

At this session there are over one hundred (100) students attending lectures in the dental department of the State University at Iowa City. The number in attendance in this department during the session of 1888-9 was seventy-five (75), thus showing an increased attendance this year of over twenty-five (25) per cent.

We cannot refrain from again calling your Excellency's attention to the fact, of the urgent need of an amendment to our present dental law, whereby the fee for licenses granted on examination, should be increased from two, as now, to not less than five dollars, and a corresponding increase for licenses issued to the holders of valid diplomas. This would be in accordance with the fees, as required in all the newer enactments of other States, and would give the board funds for the prosecution of their work, with much greater efficiency than is now possible, with the limited amount at their command.

Section 9 of the dental law allows members of this board as compensation, the sum of five dollars for each day actually engaged in the duties of their office—and it requires four entire days to perform the work of each annual meeting. Besides this much additional time is devoted by the several members each year, to the examination of applicants for temporary license. Therefore, practically, this board performs its official duties without complaint or compensation.

The following are the receipts and expenditures of the board since the last report, November 15, 1888:

RECEIPTS.

On hand as per Secretary's report, Nov. 15, 1888.....	\$ 26.69
Received for examinations and licenses to date.....	134.00
Total.....	\$ 160.69

EXPENDITURES.

Stationery, printing, prosecutions and incidentals, Secretary's office for the year.....	\$ 149.10
Balance on hand Nov. 15, 1889.....	\$ 11.59

All of which is respectfully submitted,

S. A. GARBER, D. D. S.,
Secretary.

SIXTH BIENNIAL REPORT

OF THE

CENTRAL STATION

OF THE

Iowa Weather Service

GUSTAVUS HINRICHS,

DIRECTOR.

PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

DES MOINES:

G. H. RAGSDALE, STATE PRINTER.
1889.

To his Excellency, WILLIAM LARRABEE, Governor of Iowa:

SIR—I have the honor to submit to you the sixth biennial report of the Central Station of the Iowa Weather Service.

Very respectfully yours,

GUSTAVUS HINRICHS,

CENTRAL STATION, I. W. S.

Director I. W. S.

Iowa City, Iowa, November 5, 1889.

REPORT.

THE Iowa Weather Service has completed its twelfth year under assistance from the State, and is in the fifteenth year since its organization. It has been possible for me to continue the same without a moment of interruption since its organization, and I am especially pleased to see many of the volunteer observers of 1875 still continue their work, though some of the earnest volunteer observers have been disabled by disease or left the State or even gone to their long home. In the fifth biennial Report this interesting subject was more fully presented.

The only serious obstacle we have encountered in our work has come from the Signal Service, which has, by false presentations, attempted to estrange our volunteer observers, and to destroy our existence as a State institution. In April, 1889, the Signal Service of the United States Army publicly established the "Iowa Weather Service"—thus unlawfully assuming the name under which our Service has labored for the benefit of the State, for fifteen years, partly under the assistance of the State. As well might that branch of the army have sent a sergeant into the capital of Iowa and established a State Government, or perchance a Territorial Government. I merely mention this outrage here to dispel further misunderstandings; the proper place for redress is, of course, at Washington.

It has been my unpleasant duty to compare the Signal Service predictions with the actual weather prevailing in Iowa; and I regret to say that I found these predictions without practical value, as has been shown on several occasions in our Reports. I was also compelled, in the interest of our State, to demonstrate to the world the utterly false and horribly exaggerated nature of the tornado

record which the Signal Service has officially published for Iowa (see Part II of Report for 1888). I understand that the Signal Service authorities desire to destroy further impartial testing of their predictions, and wish to obtain free-hand in publishing Iowa to the world as a State through which tornadoes cut a swath of destruction a mile wide and from fifty to over a hundred miles long, when in fact no storm of any note occurred in the State at all. I do not believe that the General Assembly now being elected will be disposed to punish an Iowa Weather Service for having shown, from our records, that the direful and numerous tornadoes ascribed to Iowa by the Signal Service, have had no existence in reality, and that people may as safely settle on our beautiful prairies as in any other part of the habitable world.

It is intended to represent our Iowa Weather Service at America's World's Fair in 1892. We shall then have the records of our fifteen years, and can exhibit the general results for three complete Lustra, or four-year periods, namely from 1876 to 1880, 1881 to 1885, and 1886 to 1890. It is my intention to complete the necessary tables in time, and to draw the maps and charts to graphically represent these results to the eye. It would be an admirable thing for Iowa, to have this representation of her climate made as complete and attractive as possible, and to present it in printed form; such a publication would go far to dispel the false impressions disseminated about Iowa climate, and would help in attracting desirable settlers and investments to our State. It would also be of interest and practical value to our citizens and in our schools. The Legislature, I trust, will deem this suggestion worthy their special attention and make the necessary provisions to carry it into effect.

I purposely cut short this Report in order to get room for a complete file of all the Press Bulletins issued since the very organization of this Service. These Bulletins give a brief and reliable history of the weather in Iowa from July, 1875, to the close of 1888, with rain-maps for each year. The republication of these Bulletins in pamphlet form will, I think, be welcomed by the farmers and progressive citizens of our State, as forming the most concise data for comparison with the current seasons in existence for any part of the United States.

Since the State of Iowa does provide for but a small fraction of the total cost of the Iowa Weather Service, I am glad to say that in a neighboring State I have found such a field of labor in my

own profession that I will be able to continue the work for the Iowa Weather Service, and to maintain the building I have erected to shelter the same; it is only necessary for me to be absent a part of five winter months, so that through the assistance of my clerk the work will be continued without interruption or break, as during the fourteen years past. During the seven warmer months of the year I shall remain at my Iowa home, and continue the study of Iowa weather.

FINANCIAL STATEMENT.

I.—VOUCHERS SENT TO AUDITOR OF STATE.

1887.	Dec.	16.	Vouchers Nos. 537-550	\$ 293.14
1888.	Jan.	21.	Vouchers Nos. 551-563	250.60
	May	9.	Vouchers Nos. 564-585	324.53
	Sept.	27.	Vouchers Nos. 586-600	299.10
	Dec.	28.	Vouchers Nos. 601-613	233.70
1889.	March	14.	Vouchers Nos. 614-631	283.90
	Aug.	8.	Vouchers Nos. 632-649	327.50
Total				\$3,011.47

II.—STATE WARRANTS RECEIVED FROM AUDITOR OF STATE.

1887.	Dec.	19.	Warrant No. 4,325	\$ 293.14
1888.	Jan.	23.	Warrant No. 4,802	250.60
	May	11.	Warrant No. 6,961	324.53
	Sept.	28.	Warrant No. 8,261	299.00
1889.	Jan.	2.	Warrant No. 9,305	233.70
	March	15.	Warrant No. 9,915	283.90
	Aug	10.	Warrant ———	327.50
Total				\$3,011.37

LIST OF VOUCHERS.

Number.	PERSON.	OBJECT.	AMOUNT.
537	C. J. Tagliabue, New York	Station thermometers.	10.00
538	Henry J. Green, New York	Instruments	17.00
539	Mrs. J. G. Fink	Stationery	23.05
540	John Morris & Co., Chicago	Filling cases.	10.80
541	C. R. L. & P. R. R.	Freight, from Secretary of State.	6.70
542	Boerner Bros	Glycerine.	1.10
543	Geo. Paul, P. M.	1,000 stamps	13.75
544	U. S. Express Co.	Traveling expenses	26.74
545	A. Hinrichs	Freight, July, August, 1887.	70.00
546	A. Hinrichs	Traveling expenses	11.50
547	Director	Clerk, September, October, 1887	60.00
548	A. Hinrichs	Book-case	10.00
549	Holenschuk & Cree	Petty expenses, July-December, 1887	9.00
550	Director	Freight, from Secretary of State	5.35
551	C. R. L. & P. R. R.	2,000 stamps	30.00
552	Geo. Paul, P. M.	Apparatus and chemicals	33.75
553	E. H. Sargent & Co., Chicago	Printing	24.50
554	Republican Publishing Co.	Printing	4.00
555	Republican Publishing Co.	Printing	4.00
556	D. Mann	Clerk, November, December, 1887	70.00
557	A. Hinrichs	Transportation	5.25
558	U. S. Express Co.	Supplies	2.95
559	Boerner Bros	Printing	43.35
560	A. J. Herschke & Co.	Repairing instruments	5.50
561	Joseph Barborka	Apparatus	18.33
562	Marshall & Holubar	Petty expenses	2.20
563	Director	Folding frame	3.00
564	Holenschuk & Cree		

LIST OF VOUCHERS—CONTINUED.

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Number.	PERSON.	OBJECT.	AMOUNT.
565	Director	Traveling expenses	\$ 11.25
566	J. G. Fink	Stationery	8.80
567	Geo. Paul, P. M.	1,000 stamps	20.00
568	J. W. Queen, Philadelphia	Hygrometer	30.00
569	Geo. Paul, P. M.	800 stamps	10.00
570	Levy Type Co., Chicago	Cuts	20.25
571	Geo. Paul, P. M.	1,000 stamps	10.00
572	Don D. Donnan	Printing	9.25
573	James Lee	Stationery	10.30
574	Republican Publishing Co.	Binding	35.40
575	Republican Publishing Co.	Printing	10.30
576	H. C. Smith	Shipping boxes, etc.	8.85
577	C., R. I. & P. R. R.	Freight	70.00
578	A. Hinrichs	Clerk, January, February, 1888	8.37
579	B. Westermann & Co.	Books	6.75
580	Republican Publishing Co.	Printing	10.00
581	Kittredge & Holmes, Ann Arbor	Reprints	4.00
582	Don D. Donnan	Printing	80.00
583	Geo. Paul, P. M.	2,000 stamps	9.00
584	U. S. Express Co.	Transportation	7.10
585	Director	Petty expenses	60.00
586	A. Hinrichs	Clerk, March, April, 1888	13.50
587	J. H. Whetstone	Chemicals and glassware	1.95
588	C., R. I. & P. R. R.	Freight	4.45
589	C., R. I. & P. R. R.	Type-writer (first payment)	50.00
590	Geo. S. Forest	Printing	5.00
591	Republican Publishing Co.	Clerk, May, June, 1888	70.00
592	A. Hinrichs	500 stamps	10.00
593	Geo. Paul, P. M.		

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594	J. W. Queen & Co., Philadelphia	Blanks for instruments	15.00
595	Republican Publishing Co.	Printing	6.00
596	A. J. Hershire & Co.	Printing	18.90
597	Director	Traveling expenses	11.65
598	Geo. Paul, P. M.	500 stamps	10.00
599	Mrs. J. G. Fink	Stationery	18.95
600	Director	Petty expenses and expressage	4.70
601	Geo. Paul, P. M.	500 stamps	5.00
602	Republican Publishing Co.	Printing	2.50
603	A. Hinrichs	Clerk, July, August, 1888	70.00
604	Wyckoff, Seaman & Benedict	Type-writer supplies	4.95
605	Levy Type Co.	Cuts	9.77
606	Republican Publishing Co.	Printing	4.00
607	Geo. Paul, P. M.	500 stamps	5.00
608	Geo. S. Forest	Type-writer (balance)	49.00
609	Geo. S. Forest	Paper	1.50
610	A. Hinrichs	Clerk, September, October, 1888	60.00
611	Republican Publishing Co.	Printing	9.25
612	Marsh & Holubar	Thermometer shelters	13.58
613	Director	Petty expenses	7.15
614	H. Niedecken & Co.	Paper	7.60
615	Geo. Paul, P. M.	1,000 stamps	15.00
616	U. S. Express Co.	Expressage	9.25
617	A. Hinrichs	Clerk, November, December, 1888	70.00
618	Republican Publishing Co.	Printing blanks	10.30
619	Director	Traveling expenses	15.75
620	Geo. Paul, P. M.	1,000 stamps	20.00
621	Joseph Barborka	Repairing instruments	1.50
622	Republican Publishing Co.	Printing	7.00
623	Geo. Paul, P. M.	500 stamps	5.00
624	A. J. Hershire & Co.	Printing bulletins	13.75
625	H. Niedecken & Co.	Paper	4.50
626	H. Kittredge, Ann Arbor	Reprints	21.30
627	Republican Publishing Co.	Printing	9.25
628	Geo. Paul, P. M.	500 stamps	5.00
629	A. Hinrichs	Clerk, January, February, 1889	60.00
630	U. S. Express Co.	Expressage	6.55
631	Director	Petty expenses	2.45
632	Geo. Paul, P. M.	500 stamps	10.00

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REPORT OF THE DIRECTOR.

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LIST OF VOUCHERS—CONTINUED.

Number.	PERSON.	OBJECT.	AMOUNT.
633	Levy Type Co	Cuts	\$ 4.53
634	Geo. Paul, P. M.	200 stamps	10.00
635	Geo. Paul, P. M.	500 stamps	5.00
636	Geo. Paul, P. M.	500 stamps	10.00
637	Director	Traveling expenses	19.00
638	Republican Publishing Co.	Printing	13.75
639	A. Hinrichs	Clerk, March, April, 1888	70.00
640	Mrs. J. G. Fink	Stationery	12.75
641	Geo. Paul, P. M.	500 stamps	5.00
642	Levy Type Co	Cuts	27.56
643	U. S. Express Co.	Expressage	14.55
644	Republican Publishing Co.	Binding	14.00
645	A. Hinrichs	Clerk, May, June, 1889	70.00
646	Geo. Paul, P. M.	100 stamps	10.00
647	C. R. I. & P. R. R.	Freights	20.07
648	Geo. Paul, P. M.	500 stamps	5.00
649	Director	Petty expenses	6.10
Total, vouchers Nos. 537 to 649.			\$ 2,011.47