<b>SANITARY SCIENCE. PROF. C. N. HEWITT.</b>						
Public Health.....	Lectures.	Hewitt.	8	Senior.	24	III.
<b>INDUSTRIAL DRAWING. PROF. M. D. RHAME.</b>						
Geometrical Drawing.....	No book.	Rhame.	D. H. 54	Third.	41	I.
Desc. Geom. & Perspective.	Church, &c.	"	57	First.	12	II.
Descriptive Geometry, &c..	"	"	D. H. 57	Second.	22	II.
Free Hand Drawing.....	W. Smith.	"	54	Fourth.	41	III.
<b>FINE ARTS. PROF. G. CAMPBELL.</b>						
History and Principles.....	Lectures.	Campbell.	10	Senior.	17	III.
<b>AGRICULTURE. PROF. CHAS. Y. LACY.</b>						
Agricultural Chemistry.....	Johnson.	Lacy.	56	Special.	1	I.
Practical Agriculture.....	"	"	31	"	1	I.
" ".....	Lectures.	"	25	"	1	I.
Horticulture.....	Barry.	"	40	"	1	I.
" ".....	Lectures.	"	15	"	1	I.
<b>CIVIL ENGINEERING. PROF. M. D. RHAME.</b>						
Mechanics.....	Weisbach.	Rhame.	54	Senior.	2	I.
Field Engineering and	"	"	D. H. 20	"	1	I.
Drawing.....	"	"	57	"	3	II.
Bridge Building.....	Wood.	"	50	"	1	III.
Building Material.....	"	"	50	"	1	III.
Surveying.....	Oral.	Peck.	36	Second.	23	II.

Subjects.	Text Books.	Instructor.	No. of Exercises	Class.	No. of Students.	Term.
<b>MILITARY SCIENCE. PROF. J. A. LUNDEEN, U. S. A.</b>						
Squad Drill.....	Upton.	Lundeen.	25	3d & 4th.	54	I.
Small Arms.....	Lectures.	"	4	1st & 2d.	31	I.
Company & Battalion Drill	Upton.	"	16	First.	14	III.
" " " " " "	"	"	14	Second.	31	III.
" " " " " "	"	"	18	Third.	26	III.
" " " " " "	"	"	43	Fourth.	24	III.
Squad Drill.....	"	"	48	"	15	III.

WORK OF THE YEAR 1879-80.

The University year—1879-80 began on the 10th of September, 1878, and ended on the 5th of January, 1879.

Subjects.	Instructor.	Class.	Number of Exercises	Class.	No. of Students	Term.
<b>ASTRONOMY. PROF. E. J. THOMPSON.</b>						
Practical.....	Loomis.	Thompson.	50	Senior.	10	I.
Descriptive.....	Snell.	"	53	Soph.	30	III.
Practical.....	Loomis.	"	50	Junior.	13	III.
<b>MATHEMATICS. PROF. E. J. THOMPSON.</b>						
Diff. Calculus.....	Olney.	Thompson.	56	Junior.	15	I.
Solid Geometry, 1§.....	"	"	19	Fresh.	20	I.
" " 2§.....	"	Clarke.	14	"	22	I.
" " 3§.....	"	"	14	"	20	I.
Plane Trigonometry, 1§.....	Olney.	Thompson.	17	"	20	I.
" " 2§.....	"	Clarke.	20	"	22	I.
" " 3§.....	"	"	20	"	20	I.
Spherical Trigonometry, 1§.....	"	Thompson.	15	"	20	I.
" " 2§.....	"	Clarke.	20	"	22	I.
" " 3§.....	"	"	20	"	22	I.
Algebra.....	"	Hutchinson.	52	Subfresh	72	I.
Integral Calculus.....	"	Thompson.	53	Junior.	7	II.
Analytical Geometry, 1§.....	"	"	33	Fresh.	33	II.
" " 2§.....	"	Hutchinson.	30	"	20	II.
Theory of Equations.....	Todhunter.	Thompson.	50	Junior.	5	III.
Solid & Spherical Geometry	Wentworth.	Hutchinson.	52	Subfresh	59	III.
<b>CHEMISTRY. PROF. S. F. PECKHAM.</b>						
General.....	Lectures.	Peckham.	55	Fresh.	68	I.
Correlation of Sciences.....	"	"	"	Senior.	14	II.
Applied Chemistry.....	"	"	"	Fresh.	32	III.
Analytical Chemistry.....	Manuals of Appleton,	"	"	Sen&Jun	16	I.
" " " " " "	Fresenius & others. Labo-	"	"	"	12	II.
" " " " " "	ratory work	"	"	"	6	III.
" " " " " "	Double hrs.	"	60	Soph.	12	II. & III.
<b>PHYSICS. PROF. M. D. RHAME.</b>						
Mechanics.....	Olmsted.	Rhame.	56	Soph.	15	I.
Mechanics.....	Peck.	Thompson.	20	"	36	II.
Sound and Heat.....	Ganot.	Hall and Rhame.	55	Subfresh	41	II.
Light and Electricity.....	"	Rhame.	57	Fresh.	34	III.
Physics.....	"	"	57	"	32	III.
<b>MINERALOGY. PROF. C. W. HALL.</b>						
Mineralogy.....	Lectures.	Hall.	54	Junior.	17	II.
" Laboratory Work	Brush.	"	45	"	17	II.

Subjects.	Text Books.	Instructor.	Number of Exercises	Class.	No. of Students.	Term.
<b>ZOOLOGY.</b>						
PROF. C. W. HALL.						
	Orton.	Hall.	52	Soph	46	III.
<b>BOTANY.</b>						
PROF. C. W. HALL.						
	Gray	Hall	52	Subfresh	59	III.
<b>ENGLISH.</b>						
PROF. M. MARSTON.						
Criticism.....	Goodrich.	Folwell.	56	Senior.	3	I.
Logic.....	Jevons.	Marston.	57	Soph.	62	I.
Anglo-Saxon.....	Carpenter.	"	55	"	22	I.
".....	"	"	50	"	24	II.
Historical Grammar.....	Morris.	Mrs. Smith.	59	Fresh.	16	I.
Critical Readings.....	Goldsmith.	"	57	Subfresh	16	I.
English Literature.....	Lectures.	Marston.	45	Junior.	31	II.
Rhetoric, 1§.....	Hepburn.	"	55	Soph.	30	II.
" 2§.....	"	Hutchinson.	50	"	29	II.
Shakspeare.....	Rolfe.	Mrs. Smith.	59	Fresh.	14	II.
Critical Readings.....	} Hudson's	"				
	} Addison.	"	58	Subfresh	11	II.
Criticisms.....	Goodrich.	Marston.	55	Junior.	5	III.
Milton.....	Boyd.	Mrs. Smith.	54	Fresh.	4	III.
American Authors.....	Shaw.	"	54	Subfresh	7	III.
Rhetoricals.....	"	Marston.	38	"	19	I.
".....	"	"	62	Junior.	31	I.
".....	"	"	118	Soph.	59	I.
".....	"	Peckham.	136	Fresh.	68	I.
Elocution.....	"	} Miss Chid-	12	Subfresh	70	I.
	"	ester.				
Rhetoricals.....	"	Marston.	36	Senior.	18	II.
".....	"	"	72	Junior.	36	II.
" 1§.....	"	Clarke.	60	Soph.	30	II.
" 2§.....	"	Hutchinson.	58	"	29	II.
".....	"	Marston.	132	Fresh.	66	II.
Essays.....	"	Mrs. Smith.	66	Subfresh	33	II.
Rhetoricals.....	"	Marston.	17	Senior.	17	III.
".....	"	"	50	Junior.	25	III.
".....	"	"	100	Soph.	50	III.
<b>GERMAN.</b>						
PROF. J. G. MOORE.						
Scientific Prose, 3 per week	Hodge.	"				
Lit. Geschichte, 2 per week	Mobins.	Moore.	Daily.	Sen & Jun	14	I.
Grammar and Reader.....	Whitney.	"	"	Junior.	16	I.
Schiller's Prose.....	Buchheimer.	"	"	Fresh.	37	I.
Grammar.....	Comfort.	} MissCamp-	"	Subfresh	34	I.
	"	bell.				
Faust, (3).....	Hart.	"	"			
Lit. Gesch., (2).....	Mobins.	Moore.	"	Sen & Jun	12	II.
Grammar and Reader.....	Whitney.	"	"	Junior.	15	II.
Minna von Barnhelm, (3).....	Buchheim.	"	"			
German History, (2).....	Kohlrausch.	"	"	Fresh.	34	II.
Grammar and Reader.....	Whitney.	} MissCamp-	"	Subfresh	37	II.
	"	bell.				
Deutsche Poesie, &c.....	Klemm.	Moore.	"	Sen & Jun	15	III.
Hermann und Dorothea & } German Composition..... }	Hart.	"	"	Junior.	12	III.
Wilh. Tell, (3).....	Buchheim.	"	"			
German History, (2).....	Kohlrausch.	"	"	Fresh.	30	III.
Grammar and Reader.....	Whitney.	} MissCamp-	"	Subfresh	30	III.
	"	bell.				
<b>FRENCH.</b>						
PROF. G. CAMPBELL.						
Dram. Lit.....	Knapp.	Campbell.	Daily.	Senior.	8	I.
Grammar.....	Fasquelle.	} MissCamp-	"	Soph.	48	I.
	"	bell.				
Class. Prose.....	Knapp.	Campbell.	"	Senior.	8	II.
Grammar and Reader.....	Fasquelle.	} MissCamp-	"	Soph.	50	II.
	"	bell.				
Philosophie de l'Art.....	Taine.	Campbell.	3 per week.	Senior.	7	III.
Selections in Prose & Verse	Knapp.	} MissCamp-	Daily.	Soph.	24	III.
	"	bell.				

Subjects.	Text Books.	Instructor.	No. of Exercises	Class.	No. of Students.	Term.
<b>LATIN. PROF. R. H. TRIPP.</b>						
Horace.....	Chase & Stewart.	Tripp.	54	Soph.	25	I.
Essays.....	"	"	"	"	25	I.
Contemporary History.....	"	"	"	"	25	I.
Cicero.....	Sundry.	"	55	Subfresh	22	I.
Contemporary History.....	"	"	"	"	22	I.
Cicero.....	"	"	55	"	11	I.
Contemporary History.....	"	"	"	"	11	I.
Cicero.....	"	Clarke.	52	"	16	I.
Contemporary History.....	"	"	"	"	16	I.
De Amicitia.....	Chase & Stewart.	Tripp.	56	Junior.	17	II.
Livy.....	Lincoln.	"	57	Fresh.	23	II.
History of the Kings.....	"	"	"	"	23	II.
Livy.....	"	"	57	"	24	II.
History of the Kings.....	"	"	"	"	24	II.
Virgil.....	Searing.	Clarke.	54	Subfresh	17	II.
Contemporary History.....	"	"	"	"	17	II.
Virgil.....	"	"	54	"	20	II.
Contemporary History.....	"	"	"	"	20	II.
Tusculan Dispt.....	Chase & Stewart.	Tripp.	57	Junior.	15	III.
Essays.....	"	"	12	"	"	III.
De Amicitia.....	"	Clarke.	55	Soph.	15	III.
Livy and Horace.....	"	Tripp.	56	Fresh.	10	III.
Contemporary History.....	Liddell.	"	"	"	10	III.
Livy and Horace.....	Chase & Stewart.	"	56	"	28	III.
Contemporary History.....	Liddell.	"	"	"	28	III.
Virgil, 1§.....	Searing.	Clarke.	55	Subfresh	11	III.
Virgil, 2§.....	"	"	45	"	22	III.
<b>GREEK. PROF. J. BROOKS, D. D.</b>						
Literature.....	Lectures.	Brooks.	22	Senior.	5	I.
Examination & Reviews on.....	"	"	22	"	5	I.
Plato, Apology and Crito.....	Tyler.	"	56	Junior.	11	I.
Essays.....	Original.	"	33	"	41	I.
Homer, Iliad.....	Boise.	"	57	Fresh.	15	I.
Essays.....	Original.	"	45	"	15	I.
Xenophon, Anabasis.....	Boise.	Hutchinson.	52	Subfresh	15	I.
Plato, Phædo.....	Davies.	Brooks.	53	Senior.	4	II.
Demosthenes, Orations.....	Hislops.	"	56	Soph.	14	II.
Homer, Iliad.....	Boise.	"	54	Fresh.	13	II.
Xenophon, Anabasis.....	"	Hutchinson.	50	Subfresh	13	II.
New Testament.....	"	Brooks.	20	Senior.	3	III.
Æschylus, Prometheus.....	Woolsey.	"	53	Soph.	13	III.
Essays.....	Original.	"	39	"	13	III.
Demosthenes, Orations.....	Hislops.	"	58	Fresh.	13	III.
<b>COMPAR. PHILOLOGY.</b>						
Philology, theoretical.....	Lectures.	Campbell.	22	Junior.	36	I.
<b>MENTAL PHILOSOPHY.</b>						
Psychology.....	Hickok ½h Lect/res ½h	Campbell.	55	Junior.	35	III.
History of Philosophy.....	Lectures.	"	40	Senior.	17	I.
Ontology.....	"	"	15	"	17	I.
<b>MORAL PHILOSOPHY. PROF. G. CAMPBELL</b>						
Practical Ethics.....	Lectures.	Campbell.	10	Fresh.	73	II.
History of Ethics.....	"	"	20	Senior.	17	II.
Philosophy, Ethics.....	Hickok.	"	15	"	17	II.
Evidences of Christianity.....	Lectures.	"	20	"	17	II.
Natural Theology.....	"	"	20	"	17	III.

Subjects.	Text Books.	Instructor.	No. of Exercises	Class.	No. of Students.	Terms.
<b>HISTORY.                      PROFS. CAMPBELL AND MARSTON.</b>						
History of Civilization.....	Guizot.	Folwell.	33	Junior.	26	I.
Medieval History, 1§.....		Clarke.	21	Fresh.	27	II.
2§.....		"	21	"	32	II.
Ancient History.....	Rawlinson.	Mrs. Smith.	57	2 sec.	33	II.
Modern History.....		"	30	Subfresh Soph.	26	III.
<b>POLITICAL SCIENCE.                      MR. WM. W. FOLWELL.</b>						
Civil Government.....	DeTocquev'e	Folwell.	25	Seniors.	13	II.
"                                    "	Const. U. S.	"	9	"	13	II.
"                                    "	Const. Minn.	"	5	"	13	II.
"                                    "	Lectures.	"	2	"	13	II.
Political Economy.....		"	35	"	17	III.
<b>SANITARY SCIENCE.                      PROF. C. N. HEWITT, M. D.</b>						
Public Health.....	Lectures.	Hewitt.	7	Senior.	10	III.
<b>INDUSTRIAL DRAWING.                      PROF. M. D. RHAME.</b>						
Geometrical Drawing.....	Oral.	Rhame.	D. H. 56	Subfresh	47	I.
Drawing.....		"	D. H. 55	Fresh.	33	II.
Descriptive Geometry.....	Church.	"	55	Soph.	14	II.
<b>FINE ARTS.                                      PROF. G. CAMPBELL.</b>						
Philosophy of Art.....	Lectures.	Campbell.	2	Senior.	15	III.
Architecture.....	"	"	4	"	15	III.
Sculpture.....	"	"	2	"	15	III.
Painting.....	"	"	2	"	15	III.
<b>AGRICULTURE.                                      PROF. C. Y. LACY.</b>						
Agricultural Chemistry.....	Johnson.	Lacy.	50	Special.	1	I.
Agriculture.....		"	50	"	1	I.
Horticulture.....		"	50	"	1	I.
Agricultural Chemistry.....	Johnson.	"	50	"	1	II.
Agriculture.....		"	50	"	1	II.
Arboriculture.....		"	50	"	1	II.
Farm Drainage & Accounts		"	50	"	1	III.
Agriculture.....		"	50	"	1	III.
Horticulture.....		"	50	"	1	III.
<b>CIVIL ENGINEERING.                      PROF. M. D. RHAME.</b>						
Mechanics.....	Todhunter.	Rhame.	55	Junior.	3	II.
Surveying.....		"	20	Fresh.	24	III.
<b>ANTHOPOLOGY.                                      PROF. C. W. HALL.</b>						
	Topinard.	Hall.	9	Senior.	2	III.

## COURSES OF STUDY.

It would be in accordance with custom and precedent to insert in detail the courses of study in and for the various departments and colleges, as adopted by your honorable Board in May last (1880); but inasmuch as they have already been printed in full in the annual calendar, which is furnished free to all persons applying for it, it seems unnecessary to swell the bulk of the report by embodying the tables.

The changes made in the collegiate department consist in removing certain studies, as physics, geology and logic, to be taken up at a later period, in increasing the amount of elementary chemistry and botany, and in restoring Latin as an option in the modern course in the Sophomore year.

In the College of Science, Literature and Arts, the chief modification is the introduction of a larger number of elective studies.

As a general rule, each student has in each term one "required" study, and fills up his time from a list of "electives." Two reasons may be given in justification of this increase of elective work. (1.) The impossibility of comprising in any course of study all of those studies thought to be essential to an education. (2.) The opportunity afforded students who have already spent two years in the disciplinary studies of the University, to pursue their favorite studies with an interest not to be expected of those who are forced to their work. The example of several of our leading institutions affords a clear ground for this action of the Board.

The amount of Greek and Latin, required and elective, has been somewhat reduced, and several studies brought up from the lower years as mentioned above, have been inserted.

In the College of Mechanic Arts the courses have been so arranged as to be economically coordinated with the general Scientific course. The course in Mechanical Engineering has been made more prominent than those in Civil Engineering and Architecture, in expectation of a more extended demand in that line of work.

No material changes were made in the College of Agriculture. This department still offers a large and liberal assortment of courses: (1) The regular undergraduate course, resting on the Scientific course of the Collegiate Department, and leading, after a thorough scientific and practical drill of five years, to the baccalaureate degree; (2) the Elementary course, running parallel with the Scientific course of the Collegiate Department for three years; (3) several special courses; (4) the Farmers' lecture course.

In arranging the schedule for the use of the Board, the General Faculty, after careful and tedious deliberation, could not devise any more liberal arrangement of studies in this College. These courses have been offered for years and not in a mere formal way. The Agricultural College is here, with its building, laboratory, plant house, experimental farm, apparatus, books, and large body of professors, but in spite of all these and of all the efforts, it has been impossible to attract students into the College. When there have been students they have been diligently instructed. The teaching services of the professor of Agriculture have at times been monopolized by a single student.

This paucity of Agricultural students is not peculiar to Minnesota. It exists in all other States. Many are discouraged and fear that the agricultural classes have no care for science as applied to their profession.

For one, I am not discouraged. Time is needed to build up the agricultural colleges and departments, as it took time to build up law and medical colleges. The legal profession are not yet a unit as to the value of the training given in the law schools.

It should be remembered that the students of the University are entirely *free* to elect their courses of study. The Faculty have no power, and they are wisely forbidden by the Board to exert influence to induce applicants to enter any particular course.

In consequence of the discontinuance of the Fourth class at the end of the year 1878-9, the requirements for admission have been raised by one full year's work in all the courses.

#### BUILDINGS.

The buildings and furniture will be found on inspection to be in good repair. The only exception is that of the plastering in the old part of the main building, which continues to fall off, especially from ceilings. The wood work in the new part still remains without the final coat of paint, which should soon be put on, both for looks and economy's sake.

The need of new structures will be mentioned hereafter.

#### MUSEUMS AND COLLECTIONS.

Extensive additions have been made to both the mineralogical and zoological collections of the General Museum. There is still a considerable amount of material which will have to await the enlargement of the rooms before it can be displayed for purposes of instruction and inspection by visitors.



The museum has at length become a creditable and attractive portion of the outfit. The curator's report will show many interesting particulars. It may be proper to suggest the question whether the curator has done wisely in attaching his report on the museum to the report of the Geological Survey, as if the museum were an incident of the survey and not a permanent part of the University plant.

Some additions have been made to the collections in Agriculture and Technology, and a number of much needed cases have been put in place. Much remains, however, to be done in the arrangement and display of the material.

The purchase of a few busts and statuettes in plaster comprise the accessions to the classical museum. So soon as the means can be afforded the classical and literary work may be greatly reinforced by judicious additions to this collection.

#### LABORATORIES AND APPARATUS.

The chemical laboratory has been maintained in its usual efficiency, and is fully equipped for all ordinary qualitative and quantitative work.

Since the consolidation of the physics with another department, no progress has been made in its development. It is erately delib conviction that this department must, so soon as the means can be compassed, be placed upon an independent footing and supplied with a laboratory and additional apparatus. If any department of University work at this time demands the services of a specialist, it is that of physics, and the time is at hand when the field will have to be subdivided even.

The departments of biology and mineralogy have been essentially advanced by the fitting up of the laboratory, under the supervision of Prof. C. W. Hall. Admirably as this establishment serves its present purpose, it is already apparent that the place is too strait for the future. Already classes have to be subdivided, so as to double the work of the professor.

#### THE EXPERIMENTAL FARM.

The report of Prof. Lacy for the year 1878-9, herewith transmitted, was submitted at the last annual meeting. As this officer retired in June last, without leaving any report of operations subsequent to the last annual report, there is no official information at my disposal as to the operations of the farm. It is believed that the crops, teams and other property have been properly cared for by the hands in charge.

## THE FRUIT FARM.

The report of Mr. P. M. Gideon, the superintendent, herewith transmitted, shows the progress made, which seems to be creditable. A personal visit made in April last gives reason to believe that much may be expected of the experiments of Mr. Gideon.

## GEOLOGICAL SURVEY.

The annual report of Professor Winchell, State Geologist, is herewith transmitted. It contains a preliminary list of the crystalline rocks in the north part of the State, and an account of the geology of the same.

Prof. Winchell gives notice of his expectation to have one or two volumes of the final report of the survey ready for publication before the adjournment of the Legislature of 1881.

## THE LIBRARY.

The whole number of volumes added in the year 1878-9 was 536, and in the year 1879-80, 717. A complete alphabetical list of these additions, arranged according to the authors, is herewith transmitted for your inspection and the information of the Legislature and the people. See appendix B.\*

A "finding list" of all the books, arranged according to subjects is in preparation and will be ready for printing with the other reports to the Board. It is highly important that this list be printed, as it will have the effect of increasing the usefulness of the library, not only to the members of the University, but to all the people of the State in a degree not to be indicated by any authenticated statement.

The printed list of authors already published shows what writers are represented. The list of subjects will show what works and articles may be found. I trust the Board will decide it wise to include this list in their reports. See appendix C.\*

Under the advice of the Executive Committee the Faculty have refrained from drawing on the annual appropriation except to a limited extent. It is to be hoped that the condition of the treasury will at an early day not only permit the expenditure of the whole sum now set apart by the Board, but that it may be materially increased. The teachers need books and those who are taught

\*See close of this volume.

need books. Next to the teaching force, in my judgment stands the library in point of importance in Universities. With the latest books on the shelves, able and enterprising instructors extend and supplement their work, and incompetent and inefficient teachers cannot remain in an institution whose students have access to such books.

The following donations have been duly acknowledged on behalf of the University :

1878-9.

- T. R. Newton, B. A. :  
Gazetteer U. S.
- R. W. Laing, LL. D. :  
Life of Gouverneur Morris.  
Life of Picciola.  
Le Sage—Gil. Blas.  
J. Walton—Eng. Biography.  
Notes on Æschylus.
- U. S. Gov't. Department of Interior.  
Scientific.  
Documents 1st and 2d sessions 45th Congress.
- U. S. Gov't. Treasury Department.  
Synopsis of Decisions—1878.  
Report of Life Saving Service—1878.  
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Prof. S F. Peckham:  
 Evolution of Sound.

- Prof. C. Y. Lacy:  
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Mineralogy and Chemistry.
- Wisconsin:  
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The following table shows the number and classification of the books actually used since 1873:

Year ending in June.	'73.	'74.	'75.	'76.	'77.	'78.	'79.	'80.
History.....	94	139	219	300	489	527	603	466
Biography.....	121	83	134	147	170	359	382	331
Fiction.....							665	514
Metaphysics.....	163	96	176	446	513	272	348	329
Belles Lettres, Prose.....	117	101	161	186	267	511	334	290
Belles Lettres, Poetry.....	140	107	167	143	156	323	365	311
English Literature.....								114
Ancient Language and Literature.....	12	41	41	68	54	70	82	62
Modern Language and Literature.....	53	92	104	64	120	175	319	112
Natural History, Science.....	83	106	107	121	93	203	328	167
Political Science.....	32	23	55	45	84	120	166	215
Travels.....	108	99	145	111	105	120	172	111
Mathematics.....	95	43	28	31	18	32	24	31
Philology.....								70
Miscellaneous.....	191	103	165	169	144	191	278	242
	1,360	1,066	1,569	1,904	2,356	2,930	4,138	3,364
To Faculty, Alumni and Others.....	203	166	471	486	669	1,022	1,076	953
Used by Students in Reading Room.....	370	500	720	1,650	3,200	*4,000	*4,500	*4,000
	1,933	1,622	2,750	4,040	6,225	7,925	9,614	8,317

\*Estimated.

The following periodicals have been supplied to the Reading Room from the fund appropriated by the Board. Those marked with a \*, however, have been sent gratuitously by the publishers, to whom the thanks of the Board are due:

*Quarterlies*—Bibliotheca Sacra, British Review, Edinburgh Review, Journal of Speculative Philosophy, London Review, Mind, National Quarterly Review, Popular Science Review, Westminster Review.

*Bi-Monthlies*—International Review, New Englander, North American Review.

*Monthlies*—American Journal of Science and Art, Appleton's Art Journal, Atlantic, Blackwood's Magazine, Contemporary Review, Eclectic, Harper's Magazine, Deutsche Revue, Library Journal, Popular Science Monthly, Scribner's Magazine, Van Nostrand's Engineering Magazine, Gardner's Monthly, American Agriculturist, Live Stock Journal, \*Messenger of Peace.

*Semi-Monthlies*—Ueber Land und Meer.

*Weeklies*—Academy, Athenaeum, Chemical News, Harper's Weekly, Littell's Living Age, Nation, Nature, Publishers' Weekly, \*Official Gazette, Scientific American and Supplement, Glencoe Register,\* Glencoe Enterprise, Prairie Farmer, Country Gentleman, Owatonna Journal,\* Minneapolis Freie Presse,\* Staats Tidning.\*

*Semi-Weeklies*—New York Tribune, New York Evening Post.\*

*Dailies*—War Department Weather Map,\* St. Paul and Minneapolis Pioneer Press, Minneapolis Tribune.\*

It is but proper that particular mention should be made of the fidelity and efficiency of Miss C. A. Rollit, who for the past two years has acted as assistant librarian.

Since the close of the period covered by this report, a beginning has been made on the catalogue of subjects, which has been for many years greatly needed by all readers and especially by the students.

#### REMARKS AND SUGGESTIONS.

The biennial period now closing has been full of event. As to the changes affecting the personnel of the University, the report of the Board having said what is necessary and proper, there is no occasion for remark here. The modifications of the courses of study have been referred to. Of these it may be proper to remark further that I believe them in the main to be in the line of safe progress, and that they will contribute to the advancement of the institution. While our University has innovated in the single point of drawing a sharper line between the secondary and superior education than others have yet done, in other regards she has been one respect we have, in my judgment, probably been too conserv-

ative—that of limiting the admission of special students to strictly eminently conservative. We have attempted nothing not sanctioned by the experience of other institutions on like ground. In “exceptional cases.” In a liberal view the University exists not merely for the benefit of the few youth who can by good fortune or extreme self-denial pass through a full course to graduation, but for the benefit of any persons who, seriously desiring to learn anything taught in Universities, can profitably join the classes and receive the instruction. Another reason for a liberal policy is that in many cases students admitted to the special list, finding what the advantage of the University may really be to them, fall in some regular class and are graduated. We have had several such cases. The present policy of the Universities of Michigan and Wisconsin may serve as a convenient guide for any legislation the Board should be pleased to undertake.

In the matter of elective studies there is a farther step which may be taken, which will, I now believe, be a great relief to the Faculties and to many students. In accordance with the theory that all college bred men were expected to be professional and to be public, the old colleges required a large amount of oratorical work of all students. The theory is no longer tenable, but in obedience to tradition we are still forcing a great many unwilling youth to “speak in public on the stage.” Such compulsory drill is of very slight benefit to reluctant performers, and it is exacted at great cost of effort and vexation on the part of the professors. It would be far better to save this lost labor in order to bestow it upon those students who really desire to practice oratory and will work cheerfully. I would therefore recommend the early consideration of some plan by which oratory would be put on the elective list.

Agreeably to the resolution of the Board, the Fourth class was discontinued at the close of the year 1878-9. The members of this class formed, for the year 1879-80, the Third or Sub-Freshman class. It was therefore not until the beginning of the year now in progress that a Sub-Freshman class was first recruited entirely from the schools of the State. The indications thus far point to the conclusion that the Board acted wisely in dropping the Fourth class. Without doubt we may expect a reasonable and sufficient number of well prepared students, if the act for the encouragement of higher education shall be, after suitable amendment, continued in force by the Legislature. Certainly some such provision is essential to the integrity of the State system of public instruction. Without it only the favored few dwelling in cities and



towns can really exercise the right to a complete course of public instruction from A. B. C. to the end of the University course. The object of the law in question is simply to open the high schools to the sons and daughters of the farmers, free of tuition, as they are to local residents. There will be then common schools for all, high schools for all and the University for all.

It has lately come to my knowledge that the farmers of the State do not understand that their sons may be admitted to the special agricultural courses without examination. The Board can not be held responsible for this, as every catalogue which has been published has contained an announcement of the fact. It may, however, be wise to use some extraordinary endeavors to extend this information.

I cannot close this report without reference to the many impending needs of the University. The endowment, considerable as it may seem in prospect, will be greatly inadequate to the support of the University such as the State needs and must have. Already the funds have to be invested in bonds drawing less than 5 per cent. The endowment must be greatly increased or the institution must be supported by taxation.

The current income is already insufficient to carry on the work which is in hand, if we mean to do it in such manner as other colleges and universities are doing it. There are needed more men, more books, more instruments and apparatus. To procure them, to expand and develop the institution, to keep pace with our nearest neighbors even, to say nothing of the great institutions of the older States, large amounts of money are indispensable. It seems to me that the time has come when the representatives of the people should be appealed to for the indispensable means to place the institution on such a footing as will not merely enable it to do the work of a modern University, but render it a pride to the State. The Board may fairly claim that they have brought the institution into a creditable condition; they may boldly challenge the fullest scrutiny of their administration, and they may therefore urgently represent these impending needs. Before opening new departments, those now organized should be properly equipped. In order to do this the first requisite is additional buildings, which in my own judgment should be erected in the following order:

1. A Farm House with necessary out houses.
2. A Mechanic Arts building, to include shops for wood and iron working, draughting rooms and machines.

3. A gymnasium, to include a drill hall for the military exercises.
4. An astronomical observatory on a simple and moderate scale, for actual use as an appliance of instruction.
5. A museum, to which should be attached working rooms for the geological survey, and class-rooms and laboratories for geology and mineralogy, botany, zoology and biology.
6. A library building sufficient for the storage of 50,000 volumes, with the necessary rooms for reading and consultation and for the work of the attendants.

I would most respectfully urge your honorable body to take this subject into consideration with a view to immediate action. The State is advancing in wealth, population and reputation. Her institutions cannot remain stationary and remain respectable. If the State be not firmly resolved to have a University which, developing as she develops, shall at length stand the peer of those of other States, the sooner the endowment be devoted to another purpose the better. The people's University must be grander and more beneficent than that of any sect or denomination or be ridiculous.

All of which is respectfully submitted.

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APPENDIX A.

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# PROGRAMME OF THE SEVENTH ANNUAL COMMENCEMENT.

JUNE 5TH, 1879.

## CLASSES.

### COLLEGE OF LITERATURE, SCIENCE AND THE ARTS.

#### FOR BACHELOR OF ARTS:

1. John Franklin Collom.....	Minneapolis.
2. Etta Medora Elliot.....	Minneapolis.
3. John Finley Goodnow.....	Minneapolis.
4. Frank Smith McKean.....	Lakeland.
5. Robert William Rhames.....	Rochester.
6. Chelsea Joseph Rockwood.....	Garden City.
7. George Burt Thompson.....	Minneapolis.
8. Willis Mason West.....	St. Cloud.

#### FOR BACHELOR OF SCIENCE:

9. Walter Barrett.....	Wasioja.
10. Fred Capin Bowman.....	Litchfield.
11. Catherine Amelia Burnes.....	Minnetonka.
12. Timothy Edward Byrnes.....	Kingston.
13. Evelyn May Champlin.....	Maple Grove.
14. Addison Gage, Jr.....	Anoka.
15. Allen Jay Greer.....	Lake City.
16. Laura Alberta Linton.....	Cook's Valley.
17. George Henry Partridge.....	Winona.
18. Etta Thompson.....	Minneapolis.

#### FOR BACHELOR OF LITERATURE:

19. William Lincoln Bassett.....	Minneapolis.
20. Alvin Hildreth.....	Sumner.
21. William Winchester Keysor.....	Mankato.
22. Marion Hooker Roe.....	Afton.
23. Caroline Rollit.....	Minneapolis.
24. Martha Isabel West.....	Minneapolis.

## COLLEGE OF MECHANIC ARTS.

## FOR BACHELOR OF CIVIL ENGINEERING:

25. William Sanborn Dawley..... Lake City.  
 26. Pierce Power Furber ..... Cottage Grove.

## ORDER.

\*Music—Overture, "Lustspiel,"—*Keler Bela*.

Prayer—By Rev. Cyrus Brooks, D. D., of St. Paul.

Music—March, "Boston,"—*Bach*.

Oratio Salutatoria—Education our Safeguard..... Mr. Partridge.†

Oration—Necessary Truths ..... Mr. Barrett.

Oration—The Physician ..... Mr. Bowman.

Essay—Schiller's "William Tell" ..... Miss Burnes.

Music—Conferenz Polka—*Zikoff*.

Oration—Modern Socialism..... Mr. Byrnes.

Essay—Elements of Permanency in Modern Civilization ..... Miss Champlin.

Oration—Public Opinion..... Mr. Collom.

Oration—Theory and Practice in Engineering..... Mr. Dawley.

Music—"Album Leaves,"—*Bauer*.

Essay—Moral Tone ..... Miss Elliot.

Oration—"Joe," in Bleak House..... Mr. Gage.

Oration—Preventability of Disease..... Mr. Goodnow.

Oration—The Tramp..... Mr. Greer.

Music—"Bohemian Girl,"—*Balfe*.

Oration—Money..... Mr. Hildreth.

Essay—Æsthetics of Science ..... Miss Lanton.

Oration—Language and Character..... Mr. McKean.

Oration—Patriotism Always a Duty..... Mr. Rhames.

Music—Romance from La Favorite.—*Donizetti*.

Oration—"Manfred"..... Mr. Rockwood.

Essay—Cheap Art..... Miss Roe.

Essay—Wagner's Theory of Music..... Miss Rollit.

Essay—Utopias..... Miss Thompson.

Music—Pinafore Selections,—*Sullivan*.

Oration—True Liberty ..... Mr. Thompson.

Essay—Civilization of South America..... Miss West.

Oration—The Higher Culture..... Mr. West.

Valedictory Oration—Home, Country, God..... Mr. Keysor.†

Music—Gallop—"Tik, Tak,"—*Strauss*.

Conferring of degrees.

Music—Light and Happy,—*Gowen*.

Benediction.

\*By the Great Western Orchestra of St. Paul, Prof. Seibert, Conductor.

†Elected by the Class.

PROGRAMME OF THE  
EIGHTH ANNUAL COMMENCEMENT.

JUNE 3<sup>RD</sup>, 1880.

CLASS.

COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

FOR BACHELOR OF ARTS:

- |                                |                   |
|--------------------------------|-------------------|
| 1. James Francis Bryant.....   | St. Peter.        |
| 2. Cora Inez Brown.....        | Minneapolis.      |
| 3. Albert William Rankin.....  | St. Peter.        |
| 4. Wm. Wadsworth Williams..... | Lime Springs, Ia. |

FOR BACHELOR OF SCIENCE:

- |                                 |              |
|---------------------------------|--------------|
| 5. Frederick Gerald Berry.....  | Brooklyn.    |
| 6. Horace Burnham Greeley.....  | Mapleton.    |
| 7. Clarence Luther Herrick..... | Minneapolis. |
| 8. Robert Peter Andrew Nix..... | New Ulm.     |
| 9. Minnie Aurora Reynolds.....  | Crookston.   |
| 10. Alva Lucius Roe.....        | Afton.       |
| 11. Gilman Walter Smith.....    | Red Wing.    |
| 12. Harvey Page Smith.....      | Red Wing.    |
| 13. Lillian Sanborn Todd.....   | Minneapolis. |

FOR BACHELOR OF LITERATURE.

- |                                 |              |
|---------------------------------|--------------|
| 14. Andrew Holt.....            | Carver.      |
| 15. Joseph Elisha Horton.....   | Preston.     |
| 16. Lizzie Augusta House.....   | Minneapolis. |
| 17. Bessie Sumner Lawrence..... | Minneapolis. |

## ORDER.

\*Music—"Greeting to America"—*Bial*.

Prayer—By the Rev. C. M. Terry.

Music—"Bohemian Girl"—*Balfe*.

Oration—Salutatory—The Higher Education, Practical..... Mr. G. W. Smith.†

Oration—Nihilism..... Mr. Berry.

Essay—The Women of Dickens ..... Miss Brown.

Oration—The "Uses of Adversity"..... Mr. Bryant.

Music—Cornet Polka, "L'Elegante"—*Damare*.

Oration—Early Religious Wars in France..... Mr. Greeley.

Oration—Undine..... Mr. Herrick.

Oration—Unwritten History..... Mr. Holt.

Oration—Heritage of the Pilgrims..... Mr. Horton.

Music—Overture—*Suppe*.

Essay—Art and Culture..... Miss House.

Essay—Music as an Educator..... Miss Lawrence.

Oration—Kosciusko..... Mr. Nix.

Essay—Auerbach's "On the Heights"..... Miss Reynolds.

Music—Romance—*Schumann*.

Oration—Anglo-Saxon Aggressiveness..... Mr. Roe.

Oration—Toussaint L'Ouverture..... Mr. H. P. Smith.

Essay—Foundations..... Miss Todd.

Orations—Promethens..... Mr. Williams.

Music—Turkish Patrol—*Michaelis*.

Valedictory Oration—Progress..... Mr. Rankin.†

Conferring of Degrees.

Benediction.

(For appendices B and C see end of this volume.)

\*By the Great Western Orchestra,—Prof. Geo. Seibert, Conductor.

†Elected by the class.

REPORT OF CHAS. Y. LACY, PROFESSOR OF AGRICULTURE, ON THE EXPERIMENTAL FARM.

*Wm. W. Folwell,*

*President of the University of Minnesota:*

SIR:—I respectfully beg leave to submit the following report of the College of Agriculture for the year ending Oct. 31st, 1879:

Regarding instruction, library, museum, orchard, fruit garden and nursery, there is nothing new worthy of mention, save that the orchard has this year, for the first time, borne some fruit.

VEGETABLE GARDEN.

Experiments with garden vegetables have been continued or substantially the same plan as heretofore. They include—

Dwarf Beans,	Spinach,	Swiss Chard,
Pole Beans,	Sweet Corn,	Salsify,
Carrots,	Pop Corn,	Egg Plants,
Parsnips,	Onions,	Peppers,
Tomatoes,	Garden Beets,	Okra,
Lettuce,	Cucumbers,	Radishes,
Garden Peas,		

Farm work having continued up to a late day, the statistical results of these experiments are not yet prepared for publication, but nothing now stands in the way of preparing them in a short time.

FARM EXPERIMENTS.

These include experiments on—

- Varieties of Field Beans.
- Varieties of Spring Wheat.
- Varieties of Oats.
- Varieties of Barley.
- Varieties of Spring Rye.
- Varieties of Winter Rye.
- Varieties of Field Peas.
- Varieties of Field Corn.



Varieties of Beets for stock.  
 Varieties of Turnips for stock.  
 Varieties of Millet.  
 Varieties of Potatoes on loamy soil.  
 Varieties of Potatoes on sandy soil.  
 Times of sowing Wheat.  
 Times of cutting Wheat.  
 Methods of cultivating Wheat.  
 Germination of different grades of Wheat.  
 Germination of Corn.  
 Methods of planting Potatoes.  
 Fertilizers on Wheat.  
 Fertilizers on Potatoes.

The results of these experiments are likewise not yet prepared for official publication, though partial results have been published in several papers.

#### IMPLEMENTS.

The implements that have been tested on the University farm the past year are Corn Sheller, Combined Reaper and Mower, and Spring Tooth Harrow.

#### FARM CROPS.

The quantity of hay put up the past season is estimated to be considerably greater than usual, this being partly due to the favorableness of the season to the growth of that crop and partly due to re-seeding in 1878 of tracts formerly unproductive. The winter rye sown in 1878 yielded about 150 bushels of clean grain which has been sold at 40 cents per bushel. The produce from the experiments with grain, potatoes, &c., is also larger than usual. It is estimated as follows: oats, 200 bushels; wheat, 50 bushels; barley, 30 bushels; peas, 20 bushels; potatoes, 200 bushels; beets, carrots and turnips, 150 bushels.

#### IMPROVEMENTS.

The breaking, subduing and re-seeding of unproductive grass and bush land has been continued at such times as experimental and other farm work permitted. About seven acres have thus been broken the past season, five of which have been re-seeded with timothy and may be expected to produce more hay next season than it has ever done before.

## PLANT HOUSE.

About the first of February, Mr. Geo. A. Wood severed his connection with the University, and since that time the work in the Plant House has been divided between two students of the University, Messrs. A. L. Roe and W. J. Barrett. This has been done without impairing the efficiency of the work or the condition of the Plant House, and also without increasing the expense for labor.

## THE FAIRS.

The usual exhibits of farm products and experimental results were made at the fairs in St. Paul and Minneapolis, and afterwards at Red Wing and Lake City. A growing interest in these exhibits and the experiments they represent, was unmistakably manifested, and whether or not of much good to the University in the past they certainly promise to awaken considerable interest in the future.

## CAMPUS.

In addition to the ordinary care—removing sticks, stones and leaves and mowing the grass—dead and superfluous branches have been removed from about one-half of the trees, and a few dead trees have been entirely removed. This year, for the first time, some returns have been obtained from the campus in the shape of marketable hay.

## ANALYSIS OF SOILS.

Your attention is particularly invited to this subject. So far as I am aware, no complete and reliable analyses of the soils of this State have been made. Hence there are no trustworthy data for comparing the capacity of these soils with those of other States and other countries. It is almost certain that such analyses could be made very useful in encouraging emigrants to settle in the State. But they would probably possess more permanent value in the suggestions they would give of the most profitable and least exhaustive systems of farming, and of the means of restoring worn-out soils. In a conversation with Prof. Peckham I was told that Prof. Brewer, who is in charge of the Cereal Department of the U. S. census, considers that such analyses of soils would be very desirable to accompany the statistics of cereal productions in

the northwest. They might be made part of the work of the Geological survey, or they might be made special work of the Agricultural College. In either case the *collection* of the soils is a matter that should not be considered lightly, but should be made by some person equally acquainted with every circumstance that can influence the results of analysis, and with every circumstance that can influence their agricultural fertility.

#### MINERALS FOR MUSEUM OF AGRICULTURE.

To this point, also, your attention is especially solicited. In studying the composition and origin of soils, it is found desirable to study the minerals of which they are composed and from which they are derived. To do this advantageously it is necessary to have at easy command specimens of the minerals to compare with the printed descriptions. A large proportion of those needed for this purpose are duplicated in the General Museum of the University. I would suggest, that if consistent with the rules governing the General Museum, one set of these duplicates be assigned to the Museum of Agriculture, and that authority be given to procure the others required.

#### PUBLICATION OF EXPERIMENTS

The demand for the reports of the Experimental Farm by those who probably care little for the entire report of your Board, as well as the delay in publishing the latter, makes it highly desirable to have a number of copies of the former printed separately. Not less than one hundred applications for the Farm Report for 1878 have been received, which could not be filled until a very recent date, while several hundreds of them could have been advantageously distributed at the fairs.

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NOTE.—Professor Lacy having retired from the service of the University in June, 1880, soon after the opening of the season, could not, of course, make any report for the season, and his successor did not enter upon his duties until after the close of the season; accordingly no reports of farm operations and experiments appear for the years 1879 and 1880.

REPORT OF PETER M. GIDEON, SUPERINTENDENT  
OF THE FRUIT FARM ON MINNETONKA.

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EXCELSIOR, MINN., Nov. 23, 1880.

*Wm. W. Folwell, President,  
State University, Minneapolis, Minn.*

The time to make my yearly report as Superintendent of the State Experimental Fruit Farm is at hand, and I herein comply.

Last spring I filled up all vacancies occasioned by the severity of the last winter and added a few trees more, the loss being about 100 trees, comprising about eight or ten varieties of the long keepers that proved too tender, even when top-grafted on our hardy seedlings. Though the loss was considerable, it was less than anticipated. Some thirty other long-keepers did well, giving assurance of the final success of the undertaking. Not knowing what long keeping varieties could be relied on, we set about forty varieties, and those of the very best in quality that the United States could afford; and alternate in each row we set an iron clad, and none but those best in fruit, so that in the orchard there is nothing to adulterate; and therefore in the commingling we cannot fail of something extra, combining more good qualities than any apple yet produced in any part of the world, the chances never having been so favorable.

The orchard contains 760 trees doing well, except a few grafts that failed, that will be reset next spring.

The whole orchard is nicely set in strawberries—mostly the Crescent and Green Prolific—our choice out of a vast number of varieties tested, being hardiest in plant, stands without winter protection, best in quality and yields the greatest amount of fine berries.

On another part of the farm stands the grapery, pear orchard and other trees, shrubs, vines and plants, as ornament or on trial.

About 500 grape vines are set, comprising some 60 or 70 named varieties and about 200 seedlings. A large space remains, and vines to set the same next spring.

There are a few varieties each of raspberries, blackberries and strawberries now on trial, which help to fill the space.

As to pears, we have about 350 growing, mostly top-grafted on mountain ash, including a great many varieties of the best pears that America could produce, regardless of cost.

The American and European mountain ash were both used, and each variety of pear was tried on each variety of mountain ash, and the result was that every one on the European mountain ash died last winter, and some varieties died on the American, but several varieties on the American mountain ash did well, and made fine growths this season.

The results satisfy me that some varieties of the pear can be grown successfully by top-grafting on the American mountain ash, on which the pear takes as readily as on the pear stock itself, and being a tree that stops its growth and sap-flow early, the later growing pear is compelled to stop its growth and harden up for winter. The pear, on its own root, or on that of the European mountain ash, continues its growth until late fall, or, as is often the case, until actual winter sets in. So strong is my faith in pear culture with the American mountain ash for the stock, that I have ordered one hundred to graft on next spring, for I intend to give the matter a fair trial, and if successful, the luscious fruit will pay me, and at the same time be a mine of wealth and luxury to the people of the Northwest. I have some pears from the seed, and others grafted on pear roots, so as to give each and every form a fair test. Others, new and rare, and renowned for hardiness, will be inserted as fast as they can be had.

The work done by order of the Regents of the State University, and by them paid, is as follows: 2 acres cleared and ploughed at a cost of \$43.50, which when turned over in the spring will be in fine condition for setting trees, which will be done with choice seedlings of our own growing, or new Russians, as the Board prefer. If seedlings, I donate and set them, but if set with Russian varieties, the Regents are expected to foot the bill for trees and freight, as it is an orchard over which they will have

control after set. And I think it quite important that these Russian varieties of apples and pears should be tested. I should like to know the decision on that matter at an early date, so that I can calculate accordingly. I should have had more cleared, but the parties failed to comply with contract and delayed till too late to employ others, and whether more can be cleared in time to set trees in spring I can't say at present, as the contract is not let to any parties yet.

Respectfully,  
PETER M. GIDEON,  
Superintendent of State Experimental Fruit Farm.