

Thirty-second annual report of the Government Hospital for the Insane to the Secretary of the Interior. 1887.

Contributors

Government Hospital for the Insane (U.S.)
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THIRTY-SECOND ANNUAL REPORT

OF THE

GOVERNMENT HOSPITAL FOR THE INSANE

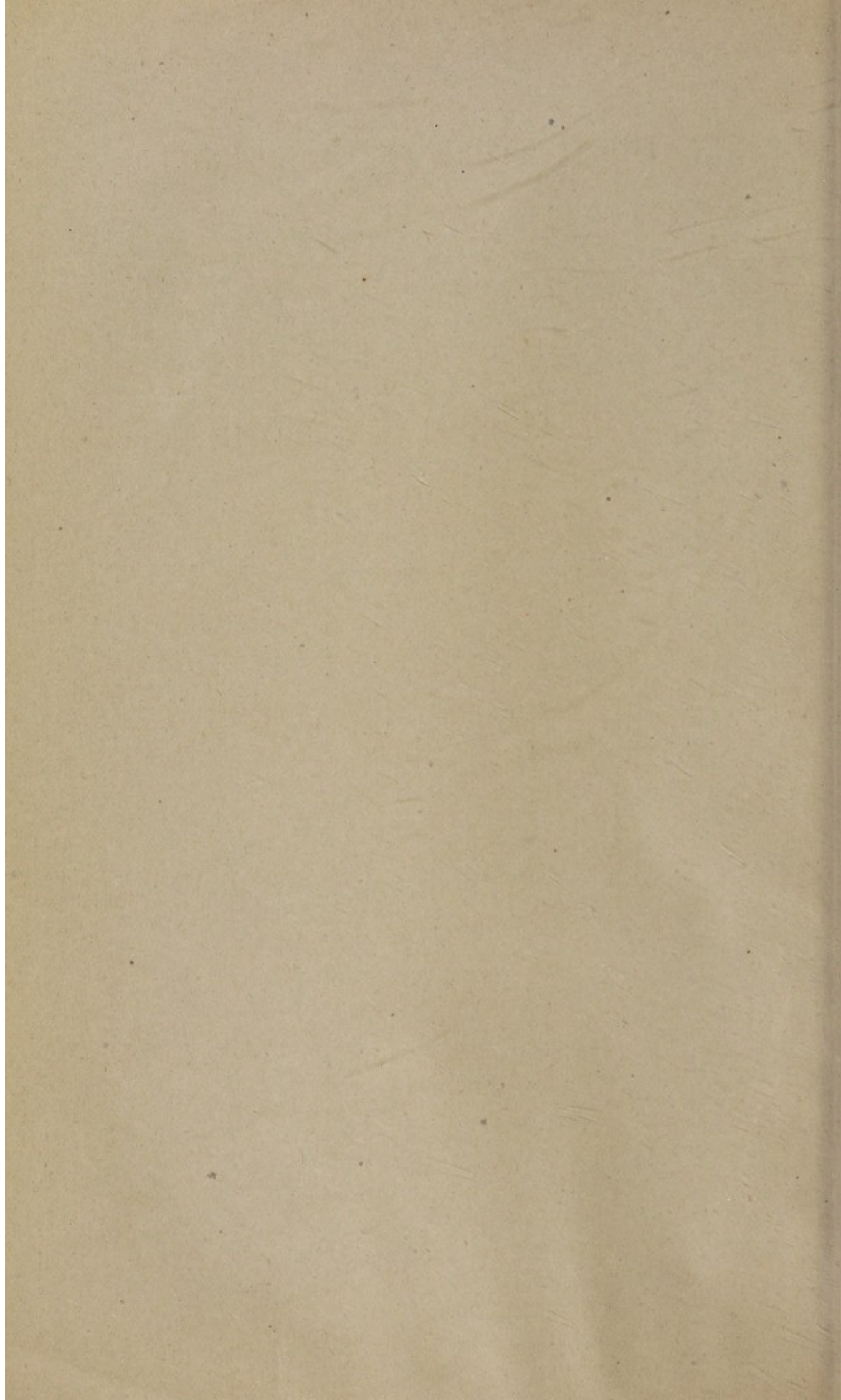
TO THE

SECRETARY OF THE INTERIOR.

1887.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.

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REPORT
OF THE
BOARD OF VISITORS OF THE GOVERNMENT HOSPITAL
FOR THE INSANE.

OFFICERS OF THE HOSPITAL, JUNE 30, 1887.

VISITORS:

JOSEPH M. TONER, M. D., <i>President of the Board.</i>	Hon. WM. A. MAURY.
JAMES C. WELLING, LL. D. Adm. JOHN J. ALMY, U. S. N.	JOHN MOORE, M. D., SURGEON-GENERAL, U. S. A.
Mrs. A. M. GANGEWER.	F. M. GUNNELL, M. D., SURGEON-GENERAL, U. S. N.
Mrs. AMELIA J. ROWLAND.	Rev. BYRON SUNDERLAND, D. D.

EXECUTIVE COMMITTEE OF THE BOARD:

Messrs. TONER, GUNNELL, and MOORE.

CHAPLAINS:

Rev. JOHN CHESTER, D. D.	Rev. THOMAS B. HUGHES.
Rev. A. FLORIDUS STEELE.	Rev. W. S. EDWARDS, D. D.
Rev. WILLIAM E. PARSON.	

MEDICAL OFFICERS:

W. W. GODDING, M. D., *Superintendent and ex-officio Secretary of Board of Visitors.*
A. H. WITMER, M. D., *First Assistant Physician in charge of Female Department.*
M. J. STACK, M. D., *Second Assistant Physician in charge of Male Department.*
A. C. PATTERSON, M. D., *Third Assistant Physician and Chief Clerk.*
J. C. SIMPSON, M. D., *Fourth Assistant Physician.*
J. E. KENNEY, M. D., *Night Medical Inspector.*
I. W. BLACKBURN, M. D., *Special Pathologist.*
J. V. CALVER, D. D. S., *Dentist.*

Admissions and discharges—Continued.

	Males.		Females.		Totals.	
ADMITTED DURING THE YEAR 1886-'87—Continued.						
Navy	{ White... 8					
	{ Colored.. ..	8				8
Marine Hospital Service.....	{ White... 2					
	{ Colored.. 1	3				3
Civil life.....	{ White... 58		40			
	{ Colored.. 29	87	21			
		206	61		62	268
UNDER TREATMENT DURING THE YEAR.						
Army.....	{ White... 698		4			
	{ Colored.. 11	709				713
Navy	{ White... 64			4		
	{ Colored.. 1	65				65
Marine Hospital Service.....	{ White... 16					
	{ Colored.. 5	21				21
Civil life.....	{ White... 261		256			
	{ Colored.. 116	377	103			
		1,172	359		363	1,535
DISCHARGED DURING THE YEAR—Recovered.						
Army.....	{ White... 21					
	{ Colored.. 1	22				22
Navy	{ White... 3					
	{ Colored.. ..	3				3
Marine Hospital Service.....	{ White... ..					
	{ Colored.. 2	2				2
Civil life.....	{ White... 24		10			
	{ Colored.. 6	30	5			
		57	15		15	72
DISCHARGED DURING THE YEAR—Improved.						
Army.....	{ White... 30		1			
	{ Colored.. ..	30				31
Marine Hospital Service.....	{ White... 2			1		
	{ Colored.. 1	3				3
Civil life.....	{ White... 10		12			
	{ Colored.. 6	16	4			
		49	16		17	66
DISCHARGED DURING THE YEAR—Unimproved.						
Army.....	{ White... 1					
	{ Colored.. ..	1				1
Civil life.....	{ White... 1		1			
	{ Colored.. ..	1				2
		2	1		1	3
DECEASED DURING THE YEAR.						
Army.....	{ White... 37					
	{ Colored.. 2	39				39
Navy	{ White... 4					
	{ Colored.. ..	4				4
Marine Hospital Service.....	{ White... 2					
	{ Colored.. ..	2				2
Civil life.....	{ White... 11		11			
	{ Colored.. 17	28	8			
		73	19		19	92
REMAINING JUNE 30, 1887.						
Army.....	{ White... 609		3			
	{ Colored.. 8	617				620

Admissions and discharges—Continued.

	Males.			Females.			Totals.
REMAINING JUNE 30, 1887—Continued.							
Navy	{ White ...	57	58				58
	{ Colored..	1					
Marine Hospital Service.....	{ White ...	12	14				14
	{ Colored..	2					
Civil life.....	{ White ...	215	302	991		222 86	610
	{ Colored..	87					
						308	311
							1,302

The patients from civil life remaining June 30, 1887, are classified as follows :

	Males.	Females.	Total.
District of Columbia—transient.....	41	18	59
District of Columbia—resident indigent.....	219	282	501
United States convicts and criminals.....	37	3	40
Private patients.....	5	5	10
Total.....	302	308	610

Monthly changes of population.

Date.	Admitted.			Discharged.						
	Males.	Females.	Total.	Males.	Females.	Total.	Died.			Total discharges, including deaths.
							Males.	Females.	Total.	
July, 1886.....	20	9	29	9	9	18	4	3	7	25
August, 1886.....	14	4	18	21	5	26	4	3	7	33
September, 1886.....	10	4	14	5	4	9	5	2	7	16
October, 1886.....	8	3	11	7	1	8	4	.....	4	12
November, 1886.....	25	2	27	16	.....	16	12	.....	12	28
December, 1886.....	10	9	19	4	3	7	6	1	7	14
January, 1887.....	14	4	18	6	3	9	3	1	4	13
February, 1887.....	13	4	17	5	1	6	4	2	6	12
March, 1887.....	12	3	15	6	3	9	10	1	11	20
April, 1887.....	15	5	20	15	1	16	5	1	6	22
May, 1887.....	32	9	41	9	3	12	6	2	8	20
June, 1887.....	33	6	39	5	.....	5	10	3	13	18
Total.....	206	62	268	108	33	141	73	19	92	233

Cause of death.

Apoplexy	3	General paralysis with pneumonia...	1
Apoplexy—hemorrhagic	1	General paralysis with pulmonary gan-	
Asphyxia—from food in larynx.....	1	grene	1
Bright's disease.....	1	Meningitis—diffuse suppurative.....	1
Bronchitis	2	Meningitis—chronic lepto with cardiac	
Carcinoma	1	failure	1
Cardiac dilatation with pericarditis..	1	Organic disease of brain.....	5
Cardiac valvular disease.....	1	Organic disease of brain with cardiac	
Cerebritis	1	valvular disease.....	1
Diarrhœa	4	Organic disease of brain with epileptic	
Empyema	1	convulsions	1
Epileptic convulsions.....	5	Organic disease of brain with perito-	
Exhaustion and inanition.....	10	nitis	1
Fever—pernicious intermittent.....	1	Pachymeningitis interna hemorrhagica	1
Fever—typho-malarial with pericardi-		Paralysis—bulbar	1
tis	1	Peritonitis	1
Gangrene—pulmonary	1	Phlebitis	1
Gangrene—senile	1	Phthisis.....	12
General paralysis.....	2	Phthisis with pulmonary congestion..	1
General paralysis with apoplexy	1	Pneumonia	2
General paralysis with bulbar paraly-		Pneumonia—typhoid	1
sis	7	Senectus	3
General paralysis with epileptiform		Septicæmia from cystotomy	1
convulsions	9		
General paralysis with peritonitis....	1	Total	92

Duration of the mental disease, on admission, of those who recovered.

Under 10 days.....	5	Between 1 and 2 years.....	5
Between 10 and 20 days.....	5	Between 2 and 3 years.....	3
Between 20 and 30 days.....	5	Between 3 and 4 years.....	2
Between 1 and 2 months.....	15	Between 4 and 5 years.....	2
Between 2 and 3 months.....	9	Between 8 and 9 years.....	1
Between 3 and 4 months.....	8	Between 20 and 25 years.....	1
Between 4 and 5 months.....	4	Between 30 and 40 years.....	1
Between 6 and 8 months.....	6		
		Total	72

Duration of mental disease of those who died.

Less than one month.....	4	Fifteen years.....	3
One month.....	1	Seventeen years.....	3
Three months	1	Nineteen years	2
Eight months	2	Twenty-one years	2
One year.....	4	Twenty-two years.....	3
Two years.....	16	Twenty-three years.....	1
Three years	10	Twenty-four years.....	1
Four years	4	Twenty-five years	1
Five years	7	Twenty-nine years	1
Six years.....	8	Thirty years	1
Seven years.....	2	Thirty-three years.....	1
Eight years	4	Unknown	2
Eleven years	2		
Thirteen years	6	Total	92

Duration of disease on admission.

		Males.		Females.		Totals.	
LESS THAN SIX MONTHS							
Army.....	{ White ...	25	26				26
	{ Colored ..	1					
Navy.....	{ White ...	4	4				4
	{ Colored ..						
Marine Hospital Service.....	{ White ...						
	{ Colored ..						
Civil life.....	{ White ...	26	36	19	30	30	66
	{ Colored ..	10		11			
			66				96
LESS THAN ONE YEAR.							
Army.....	{ White ...	11	11	1			12
	{ Colored ..						
Navy.....	{ White ...	1	1				1
	{ Colored ..						
Marine Hospital Service.....	{ White ...						
	{ Colored ..						
Civil life.....	{ White ...	4	8	2	3	4	11
	{ Colored ..	4		1			
			20				24
ONE TO TWO YEARS.							
Army.....	{ White ...	31	31				31
	{ Colored ..						
Navy.....	{ White ...	2	2				2
	{ Colored ..						
Marine Hospital Service.....	{ White ...	2	3				3
	{ Colored ..	1					
Civil life.....	{ White ...	6	13	7	12	12	25
	{ Colored ..	7		5			
			49				61
OVER TWO YEARS.							
Army.....	{ White ...	9	9				9
	{ Colored ..						
Navy.....	{ White ...						
	{ Colored ..						
Marine Hospital Service.....	{ White ...						
	{ Colored ..						
Civil life.....	{ White ...	6	10	1	4	4	14
	{ Colored ..	4		3			
			19				23
OVER THREE YEARS.							
Army.....	{ White ...	7	7				7
	{ Colored ..						
Navy.....	{ White ...	1	1				1
	{ Colored ..						
Marine Hospital Service.....	{ White ...						
	{ Colored ..						
Civil life.....	{ White ...	2	2	1	1	1	3
	{ Colored ..						
			10				11
OVER FOUR YEARS.							
Army.....	{ White ...	2	2				2
	{ Colored ..						

Duration of disease on admission—Continued.

		Males.		Females.		Totals.	
OVER FOUR YEARS—continued.							
Navy	{ White ...						
	{ Colored ..						
Marine Hospital Service	{ White ...						
	{ Colored ..						
Civil life	{ White ...	3					
	{ Colored ..						
		3	5			3	5
FIVE TO TEN YEARS.							
Army	{ White ...	11					
	{ Colored ..						
		11				11	
Navy	{ White ...						
	{ Colored ..						
Marine Hospital Service	{ White ...						
	{ Colored ..						
Civil life	{ White ...	3		3			
	{ Colored ..	1					
		4	15	3		7	18
TEN TO TWENTY YEARS.							
Army	{ White ...	8					
	{ Colored ..						
		8				8	
Navy	{ White ...						
	{ Colored ..						
Marine Hospital Service	{ White ...						
	{ Colored ..						
Civil life	{ White ...	4		2			
	{ Colored ..	1					
		5	13	2		7	15
OVER TWENTY YEARS.							
Army	{ White ...	2					
	{ Colored ..	1					
		3				3	
Navy	{ White ...						
	{ Colored ..						
Marine Hospital Service	{ White ...						
	{ Colored ..						
Civil life	{ White ...	4		3			
	{ Colored ..	2					
		6	9	3		9	12
UNKNOWN.							
Army	{ White ...						
	{ Colored ..						
Navy	{ White ...						
	{ Colored ..						
Marine Hospital Service	{ White ...						
	{ Colored ..						
Civil life	{ White ...			1			
	{ Colored ..			1			
				2		2	2
NOT INSANE.							
Civil life	{ White ...			1			
	{ Colored ..						
				1		1	1

Table showing the nativity, as far as could be ascertained, of the 6,913 cases treated.

Native born.		Foreign born.	
	Number.		Number.
District of Columbia.....	795	Ireland.....	1,344
New York.....	492	Germany.....	878
Maryland.....	512	England.....	157
Virginia.....	568	France.....	62
Pennsylvania.....	369	Canada.....	57
Ohio.....	267	Scotland.....	60
Massachusetts.....	154	Switzerland.....	24
Maine.....	76	Italy.....	25
Illinois.....	65	Denmark.....	17
Connecticut.....	57	Norway.....	13
New Hampshire.....	57	Sweden.....	24
Indiana.....	60	Poland.....	14
Kentucky.....	49	Russia.....	11
Michigan.....	40	Austria.....	14
New Jersey.....	54	Nova Scotia.....	9
Tennessee.....	31	Spain.....	4
Wisconsin.....	26	Holland.....	8
Vermont.....	34	Wales.....	5
Missouri.....	35	Portugal.....	4
Rhode Island.....	21	Hungary.....	4
Delaware.....	14	Mexico.....	5
North Carolina.....	26	Saxony.....	5
Alabama.....	12	Malta.....	3
South Carolina.....	15	Belgium.....	4
Iowa.....	7	Buenos Ayres.....	1
Georgia.....	16	Costa Rica.....	1
Mississippi.....	18	Bavaria.....	4
Louisiana.....	10	Sicily.....	1
West Virginia.....	14	British Columbia.....	1
Kansas.....	3	British possessions.....	1
Florida.....	3	East Indies (British).....	3
Texas.....	8	West Indies (British).....	6
California.....	3	New Brunswick.....	1
Indian Territory.....	5	Cuba.....	2
Colorado.....	1	China.....	1
Arkansas.....	2	Sandwich Islands.....	1
Montana.....	1	Coast of Africa.....	1
Oregon.....	1	Cyprus.....	1
Minnesota.....	1	Turkey.....	1
		Greece.....	1
Total.....	3,862	New Granada.....	1
		West Indies (Hayti).....	1
		Total.....	2,780

Native born.....	3,862
Foreign born.....	2,780
Unknown.....	271
Total.....	6,913

Form of disease in those admitted.

Disease.	Total last year.	Admitted during year.	Total.	Disease.	Total last year.	Admitted during year.	Total.
Mania, acute.....	2,176	56	2,232	Dipsomania.....	426	2	428
Mania, chronic.....	1,149	59	1,208	Kleptomania.....	4		4
Melancholia.....	880	64	944	Nymphomania.....	4		4
Dementia.....	1,645	44	1,689	Imbecility.....	73	6	79
Dementia, senile.....	126	13	139	Opium-eaters.....	16		16
Paresis.....	134	21	155	Idiocy.....		1	1
Typhomania (Bell's dis- ease).....	2		2	Not insane.....	10	1	11
Diffuse suppurative men- ingitis.....		1	1	Total.....	6,645	268	6,913

Tabular statement of the time of life at which the 6,913 cases treated since the opening of the institution became insane.

Age.	1886.	Admitted.	1887.
Under 10 years	126	14	140
Between 10 and 15 years	71	2	73
Between 15 and 20 years	385	10	395
Between 20 and 25 years	1,086	36	1,122
Between 25 and 30 years	1,248	26	1,274
Between 30 and 35 years	1,077	28	1,105
Between 35 and 40 years	796	20	816
Between 40 and 45 years	554	35	589
Between 45 and 50 years	382	26	408
Between 50 and 60 years	414	41	455
Between 60 and 70 years	243	15	258
Between 70 and 80 years	81	10	91
Between 80 and 90 years	12	2	14
Over 90 years	1	.....	1
Unknown	159	2	161
Not insane	10	1	11
Total	6,645	268	6,913

As far as could be ascertained, the volunteers of the Army and Navy under treatment during the year ending June 30, 1887, entered the service from the following States:

States.	Army.	Navy.	Total.	States.	Army.	Navy.	Total.
New York	64	.....	64	Kansas	1	.....	1
Ohio	53	.....	53	Nebraska	1	.....	1
Pennsylvania	42	.....	42	Delaware	1	.....	1
Indiana	33	.....	33	Minnesota	4	.....	4
Michigan	19	.....	19	Iowa	5	.....	5
Illinois	27	.....	27	North Carolina	1	.....	1
Wisconsin	10	.....	10	New Mexico	1	.....	1
Missouri	13	.....	13	Kentucky	7	.....	7
Connecticut	8	.....	8	Louisiana	1	.....	1
New Hampshire	8	.....	8	West Virginia	3	.....	3
Vermont	3	.....	3	Rhode Island	1	.....	1
Maryland	10	.....	10	Colorado	1	.....	1
Massachusetts	29	.....	29	Unknown	10	2	12
New Jersey	6	.....	6				
Maine	11	1	12	Total	374	3	377
California	1	.....	1				

Private patients.

	Male.	Female.	Total.
There were at the beginning of the year	4	5	9
Admitted during the year	1	.....	1
Whole number under treatment	5	5	10
Discharged during the year .....	.....	.....	.....
Remaining at end of the year	5	5	10

Table showing the history of the annual admissions since the opening of the hospital, with the discharges and deaths, and the number for each year remaining June 30, 1887.

Years.	Admitted.				Of each year's discharged and died in 1887.								Total discharged and died of each year's admissions.								Remaining of each year's admissions June 30, 1887.											
	New cases.		Relapsed cases.		Recovered.		Improved.		Unimproved.		Died.		Recovered.		Improved.		Unimproved.		Died.		Males.	Females.										
	Males.	Females.	Males.	Females.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.								
1855	26	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1856	36	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1857	24	25	1	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1858	27	11	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1859	45	15	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1860	67	19	1	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1861	60	30	4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1862	172	11	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1863	323	18	7	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1864	462	23	22	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1865	452	34	26	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1866	182	24	12	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1867	71	18	17	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1868	105	28	15	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1869	114	32	19	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1870	130	26	16	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1871	147	28	14	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1872	120	38	22	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1873	130	37	23	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1874	165	28	27	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1875	155	37	24	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1876	136	37	30	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1877	119	37	28	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1878	109	31	29	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1879	138	42	31	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1880	159	33	22	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1881	135	51	26	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1882	151	59	27	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1883	169	51	32	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1884	245	54	41	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1885	203	72	26	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1886	205	57	29	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1887	184	52	22	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.	4,966	1,106	599	242	6,913	57	15	72	49	17	66	2	1	3	73	19	92	2,289	375	2,664	804	241	1,045	131	66	197	1,350	355	1,705	991	311	1,302

Summary of total admissions.

	Male.	Female.	Both sexes.
Percentages of cases recovered	41.13	27.82	38.54
Percentages of cases improved.....	14.45	17.88	15.12
Percentages of cases unimproved	2.35	4.90	2.85
Percentages of cases died.....	24.26	26.33	24.66
Percentages of cases remaining	17.81	23.07	18.83
	100.00	100.00	100.00

These tables show that 1,535 cases were under treatment during the year, the daily average having been a fraction over 1,253. Both of these figures are higher than ever before. The whole number of admissions was 268, and out of a total of 233 discharges, 72 are reported to have recovered and 92 have died. This shows a little more than 30 per cent. of recoveries on discharges, and a death-rate of almost exactly 6 per cent. of the whole number under treatment. This mortality is unexpectedly low, and in view of the advanced age of a majority of the patients, we cannot look for its continuance during the present year. The soldiers of the late war, who make so considerable a proportion of our population, are already veterans, and each succeeding year, while it thins their ranks, adds to the infirmities of the survivors. One death from asphyxia occurred in a general paralytic when swallowing food. That door to death would seem to be always open in this form of disease, rendering it necessary to use great care in administering food in the advanced stages of paralysis. Aside from this no unusual accident, no special epidemic or calamity has come to disturb the annals of a quiet hospital year. Where for a term of years this becomes the uniform record, we are in danger of forgetting to be thankful for an immunity which in a hospital crowded like this means so much.

Farm and garden products.

Apples, 145 bushels, at 75 cents.....	\$108.75
Asparagus, 1,469 bunches, at 6 cents.....	88.14
Beans (Lima), 26½ bushels, at \$1.30.....	34.45
Beans (string), 501 bushels, at 75 cents.....	375.75
Beets, 200 bushels, at 70 cents.....	140.00
Cabbage, 20,547 heads, at 8 cents.....	1,643.76
Cabbage sprouts, 52 barrels, at \$1.....	52.00
Cantaloupes, 5,559, at 10 cents.....	555.90
Carrots, 52 bushels, at 50 cents.....	26.00
Celery, 17,640 bunches, at 5 cents.....	882.00
Chickens, 3 doz., at \$4.....	12.00
Corn (green), 993 doz., at 15 cents.....	148.95
Cucumbers, 402 doz., at 10 cents.....	40.20
Currants, 270 quarts, at 15 cents.....	40.50
Ducks, 1 doz., at.....	6.00
Eggs, 1,170 doz., at 25 cents.....	292.50
Egg-plants, 1,757, at 6 cents.....	105.42
Figs, 96 quarts, at 25 cents.....	24.00
Grapes, 5,278 pounds, at 5 cents.....	263.90
Honey, 56 pounds, at 25 cents.....	14.00
Kale, 311 barrels, at \$2.....	622.00
Leeks, 3,610 bunches, at 3 cents.....	108.30
Lettuce, 13,103 heads, at 3 cents.....	393.09
Milk, 67,057 gallons, at 25 cents.....	16,764.25
Onions, 8,115 bunches, at 2 cents.....	162.30
Onions (sets), 20 bushels, at \$4.....	80.00
Onions, 121½ bushels, at 65 cents.....	78.98

Oyster-plants, 2,805 bunches, at 3 cents	\$84. 15
Parsley, 5,590 bunches, at 2 cents	111. 80
Parsnips, 108 bushels, at 75 cents	81. 00
Peaches, 233 $\frac{3}{4}$ bushels, at \$2	467. 50
Pears, 74 $\frac{3}{4}$ bushels, at \$1.50	112. 13
Peas, 143 bushels, at \$1	143. 00
Peppers, 4 bushels, at \$1	4. 00
Pork, 25,582 pounds, at 7 cents	1,790. 74
Potatoes (Irish), 449 bushels, at 70 cents	314. 30
Quinces, 56 bushels, at \$2.50	140. 00
Radishes, 2,686 bunches, at 2 cents	53. 72
Rhubarb, 1,113 bunches, at 2 cents	22. 26
Squash (summer), 1,238, at 1 cent	12. 38
Squash (winter), 30 bushels, at 50 cents	15. 00
Strawberries, 1,130 quarts, at 12 cents	135. 60
Tomatoes, 597 bushels, at 60 cents	358. 20
Turnips, 644 $\frac{1}{2}$ bushels, at 45 cents	290. 03
Sale of stock	269. 00
Total	27,467 95

The following products were consumed on the farm, and consequently are not a part of the profits :

Corn-fodder (green), 9 acres, at \$35	\$315. 00
Corn-fodder (dry), 45 tons, at \$15	675. 00
Grass (green), 12 acres, at \$35	420. 00
Hay, 250 tons, at \$13	3,250. 00
Kale, 46 barrels, at \$2.50	115. 00
Rye (green), 9 acres, at \$35	315. 00
Rye (dry), 75 tons, at \$13	975. 00
Turnips, 78 bushels, at 45 cents	35. 10
Total	6,100. 10

This is very much the usual result of farm labor. Some items show a decrease from former years, others a notable increase; that of the milk product is especially gratifying not only to us but to the household who consume it. But of the farm and grounds it is not enough to tabulate the yield in agricultural products, it is what they afford in other ways wherein their great value lies; healthful occupation, breathing spaces, invigorating walks, restful places full of healing balm, these are the plants of perennial root that blossom and bear their fruit there all the year round; all of which has been detailed often enough before. The problem of labor in its bearing on the treatment of the insane was also fully discussed in our last report, and to what was then said we can only add that the experience of another year confirms us in the opinions then expressed.

The institution has now apparently reached a permanent population of 1,300, the number remaining June 30, 1887, being 1,302; and unless the number of inmates should rapidly increase, which increase we confidently hope the movement on the part of the District Commissioners to provide for some of their imbecile and harmless chronic classes elsewhere will prevent, this year, with the completion of the buildings already provided by Congress, will witness the end of the overcrowding which has existed here ever since the close of the war, increasing many fold the difficulties incident to the management of an institution like this, interfering as it does with the comfort of its inmates, and rendering practically impossible anything like a satisfactory classification.

The question is often asked, What are our accommodations for so extensive a household? And since many, even members of Congress, on visiting us, are surprised to find St. Elizabeth so much of a place, a brief description of the present hospital buildings and a statement of the

provision for the insane afforded by them would seem to be appropriate here. In such statement we may be permitted to so far anticipate the future as to consider as finished, buildings for which the appropriations have been made, and which will be completed and occupied during the present fiscal year.

The main hospital edifice, built of common brick, of which the first foundations were laid in 1853 and whose latest extension was completed during the present year, is an imposing pile of buildings fronting the Capitol, and standing on the high grounds of the southern bank of the Anacostia River, or eastern branch of the Potomac. The distance from the Capitol by highway is 3 miles. It is built on the so-called Kirkbride plan, somewhat modified, after designs of the first Superintendent, Dr. C. H. Nichols. The architecture is collegiate gothic; the building castellated in appearance, and crowning the hill and overlooking the river as it does is pleasing to the eye and well adapted to its purpose. This main edifice, with a frontage in a right line of 948 feet but with receding wings, consists of a central administrative building and two wings extending on either hand, the wings themselves subdivided into eleven sections of from two to four stories in height. Their subdivision into wards, with separate dining rooms, bath rooms, and closets, provides for the distribution into more than thirty families, or classes, of the six hundred insane persons who are here gathered under one roof. Here most of the recent cases, some convalescent and many of those suffering from active and violent excitement, are cared for; the division into distinct sections admitting of this without any great disturbance of the one class by the other.

Two detached buildings for the colored insane, male and female respectively, formed a part of the original plan of the hospital. These at first accommodated twenty of each sex, a provision mostly in single rooms. The extensions of these buildings recently provided for, together with those previously made, will increase the capacity of each lodge to one hundred beds, for the most part in associate dormitories. The African is gregarious in habits, and the social character of this arrangement suits him. In some cases, however, the type of insanity renders segregation necessary. A race distinct from the whites, with peculiarities and ways of their own, they are more at home in quarters by themselves and happier in their associations than scattered through the buildings, as necessity has compelled in our more crowded days.

The Atkins Hall is one of a distinct group of detached buildings that have grown up from time to time as the necessity of providing room became urgent. This hall, also plainly built of ordinary brick, is constructed on a plan departing somewhat widely from that of the main building. It is a provision for fifty inmates, mainly in a large associate dormitory, and the class selected is the quiet men who work every day. Some are convalescent, some will make the hospital their home for life, but all labor contentedly together on the farm or in some of the various departments where work may be found. Atkins Hall, with its sense of freedom and special diet adapted to working men, its parole, its open doors, its ungrated windows, and privilege to play at games or sit and smoke when work is over, it is a reward of merit to live there; it is their house, their castle, where for the most part they live content. It will be remembered that these fifty men are selected from well-nigh a thousand; ought it to be strange that at least that number should be found who, going at large every day to their work, and believing it a home and not a prison, need no bars? As a matter of fact, there are found to be many more of these contented working men, and the overflow, amounting to

fully fifty more, finds lodging and like open quarters in the Relief Building, so called from the relief from overcrowding it afforded. This building, also of brick, plainly but substantially built, offers, six wards, or divisions, for the classification of two hundred and fifty male patients, of varying degree of mental infirmity, some of whom work at brush and mat making in a shop within the building, having for the most part liberty to come and go within the grounds of their inclosure.

The third building of this group, known as the Home, is occupied by insane men from the National Home for Disabled Volunteer Soldiers. This gives liberal accommodations for one hundred and fifty men arranged in four groups, something like one-third of whom have single dormitories. The lower story of this building is devoted to the aged, the lame, the blind, classes requiring special care, and they have both day and night nurses, also a diet suited to their needs, with dining-room to themselves. The second floor is occupied by the epileptic insane. They have also a night nurse and their own dining-room. This seems to be necessary for the proper care of this, in some respects, the most trying class of the insane. It may be said here that a similar day and night provision is made for a part of the female epileptic insane in a ward in the main hospital building. A more complete provision for this troublesome class would be an entirely distinct department, with wards especially adapted to their needs, and this may well be considered in providing buildings in the future as they may be required.

The remaining building of this detached group is a common dining hall giving comfortable seating capacity for six to eight hundred patients. Two classes have already been noted that it would be inexpedient to bring there, and there are others whose violence or the character of whose disease would render them unsuitable for it. But, after making all due allowance for these, it is probable that three-fourths of all the inmates can safely take their meals together. The gain to be expected from the use of a common dining hall is, economy in provisions and in the service of the food; that the meals, being kept warm by steam-tables and special appliances, will be more palatable when served; that they may be more readily supervised by the medical officers of the hospital, and that the whole matter of the food and its service is likely to be more satisfactory than when scattered through so many rooms at all points of the institution. Moreover, the orderly coming and going is a wholesome moral treatment for the disease and is a relief from the monotony of life in the wards. The dining hall itself is a building whose inside dimensions are 60 by 140 feet, open throughout, with ample side windows, also receiving light and ventilation from a gallery of windows above. Certainly it is a bright and cheerful room, well adapted to its use. It is fitted with an elevated platform or stage at one end, admitting of music or other diversion at the meals, and should it ever be thought desirable to return to the original plan of distinct dining rooms for each ward this will afford an amusement hall of considerable greater capacity than the present chapel and lecture room.

This group of detached buildings may be taken as fairly illustrating the segregate-building provision for the insane to the number of 450 cases selected from nearly 1,000 male patients. These structures have been built at a cost not exceeding \$137,000, or about \$300 per capita. It should, however, be remembered that these are selected cases, and that no expense for kitchen, laundry, or executive building is included. If it were necessary to provide these it would not be safe to estimate the cost at less than \$400 per patient, and if all classes of the insane

are to be provided for in distinct buildings \$500 per capita would not be an unreasonable figure. It seems proper to make this statement here, as this hospital has been quoted as making provision for the insane in comfortable quarters at an expense of \$150 per inmate. This was only for a selected class in Atkins Hall, the provision being by associate dormitory. The comparative advantages of the congregate and the segregate plan of buildings for the care of the insane can hardly be discussed here. It is perhaps enough to say that we have both on the same grounds; that for some years we have made use of a modified segregate provision for a considerable proportion of our male population, and have on the whole been satisfied with the result.

But the detached building which promises the most for the future comfort and welfare of the hospital, one entirely distinct from the last-mentioned group as well as from the main building, is a special department for the convict and homicidal classes. This is a strongly constructed, nearly fire-proof, brick building, made light and cheerful, but provided with more than the ordinary safeguards against escape. The structure consists of a four-story central building with projecting bell tower and two wings at right angles to each other. The central building, standing four square, is 45 feet in diameter, and provides in its different stories a main iron stairway, a common dining hall, rooms for the resident medical officer and warden, two large workshops for the inmates, and rooms for the attendants. These latter open directly upon the wards, four in number, situated in the wings, which extend 88 feet south and west from the central building. Exclusive of the basement story each wing contains two wards of fifteen single rooms, with iron stairs at the remote end, opening into an inclosed court. The bath rooms and water closets are placed in a projecting tower, having a ventilation distinct from the ward. All is made as nearly fire-proof as possible while making use of wooden floors and casings.

This building, now being constructed under contract, is likely to be ready for occupation before the next fiscal year, and when so occupied will provide for sixty men of the following classes:

First. The convict insane. Those persons who, having been convicted of crime in the United States courts, are found to be insane or have become so while serving sentence in the penitentiaries and are, on the request of the Attorney-General, sent here by order of the Secretary of the Interior.

Second. The criminal insane. Men who, being under indictment for crime, are found to be insane, and on certificate of the United States courts are sent here by order of the Secretary of the Interior.

Third. Military prisoners. Soldiers who, for desertion or other crimes under military law and while serving sentence in military prisons, have been found insane. These are sent here by order of the Secretary of War.

Fourth. Especially dangerous and homicidal persons from whatever source received. This is a class very difficult to care for in the ordinary wards of a hospital; liable to outbreaks, a source of constant anxiety, and the danger of whose escape is a perpetual menace to the community. This class will have a ward to themselves, distinct from the convicts, but within the walls of the same building and having the security which it affords.

The advantages of such provision for the classes enumerated are greater freedom within restricted limits and at the same time greater security for these men. That opportunity for regular employment, most essential to their treatment, will be afforded which could hitherto only

be obtained by the introduction of an element of danger into the wards or by hazarding the escape of the convict in sending him outside to work. It is remarkable what a measure of content, satisfaction even, with one's lot goes with steady employment, and to this rule of social existence the insane man is no exception.

But great as will be the advantage to the class provided for in this building over the present most unsatisfactory arrangement it is small compared with the gain, hardly to be measured, that will come to the rest, who are thus relieved from the constant presence and association of this most undesirable class. To nine perfectly harmless, insane persons we add one dangerous lunatic, and we must build bars around them all. With the criminal element removed what need has St. Elizabeth for all these grated windows that only keep out the sunshine? Why, but for this dangerous factor, should this be a prison which was meant for a home? The hospital will seem another place without them. Less restraint about it, more unbarred doors, with here and there windows standing wide, the woodbine and ivy replacing the lattice guards. If some such progress be not possible then there is no gain in classification.

We still lack a suitable infirmary building for our sick and feeble men distinct from the structures for the control of the insane, to be built on the plan of the modern hospital for the sick and fitted with all the appliances for their restoration and care. But this is included in the estimates of the coming year, and we hope in the next report to count it in our accomplished work.

There are buildings for the employment of the inmates, cabinet, carpenter, tailor, mattress, and shoe shops, but we have not included them in this review, since they belong rather to the appliances for treatment than buildings for the lodging of the insane.

To sum up, then, we have here a main hospital edifice and six distinct buildings, not including the dining hall, for the care of the insane, with upwards of 50 wards for the classification of 1,300 inmates in more than 500 associate dormitories and single rooms. It is an instructive census and suggestive in its extent.

The estimates for the fiscal year ending June 30, 1889, are as follows:

For current expenses.....	\$280,500
For general repairs and improvements.....	20,000
For special improvements, viz:	
An infirmary building.....	30,000
Water-tank and connections, stand-pipe, and fire escapes.....	4,500
Tower clock.....	750
Cement flooring and finishing rooms in basement of dining hall.....	1,200
Porter's lodge at lower entrance.....	1,200

The estimate for current expenses is for support in the hospital, including clothing, medical, and moral treatment of an estimated average number of 1,275 indigent insane persons who, under United States laws, are entitled to treatment here. These comprise the insane of the Army and Navy, Marine Corps, Revenue Cutter Service, the National Home for Disabled Volunteer Soldiers, the indigent insane of the District of Columbia, and United States convict insane. The basis of estimate is an annual cost of \$220 per capita. Of late years Congress has provided for a certain portion of this expenditure in the bill for the District of Columbia. In making the appropriation for the hospital for the year 1887 Congress, in committee, after a careful consideration of the whole subject of the amount properly chargeable to the District appropriation,

fixed upon the sum of \$75,132, and it was so ordered for that year. The average number of patients from the District of Columbia under treatment during the fiscal year 1887 was 556. The estimated average number to be cared for during the fiscal year 1889 will be 586. Assuming \$75,132 to have been the correct proportion when the number was 556, the appropriation in the District bill for 1889, following the same ratio, should be \$79,185, leaving the sum of \$201,315 to be appropriated in the sundry civil bill, of which sum it is asked that not exceeding \$1,500 may be used as hitherto to defray the expenses of the return of patients to their friends.

The sum of \$20,000 is needed for general repairs and improvements, including care of grounds. It is evident that a hospital, whose patients have in ten years increased from less than 800 to more than 1,300, and whose accommodations have at least kept pace with the increase, requires something more for repairs and improvements than the \$10,000 given ten years ago. Much of the heating apparatus requires to be renewed; the exterior wood work of the entire west wing needs painting; interior walls and ceilings must from time to time be renewed, and if the buildings are not allowed to deteriorate, which should never be permitted in a hospital, some wards should be freshly tinted and their floors relaid. That floors are no small item here will be understood when it is remembered that the actual floor space at St. Elizabeth is more than 400,000 square feet, the ground actually occupied with buildings being more than 4 acres. When the class of occupants is considered the endless need of repair is evident.

In accordance with the modern ideas of hygiene in hospitals and the "most enlightened care and curative treatment" of the insane, which the organic act creating this hospital calls for, the immediate present want of the institution is a distinct infirmary building for hospital purposes for the sick and acute febrile cases. The great danger to a hospital that retains its chronic insane is that it will degenerate from a hospital into an asylum. Curative care, the most approved appliances of the modern hospital for the sick, buildings specially adapted in their design to the wants of this class—light and airy, fitted with batteries, medicated baths, special facilities for the preparation of those light articles of food which it is so essential shall be inviting and palatable when presented to the sick; all these most necessary provisions it is proposed to make here to enable the institution to keep abreast of the medical science of to-day. In the event of the invasion of some epidemic disease such detached building would become indispensable. With our large household, as at present situated, it is not pleasant to contemplate the outbreak of a contagious disease like small-pox. For such infirmary building, with space for the nurses' quarters, beds for sixty cases, with bath-rooms, kitchen, closets, and everything complete, including heat and ventillation, \$30,000 is needed.

A water tank for the storage of river water in the west tower of the main hospital building connected with the fire hydrant system, also to be used for purposes of irrigation and sewerage, is imperatively needed. For all other purposes we obtain from the tubular wells an abundant supply of pure, sparkling water, whose only fault is a small amount of iron held in solution by fugitive gases. But there is a limit beyond which these wells cannot be pumped, and with the constantly increasing consumption of water for building purposes, and during the dry season for sprinkling the lawns, supplying the lakes, for use at the stables, and in the numerous water closets throughout the hospital that limit has been reached. All this can be easily and permanently guarded

against by providing this elevated tank for the river water and making the necessary connections for its use. As there is already a second 6-inch service pipe from the pump house at the river as well as duplicate pumps, it is believed the whole expense of the change need not exceed \$4,500, the sum asked, for which the additional protection against fire thereby afforded will be more than an equivalent.

A tower clock at some central point of the hospital is much needed. Nothing adds more to the comfort and order of a hospital for the insane than a standard time-keeper so placed as to be visible from all quarters. There is a sense of companionship to the inmates in the very striking of the hours. The sum of \$750 is asked for the purchase of such clock.

The sum of \$1,200 is asked for cementing the basement floor of the dining hall and finishing it for a recreation room for the inmates in wet and inclement weather. A small expenditure here will make available a space equal to that of the dining hall itself, for the comfort of the inmates at times when the lawns and groves present no attractions. A bowling alley, a smoking room, an escape from and a shelter out of the storm, when once provided we shall wonder how we ever got along without it.

An improvement much needed for the more effectual custody of the hospital and grounds is a small but tasteful brick structure for use as a gardener's cottage and porter's lodge at the lower hospital entrance. This is at present, from the necessity of keeping it almost constantly open, a source of considerable anxiety respecting its improper use as a means of ingress as well as egress from the grounds, so much so as to necessitate the employment of a day watchman. The placing of a gardener's cottage at that point would obviate this, and \$1,200 is asked for that purpose.

Since the date of the last annual report the Board has lost one of its members by death—Judge Cuppy. His association with the other members of the Board had been most pleasant, and at the semi-annual meeting in April, 1887, the following resolutions were passed:

Whereas, This Board has learned with profound regret of the unexpected decease, on the 30th of March, 1887, of Fletcher P. Cuppy, esq., one of its members,

Therefore be it—

Resolved, That in this bereavement we, in common with the legal profession and the community at large, mourn the loss of an able and upright lawyer, a wise counsellor, and a distinguished citizen—patriotic, philanthropic, and ready to aid in every good word and work.

Resolved, That as personal associates on the Board of Visitors of this hospital with Judge Cuppy, we desire to bear testimony to the warm interest and friendly sympathy which he has always manifested in our work, and we feel that the insane, no less than ourselves, have lost in him a friend ever patient to listen to their appeals, ready to console and anxious to aid and help them and us by every means in his power. Courteous, conscientious, high-minded, a gentleman in the best sense of the word with all which that name denotes, his genial presence will be sadly missed from our councils and our work.

Resolved, That these resolutions be entered on the minutes of the Board, and that a copy of the same be forwarded to his family.

Mr. H. C. Cross, for thirteen years the chief book-keeper of the hospital, after a brief illness died on the 15th of May, 1887. Mr. Cross had been a soldier in the late war, was a faithful accountant, very accurate in his work, and the loss will be much felt at the hospital. In his private life he was genial, upright, and generally beloved. Such life ended in the hospital service deserves mention in its report.

Mr. and Mrs. Evander French, for many years connected with the hospital as farm steward and housekeeper respectively, resigned their positions early last autumn to return to their old home. Mr. French had been in charge of the farm for nine years, and under his efficient and judicious management many improvements had been introduced. They take with them our best wishes for their future prosperity.

The medical officers of the staff have remained without change and have continued their efficient work. We consider the hospital fortunate in retaining the services of such able, trained, and faithful men in their respective positions. It is an earnest of success in this great work before us.

We have been remembered by the friends of former years, as well as by some new ones, with aid in our evening entertainments, in gifts of flowers and books, and pictures for our wards, and in other ways of doing good, all of whom will please to consider themselves thanked by us and the inmates without more particular mention.

In our report of two years ago, allusion was made to the connection of this hospital in its origin with that world-famed philanthropist Miss Dorothea L. Dix. At an advanced age, and after some years of failing health, during a part of which time she was an honored guest of this institution, and more recently of the New Jersey State Hospital at Trenton—another of the hospitals she had been instrumental in founding—on the 18th of July, 1887, she passed peacefully away. This is not the time or place for her eulogy, but as her life work, her first care and her latest thought was for the insane, and this was one of the hospitals near to her heart—a child as it were of her own creating—it seems fitting that her death should have passing mention here. The mortal form—all that was perishable—has gone from us, but the work and the fame remain. The example of her life, the devotion without a parallel, the loving service rendered to humanity's saddest sickness—

“To other souls,
The cup of strength in their great agony,”

these do not pass away, and through the coming time the soul-sick ones rising out of the darkness of madness into reason's light will bless the name and revere the memory of Dorothea L. Dix.

We are, very respectfully, your obedient servants,

J. M. TONER,

President of the Board.

W. W. GODDING,

Secretary ex-officio.

Hon. L. Q. C. LAMAR,

Secretary of the Interior.

GOVERNMENT HOSPITAL FOR THE INSANE,
Washington, D. C., September 15, 1887.

SIR: In accordance with act of Congress approved June 4, 1880, requiring the Superintendent of the Government Hospital for the Insane to make a report to Congress annually of the detailed expenditures of the hospital for the preceding fiscal year, I have the honor to submit the following statement.

I am, sir, very respectfully, your obedient servant,

W. W. GODDING,

Superintendent.

Hon. L. Q. C. LAMAR,

Secretary of the Interior.

Month	No.	Name	8.85	394.20	\$1,463.08	89.67	2.40	1,787.30	2,771.43	720.37	9.94	34.45	45.00	28.00	181.10
Oct.	172	Myers & Loving													
	173	The Great Falls Ice Company													
	176	Browning & Middleton													
	177	George M. Oyster & Co		1,538.24											
	180	G. G. Cornwell & Son				89.67							45.00	28.00	382.41
	181	N. W. Burchell					2.40								11.10
	182	Thurber, Whyland & Co.													59.22
	185	J. B. Bryan													60.53
	187	N. T. Metzger & Bro													2.25
	188	J. C. Ergood & Co.													282.25
	213	Levi Baker													13.68
	222	W. M. Galt & Co.				1,787.30			2,771.43	720.37		101.17			
	223	J. T. Varnell & Son													
	224	Poole & Brooke		15.60											
	225	R. A. Golden													8.75
	226	Strang & Tucker													
	230	Rabbitt & Crown													149.00
	239	A. A. Kennard & Co.		374.06											196.55
	243	Harry B. Sweeney													9.00
	246	Barbour & Hamilton		211.18									24.64		327.94
253	Wm. H. Milnor & Co.														
257	N. W. Burchell														
258	Myers & Loving		179.40												
268	D. J. Quaid														
290	J. T. Varnell & Son							3,000.24	660.86		10.00				
292	George M. Oyster & Co		2,275.26												
294	R. L. Hyde														
298	Wm. M. Galt & Co.					1,729.70								16.56	
299	Levi Baker												225.00		
308	Gambrell Manufacturing Co.					90.80									
309	Wm. H. Milnor & Co.													12.00	
310	Thurber, Whyland & Co.													16.62	
312	Myers & Loving		165.60												
335	J. T. Varnell & Son							2,697.27	689.09						
338	N. T. Metzger & Bro												907.31	86.32	
362	Myers & Loving													4.50	
364	Thurber, Whyland & Co.		179.40												
373	A. A. Kennard & Co.					293.68						218.30			
375	Tyler & Bros.					60.03									
379	Gambrell Manufacturing Co.					90.80									
381	J. T. Varnell & Son							2,318.15	800.20						
384	J. B. Bryan														
390	Browning & Middleton													3.60	
395	George M. Oyster & Co		1,398.59											162.03	
399	G. G. Cornwell & Son														
402	W. M. Galt & Co.					193.44								974.10	
403	N. W. Burchell					887.50								9.80	
404	Frank Hume														
412	J. C. Ergood & Co.													969.72	
417	E. J. Adams & Co.													193.44	
421	Great Falls Ice Company													313.75	
425					517.02										

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Classified expenditures, &c.—Continued.

SUBSISTENCE—Continued.

Date.	Furnished by—	On voucher numbered—	Flour, meal, crackers, &c.	Ice.	Butter, cheese, and eggs.	Fresh meats.	Salt and smoked meats.	Fish and poultry.	Tea and coffee.	Sugar and molasses.	Lard.	Fruits and vegetables.	Other groceries.	Grand total.
1887.														
Jan. 31	N. T. Metzger & Bro.	462										\$701.04		
31	Andrews & Wade	463										644.26		
31	Barbour & Hamilton	467											\$386.01	
31	R. A. Golden	469						\$646.73						
31	Rabbitt & Crown	474						1,385.23						
31	Daniel Loughran	476						17.60					120.50	
31	Myers & Loving	479			\$165.60									
31	Strang & Tucker	482										793.10		
31	George M. Oyster & Co.	486			1,414.95									
Feb. 11	William H. Milnor & Co	506							\$349.80					
28	T. V. Varnell & Son.	522				\$2,507.99	\$507.89							
28	C. A. Gambrell Manufacturing Company	529	\$196.20											
28	Thurber, Whyland & Co	530								\$1,094.31			47.26	
28	N. T. Metzger & Bro	537										441.64	35.69	
28	W. M. Galt & Co	539	1,744.40										25.52	
28	Myers & Loving	543			165.60			27.17						
28	G. G. Cornwell & Son.	568	164.41					685.45	282.00	60.60		211.84	601.63	
31	J. T. Varnell & Son	586				4,754.08	962.35							
31	A. A. Kennard & Co.	589			397.77									
31	Tyler & Bros	591	53.27											
31	Gambrell Manufacturing Company	592	127.00											
31	W. H. Milnor & Co.	594							345.95					
31	George M. Oyster & Co.	599			2,293.34					25.74				
31	R. A. Golden	601						506.45						
31	Frank Hume	603											846.97	
31	Myers & Loving	605			163.60									
31	W. M. Galt & Co.	606	876.25											
31	N. W. Burchell	608							347.70			19.50		

31	Apr.	609	Great Falls Ice Company	\$360.88	249.90	920.15	751.57	7,983.90	9,535.80						
31		610	J. C. Ergood & Co.	89.25					154.13						
31		611	Strang & Tucker					408.25							
31		612	Andrews & Wade						154.18						
31		613	Browning & Middleton						388.03						
31		614	Barbour & Hamilton					59.50							
31		615	Schafer & Clary					53.83							
31		616	C. D. Whitman					216.14	610.72						
31		617	J. T. Varnell & Son	2,350.15	450.61	61.05		102.25							
31		618	G. G. Cornwell & Son	172.02											
31		619	Myers & Loving	269.10											
31		620	Strang & Tucker												
31	May	621	Gambrell Manufacturing Com- pany	244.80											
31		622	Thurber, Whyland & Co.			863.79			16.60						
31		623	Rabbitt & Crown		11.50				94.80						
31		624	George W. Harvey						71.40						
31		625	N. T. Metzger & Bro.					24.40	37.68						
31		626	Myers & Loving	186.30				21.90							
31		627	William M. Galt & Co.	1,709.25											
31		628	Rose Howard	72.49											
31		629	Tyler & Bros.												
31		630	A. A. Kennard & Co.	272.45					7.20						
31		631	J. B. Bryan					99.66	812.55						
31		632	E. J. Adams & Co.												
31		633	Frank Hume			57.21		41.00							
31		634	Martha Edelen				88.36								
31		635	J. T. Varnell & Son		4,481.29										
31		636	William H. Milnor & Co.			330.20									
31		637	George M. Oyster & Co.												
31		638	Great Falls Ice Company	859.77											
31		639	N. W. Burchell			363.25									
31		640	Barbour & Hamilton						433.04						
31		641	Myers & Loving					3.75							
31		642	R. A. Golden						273.21						
31		643	G. G. Cornwell & Son	127.29		31.05									
31		644	Andrews & Wade					132.40							
31		645	J. C. Ergood & Co.						78.50						
31		646	H. L. Strang			17.69		137.50							
31		647	Browning & Middleton						124.25						
31		648	William M. Galt & Co.	784.00					18.08						
31		649	Rabbitt & Crown												
31		650	Schafer & Clary												
31		651	N. T. Metzger & Bro.												
				Total	12,452.13	3,209.75	17,308.99	29,345.87	7,847.84	8,814.02	5,120.70	7,277.80	751.57	7,983.90	9,535.80

\$109 648.37

Classified expenditures—Continued.
HOUSE-FURNISHING, FUEL, LIGHTS, &c.

Date.	Furnished by—	On voucher num- bered—	Furniture, fix- tures, &c.	Bedding.	Table and towel linen.	Utensils, crock- ery, &c.	Kitchen fittings.	Laundry supplies.	Carpets.	Hard coal.	Soft coal.	Wood.	Lights, oils, &c.	Making brooms.	Grand total.
1886.															
July 10	Elise H. Stanton.....	4						\$10.30					\$77.58		
31	Chas. H. Nicolai.....	21												\$31.10	
31	Meixsel & Co.....	22													
31	Rosenblatt & Co.....	24						344.00							
31	Barbour & Hamilton.....	27						29.73							
31	G. G. Cornwell & Son.....	32											18.20		
31	W. B. Moses & Son.....	34	\$129.00												
Aug 13	Jennings Bros.....	51				\$147.00									
17	Wm. Beaman.....	59												32.20	
31	Thos. G. Hood.....	78		\$102.86	\$137.46										
31	T. A. Ashburner.....	80		465.12											
Sept. 23	J. M. Wheatley.....	120									\$10,323.89				
30	Union Oil Co.....	137						140.93							
30	Rosenblatt & Co.....	139						344.00							
30	Thos. G. Hood.....	140	114.15	111.40	118.26										
30	James M. Shaw & Co.....	143				\$194.64									
30	C. Stoddart & Bro.....	146		199.28											
30	Chas. H. Nicolai.....	147											91.08		
30	R. A. Robbins.....	150		53.56										124.04	
30	M. W. Beveridge.....	152				190.48									
30	S. L. Hempstone.....	153			35.69										
30	Hayward & Hutchinson.....	155				\$13.70								2.94	
30	J. T. Campbell.....	157													
30	Louis A. Dieter.....	158	16.52												
30	Woodward & Lothrop.....	160		79.75											
30	M. Silverberg & Co.....	161	43.29												
30	Petersen & Childs.....	167							\$97.31						
30	Sam'l S. Shedd.....	168	9.00												
30	W. B. Moses & Son.....	174	162.75												
30	G. G. Cornwell & Son.....	180						29.05							
30	J. Maury Dove.....	183								\$2,303.44					
Oct. 11	Wm. Beaman.....	211													
12	H. I. Gregory.....	215				21.00									
20	Jennings Bros.....	228				294.61								23.20	
20	E. G. Wheeler.....	223				1.40		13.36							

Classified expenditures—Continued.

HOUSE FURNISHING, FUEL, LIGHTS, &c.

Date.	Furnished by—	On voucher num- bered—	Furniture, fix- tures, &c.	Bedding.	Table and towel linen.	Utensils, crock- ery, &c.	Kitchen fittings.	Laundry supplies.	Carpets.	Hard coal.	Soft coal.	Wood.	Lights, oils, &c.	Making brooms.	Grand total.
1887.															
Mch. 31	S. L. Hempstone	619		\$12.78											
31	S. S. Shedd	620	\$17.31												
31	Wash. B. Williams	623	144.75												
31	Hayward & Hutchinson	626				\$112.88									
Apr. 30	G. G. Cornwall & Son	655					\$26.73								
30	W. B. Moses & Son	656	372.83												
30	Hayward & Hutchinson	658					57.99								
30	Alex. Milne	663	19.50												
May 18	T. A. Ashburner	682		114.80											
20	G. A. Hamberger	683		5.80											
31	Thomas G. Wood	692		89.71	\$130.40									\$28.20	
31	Wm. Beaman	701													
31	W. H. Harrover	706					12.08								
June 18	Troy Laundry Machine Co.	725				\$13.05		9.20							
25	James M. Shaw & Co.	730									\$30.00				
27	A. H. Chace & Bro.	734	2.40												
27	J. M. Wheatley	739													
27	Frank Hume	749						16.69							
30	Wm. Beaman	751						40.00						17.60	
30	S. Patrick	755													
30	R. A. Robbins	761		50.94										51.26	
30	Chas. H. Nicolai	762											\$182.16		
30	Barbour & Hamilton	774						24.25							
30	M. W. Beveridge	781				68.27									
30	Union Oil Company	785						168.13							
30	G. G. Cornwall & Son	793						46.21							
30	Lewis Baar	796	2.70												
30	Rosenblatt & Co.	799						344.00							
30	Poole & Brooke	803												39.90	
30	L. W. Loomis	842					946.00								
	Total		2,320.63	6,036.15	718.34	2,023.67	1,146.55	2,816.35	\$330.57	\$2,303.44	10,416.52	\$344.66	1,340.78	459.04	\$30,256.70

Classified expenditures—Continued.
 DRY GOODS AND CLOTHING, BOOKS, STATIONERY, AND MISCELLANEOUS.

Date.	Furnished by—	On voucher numbered—	Boots, shoes, and slippers.	New clothing.	Clothing material.	Hats.	Notions.	Books and periodicals.	Stationery and postage.	Freight and hauling.	Incidental work.	Advertising.	Electrical instruments.	Photographic instruments, &c.	Grand total.
1886.															
July 20	Wm. Beaman	7									\$2.38				
28	Robert W. Shoppell	12						\$5.00			18.75				
31	A. E. Offutt	17													
31	C. Stoddard & Bro.	23					\$60.88								
31	C. & P. Telephone Co.	30											\$100.00		
31	A. S. Clark	35						23.94							
31	Geo. W. Knox	36								\$2.42					
31	Adams Express Company	37								1.10					
31	Baltimore and Potomac R. R. Co.	38								75					
31	Baltimore and Ohio R. R. Co.	39								37					
Aug. 18	I. Alder Blumer	60						5.00							
25	H. W. McNeal	74						15.00							
31	Thos. G. Wood	78		\$275.16	\$856.81		32.40								
31	Adams Express Company	82								1.25					
31	Geo. W. Knox	83								25.52					
31	Inland & Seaboard Coasting Company	84								1.70					
31	Baltimore & Ohio R. R. Co.	85								13.57					
Sept. 24	R. A. Pinsmore	121						7.00							
30	Baltimore and Potomac R. R. Co.	133								25					
30	Adams Express Company	134								85					
30	Geo. W. Knox	135								36.14					
30	Thos. G. Hood	140					\$19.92								
30	Augustus Thomas	144			34.83										
30	Wm. Wood & Co.	145						6.00							
30	C. Stoddard & Bro.	146					74.62								
30	John Wanamaker	148		199.67											
30	R. A. Robbins	150	\$37.52												
30	S. L. Hemphstone	153					2.80								
30	Robt. Cohen	156	12.00												
30	C. S. Cudlip	159												\$27.90	

Classified expenditures—Continued.
 DRY GOODS AND CLOTHING, BOOKS, STATIONERY, AND MISCELLANEOUS.

Date.	Furnished by	On voucher numbered—	Boots, shoes, and slippers.	New clothing.	Clothing material.	Hats.	Notions.	Books and periodicals.	Stationery and postage.	Freight and hauling.	Incidental work.	Advertising.	Electrical instruments.	Photographic instruments, &c.	Grand total.
1886.															
Sept. 30	Washington Post	163						\$25.56							
30	H. Adler, agent	164					\$6.31								
30	Wm. Hahn & Co.	175	\$400.50												
30	Lansburgh & Bro.	178			\$265.42		81.16								
30	Washington City Post-Office	179							\$34.00						
30	T. G. Morrow	192						15.99							
Oct. 5	E. H. Stanton	203						5.00							
8	Lea Brothers & Co.	206						25.00							
9	W. F. Essick	207						35.00							
9	A. S. Clark	210						1.00							
16	Interior Department	218							51.99						
25	J. G. Toepper	237						3.50							
30	John H. Walsh	248													
30	Geo. W. Knox	249								\$31.13					
Oct. 30	Inland and Seaboard Coasting Com- pany.	250								2.77					
30	Wm. Ballantyne & Son	255						58.24							
30	Woodward & Lothrop	256			78.50		2.15								
Nov. 1	W. H. Igams	266								1.18					
6	J. L. Shaw	270						6.00							
30	John K. Walsh	300									35.00				
30	Geo. W. Knox	303								32.15					
30	Potomac Steamboat Company	304								16.92					
30	Adams Express Company	305								2.40					
30	Baltimore and Ohio Express	306								3.80					
30	Wm. Ballantyne & Son	313						16.00							
9	Congressional Record	327						4.00							
27	R. C. Jones	344						8.00							
31	George W. Knox	353								20.23					
31	Baltimore and Ohio Express	354								15.25					

1887.			2. 10	35. 00	50. 96	12. 00	44. 00	120. 00	250. 68	250. 68	250. 68	147. 92	107. 73	24. 25	89. 69	2. 10	35. 00
31	Adams Express Company	355															
31	John K. Walsh	356			50. 96	12. 00	44. 00	120. 00	250. 68	250. 68	147. 92	107. 73	24. 25	89. 69	2. 10	35. 00	
31	F. A. Davis, attorney	357															
31	H. Adler, agent	358															
31	Washington City post-office	360					44. 00	120. 00	250. 68	250. 68	147. 92	107. 73	24. 25	89. 69	2. 10	35. 00	
31	A. H. Roffe & Co.	361															
31	Chas. C. Fulton & Co.	366															
31	Curwen, Stoddard & Bro.	367															
31	W. H. Lowdermilk & Co.	370															
31	Rowland A. Robbins	375		30. 19					30. 19	147. 92	107. 73	24. 25	89. 69	2. 10	35. 00		
31	Thos. G. Hood	377							\$115. 88	107. 73	24. 25	89. 69	2. 10	35. 00			
31	Washington Post	387															
31	E. Morrison	398															
31	Chas. S. Cudlip	405															
31	Geo. C. Maynard	406															
31	Wm. Hahn & Co.	409		616. 65													
31	James J. Chapman	410															
31	S. Bieber	411		1, 600. 73													
31	Harris & Schafer	420															
31	Saks & Co.	423		135. 85													
31	Petersen & Childs	427							\$107. 46								
31	T. G. Morrow	428							20. 90								
12	W. H. Boyd	455															
31	R. C. Jones	439															
31	Adams Express Company	459															
31	Geo. W. Knox	460															
31	Baltimore and Ohio Express	461															
31	Robt. Cohen	464		106. 00													
31	John K. Walsh	472															
31	Department of the Interior	473															
31	Lansburgh & Bro.	478		473. 17				470. 05									
31	Auerbach & Bro.	481						596. 55									
31	S. F. Shreve	483						9. 96									
8	R. C. Jones	505						6. 00									
25	A. Kaufman	518						17. 15									
28	John R. Walsh	523															
28	Adams Express Company	525															
28	George W. Knox	526															
28	Baltimore and Ohio Express	527															
28	C. Stoddard & Bro.	532															
28	A. L. Williston	533															
28	Woodward & Lothrop	540															
20	H. W. McNeal	558															
13	R. C. Jones	565						57. 25									
29	F. B. Sanborn	573						6. 00									
31	R. C. Jones	575						1. 50									
31	H. Wagner	577						7. 00									
31	T. G. Morrow	578															
31	H. L. Pelouze & Son	581						23. 16									
31	Washington City post-office	582															
31	Adams Express Company	583						44. 00									

Classified expenditures—Continued.
DRY GOODS AND CLOTHING, BOOKS, STATIONERY, AND MISCELLANEOUS.

Date.	Furnished by—	On voucher numbered—	Boots, shoes, and slippers.	New clothing.	Clothing material.	Hats.	Notions.	Books and periodicals.	Stationery and postage.	Freight and hauling.	Incidental work.	Advertising.	Electrical instruments.	Photographic instruments, &c.	Grand total.
1887.															
Mar. 31	George W. Knox	584								\$21.96					
31	Baltimore and Ohio Express	585								.45					
31	John Wanamaker	593			\$403.99										
31	Thomas G. Hood	595			172.34		\$26.81								
31	Auerbach & Bro	607		\$250.20											
31	Washington Post	618					\$14.79								
31	S. L. Hempstone	619					9.84								
31	William Hahn & Co.	621	\$697.70												
31	M. G. Copeland & Co.	622							\$58.46		\$19.00				
31	E. Morrison	627							13.74						
31	Department of the Interior	632													
Apr. 30	John K. Walsh	653													
30	Saks & Co.	657		45.00		\$50.26	41.89								
30	W. H. Lowdermilk & Co.	662													
30	Woodward & Lothrop	666			78.76										
30	William Hahn & Co	667	204.00												
30	Adams Express Company	668													
30	George W. Knox	669								.25					
May 20	James J. Chapman	685						19.00		13.47					
31	Thomas G. Hood	692					47.17								
31	Augustus Thomas	694			40.50										
31	George W. Knox	702								10.42					
31	C. M. Sloussa	707													25.00
June 1	R. C. Jones	715						6.00							
9	A. E. Offutt	720													12.30
13	Public Opinion Company	722						3.00							
14	J. L. Shaw	723						6.00							
25	Thomas G. Hood	731					34.40								
27	Adams Express Company	733													
27	W. L. King & Bro	735	.25							1.80					

27	Wm. Hahn & Co	737	40.32																
27	Chas. S. Cudlip	738																	\$12.85
27	Z. D. Gilman	741																	9.60
30	Geo. W. Knox	754												32.61					
30	Washington City post-office	757											44.00						
30	Saks & Co	759																	
30	R. A. Robbins	761	14.80																
30	Lansburgh & Bro.	764		1,723.60															
30	B. H. Stinemetz & Son	767																	
30	Julius Lansburgh	769																	
30	H. Adler	770																	
30	Geo. Ryneal, jr	771																	
30	Wm. Ballantyne & Son	775																	
30	Fred. A. Schmidt	778																	
30	T. G. Morrow	779																	
30	The Washington Post	780																	
30	Robt. Cohen	782	1.25																
30	Department of the Interior	787																	
30	F. A. Davis	800																	
30	E. Morrison	805																	
30	Chas. C. Fulton & Co	813																	
30	Journal of Commerce	818																	
30	Lewis S. Hayden	825																	
30	David M. Stone	832																	
30	Edmund Hudson	833																	
30	A. S. Abell & Co	834																	
30	Lee Crandall	835																	
30	E. N. Root	836																	
30	Louis Schade	837																	
30	E. W. Fox	838																	
30	Wm. M. Slingerly	839																	
30	Hallet Kilbourn	840																	
30	Edward T. Fletcher	841																	
	Total		2,161.18	2,422.82	5,338.64	237.71	2,423.81	771.60	641.99	392.28	261.72	74.82	\$105.90	58.25	\$14,890.72				

Classified expenditures—Continued.
MEDICAL SUPPLIES—EXPENDITURES FOR AMUSEMENT OF PATIENTS, &c.

Date.	Furnished by—	On voucher numbered—	Drugs, medicines, &c.	Alcoholic stimulants.	Instruments, &c.	Returning eloped patients.	Amusement of patients.	Sending to their homes.	Refunded board money.	Grand total.
1886.										
July										
5	M. McKenzie	1				\$5.00	\$5.00			
7	W. H. Daniel	3								
31	Barbour & Hamilton	27		\$29.90						
31	G. G. Cornwell & Son.	32		30.72						
31	Richard Brooke	44						\$10.00		
Aug.										
6	John Owens	48				5.00				
17	F. F. Wheelock	56			\$65.40					
18	S. S. White Dental Manufacturing Company	62			99.75					
28	E. Rowan & Co.	69			3.00					
29	Edward Payne	70				5.00				
31	Scheller & Stevens	76	\$5.00		2.00					
31	W. H. Schieffelin & Co.	77	53.35							
31	McKesson & Robbins	79	143.97							
12	Henry Norton	90						18.00		
18	T. J. Robertson	91						33.00		
28	A. E. Offutt	92						17.50		
Sept.										
2	J. W. Simpson	93				5.00				
8	John Roland	98				5.00				
10	Albert Brown	100				5.00				
16	T. Rochett	104				5.00				
17	J. H. Tighlman	105				5.00				
20	W. A. Bottomley	106				5.00				
24	William A. Dean	122				5.00				
25	Addison Smith	123				5.00				
29	Charles McKenzie	125				5.00				
29	Frank Hume	129		12.25						
30	McKesson & Robbins	138	20.35							
30	S. F. Ware	170	24.56							
30	Myers & Loving	172	2.50							
30	Browning & Middleton	176		20.00						
30	G. G. Cornwell & Son	180		279.16						

Classified expenditures—Continued.

MEDICAL SUPPLIES—EXPENDITURES FOR AMUSEMENT OF PATIENTS, &c.

Date.	Furnished by—	On voucher numbered—	Drugs, medicines, &c.	Alcoholic stimulants.	Instruments, &c.	Returning eloped patients.	Amusement of patients.	Sending patients to their homes.	Refunded board money.	Grand total.
1887.										
Jan 31	J. C. Simpson	495								
Feb 2	S. Schaffer	496					\$1.00	\$12.00		
4	Gilbert B. Walden	500					15.00			
7	Pasquale Serpico	504					3.45			
14	W. H. Harshman	510				\$5.00				
15	James H. Rowland	512				5.00				
17	Frank Roosevelt	514					9.80			
25	Michael Donsch	519					11.50			
28	McKesson & Robbins	528	\$276.55							
28	James W. Queen & Co.	535			\$42.37					
28	E. F. Houghton & Co.	536	13.50							
28	S. F. Shreve	538	60.37							
3	Lee Mastin	550						25.00		
16	J. C. Simpson	551						36.10		
Mar. 10	T. H. McAllister	557								
11	J. A. De Witt	559					47.08			
17	M. Silverberg & Co.	561					15.00			
23	Michael Donsch	566					112.32			
24	H. Hoffa	567					12.65			
24	G. G. Cornwell & Son	568		\$319.54	24.00					
28	Joseph Smith	572								
31	S. F. Shreve	602	14.19			5.00				
31	Frank Hume	603		12.25						
31	Charles Fischer	611			11.75					
31	Melville Lindsay	613			3.83					
31	Barbour & Hamilton	616	40.00							
31	Scheller & Stevens	617			7.50					
31	Stott, Cromwell & Co.	629	72.30		3.00					
31	George J. Mueller	631					105.37			
31	William McLachlan	637						6.00		

Apr. 5	Albert Brown	639					5.00	23.25		
26	T. H. McAllister	646								
26	William Whyte	647					5.00			
30	G. G. Cornwell & Son	655	121.62							
30	S. F. Shreve	670	103.79						19.00	
30	James E. Toner	676						10.00		
4	John O'Halloran	677						10.00		
5	James E. Toner	678								
10	C. Kordas	680					5.00			
17	John Tillman	681					5.00			
20	Charles W. Wood	684						12.00		
31	Charles H. Howard	690					5.00			
31	W. H. Schiefelin & Co	691	90.97							
31	E. F. Houghton & Co	696	18.00							
31	S. F. Ware	699	22.25							
31	S. F. Shreve	705	65.46						20.75	
31	J. C. Simpson	712							4.00	
31	James E. Toner	713								
2	Robert H. Owens	716					5.00			
3	W. S. Dodge	717					5.00			
3	John Roland	718					5.00			
7	J. E. Smith	719					5.00			
13	Wm. Burgess	721								
25	Gideon Sibley	726				3.00				
25	McKesson & Robbins	729	101.90							
27	Saml. Lewis' Sons	736				1.60				
27	Frank Hume	749	24.50							
30	C. H. Grosvenor	752							18.00	
30	Browne & Sharpe Manufacturing Company	763				5.00				
30	Chas. Fischer	768				28.50				
30	Z. D. Gilman	773	7.50							
30	Barbour & Hamilton	774								
30	Myers & Loving	776	.50	46.57						
30	S. F. Ware	784	.70							
30	S. F. Shreve	786	4.78							
30	Geo. C. Frye	789	21.00							
30	G. G. Cornwell & Son	793		122.04						
30	E. C. Stott & Co	797	5.50							
30	Edward F. Droop	811							11.30	
30	A. C. Patterson	819							67.25	
30	W. G. Metzertott & Co	824							31.50	
	Total		1,999.16	2,023.74	512.54	150.00	841.87	297.98	\$30.72	\$5,856.01

Month	Day	Name	414	411.72	516.34	469.20	439.00	248.33	1,149.70	764.40	38.00	\$11,735.95
31		P. H. Heiskell, jr., & Co			2.40							
1887.												
Jan.	14	Alfred E. Lanham	440							28.32		
	18	Henry West	444							100.50		
	31	Lutz & Bro	470					134.45				
	31	Robt. H. Owens	471	38.00								
	31	E. G. Wheeler	480					7.48				
	31	Allison Nailor, jr	485		12.50	50.00						
	31	B. T. Wells	488									
	31	E. B. Lafferty	489							21.62		
Feb.	15	H. J. Hoyle	513				14.00					
	28	W. M. Galt & Co	539	1,586.63								
Mar.	31	John T. Price & Son	579			25.00			14.00			
	31	R. H. Owens	580						19.00			
	31	Baltimore and Ohio Express	585									
	31	W. M. Galt & Co	606	710.57		13.00						
	31	Lutz & Bro	624					39.15				
	31	John McDermott & Bro	625						221.80			
Apr.	30	Samuel Beall	652							13.23		
	30	P. H. Heiskell, jr., & Co	665		45.30					362.44		
May	31	Wm. M. Galt & Co	704	1,266.68								
June	25	Peter Henderson & Co	728		23.85							
	27	H. A. Linger	742							12.54		
	30	James C. Brooke	750		7.50							
	30	John T. Price & Son	756			25.00						
	30	Allison Nailor, jr	777			100.00						
	30	P. H. Heiskell, jr., & Co	783									
	30	R. H. Owens	788		2.00							
	30	Jas. McDonnell	791					18.00				
	30	John McDermott & Bro	792						49.70			
	30	Frances M. Joyce	794						7.00			
	30	Lutz & Bro	804					4.25				
	30	Wm. M. Galt & Co	807	439.35		43.50				47.34		
	30	Baltimore and Ohio Express	809			15.00						
	30	John A. Baker	814									
		Total	7,699.26	411.72	516.34	469.20	439.00	248.33	1,149.70	764.40	38.00	\$11,735.95

Classified expenditures—Continued.

REPAIRS AND IMPROVEMENTS.

Date.	Furnished by—	On voucher numbered—	Lumber, doors, &c.	Hardware.	Engineers' and plumbers' supplies.	Paints, oils, glass, &c.	Roofing.	Iron work, &c.	Plastering.	Sundry small repairs.	Fire and other apparatus.	Masons' supplies.	Paths, roads, &c.	Buildings.	Grand total.
1888.															
July 31	J. T. Campbell	28		\$1.00									\$5.34		
31	J. K. Clark	1		87.05											
31	William Sellars & Co	2								\$37.06					
31	A. Lamb	3													
31	J. T. Campbell	4							\$15.00						
31	D. McMenamin	5										\$77.75			
31	J. H. Aukward	68												\$1,000.00	
31	James W. Barker	69					\$93.41							700.00	
Aug. 19	A. O. Brummel	7	\$193.22												
25	T. B. Cross, jr.	8													
31	D. E. Haines	9													
21	Joseph H. Aukward	70							18.75						
21	James W. Barker	71												1,000.00	
Sept. 30	J. B. Shannon & Sons	142		72.00										1,000.00	
30	R. A. Robbins	150			\$52.80										
30	Robert Boyd	154		70	4.13		9.00								
30	J. Blake Kendall	166		64.62											
30	S. F. Shreve	189													
30	L. H. Schneider's Son	193		146.37		\$310.94									
30	Thomas Somerville & Sons	195			53.00					13.80					
30	Robert Leitch & Sons	11			124.82										
30	A. L. Jones	12			45.00										
30	Knowles' Steam Pump Works	13			19.40										
30	Robert Boyd	14					19.00								
30	Thomas W. Smith	15	51.69												
30	John Webster	16													
30	Thomas Somerville & Son	17			36.16							196.50			
30	W. D. Campbell & Co	18	488.67												
30	T. B. Cross, jr.	19	899.87						97.45						
30	George Rynear, jr.	20													
21	Joseph H. Aukward	72				17.21								1,750.00	

	22	Robert Leitch & Sons	37.60	19.88	37.60	310.60	479.88	1,617.43	270.18	\$11,622.62	\$27,843.43
	31	T. B. Cross, jr	23.78								
	31	Thomas Somerville & Sons			26.40						
	31	Clem Smith			46.20						
	31	William D. Campbell & Co					\$44.83				
A pr.	14	P. Bent									
	30	Pettit & Dripps	46.83								
	30	Thomas W. Smith		230.36							
	30	S. F. Shreve			141.27						
	30	L. H. Schneider's Son		80.99							
	30	Robert Leitch & Sons	33.88								
	30	L. H. Schneider's Son		31.61				\$143.00			
	30	John Webster									
	30	W. D. Campbell & Co			117.60						
	30	Pettit & Dripps	24.80								
May	31	S. F. Shreve			7.05						
	31	Hayward & Hutchinson	4.00								
	31	Clem Smith			31.90						
	31	Whyte & Overman		21.83							
June	30	R. A. Robbins	47.72								
	30	George Rynceal, jr			110.25						
	30	S. F. Shreve			11.40						
	30	J. Blake Kendall			38.75						
	30	Francis Miller		9.23							
	30	Robert Boyd			139.24						
	30	Thomas Somerville & Sons	3.90		18.00						
	30	E. G. Wheeler	42.75								
	30	L. H. Schneider's Son		1.23							
	30	W. D. Campbell & Co		55.73							
	30	E. G. Wheeler			18.00						
	27	John Webster		11.20				58.50			
	27	E. G. Wheeler		4.82							
	27	William D. Campbell & Co				17.10					
	27	Robert Boyd			27.65						
	27	Thomas Somerville & Sons	7.72								
	27	L. H. Schneiders' Son		11.60							
	27	Robert Leitch & Sons	24.65								
	27	George A. Shehan		69.00							
	27	M. G. Copeland & Co					32.50				
	27	E. G. Wheeler		76.61							
	27	Pettit & Dripps	8.58								
	27	White's Sons	27.30								
	27	Charles White & Co							764.87		
		Total	3,044.10	1,170.40	1,721.55	696.99	901.87	1,617.43	270.18	\$11,622.62	\$27,843.43

Classified expenditures—Continued.

SALARIES AND WAGES

Date.	Furnished by—	On voucher numbered—	Superintendent, physicians, and general office.	Ward service.	Inside domestic department.	Engineers' department.	Farm and garden, hauling coal, drivers, &c.	Sunday service.	Mechanics and helpers.	Making clothing.	Laundry.	Grand total.
1886.												
July 16	Jane Beaven	5								\$18.00		
19	Maggie O'Leary	6								10.00		
23	Fannie E. Bonini	8								15.47		
24	M. A. Dodge	10								14.28		
24	Eliza Goodwin	11								13.50		
28	Bertie Grimes	13								13.50		
30	Etta Harrison	14								10.00		
31	Pay-roll—support.	40	\$1,352.14	\$1,781.05	\$747.50	\$491.33	\$993.34	\$12.50	\$528.00		\$364.66	
31	do	41		1,351.50	324.16		1,098.60		182.62			
31	do	42										
31	do	43										
31	Pay-roll—buildings and grounds.	6										
Aug. 2	Eliza Havenner	45								6.00		
4	S. H. Hardy	46								9.00		
5	H. M. McAndrews	47								13.44		
9	Ellen Bowling	49								13.50		
9	Sarah A. Woods	50								12.00		
18	Fannie E. Bonini	61								12.24		
20	Eliza Goodwin	63								18.00		
21	Eliza Sweeney	64								7.14		
23	Bertie Grimes	65								13.50		
23	J. A. Davall	66								8.16		
24	Mary C. Quaid	67								16.32		
25	Matilda McInturff	68								18.00		
31	Jane Beaven	71								27.00		
31	Pay-roll—support	86	1,352.14	1,695.48	712.50	551.83	970.33	12.50	499.43		356.59	
31	do	87		1,409.70	308.87		1,053.47		469.82			
31	do	88										
31	Pay-roll, support.	89										
31	Pay-roll, buildings and grounds.	10										
Sept. 2	Maggie O'Leary	94								15.04		

Classified expenditures—Continued.

SALARIES AND WAGES.

Date.	Furnished by—	On voucher numbered—	Superintendent, physicians, and general office.	Ward service.	Inside domestic department.	Engineers' department.	Farm and garden, hauling coal, drivers, &c.	Sunday service.	Mechanics and helpers.	Making clothing.	Laundry.	Grand total.
1886.												
Nov. 20	M. A. Dodge	281								\$8.16		
20	M. F. Cator	282								9.60		
22	Fannie T. Green	284								13.50		
26	Mary C. Quaid	285								18.36		
27	C. McKenna	286								12.24		
29	Fannie E. Bonini	293								16.32		
30	Etta Harrison	295								8.16		
30	Eliza Goodwin	296								10.20		
30	Pay-roll, support	314	\$1,318.80	\$1,793.00								
30	do	315		1,449.09	\$690.50							
30	do	316			370.20		\$992.83					
30	do	317				\$551.83	582.33					
30	Pay-roll, buildings and grounds	33							\$426.00			
30	do	79							1,005.41			
30	do	322							202.75			
4	Mary C. Quaid	323								16.32		
4	Bertie Grimes	323								10.20		
7	S. M. Hardy	324								13.50		
8	Eliza Sweeney	325								9.00		
10	Jane Beavan	328								27.00		
11	Fannie E. Bonini	329								8.16		
11	S. A. Woods	330								20.40		
14	Lizzie Langley	331								13.50		
17	Fannie T. Green	332								13.50		
18	Jane Miles	334								8.16		
21	Maggie O'Leary	337								13.50		
21	Eliza Goodwin	337								13.50		
24	C. V. Watts	343								8.33		
30	Annie Hannan	347								20.83		
31	Ellen Bowling	350								27.00		
31	Pay-roll, support	431	1,324.13	2,368.37								
31	do	432		916.74	689.50							

Date	Description	433	434	43	376.71	561.84	972.84	441.42	688.87	910.88	340.56
31	do										
31	do										
31	Pay-roll, buildings and grounds										
1887.											
Jan. 6	Bertie Grimes	436								14.00	
7	M. A. Dodge	437								10.20	
14	D. J. Meehan	441								9.00	
15	Mary C. Quaid	442								14.28	
17	Fannie E. Bonini	443								10.20	
21	J. A. Duvall	446								8.16	
25	H. M. McAndrews	447								24.32	
25	Matilda McInturf	448								8.16	
25	Ceollia McKenna	449								8.16	
27	Jane Beavan	451								15.00	
27	Eliza Goodwin	452								13.50	
27	Eliza Sweeney	453								9.00	
31	Ellen Bowling	456								13.50	
31	Pay-roll, support		1,359.80								
31	do		1,843.37								
31	do		1,501.92								
31	do			1,100.94							346.00
31	Pay-roll, buildings and grounds	494				645.83	1,375.83		514.42	874.70	
31	M. A. Dodge	497									10.20
4	Lizzie Langley	498									13.50
4	Maggie O'Leary	499									13.50
5	Katie Roberts	501									10.20
7	Bertie Grimes	503									15.00
12	Jane Miles	507									10.20
12	E. V. Watts	508									8.16
15	Etta Harrison	511									16.91
19	Fannie E. Bonini	515									9.18
21	Eliza Goodwin	516									15.00
23	Annie Hannan	517									10.00
28	S. M. Hardy	520									13.50
28	Jane Beavan	521									27.00
28	Pay-roll, support		1,379.80								
28	do		1,826.79								
28	do		1,447.34								
28	do			1,093.22							
28	do				710.83		1,393.83		506.46		
5	Bertie Grimes	552									15.00
7	A. E. Rowe	553									13.50
7	H. M. McAndrews	554									11.52
8	Eliza Goodwin	555									10.00
9	Mary Cator	556									7.68
16	Ellen Bowling	560									17.25
17	M. A. Dodge	562									8.16
23	Fannie E. Bonini	564									8.16
26	Mary V. Powell	569									13.50
28	S. A. Woods	570									25.50
28	Jane Beavan	571									13.50
30	C. C. McKenna	574									9.18
31	J. A. Howard	576									10.20

Classified expenditures—Continued.

SALARIES AND WAGES.

Date.	Furnished by—	On voucher numbered—	Superintendent, physicians, and general office.	Ward service.	Inside domestic department.	Engineers' department.	Farm and garden, hauling coal, drivers, &c.	Sunday service.	Mechanics and helpers.	Making clothing.	Laundry.	Grand total.
1887.												
Mar. 31	Pay-roll, support.....	633	\$1,385.90	\$1,839.79								
31	do.....	634		1,506.65							\$352.78	
31	do.....	635			\$1,081.90				\$532.41			
31	do.....	636				\$600.84	\$1,452.50		178.25			
31	Pay-roll, buildings and grounds.....	68								\$15.00		
Apr. 4	Bertie Grimes.....	638								13.50		
5	Eliza Goodwin.....	640								13.50		
5	Etta Harrison.....	641								15.00		
12	Annie Hannan.....	642								20.00		
19	Mattie A. Bruce.....	644								13.50		
26	L. A. McKenney.....	648								13.50		
28	Ellen Bowling.....	649								13.50		
30	Maggie O'Leary.....	650								13.50		
30	Eliza Sweeney.....	651								13.50		
30	Pay-roll, support.....	672	1,385.80	2,368.40								
30	do.....	673		876.87	743.50							
30	do.....	674			371.00		948.83					
30	do.....	675				531.67	688.94					
30	Pay-roll, buildings and grounds.....	74								15.00		
May 10	Bertie Grimes.....	679								13.50		
21	A. A. Hopkins.....	686								9.00		
28	Mattie A. Bruce.....	687								13.50		
28	Ellen Bowling.....	688								13.50		
31	Eliza Goodwin.....	689								13.50		
31	Pay-roll, support.....	708	1,294.14	2,333.03								
31	do.....	709		861.29	708.34							
31	do.....	710			364.75		963.33				350.50	
31	do.....	711				355.83	796.02					
31	Pay-roll, buildings and grounds.....	78								13.50		
June 1	Jane Beavan.....	714										
27	John Chester.....	744						\$100.00				

27	A. Floridus Steele	745																		
27	William E. Parson	746																		
27	Thomas B. Hughes	747																		
27	W. S. Edwards	748																		
30	George Wall	823				26.67														
30	Lena M. Cross	826			44.35															
30	Pay-roll, support	827	1,300.22	2,339.34																
30	do	828		684.83		848.84														
30	do	829				349.40														
30	do	830					562.34													
30	Pay-roll, buildings and grounds	91																		
30	I. E. Harrison	831				2.00														
	Total		16,321.13	38,535.25	13,067.70	6,737.84	21,344.45	525.00	12,327.15	1,716.84	4,193.27	\$114,768.63								

Detailed statement of receipts and expenditures for the fiscal year ending June 30, 1857.

RECEIPTS.

Appropriation for support.....	\$195,000.00
Appropriations for buildings and grounds.....	65,000.00
Appropriation, District of Columbia.....	75,132.00
Miscellaneous receipts.....	17,420.11
On hand, buildings and grounds.....	12,449.23
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	365,001.34

EXPENDITURES.

Subsistence :	
Flour, meal, and crackers.....	\$12,452.13
Ice.....	3,209.75
Butter, cheese, and eggs.....	17,308.99
Fresh meats.....	29,345.87
Smoked and salt meats.....	7,847.84
Poultry and fish.....	8,814.02
Tea and coffee.....	5,120.70
Sugar and molasses.....	7,277.80
Lard.....	751.57
Fruits and vegetables.....	7,983.90
Other groceries.....	9,535.80
	<hr/>
	109,648.37
House furnishing, fuel, lights, &c. :	
Furniture, fixtures, &c.....	2,320.63
Bedding.....	6,036.15
Table and towel linen.....	718.34
Utensils, crockery, &c.....	2,023.67
Kitchen fittings.....	1,146.55
Laundry supplies.....	2,816.35
Carpets.....	330.57
Hard coal.....	2,303.44
Soft coal.....	10,416.52
Wood.....	344.66
Lights, oils, &c.....	1,340.78
Making brooms.....	459.04
	<hr/>
	30,256.70
Dry goods and clothing, books, stationery, and miscellaneous :	
Boots, shoes, and slippers.....	2,161.18
New clothing.....	2,422.82
Clothing material.....	5,338.64
Hats.....	237.71
Notions.....	2,423.81
Books and periodicals.....	771.60
Stationery and postage.....	641.99
Freight and hauling.....	392.28
Incidental work.....	261.72
Advertising.....	74.82
Electrical instruments.....	105.90
Photographic instruments.....	58.25
	<hr/>
	14,890.72
Medical supplies :	
Drugs, medicines, &c.....	1,999.16
Alcoholic stimulants.....	2,023.74
Instruments.....	512.54
Returning eloped patients.....	150.00
Amusement of patients.....	841.87
Sending patients to their homes.....	297.98
Refunded board money.....	30.72
	<hr/>
	5,856.01
Farm, garden, and stable :	
Feed.....	7,699.26
Implements, horseshoes, &c.....	411.72
Plants and seeds.....	516.34
Manures.....	469.20
Live stock.....	439.00

Farm, garden, and stable—Continued.

Harness and repairs.....	\$248.33	
Vehicles and repairs.....	1,149.70	
Hay and straw.....	764.40	
Incidental expenses.....	38.00	
		\$11,735.95
Repairs and improvements:		
Lumber, doors, &c.....	5,297.16	
Hardware.....	1,170.40	
Engineers' and plumbers' supplies.....	3,044.10	
Paints, oils, and glass.....	1,721.55	
Roofing.....	696.99	
Iron work, &c.....	901.87	
Plastering.....	710.65	
Sundry small repairs.....	310.60	
Fire and other apparatus.....	479.88	
Masons' supplies.....	1,617.43	
Paths, roads, &c.....	270.18	
Buildings.....	11,622.62	
		27,843.43
Salaries and wages:		
Superintendent, physicians, office, &c.....	16,321.13	
Ward service.....	38,535.25	
Inside domestic department.....	13,067.70	
Engineers' department.....	6,737.84	
Farm and garden, hauling coal, &c.....	21,344.45	
Sunday service.....	525.00	
Mechanics and helpers.....	12,327.15	
Making clothing.....	1,716.84	
Laundry.....	4,193.27	
		114,768.63
Covered into United States Treasury on support.....		.95
Covered into United States Treasury on buildings and grounds.....		.58
On hand, building and grounds (convict building).....		50,000.00
		365,001.34

Itemized receipts.

1886.

July	1. Cash received for board of Sarah R. Cox.....	65.00
	1. Cash received for board of Adolph Berger.....	130.00
	2. Cash received for board of George Beckman.....	65.00
	3. Cash received for board of Joseph P. Hutchins.....	599.37
	7. Cash received for board of F. W. Yeager.....	84.00
	7. Cash received for board of Christian Potter.....	65.00
	7. Cash received for board of Bryan Hall.....	65.00
	8. Cash received for board of John G. Apfeld.....	20.00
	9. Cash received for board of Ward R. Parker.....	160.00
	9. Cash received for board of M. A. Gilleland.....	65.00
	9. Cash received for board of E. B. Wadsworth.....	45.00
	12. Cash received for board of H. Buchlers.....	130.00
	13. Cash received for board of Eliza Bradley.....	20.00
	13. Cash received for board of United States Soldiers' Home patients.....	461.44
	14. Cash received for special attendance on Rollin Perkins.....	75.00
	14. Cash received for board of E. B. Wadsworth.....	28.00
	19. Cash received for board of Marine Hospital patients.....	936.00
	20. Cash received for board of Teresa Rabbitt.....	20.00
	23. Cash received for board of M. E. Cazenove.....	156.00
	27. Cash received for board of C. K. Yancey.....	91.00
	27. Cash received for board of Mary F. Toulson.....	40.00
	28. Cash received for board of Eliza Howell.....	20.00
	30. Cash received for board of John Weidman.....	91.00
	31. Cash received for sale of stock, &c.....	158.88
Aug.	2. Cash received for board of M. A. LeDuc.....	22.86
	2. Cash received for board of Catherine Riordan.....	10.00
	6. Cash received for board of S. C. Barrows.....	174.28
	10. Cash received for board of E. R. Hutchings.....	20.00
	11. Cash received for board of E. B. Wadsworth.....	28.00
	12. Cash received for board of Eliza Bradley.....	25.00

1866.		
Aug.	14.	Cash received for board of Jennie M. Lowell..... \$91.00
	14.	Cash received for board of Teresa Rabbitt..... 20.00
	18.	Cash received for board of J. K. Landis..... 15.00
	30.	Cash received for board of Mary F. Toulson..... 40.00
	31.	Cash received for sale of stock, &c..... 77.68
Sept.	2.	Cash received for board of J. H. Norwood..... 20.00
	6.	Cash received for board of J. K. Landis..... 65.00
	10.	Cash received for board of E. V. Wadsworth..... 28.00
	13.	Cash received for board of Eliza Bradley..... 20.00
	16.	Cash received for board of Warren Webster..... 418.28
	20.	Cash received for board of S. H. Johnson..... 91.00
	21.	Cash received for board of W. H. Hindes..... 65.00
	21.	Cash received for board of Edward Burchell..... 211.00
	23.	Cash received for board of George Beckman..... 65.00
	24.	Cash received for board of W. L. Harvey..... 20.00
	30.	Cash received for board of Mary DeCaindry..... 60.00
	30.	Cash received for sale of stock, &c..... 84.01
Oct.	1.	Cash received for board of W. H. Zepp..... 91.00
	1.	Cash received for board of Eliza Howell..... 31.43
	2.	Cash received for board of Adolph Berger..... 65.00
	2.	Cash received for board of M. A. Gilleland..... 65.00
	5.	Cash received for special attendance on Rollin Perkins..... 75.00
	6.	Cash received for board of H. Buchlers..... 130.00
	6.	Cash received for board of William Griffith..... 130.00
	6.	Cash received for board of Bryan Hall..... 65.00
	7.	Cash received for board of Christian Potter..... 65.00
	9.	Cash received for board of United States Soldiers' Home patients..... 500.71
	9.	Cash received for board of Mary F. Toulson..... 40.00
	11.	Cash received for board of Eliza Bradley..... 20.00
	12.	Cash received for board of M. E. Cazenove..... 156.00
	15.	Cash received for board of John Weidman..... 91.00
	15.	Cash received for board of Mary DeCaindry..... 31.00
	18.	Cash received for board of C. K. Yancey..... 91.00
	19.	Cash received for board of Marine Hospital patients..... 909.65
	22.	Cash received for board of E. B. Wadsworth..... 28.00
	28.	Cash received for board of Mary F. Toulson..... 40.00
	30.	Cash received for board of Jennie M. Lowell..... 91.00
	30.	Cash received for sale of stock, &c..... 98.08
Nov.	6.	Cash received for board of S. C. Barrows..... 130.00
	10.	Cash received for board of Eliza Bradley..... 25.00
	30.	Cash received for board of E. B. Wadsworth..... 28.00
	30.	Cash received for sale of stock, &c..... 103.17
Dec.	8.	Cash received for board of W. S. Harvey..... 40.00
	9.	Cash received for board of Mary F. Toulson..... 40.00
	20.	Cash received for board of George Beckman..... 65.00
	24.	Cash received for board of J. K. Landis..... 65.00
	27.	Cash received for board of Eliza Bradley..... 20.00
	27.	Cash received for board of Mary F. Toulson..... 50.00
	28.	Cash received for board of Adolph Berger..... 65.00
	29.	Cash received for board of Sarah H. Johnson..... 91.00
	29.	Cash received for board of W. H. Hindes..... 65.00
	31.	Cash received for board of Edward Burchell..... 211.00
	31.	Cash received for board of Mary DeCaindry..... 91.00
	31.	Cash received for board of M. A. Gilleland..... 65.00
	31.	Cash received for board of Bryan Hall..... 65.00
	31.	Cash received for board of M. E. Cazenove..... 156.00
	31.	Cash received for board of United States Soldiers' Home patients..... 482.15
	31.	Cash received for special attendance Rollin Perkins..... 75.00
	31.	Cash received for board of H. Buchlers..... 130.00
	31.	Cash received for board of W. H. Zepp..... 91.00
	31.	Cash received for board of Christian Potter..... 65.00
	31.	Cash received for board of Marine Hospital patients..... 858.22
	31.	Cash received for board of Eliza Bradley..... 20.00
	31.	Cash received for board of John Weidman..... 91.00
	31.	Cash received for board of E. B. Wadsworth..... 28.00
	31.	Cash received for board of C. K. Yancey..... 91.00
	31.	Cash received for board of Honora O'Donnell..... 10.00
	31.	Cash received for sale of stock, &c..... 151.90
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Jan.	24.	Cash received for board of E. B. Wadsworth..... 28.00

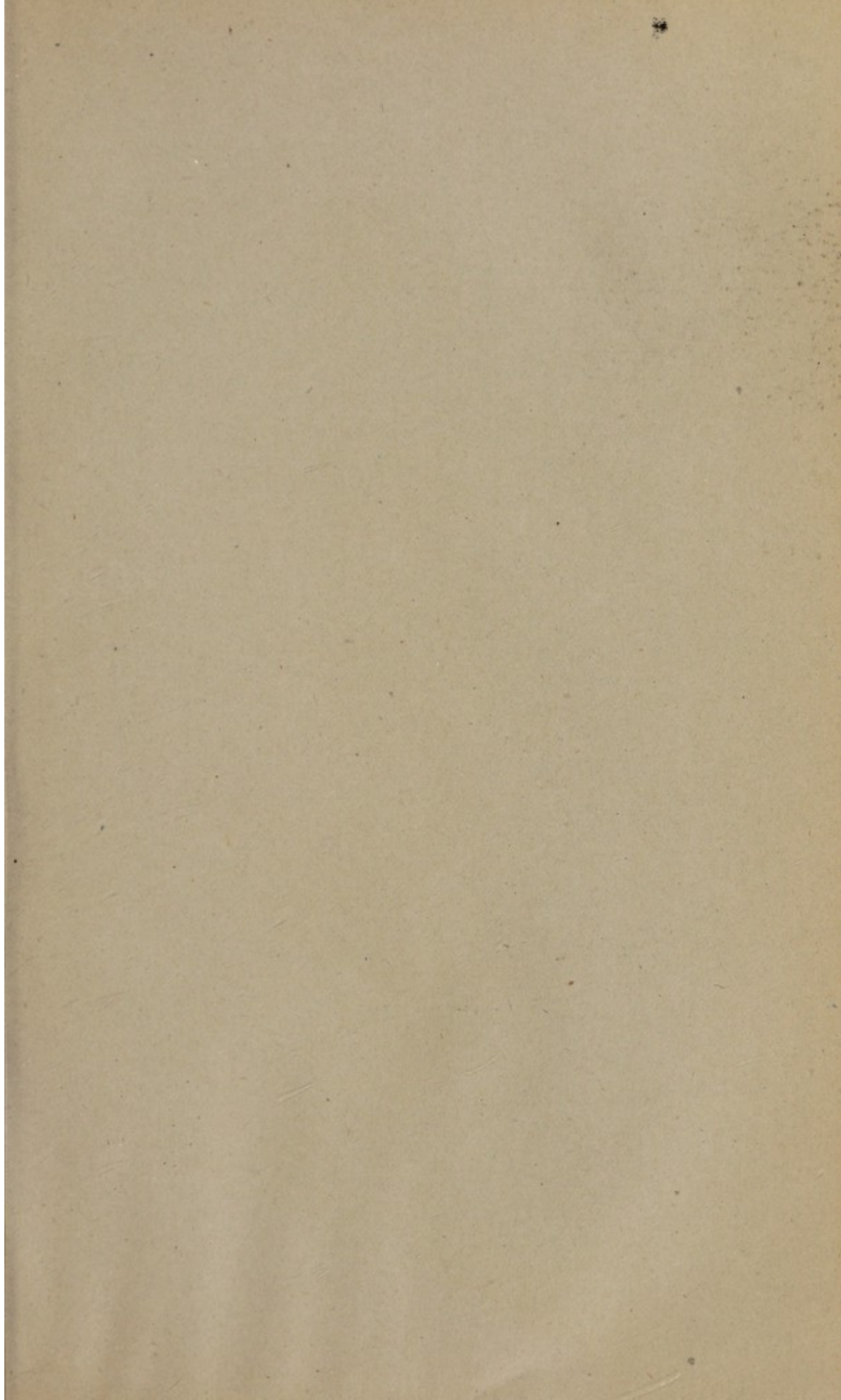
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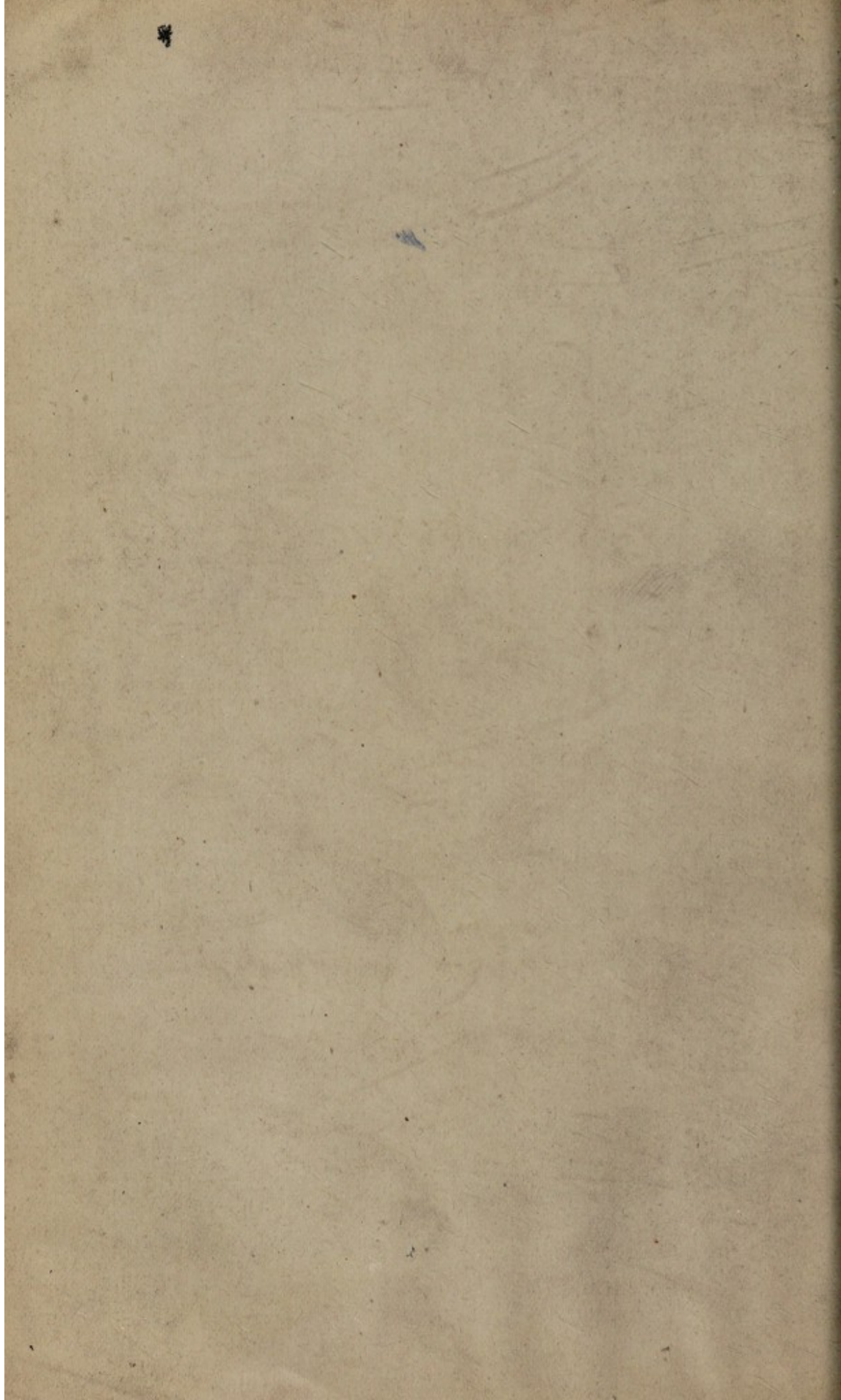
Feb.	3.	Cash received for board of F. W. Yager.....	\$58.00
	4.	Cash received for board of S. C. Barrows.....	130.00
	5.	Cash received for board of Joseph P. Hutchins.....	260.63
	5.	Cash received for board of Mary F. Toulson.....	40.00
	11.	Cash received for board of J. R. Bradley.....	25.00
	12.	Cash received for board of R. Barnett.....	169.00
	19.	Cash received for board of E. B. Wadsworth.....	28.00
	28.	Cash received for board of Duncan Vance.....	14.00
	28.	Cash received for sale of stock, &c.....	86.65
Mar.	7.	Cash received for board of J. K. Landis.....	65.00
	15.	Cash received for board of Eliza Bradley.....	20.00
	28.	Cash received for board of Mary F. Toulson.....	80.00
	28.	Cash received for board of W. H. Hindes.....	65.00
	28.	Cash received for board of Edward Burchell.....	211.00
	31.	Cash received for board of Mary DeCaindry.....	35.00
	31.	Cash received for sale of stock, &c.....	20.48
Apr.	7.	Cash received for board of United States Soldiers' Home patients.....	517.13
	11.	Cash received for board of R. Barnett.....	90.00
	12.	Cash received for board of Eliza Bradley.....	20.00
	12.	Cash received for board of Jennie M. Lowell.....	91.00
	16.	Cash received for board of Mary DeCaindry.....	56.00
	16.	Cash received for board of H. Buchlers.....	130.00
	16.	Cash received for board of Bryan Hall.....	65.00
	17.	Cash received for board of M. A. Gilleland.....	65.00
	18.	Cash received for special attendance on Rollin Perkins.....	75.00
	18.	Cash received for board of J. Kennington.....	91.00
	18.	Cash received for board of R. Swan.....	307.00
	19.	Cash received for board of Marine Hospital patients.....	793.28
	20.	Cash received for board of Christian Potter.....	65.00
	21.	Cash received for board of S. H. Johnson.....	91.00
	22.	Cash received for board of M. E. Cazenove.....	156.00
	22.	Cash received for board of John Weidman.....	91.00
	22.	Cash received for board of W. H. Zepp.....	91.00
	26.	Cash received for board of Otho Gartrell.....	120.00
	30.	Cash received for sale of stock, &c.....	90.12
May	2.	Cash received for board of C. K. Yancey.....	91.00
	2.	Cash received for board of J. Kennington.....	12.00
	2.	Cash received for board of Mary F. Toulson.....	60.00
	3.	Cash received for board of E. B. Wadsworth.....	28.00
	3.	Cash received for board of R. Nicholas.....	260.71
	7.	Cash received for board of S. C. Barrows.....	130.00
	9.	Cash received for board of Eliza Bradley.....	20.00
	13.	Cash received for board of E. B. Wadsworth.....	28.00
	31.	Cash received for sale of stock, &c.....	43.00
June	9.	Cash received for board of J. R. Bradley.....	20.00
	10.	Cash received for board of M. E. Cazenove.....	156.00
	13.	Cash received for board of Mary F. Toulson.....	40.00
	13.	Cash received for board of John T. Moncrief.....	130.00
	15.	Cash received for board of F. M. Latham.....	10.00
	17.	Cash received for board of Jennie C. Lowell.....	91.00
	20.	Cash received for board of Joseph P. Hutchins.....	65.00
	21.	Cash received for board of E. B. Wadsworth.....	28.00
	23.	Cash received for board of F. M. Latham.....	10.00
	23.	Cash received for board of B. Stickney.....	40.00
	23.	Cash received for board of Adolph Berger.....	130.00
	30.	Cash received for board of F. M. Latham.....	10.00
	31.	Cash received for board of Mary DeCaindry.....	91.00
	31.	Cash received for sale of stock, &c.....	42.00
Total.....			17,420.11

STATEMENT OF THE BOARD OF DIRECTORS

No.	Name	Address	Profession	Capital	Surplus	Total
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Total





Dup.

Compliments of S.W.B.

PATHOLOGICAL SUPPLEMENT

TO THE

THIRTY-SECOND ANNUAL REPORT

OF THE

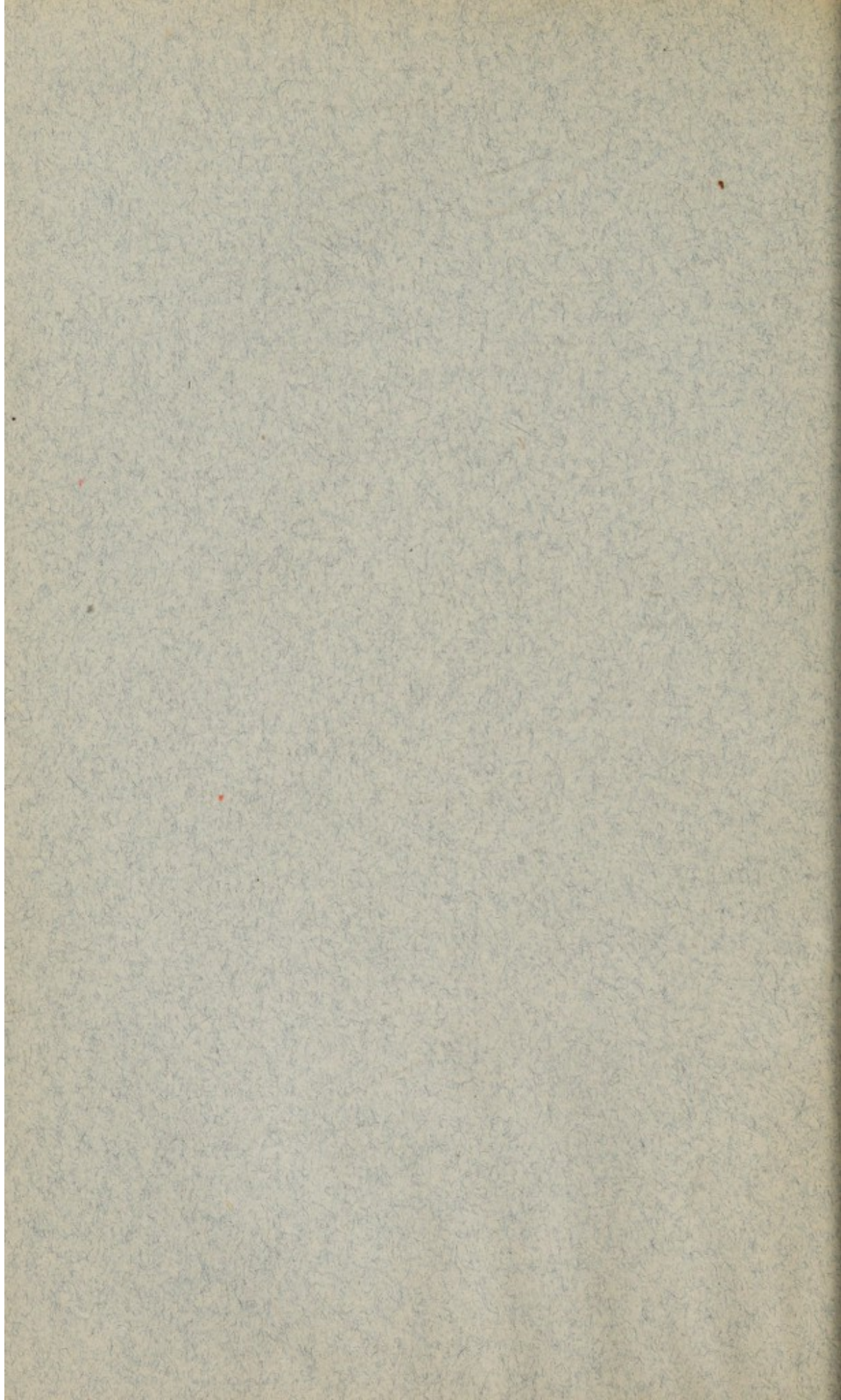
Government Hospital for the Insane

TO THE

SECRETARY OF THE INTERIOR.

1887.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1887.



PATHOLOGICAL SUPPLEMENT

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PAULSON & COMPANY

100 WALL STREET

DEPARTMENT OF THE INTERIOR

OFFICE OF THE SECRETARY

PATHOLOGICAL SUPPLEMENT TO THE REPORT OF THE GOVERNMENT HOSPITAL FOR THE INSANE.

GOVERNMENT HOSPITAL FOR THE INSANE,
Washington, D. C., October 28, 1887.

SIR: We have the honor to submit as a supplement to the thirty-second annual report of the hospital the accompanying record of the observed lesions in thirty-one of the cases of the general paralysis of the insane under treatment in the hospital which terminated in death. The observations were made by the special pathologist, Dr. I. W. Blackburn.

The great interest evinced by the medical profession in this widespread and uniformly fatal form of brain disease, which seems to be steadily increasing in all classes of society, renders the publication of this summary as a contribution to the pathology of the disease very desirable.

We are, very respectfully, your obedient servants,

J. M. TONER,

President of the Board of Visitors.

W. W. GODDING,

Superintendent and Secretary ex-officio.

Hon. L. Q. C. LAMAR,
Secretary of the Interior.

Approved.

L. Q. C. LAMAR,
Secretary of the Interior.

DESCRIPTION OF DRAWINGS.

Case 2. Fig. 1.—Deiter's cells, or spider-shaped cells in the vicinity of a vessel in the cortex. x 400.

Case 2. Fig. 2.—Deiter's cells of various shapes, found in the cortex: *a*, cell in connection with a capillary wall, represented by a dotted line; *b c*, cells joined to vessels by large processes; *c*, cell sending processes to the edge of a perivascular space; *d*, ganglionic cell. x 400.

Case 16. Fig. 3.—Distended vessel in the cortex, common to congested conditions. x 300.

Case 23. Fig. 4.—Small vein with greatly enlarged perivascular space, filled with leucocytes. x 300.

Case 23. Fig. 5.—Small vein with infiltrated wall, and cells and pigment in the perivascular space. x 300.

Case 24. Fig. 6.—Infiltration of the cortex in the vicinity of a diseased vessel. x 150.

Case 21. Fig. 7.—Small vessel with infiltrated and thickened wall, joined to the edge of the perivascular space by protoplasmic processes. x 150.

Case 26. Fig. 8.—Small vessel with infiltrated wall. x 300.

Case 26. Fig. 9.—Curved capillary in enlarged lymph space. x 250.

Case 30. Fig. 10.—Cells in various stages of degeneration; observed in many cases. x 400.

Case 30. Fig. 11.—Outer edge of cortex, showing fibrous appearance with branched, or Deiter's cells. x 300.

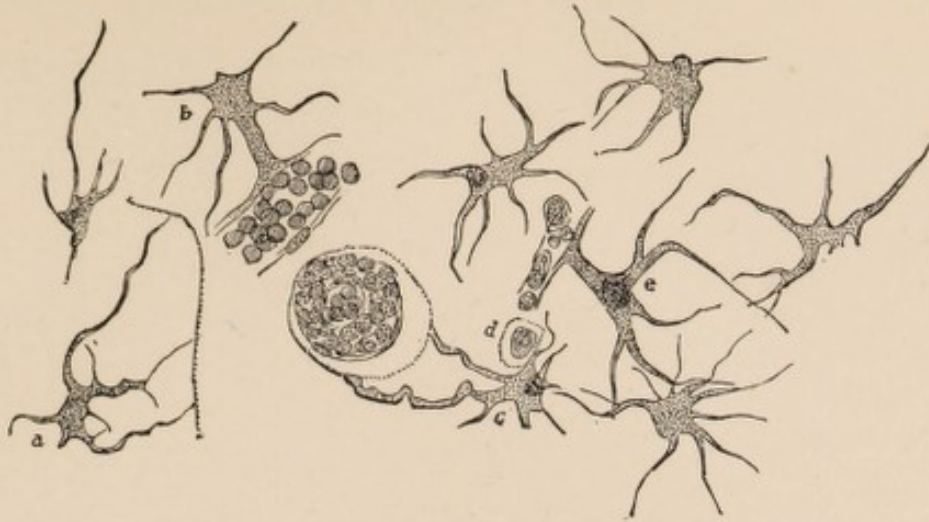


FIG. 2.—Deiter's cells or "spider cells. $\times 300$. (Reduced $\frac{1}{4}$.)



FIG. 1.—Deiter's cells in the vicinity of a small vessel. $\times 400$.



FIG. 3.—Distended vein in cortex. $\times 300$.

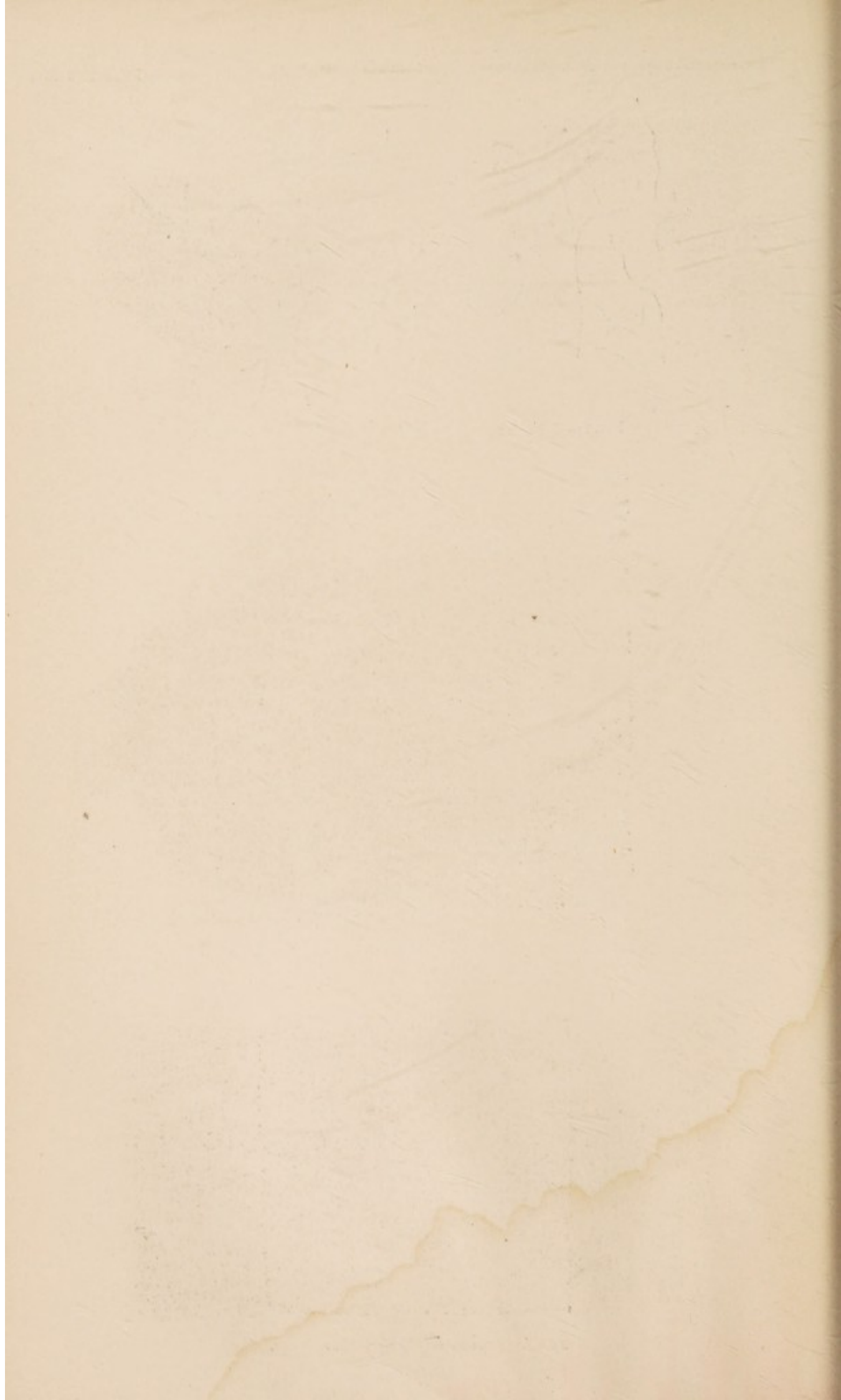




FIG. 6.—Small vessel in paretis. $\times 150$.

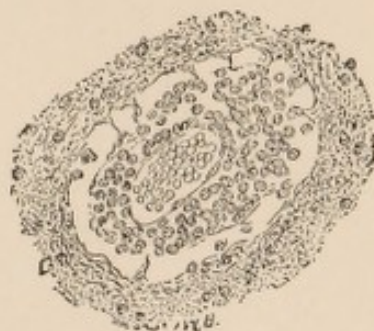


FIG. 7.—Small vessel in paretis. $\times 150$.

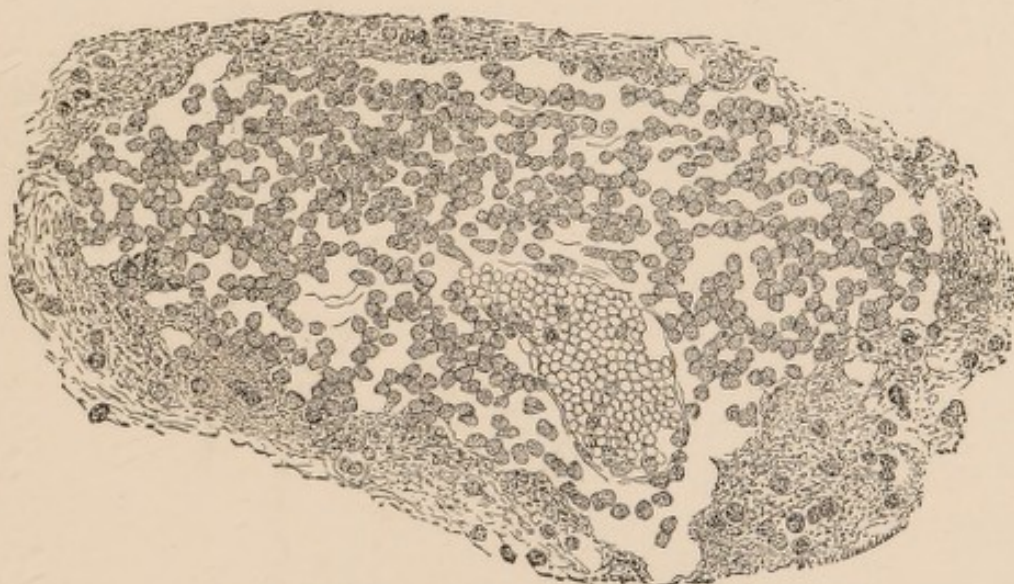


FIG. 4.—Small vein in cortex. $\times 300$. (Reduced $\frac{1}{3}$.)

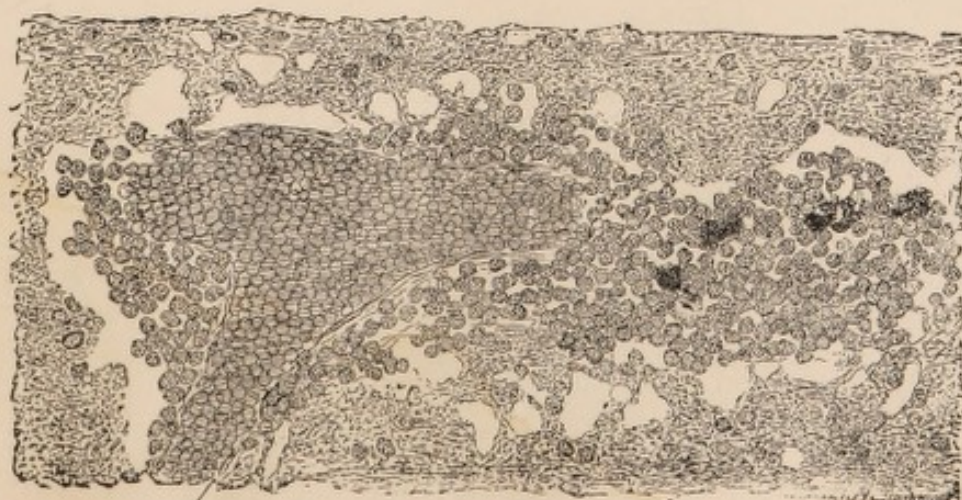


FIG. 5.—Small vein in case of paretis. $\times 300$. (Reduced $\frac{1}{3}$.)

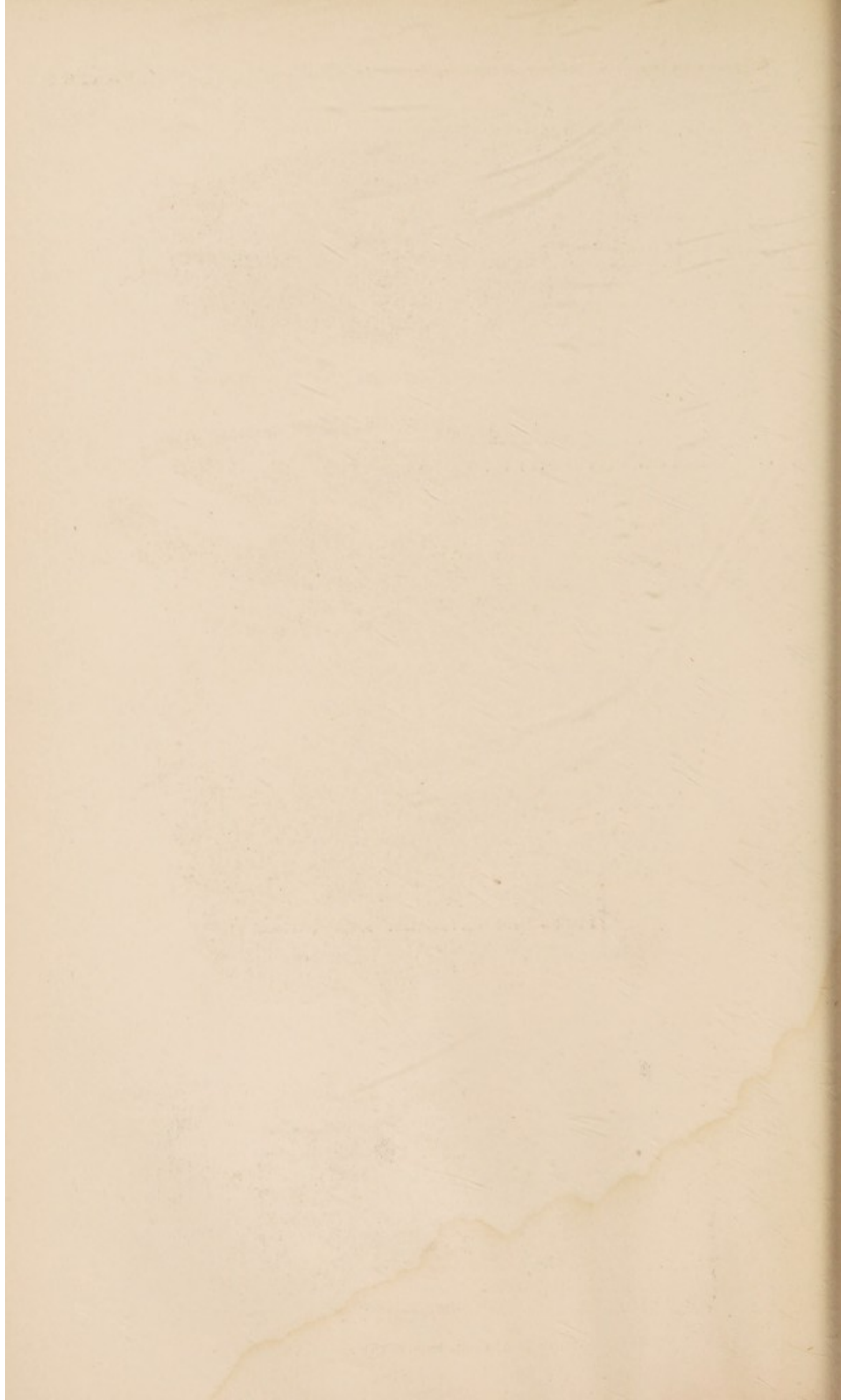




FIG. 9.—Small curved vessel in enlarged lymph space. Paresis, $\times 250$.



FIG. 10.—Nerve cells in different stages of degeneration. $\times 400$.

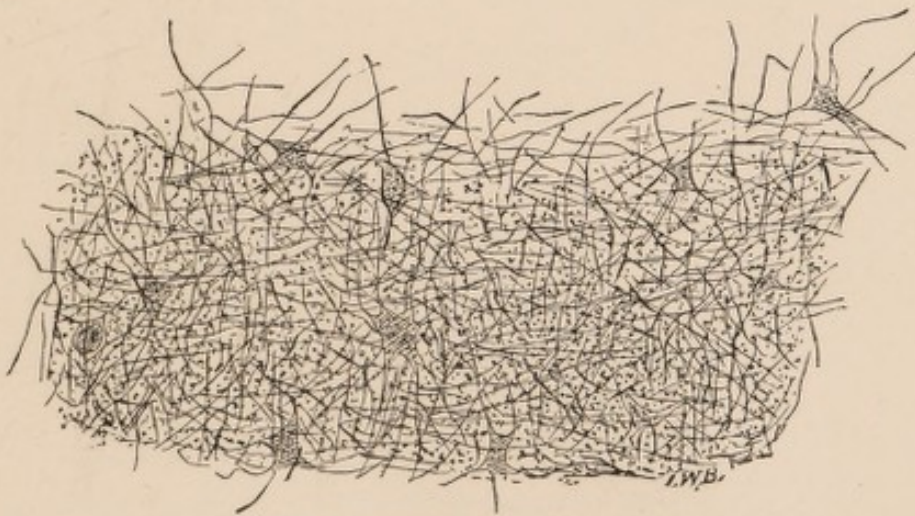


FIG. 11.—Outer edge of cortex. $\times 300$.



FIG. 8.—Small vessel in paresis. $\times 300$.



REPORT OF POST-MORTEM EXAMINATIONS IN THIRTY-ONE CASES
OF PARALYTIC DEMENTIA, OR GENERAL PARALYSIS OF THE
INSANE.

CASE 1.

J. O.; æt. 30; sailor; nativity, Norway.

Clinical history.—In this case both mental and physical symptoms of paralytic dementia were well marked. If any difference, the mental symptoms were more prominent. The course of the disease was regular, ending in exhaustion and œdema of the brain. Duration, two and one-half years. There was a suspicion of specific disease as a cause.

Autopsy.—Autopsy nine hours after death. Body fairly well nourished; bed sores over sacrum and trochanters. Two scars on the corona glandis.

Cranium: Antero-posterior diameter $7\frac{1}{4}$ inches; transverse, $5\frac{5}{8}$ inches; calvaria normal; dura mater adherent over the anterior cerebral fossæ; cerebro-spinal fluid increased.

Brain: Weight $38\frac{1}{2}$ ounces; pia mater œdematous, and the convolutions shrunken in the frontal and middle regions of the convexity. The pia was not adherent to cortex; at the base the large arteries showed patches of opacity.

The cortex was thinned; the ependyma granular, and the ventricles dilated. The basal ganglia were flattened.

Spinal cord: Pia œdematous, and in the cervical region the cord was flattened antero-posteriorly.

Lungs: Slight tubercular disease of left apex; hypostasis of dependent portions.

Heart small; weight, 8 ounces. Other organs normal.

Microscopical examination of brain.—The vessels were moderately filled with blood and their walls and perivascular spaces showed cell proliferation. Some of the small vessels were very tortuous. Within the adventitia and the perivascular spaces much yellow pigment was found. The pia mater was infiltrated with leucocytes in its deeper layers and yellow pigment in its meshes.

The cells showed little change; some were yellowish, and the processes were not easily distinguished.

The vessels and cells of medulla and cord presented changes similar to those of the brain, but less marked.

The brain tissue presented many vacuoles, due to hardening in alcohol.

CASE 2.

A. F.; æt. 38; soldier; nativity, France.

This case was considered typical, but death occurred in the early stages. The physical symptoms were characteristic, but the mental were not well marked; melancholia, without distinct delusions of grandeur. The duration was not known.

Autopsy.—Autopsy three hours after death. Body well nourished.

Cranium: Antero-posterior diameter, $7\frac{1}{4}$ inches; transverse, 6 inches; calvaria normal; dura mater adherent to the bone at the vertex, and between the membrane and the bone was a semi-fluid clot 2 by 3 inches in size. The dura adhered slightly to the pia arachnoid in this region.

Brain: Weight, $41\frac{1}{2}$ ounces. The appearances of the brain and pia arachnoid were normal. On section the ependyma was found to be slightly granular, but otherwise the ventricles appeared normal.

The spinal cord appeared normal to naked eye.

Lungs: Slight pleuritic adhesions and hypostasis of posterior portions.

Heart: Slight fenestration of semilunar valves; otherwise normal.

Other organs normal.

Microscopical examination.—The vessels and perivascular spaces were densely crowded with leucocytes, some of the smaller veins almost hidden by a thick layer of cells. In the vicinity of the vessels among the cells much yellow pigment was found. "Spider cells" were found in the outer layer of the cortex, and a few scattered in the cortex near affected vessels, and rarely in the white matter. Some appeared to be in connection with the vessel walls. The cerebral cells were not greatly altered; some of the medium-sized cells were yellow and faintly granular, and, in some of the larger, clumps of yellow granules. The vessels of medulla oblongata and cord were less affected than those of the brain, but the cells were rather more so; some of the cells of the medulla being entirely converted into masses of yellow granules, and many showed yellowish discoloration and indistinct nuclei.

CASE 3.

H. S.; æt. 37; soldier; nativity, Germany.

This case was in the later stages when admitted, the mental symptoms being profound dementia. Under the use of the iodide of potassium marked improvement resulted, but there was no other evidence of specific origin. Duration of the disease after admission, nineteen months.

Autopsy.—Autopsy twelve hours after death. Body somewhat emaciated.

Cranium: Cerebro-spinal fluid increased; calvaria, normal; dura mater, normal.

Brain: Weight, 40 ounces; pia arachnoid, œdematous, and opaque; vessels at base healthy; convolutions much shrunken; ependyma of ventricles granular; small vessels of brain tissue full of blood; no adhesion of pia to cortex.

Lungs: Slight lymph exudation on left pleura, and the same with some effusion on the right side; the lungs congested, and the right somewhat consolidated.

The heart, liver, spleen, apparently normal.

Kidneys: Early stage of interstitial nephritis.

Microscopical examination.—The vessels showed a moderate degree of cell infiltration and some free cells in the perivascular spaces. Along some of the vessels much granular yellow pigment was found.

The cells of the brain were not much affected; some were yellow, and in some of the larger size masses of granules were found.

In the medulla the vessels were in the same condition as those of the brain, and the cells were in some instances entirely converted into yellow granules; some showed but slight change. A small hemorrhage

was found in the floor of the fourth ventricle, and its ependyma was raised in prominent granulations.

The vessels and cells of the cord showed nothing but slight yellowness of the latter.

CASE 4.

W. R. K.; æt. 41; colored; laborer; nativity, United States. The physical symptoms more marked, the mental being dementia without distinct delusions. The disease had existed one year when he was admitted; entire duration, two years and two months. Death from food in the larynx; probably due to accession of convulsion while eating.

Autopsy.—Autopsy twelve hours after death. Body well nourished.

Cranium: Antero-posterior diameter, 7 inches; transverse, $5\frac{1}{4}$ inches. Diploe obliterated in frontal regions; dura mater normal. Cerebrospinal fluid much increased.

Brain: Weight, 39 ounces. Pia arachnoid œdematous and convolutions much shrunken; membrane not adherent to cortex. The cortex thinned; lining of ventricles very slightly granular.

Larynx and trachea contained small pieces of partly-masticated meat.

Lungs: Adhesion of left pleura; lungs showed numerous hemorrhagic foci of large size.

Heart: Slight hypertrophy and valvular thickening.

Liver, spleen, and pancreas normal

Kidneys: Slight reduction in weight; capsules adhered slightly to cortex.

Microscopical examination.—The vessels of both white and gray substance showed proliferation of leucocytes in the walls and perivascular spaces. Some of the small vessels seemed almost obliterated by the thick layer of cells. No spider-shaped cells were found.

The large ganglionic cells were yellowish, opaque, and some were granular; the medium sized were frequently yellowish, but the nuclei were usually distinct. In the small pyramidal cells no change was observed.

The vessels of the cerebellum and its pia mater showed infiltration with leucocytes.

The cells of the medulla were yellowish, and some were totally degenerated.

CASE 5.

H. J.; æt. 48; colored; laborer; nativity, United States.

This was an irregular case, the physical symptoms being more characteristic than the mental. The cause was syphilis. Duration sixteen months. Death occurred during an epileptiform convulsion, and peritonitis was found at the autopsy.

Autopsy.—Autopsy ten hours after death. Body emaciated.

Cranium: Antero-posterior diameter, 7 inches; transverse, 5 inches. Calvaria and dura mater normal, except some small pieces of bone in the falx cerebri.

Brain: Weight, 39 ounces. Pia œdematous and opaque; convolutions much shrunken, especially in the frontal regions; in these convolutions the cortex was much thinned. No adhesion of pia to cortex. The ventricles dilated and the ependyma granular. Vessels at base of brain atheromatous.

Lungs slightly congested.

Heart and liver normal.

Spleen very small; weight, $1\frac{1}{4}$ ounces; capsule adherent to surrounding parts.

The kidneys were slightly reduced in weight.

The abdominal cavity contained some reddish serum, and the surfaces were covered with a thin coating of lymph.

Microscopical examination.—The cerebral vessels were densely infiltrated with leucocytes, some of the smaller being almost obliterated. The deeper layers of the pia mater were infiltrated, and in the outer layer of the cortex and in the vicinity of some of the diseased vessels round cells were more numerous than normal. Some small stellate cells were found. The large ganglionic cells were in the various stages of yellow granular degeneration. In some only a patch of yellow granules, in others the whole cell body was converted into yellow granules. The vessels and cells of the medulla and cord were in a similar condition to those of the brain. In the medulla were many totally degenerated cells.

CASE 6.

C. O.; æt. $40\frac{1}{2}$; soldier; nativity, Ireland.

In this case there was a history of specific disease and the form was irregular. He was much demented when admitted; had a fixed, deep-seated pain in left side of head, subjective noises in left ear, partial aphasia and aphonia. Impairment of motion and sensation in left side of face, and of the right hand and wrist and lower extremities. Duration of the disease three years.

Autopsy.—Autopsy five hours after death. Body emaciated; contractures of right hand and wrist.

Cranium: Antero-posterior diameter, $7\frac{1}{8}$ inches; transverse diameter, $5\frac{5}{8}$ inches. Calvaria normal. Dura mater thickened and adherent to the calvaria in the anterior portion, and the inner surface of both sides showed an early stage of internal pachymeningitis.

Brain: Weight, $44\frac{1}{4}$ ounces. Pia arachnoid of convexity opaque and slightly thickened, and adherent to the cortex. The convolutions slightly shrunken. Brain tissue pale; ependyma of ventricles granular.

Dura mater of spinal cord adherent to spinal canal.

Lungs normal; heart showed very slight valvular disease. Spleen enlarged; weight, $15\frac{3}{4}$ ounces.

Kidneys: Slight reduction in weight.

Microscopical examination.—There was no infiltration of vessels, and but little cellular increase in the pia mater. Some yellow pigment was found along the vessels.

The large pyramidal cells showed various degrees of granular degeneration; some being but yellow granular masses without visible nuclei.

The medulla presented nothing abnormal.

CASE 7.

A. V.; æt. $39\frac{1}{2}$; soldier; nativity, Germany. This case was typical. The duration was not exactly known; residence in the hospital about one year and four months. Death occurred in epileptiform convulsions.

Autopsy.—Autopsy seventeen hours after death. Body well nourished.

Cranium: Antero-posterior diameter, 7 inches; transverse, $5\frac{3}{4}$ inches. Calvaria and dura normal.

Brain: Weight, 40 ounces. Pia mater œdematous; not adherent to the cortex. Convolutions shrunken; ventricles dilated; ependyma granular, especially marked in fourth ventricle; vessels at base atheromatous. Spinal cord appeared normal to naked eye.

Lungs: Pleuritic adhesions and some calcareous nodules at apices.

Heart showed slight valvular thickening; aorta atheromatous.

Kidneys were swollen; capsules tense; stellate veins prominent.

Liver, spleen, and other organs normal.

Microscopical examination.—The cerebral vessels showed great cell infiltration in vessel walls and perivascular spaces. Some of the small vessels nearly obliterated. The pia mater was densely infiltrated, especially near the vessels. Much yellow pigment was found along the vessels, and a few capillary hemorrhages were seen.

The nerve cells, especially the medium-sized pyramidal cells of the third layer, were much degenerated. Many were very granular, and of some only the nuclei remained. The large pyramidal cells contained clumps of granules of various sizes. The first layer of the cortex showed a fibrous network of neuroglia and many branched cells.

The vessels and cells of the medulla oblongata presented nothing unusual.

CASE 8.

O. C. T.; æt. 40; soldier; nativity, Germany.

This was a typical case. Duration seven months from admission. Death from congestion of the lungs.

Autopsy.—Autopsy twelve hours after death. Body well nourished.

Cranium: Antero-posterior diameter $7\frac{1}{4}$ inches; transverse, $5\frac{1}{2}$ inches. The skull was thin; sagittal suture prominent, giving a scaphocephalic skull.

Brain: Weight, 42 ounces. Pia arachnoid œdematous and opaque. Arteries at the base slightly atheromatous. Convolutions somewhat shrunken; more marked in frontal regions. The cortex showed some reduction in thickness, but no adhesion of pia mater; ventricles dilated; ependyma granular.

Lungs: Slight left pleuritis; pulmonary congestion.

Heart: Chronic aortic valvular disease; the two posterior segments merged into one.

Liver: Spleen and kidneys presented nothing abnormal.

Microscopical examination.—The vessels showed thickened and infiltrated walls and free cells in the widened perivascular spaces. Much yellow pigment was found in the vicinity of the vessels among the cells.

The cerebral cells presented various degrees of yellow discoloration and some were reduced to masses of yellow granules. The cells of the medulla oblongata were yellowish and a few were represented by clumps of brown granules.

CASE 9.

M. G.; æt. 50; colored, laborer; nativity, United States.

The case was received in the advanced stages, and the mental symptoms were not well marked; the physical signs were characteristic. Duration given as three years. Death with symptoms of bulbar paralysis.

Autopsy.—Autopsy fourteen hours after death. Body well nourished; bed sores over sacrum and trochanters; a cicatrix in the left inguinal region.

Cranium: Antero-posterior diameter 7 inches; transverse, 5 $\frac{3}{4}$ inches; dura mater slightly adherent; large increase of cerebro-spinal fluid.

Brain: Weight, 35 ounces. Pia arachnoid thickened and along the veins opaque lines; slight adhesion to cortex. Convulsions very much atrophied on convexity. Ventricles dilated; ependyma granular. Fornix thinned; unusual adhesions of velum interpositum and choroid plexus to thalami. The consistence of brain reduced.

Lungs: Strong pleuritic adhesions, and hypostatic engorgement and partial solidification of lungs.

Heart: Slight recent pericarditis, and small, recent, vegetations of aortic valves.

Liver, spleen, and kidneys appeared normal.

Microscopical examination.—The vessels showed a slight degree of round cell infiltration, and some yellow pigment in the perivascular spaces. In the first layer of the cortex a few branched cells were found.

The nerve cells were generally well preserved, but some of the larger pyramidal cells were opaque and granular with indistinct nuclei, and many of the cells of the third layer were yellow and some granular with wasted outlines.

CASE 10.

G. S. P.; æt. 43; soldier; nativity, Scotland.

The mental symptoms were profound dementia; the physical, paralysis with contractures of lower extremities. The duration unknown. Death from pulmonary tuberculosis.

Autopsy.—Autopsy three hours after death. Body much emaciated; contractures of lower extremities, right hand, and wrist.

Cranium: Antero-posterior diameter, 7 inches; transverse, 5 inches. Some sclerosis of bone and obliteration of diploe. Dura mater normal.

Brain: Weight, 33 ounces. Pia arachnoid very œdematous and opaque, but not adherent to cortex. The convulsions greatly shrunken and distinctly hardened; this change more marked in the motor regions. The cortex was much thinned; ventricles dilated; septum lucidum and fornix thinned; ependyma granular. The pons atrophied and the cord was flattened antero-posteriorly.

Lungs were in an advanced stage of tubercular disease; pleuræ firmly adherent.

Heart showed chronic pericarditis and slight thickening of the valves.

Liver, normal. Spleen, chronic perisplenitis.

Kidneys much reduced in weight by interstitial change; pelves ulcerated.

Microscopical examination.—The vessel walls and perivascular spaces were almost free from leucocytes, and did not present the appearances common in paresis. The perivascular spaces were enlarged; vessels generally empty. The pyramidal cells were yellowish, and some were granular and their contour lost. The large pyramidal cells were attenuated, yellow, and somewhat granular; the processes were not distinct, but the nuclei were usually well stained. The periganglionic spaces were much enlarged.

CASE 11.

M. A. F.; æt. 46; female; nativity, United States.

Case typical in every respect. The duration was four years. Bulbar paralysis was the immediate cause of death.

Autopsy.—Autopsy sixteen hours after death. Body fairly well nourished.

Cranium: Antero-posterior diameter, 7 inches; transverse, 5 inches. Skull thin; dura mater normal.

Brain: Weight, $41\frac{1}{4}$ ounces. Pia arachnoid showed marked opacity, especially in the vicinity of the cerebral veins. No adhesion to cortex. Convulsions slightly shrunken over convexity.

The left vertebral artery was obliterated after it gave off the inferior cerebellar; the right posterior cerebral was obliterated from its origin to its junction with the posterior communicating, and the latter was much enlarged.

The ventricles were dilated; ependyma granular; septum lucidum thinned and softened.

On the right side the tail of the caudate nucleus was interrupted at a point opposite the thalamus, and on the left a less complete interruption existed in a corresponding situation.

The brain substance was reduced in consistence; the cortex thinned and reddened. Dentate body in the cerebellum distinctly yellowish.

Microscopical examination.—The vessels showed great infiltration of the walls and free cells in the perivascular spaces, and in the latter much yellow pigment was found. The pia mater was densely infiltrated with leucocytes, but the subjacent layer of the cortex was unaltered, except that it presented a fibrous appearance, with small spider cells. Many of these branched cells were seen in the deeper layers. The ganglionic cells were much changed; some were yellow and others totally granular and opaque, without a trace of nuclei. The vessels of medulla and cord were but slightly affected, but the cells were decidedly yellowish, and in the medulla some were converted into golden-brown granular masses.

CASE 12.

E. J.; æt. 37; female; nativity, United States.

This case was somewhat irregular in its commencement and its course. Convulsions were a prominent feature. Ill health was the assigned cause. Duration, two and two-third years.

Autopsy.—Autopsy twenty-four hours after death. Body much emaciated.

Cranium: Antero-posterior diameter $7\frac{1}{8}$ inches; transverse, 5 inches. Calvaria normal. Dura mater slightly thickened, and the whole inner surface, except the cerebellar portion, covered with the false membrane of internal pachymeningitis. The false membrane was slightly adherent to the pia arachnoid of the convexity. The sinuses contained yellow clots.

Brain: Weight, $37\frac{3}{4}$ ounces. Pia arachnoid slightly opaque, and the veins contained firm clots. The convulsions very slightly shrunken over the anterior and middle regions. The ventricles moderately dilated, and the ependyma granular. The cortex was dark from congestion. Puncta vasculosa prominent. No adhesion of pia to cortex. Slight patchy opacity of vessels of the base.

Lungs showed scattered tubercular nodules, and slight adhesion of pleurae.

Heart: Valves a little thickened.

Liver, spleen, and kidneys appeared normal.

Uterus small, ovaries atrophied.

Microscopical examination.—The cerebral capillaries were filled with blood, and in some of the larger vessels fibrinous coagula. There was no cellular proliferation in vessel walls or perivascular spaces, but the latter seemed dilated.

The nerve cells seemed remarkably well preserved, no unusual appearance being present, except perhaps a slightly increased yellow discoloration of the large pyramidal cells.

CASE 13.

R. W.; æt. 34; soldier; nativity, United States. The physical symptoms were more characteristic than the mental. Delusions, if any existed, were obscured by dementia. Duration two years.

Autopsy.—Autopsy six hours after death. Body fairly well nourished.

Cranium: Antero-posterior diameter $7\frac{3}{4}$ inches; transverse, $5\frac{5}{8}$ inches; calvaria and dura mater normal.

Brain: Weight 40 ounces. Pia mater opaque, œdematous, and slightly adherent to cortex. Convolutions shrunken; cortex thinned; ventricles dilated; velum interpositum unusually adherent to thalami. Vessels at base of brain normal.

Lungs normal, except slight adhesions of pleuræ. Heart showed slight thickening of valves of left side.

Liver and spleen normal.

Kidneys cystic; capsules adherent, weight reduced.

Microscopical examination.—The vessels presented a slight degree of nuclear proliferation, and some were tortuous, and had much yellow pigment in their perivascular spaces. No spider-shaped cells were found.

The ganglionic cells showed a slight degree of yellowish discoloration, and some contained large clumps of yellow granules, which occasionally occupied nearly the whole body of the cell.

In the medulla oblongata a few totally degenerated cells were found, the whole cell body being converted into a mass of yellow granules. The general shape of the cells was preserved, but the nuclei were not visible. Nothing abnormal was noted in the cervical cord.

CASE 14.

F. O.; æt. 60; colored; nativity, United States.

The case was admitted when the mental symptoms were profound dementia. He was bedridden while in the hospital. Ataxic, but not distinctly paralytic.

Autopsy.—Autopsy fourteen hours after death. Body emaciated.

Cranium: Antero-posterior diameter $7\frac{3}{4}$ inches; transverse, $5\frac{1}{2}$ inches. The bone somewhat sclerosed, diploe partly obliterated; dura mater normal.

Brain: Weight 46 ounces. Some adhesion of pia mater to dura along the great longitudinal fissure; opacity and œdema of membrane and slight adhesion to cortex. Vessels at the base normal. Convolutions shrunken, especially in frontal and middle regions; consistence of brain reduced; ventricles dilated; ependyma normal. The medulla oblongata reddened on left side of cut surface.

Lungs: Pleuritic adhesion on both sides. Congestion and consolidation of left lung; congestion of right lung.

Heart, liver, normal. Spleen weighed $1\frac{3}{4}$ ounces. Kidneys were reduced in weight and contracted.

Microscopical examination.—The vessel walls were moderately infiltrated with lymphoid cells, and some free cells were seen in the perivascular spaces. Yellow pigment was found in the vicinity of many vessels. The perivascular and periganglionic spaces were greatly enlarged.

The nerve cells were some of them granular and wasted, others preserved their general contour, but were entirely granular, without visible nuclei. The cell processes were not easily seen.

The medulla oblongata and cord presented nothing of importance except undue pigmentation of the ganglionic cells.

CASE 15.

E. A.; æt. 36; soldier; nativity, Germany. In this case there was a history of sunstroke, and while in the hospital the physical symptoms were the more characteristic of paresis. Duration three years. Case obscure.

Autopsy.—Autopsy ten hours after death. Bed-sores over sacrum and trochanters, back and elbows.

Cranium: Antero-posterior diameter $7\frac{3}{4}$ inches; transverse, $5\frac{5}{8}$ inches. The inner table of the skull showed some local absorption in the frontal regions; diploe partly obliterated in frontal bone. The dura mater showed slight internal pachymeningitis. Falx cerebri adherent to pia in median fissure.

Brain: Weight 47 ounces. Pia arachnoid opaque, and patches of lymph over the whole convexity. The veins were full of blood. The convolutions were shrunken in the frontal and middle regions of the convexity, and the pia adhered slightly to their summits. The ventricles were dilated and the ependyma granular. The tail of the caudate nucleus interrupted by a white band opposite the optic thalamus. Consistence of brain reduced; in occipital regions a few small softened areas in the white substance.

Lungs: Emphysema of margins and hypostasis of posterior portions.

Heart: Slight fenestration of aortic valves. Liver normal. Spleen congested and soft. Kidneys large and pale; pelves and ureters dilated; capsules not adherent.

Microscopical examination.—The pia mater was infiltrated with lymphoid cells, but the cerebral vessels were not. The capillaries were filled with blood, and therefore appeared numerous. The cells presented granular degeneration in some instances, but the majority of the cells were normal.

CASE 16.

W. M.; æt. 43; soldier; nativity, United States.

This case began with symptoms of locomotor ataxia, and as such was treated from 1867 until 1883, when he was admitted to the hospital with marked mental failure. From this time until his death, which occurred in 1886, he showed the characteristic symptoms of paresis.

Autopsy.—Autopsy eleven hours after death. Body fairly well nourished.

Cranium: Antero-posterior diameter, $7\frac{1}{2}$ inches; transverse diameter, $5\frac{3}{4}$ inches. Dura mater firmly adherent to the bone, and showed traces of internal pachymeningitis.

Brain: Weight, $45\frac{1}{4}$ ounces; pia-arachnoid opaque, its meshes filled with serum, and slightly adherent to cortex; convolutions shrunken over anterior and middle regions, especially marked at the upper end of the central convolutions of both sides. The ventricles were dilated and the ependyma granular. Both cortex and white matter were darkened by congestion, and the same condition was noted in cerebellum, pons, and medulla oblongata. The puncta vasculosa were prominent and numerous. The pons and medulla seemed atrophied.

Spinal cord showed adhesion of pia, arachnoid, and dura to a slight degree, and the veins of the lower portion were varicose.

Lungs: Slight pleuritis, and some tubercular nodules in the apices.

Heart: Slight valvular disease.

Liver, spleen, and kidneys, normal.

Peritonitis in vicinity of sigmoid, flexure.

Microscopical examination.—Cellular proliferation in pia mater, vessel walls, and perivascular spaces. Some of the vessels were tortuous and irregular in caliber, and yellow pigment was found in abundance in their adventitia and perivascular spaces. The outer layer of the cortex seemed like a dense felt of fibers among which were small branched cells.

The nerve cells showed a slight degree of yellow granular degeneration, though the nuclei were generally well preserved, and in certain regions the cells appeared normal.

The vessels of the medulla oblongata were in the same condition as those in the brain, and the cells were, some of them, in the early stages of granular degeneration, and a few totally changed into greenish yellow granules. The capillaries of the nerve nuclei were full of blood, and much coiled and twisted; a few small hemorrhages were found.

The vessels of the cord were congested and showed a slight nuclear increase in their walls and spaces. No degeneration of nerve tracts existed; the cells appeared normal.

CASE 17.

J. W.; æt. 40; colored laborer; nativity, United States.

This case was admitted in the advanced stages. He was bedridden while in the hospital, and the mental symptoms were profound dementia. Death occurred in an epileptiform convulsion. Syphilis was the assigned cause.

Autopsy.—Autopsy ten hours after death. Body emaciated.

Cranium: Antero-posterior diameter $7\frac{1}{4}$ inches; transverse, $5\frac{1}{2}$ inches. Skull thick, diploe almost solidified. Dura mater, normal.

Brain: Weight, 45 ounces. Pia mater œdematous and opaque, and the surface of the arachnoid covered by a sticky exudate. Consistence of brain diminished; ventricles slightly dilated; ependyma granular; vessels at the base atheromatous.

Lungs, hypostatic; pleuræ adherent.

Heart: Slight valvular disease of left side; aorta atheromatous and calcareous.

Liver normal; spleen reduced in size and fibrous.

Kidneys: Weight less than normal; slight congestion.

Urinary bladder showed chronic inflammation.

Microscopical examination.—The vessels showed a moderate degree of infiltration of their walls, and some free cells in the perivascular spaces. A small amount of pigment was found along the vessels. No spider-shaped cells were found. Some of the large ganglionic cells were entirely converted into opaque, yellow, granular bodies, without a trace of nuclei. Many others were yellowish and showed patches of granules, but the nuclei were preserved. The perivascular and pericellular spaces were much enlarged.

The cells of the medulla were yellowish, but the nuclei were distinct; a few granular cells were found. In the floor of the fourth ventricle were several capillary hemorrhages and the ependyma was raised in prominent granulations.

CASE 18.

S. W.; æt. 44; soldier; nativity, United States.

This case was admitted when the disease was far advanced. While in the hospital he was bedridden and demented, without characteristic delusions.

Autopsy.—Autopsy six hours after death. Body emaciated; bed-sores on sacrum, trochanters, pelvis, and thighs. Lower extremities drawn upward and toward the right.

Cranium: Antero-posterior diameter, $7\frac{1}{2}$ inches; transverse, $5\frac{3}{8}$ inches. The skull showed a marked elevation of the vertex; sides symmetrical. Dura mater normal.

Brain: Weight, $44\frac{1}{4}$ ounces. Pia mater opaque and œdematous and unusually adherent to dura at the vertex; not adherent to cortex. Convulsions slightly shrunken over frontal and middle regions of convexity, and the ascending parietal convolution of the right side was much reduced in size.

The cortex was thinned in the atrophied convulsions. The ventricles were slightly dilated, the ependyma smooth. Vessels at base normal.

Lungs, showed œdema and a few calcareous nodules at right apex; right pleura adherent.

Heart, normal; slight fatty degeneration of intima of aorta.

Liver and spleen, normal.

Kidneys: Weight reduced; capsules adherent.

Marked constriction of colon.

Microscopical examination.—The vessels showed a few free cells in the perivascular spaces and some yellow pigment.

The vessel walls seemed but little affected.

The ganglionic cells of the motor region seemed smaller than normal, and some were yellowish and granular, but in general the cells appeared well preserved.

The medulla and cord showed nothing remarkable.

CASE 19.

L. H.; æt. 43; clerk; nativity, United States.

The physical symptoms were more marked than the mental, the latter being obscured by dementia. Locomotion and co-ordination were fair.

Autopsy.—Autopsy nineteen hours after death. Body well nourished.

Cranium; Antero-posterior diameter, $7\frac{1}{4}$ inches; transverse, $5\frac{3}{8}$ inches. Diploe partly obliterated. Veins of inner table present peculiar crossed and stellate markings. Dura mater normal.

Brain: Weight, 42 ounces; pia mater somewhat opaque and thickened and firmly adherent to the cortex. The arteries of the brain still retained their contents, but no disease was apparent.

The convulsions were slightly shrunken; ventricles normal.

Lungs showed slight tubercular disease and pleuritic adhesions at the apices.

Heart: Slight, chronic disease of mitral valve.

Liver normal; spleen soft and dark.

Kidneys slightly congested. Peritonitis.

Microscopical examination.—Nuclear proliferation in vessel walls, perivascular spaces, and in the brain tissue near some of the diseased vessels. The pia mater was moderately infiltrated in its deeper layers. Along the vessels much yellow pigment was found.

Many of the nerve cells were yellowish and some were granular. The cells of the third layer of the cortex seemed most affected. The

large pyramidal cells contained patches of granules, but the nuclei were generally distinct, and the cell processes showed fairly well.

CASE 20.

W. E.; aet. 43.; soldier; nativity, Germany. This case was typical. Duration of the disease, five years. Death occurred in epileptiform convulsions, lasting forty-eight hours.

Autopsy.—Autopsy sixteen hours after death. Body fairly well nourished.

* Cranium: Antero-posterior diameter, $7\frac{1}{8}$ inches; transverse, $5\frac{7}{8}$ inches; veins of inner table prominent; dura slightly adherent to the calvaria, and the inner surface showed a false membrane of internal pachymeningitis.

Brain: Weight, $46\frac{3}{4}$ ounces; pia-arachnoid opaque in the vicinity of the veins, and over the fissure of Sylvius; the arachnoid at the base thickened and opaque. In the great longitudinal fissure the two surfaces of the pia were coherent and adherent to the falx cerebri; the pia was also adherent to the cortex. Vessels at the base showed some thickening of their walls.

The convolutions were not shrunken; the ventricles dilated; ependyma granular; cortex reddened by fullness of capillaries.

Lungs: Adhesion of right apex; bronchitis; hypostasis.

Heart: Slight valvular disease; aorta atheromatous.

Liver and spleen normal.

Kidneys slightly reduced in weight.

Microscopical examination.—Vessels of both cortex and white substance showed nuclear proliferation in their walls and perivascular spaces. The pia-mater was also infiltrated in its deeper layers and around the vessels.

The nerve cells were, many of them, yellowish, and some were granular, with obscure nuclei.

Some of the vessels in the medulla oblongata presented a slight degree of round-cell infiltration; others were normal. The cells were granular; some appeared shrunken, and many of the cell processes had disappeared.

CASE 21.

L. G.; aet. 48; soldier; nativity, Germany.

There was a history of syphilis in this case and the symptoms and course were irregular. The duration was four years. Death from pulmonary gangrene.

Autopsy.—Autopsy seven hours after death. Body much emaciated.

Cranium: Antero-posterior diameter, $7\frac{1}{8}$ inches; transverse, $5\frac{5}{8}$ inches. In the calvaria were four patches where the diploe was obliterated, the remainder was intensely congested. The dura-mater was slightly adherent to the skull, and the inner surface showed an early stage of internal pachymeningitis.

Brain: Weight, $42\frac{1}{2}$ ounces. Pia arachnoid was faintly granular over the convexity; veins full of blood; convolutions moderately shrunken over the anterior and middle regions of convexity. The arachnoid at the base opaque and thickened. The large arteries showed patches of opacity. The pons was decidedly atrophied. The cortex was normal in thickness and the pia not adherent. Ventricles of normal size; ependyma granular. A small area of softening involved the anterior portion of the corpus striatum of left side.

Lungs: Right middle lobe gangrenous; remainder of lung partly solidified; thrombi in pulmonary artery in vicinity of gangrene; bronchi inflamed.

Heart, normal; slight fatty degeneration of aorta.

Liver, normal; gall bladder entirely obliterated.

Spleen, enlarged; capsule thickened by fibrous plates and adherent to surrounding parts.

Old peritoneal adhesions.

Microscopical examination.—No increase of nuclei in the vessel walls, perivascular spaces, or pia-mater.

The nerve cells presented various degrees of granular degeneration, some having masses of granules and others entirely granular.

CASE 22.

S. J.; aet. 40; colored; nativity, United States.

The physical symptoms were characteristic, but the mental were those of dementia without distinct delusions. Duration, two years; cause, intemperance.

Autopsy.—Autopsy six hours after death. Body emaciated.

Cranium: Antero-posterior diameter, $7\frac{1}{8}$ inches; transverse, $5\frac{3}{4}$ inches. Diploe nearly obliterated; skull rather thin; dura mater normal.

Brain: Weight, 42 ounces; pia arachnoid opaque in the vicinity of the cerebral veins; vessels at base healthy; convolutions much shrunken and hardened over the anterior extremity of frontal and temporo-sphenoidal lobes. The cortex was thinned in the atrophied regions; pia mater not adherent; white substance softer than normal; ventricles were dilated; ependyma granular; pons apparently atrophied.

Lungs: Tubercular disease of both, more advanced in the right; pleuritic adhesions.

Heart: Slight disease of mitral valve.

Spleen normal.

Kidneys normal.

Liver moderately enlarged and congested. Mesenteric glands enlarged.

Microscopical examination.—The vessels showed a moderate degree of cell proliferation in the walls and perivascular spaces. Some vessels appeared normal. The pia mater showed dense infiltration in the vicinity of the larger veins. The nerve cells were but little changed. A few of the large pyramidal cells were yellow and granular and their nuclei indistinct. Many contained small patches of yellow granules. The vessels of the medulla oblongata presented changes similar to those in the brain, but less advanced. A few granular cells were found in the medulla.

CASE 23.

H. M.; aet. 29; soldier; nativity, Germany.

This case was typical in every respect. The duration was two years eight months.

Autopsy.—Autopsy ten hours after death. Body emaciated.

Cranium: Antero-posterior diameter, $7\frac{1}{8}$ inches; transverse, $5\frac{3}{4}$ inches. Diploe congested, and the small veins of the inner table were prominent from enlargement. Vessels of dura engorged.

Brain: Weight, $40\frac{3}{4}$ ounces. Pia-arachnoid opaque and thickened, and the meningeal veins full. Over the convexity appeared a few patches of lymph, beneath the arachnoid. The convolutions somewhat

shrunken over anterior and middle regions. The ventricles were slightly enlarged and the ependyma granular. Consistence of brain diminished.

Lungs, hypostatic.

Heart: Slight chronic valvular disease, and fatty degeneration of aortic intima.

Liver, spleen, and kidneys normal.

Microscopical examination.—The vessels showed an enormous accumulation of lymphoid cells or nuclei in their walls and perivascular spaces. In some cases the perivascular spaces were enlarged to many times the diameter of the vessels, and crowded with cells, among which were scattered masses of bright yellow pigment. In some of the small vessels no lumen could be discovered, it being obliterated by the growth of cells. The pia mater showed dense cellular infiltration. The changes were more marked in the veins than in the arteries, but both were affected, and the vessels of both cortex and white matter were diseased. Numerous spider-shaped cells were found in all parts of the cortex.

The ganglionic cells of the brain were in the various stages of granular degeneration.

The vessels and cells of the medulla presented changes similar to those of the brain, but were less advanced. The cells were yellowish and some were granular with indistinct nuclei.

In the floor of the fourth ventricle some capillary hemorrhages were found, and the ependyma showed granulations.

CASE 24.

H. R.; æt. 44; fireman, U. S. Navy; nativity, Germany. In this case the physical symptoms were more prominent and characteristic, the mental being progressive dementia without distinct delusions. A specific origin was suspected.

Autopsy.—Autopsy nine hours after death. Body emaciated. Deformity of left ear from othæmatoma.

Cranium: Antero-posterior diameter, $7\frac{1}{2}$ inches; transverse, $5\frac{3}{4}$ inches. Skull thin; over the left brow there was a depression seven-eighths by five-eighths inches, which was caused by crushing of the outer table into the frontal sinus; no injury to the inner table. Dura slightly adherent to the skull.

Brain: Weight, $41\frac{1}{2}$ ounces. Pia arachnoid opaque and slightly adherent to cortex. Convolutions atrophied over anterior and middle regions of convexity. Vessels at the base healthy. Puncta cruenta rather prominent. Ependyma of ventricles granular, especially of the fourth.

The roof of the left lateral ventricle adherent to the caudate nucleus. Consistence of brain firm.

Lungs: Pleuritic adhesions and tubercular disease of both.

Heart: Slight chronic endocarditis and pericarditis.

Liver normal, gall-bladder containing 38 gall-stones of various sizes.

Spleen normal. Kidneys slightly contracted.

Intestines ulcerated; mesenteric glands enlarged; under surface of diaphragm showed tubercular inflammation.

Microscopical examination.—The vessel walls were infiltrated and the perivascular spaces widened and filled with cells. In the vicinity of some of the affected vessels the brain tissue showed an increase of nuclei and some spider-shaped cells. Many of the ganglionic cells showed granular degeneration in various stages. A few granular cells were found in the medulla.

CASE 25.

T. J. L.; æt. 50; marine engineer; nativity, United States. This case was obscure. The mental symptoms were mild dementia, and the physical paralytic, but not characteristic.

Autopsy.—Autopsy six hours after death. Body well nourished; contractures of lower extremities.

Cranium: Antero-posterior diameter, $7\frac{1}{4}$ inches; transverse, $5\frac{3}{4}$ inches. Dura mater showed early pachymeningitis interna.

Brain: Weight, $43\frac{1}{2}$ ounces. The pia mater was opaque and thickened, and adherent to the dura at the vertex, but not adherent to the cortex. On section a large area of softening was found in the right hemisphere, involving the anterior portions of the lenticular and caudate nuclei and the internal capsule. In the left hemisphere a small spot of softening was found in the optic thalamus near the wall of the third ventricle. The puncta cruenta were prominent and the consistence of the brain diminished. Convulsions shrunken.

Lungs: Pleuritic adhesions on right side; lungs hypostatic and hemorrhagic.

Heart: Spot of recent endocarditis near apex of left ventricle; slight valvular thickening.

Kidneys show slight interstitial change.

Spleen: Capsule adherent to surrounding parts.

Liver: Tissue normal; recent inflammation of capsule.

Stomach congested.

Acute peritonitis.

Microscopical examination.—The vessels did not show any increase of cells in their walls or perivascular spaces.

Some of the nerve cells were very granular, and a number were yellow.

In the medulla a few cells were seen pigmented with greenish yellow granules.

CASE 26.

M. R.; æt. 45; colored; hostler; nativity, United States. The disease was well advanced when admitted. The mental symptoms were profound dementia, the physical were characteristic.

Autopsy.—Autopsy six hours after death. Body well nourished.

Cranium: Antero-posterior diameter, $7\frac{7}{8}$ inches; transverse, $5\frac{5}{8}$ inches. Skull, dense; diploe present; small veins of inner table prominent. In the falx cerebri were several small irregular pieces of bone.

Brain: Weight, $43\frac{1}{2}$ ounces. The pia arachnoid opaque over the widest sulci, and the arachnoid at the base thickened over the sub-arachnoidean spaces. The membranes were not adherent to the cortex. The convulsions were atrophied over the anterior and middle regions of the convexity, and in the shrunken regions the consistence was firmer than normal. The ventricles were dilated and their lining faintly granular. The cortex was thinned in the atrophied regions. Arteries at the base atheromatous and their caliber reduced.

Lungs: Show bronchitis and some solidification in limited areas.

Heart: Slight valvular disease.

Kidneys appeared swollen.

Spleen and liver normal.

Microscopical examination.—The vessel walls were infiltrated with nuclei, and some free cells were seen in the perivascular spaces. Some of the small vessels were very tortuous and were cut in many directions

in the sections. In the outer layer of the cortex many branched cells were found, especially in the hardened convolutions.

The nerve cells were well preserved; only a few granular cells were found. The cells of the medulla and cord presented no unusual appearances, except a few dark granular cells in the former.

CASE 27.

A. V. S.; æt. 38; female; nativity, United States. This was a case of epilepsy, kleptomania (?), and in the later stages symptoms of paralytic dementia. The duration was two years. Death from exhaustion.

Autopsy.—Autopsy five hours after death. Body emaciated and large bed sores of sacral region. Œdema of left leg.

Cranium: Antero-posterior diameter, $6\frac{1}{2}$ inches; transverse, 5 inches. Skull normal. Dura mater slightly adherent to bone.

Brain: Weight, $30\frac{3}{4}$ ounces. Slight opacity of pia arachnoid and adhesion to cortex. Convolutions shrunken over the entire convexity. The pons and medulla oblongata seemed atrophied, and the olivary bodies stood out prominently. The cortex was thinned and puncta cruenta prominent; consistence of brain normal. Ependyma of fourth ventricle granular.

Lungs: Slight adhesion at apices, and limited tubercular deposit.

Heart and spleen normal.

Liver slightly enlarged from fatty infiltration.

Kidneys: Size reduced, congested.

Ovaries atrophied; os uteri ulcerated.

Microscopical examination.—A very slight increase of nuclei in the vicinity of the vessels and in the deeper layers of the pia mater.

The nerve cells showed little change; some were yellowish, and a few were opaque and granular with indistinct nuclei.

The cells of the medulla and cord varied little from the normal, except that a few cells in the former were converted into deep yellow granules.

CASE 28.

C. Z.; æt. 46; soldier; nativity Germany. The case was in the advanced stages when admitted. The mental symptoms were dementia without marked delusions; the physical, were those of paralytic dementia in the late stages. Duration two years. Death from bulbar paralysis.

Autopsy.—Autopsy four hours after death. Body extremely emaciated. Bed sores over sacrum and trochanters. Othæmatoma of left ear.

Cranium: Antero posterior diameter, $7\frac{1}{8}$ inches; transverse, 6 inches. Depressions of pacchionian bodies and dural arteries unusually large. A local absorption 1 inch in diameter in inner table of frontal bone. The dura mater showed an early stage of internal pachymeningitis.

Brain: Weight, 42 ounces. Slight diffused opacity of pia arachnoid. Arteries at the base showed patches of opacity but no appreciable reduction of lumen. Convolutions much shrunken and somewhat hardened over the anterior and middle regions of the convexity. The cortex was thinned and darker than natural, and the puncta cruenta were numerous. The ventricles were enlarged and the ependyma granular. Gray commissure absent.

Lungs: Limited adhesions of right plura; lungs œdematous.

Heart: Slight aortic valvular disease; heart atrophied.

Liver: Slightly enlarged by fatty infiltration.

Kidneys and spleen normal.

Microscopical examination.—Decided nuclear infiltration of pia mater, vessel walls and perivascular spaces.

Some of the small vessels were very tortuous, forming complete spirals which were cut in every direction. The ganglionic cells of all sizes were somewhat yellowish, but many normal cells were found.

In a few cases small hemorrhages were found in the perivascular spaces and yellow pigment was found in many.

CASE 29.

J. H. M.; æt. 47; cook; nativity, United States.

This case was typical. Aphasia was an interesting feature in the later stages. The cause was supposed to be sunstroke, but there was a suspicion of specific disease. Duration, two and three-fourths years.

Autopsy.—Autopsy fifteen hours after death. Body fairly well nourished.

Cranium: Antero-posterior diameter, $6\frac{1}{2}$ inches; transverse, $5\frac{5}{8}$ inches. Peculiar appearance of skull due to the short antero-posterior diameter. Skull usual in thickness; diploe congested; small veins of inner table prominent.

Brain: Weight, $37\frac{1}{2}$ ounces. The left side was 2 ounces lighter than the right. The pia mater was slightly opaque, and on removal left shreds of the membrane in the fissures. The convolutions were much shrunken and hardened and distinctly yellowish in color in the most affected regions. These were the anterior extremities of the frontal and temporo-sphenoidal lobes and the parts bordering upon the Sylvian fissure. The left hemisphere was more affected than the right. The middle cerebral arteries were both dilated and the left was apparently bound down by adhesions of the thickened pia at the apex of the insula; the region supplied by this vessel was most diseased.

The ventricles were dilated and their lining granular, especially in the fourth; the optic thalami were flattened. The cortex was thin, and the perivascular spaces visible to the naked eye.

No other organs examined.

Microscopical examination.—The vessels were very much infiltrated and the perivascular spaces crowded with cells. Many "spider" cells were found in the outer layer of the cortex and in the vicinity of some of the diseased vessels.

Many of the ganglionic cells showed yellowish discoloration, and some were entirely degenerated.

CASE 30.

J. G.; æt. 46; soldier; nativity, Germany.

This case was admitted in the advanced stages. He was bedridden and profoundly demented; ataxic and aphasic.

Autopsy.—Autopsy twelve hours after death. Body much emaciated. Legs flexed at the knees. Bed sores over sacrum and trochanters.

Cranium: Antero-posterior diameter, 7 inches; transverse, $5\frac{5}{8}$ inches. Diploe congested. Dura mater, normal.

Brain: Weight, 41 ounces. Opacity of pia arachnoid and on removal of membranes shreds were left in the sulci. Convolutions much shrunken, especially over anterior and middle regions. At the upper extremities of the left central convolutions marked atrophy had occurred, forming a

large cyst-like cavity. The ventricles were enlarged and the lining membrane granular.

Lungs: Slight adhesion of left pleura; lungs œdematous and hypos-tatic.

Heart: Slight valvular disease of left side.

Kidneys, show reduction in weight.

Spleen: Minute calcified masses in the parenchyma.

Liver, normal. Urinary bladder slightly inflamed.

Microscopical examination.—The pia mater, vessel walls, and peri-vascular spaces showed cellular proliferation. The outer layer of the cortex was a felt of neuroglia fibers, among which were many branched cells. Many of the nerve cells were granular, and some were much dis-integrated. The large motor cells contained patches of granules, and in some cases the cell was almost destroyed.

In the medulla and cord the cells were granular, and a few were con-verted into masses of brownish yellow granules.

CASE 31.

J. A. H.; æt. 51; laborer; nativity, United States.

This case was admitted in the advanced stages of the disease. The mental symptoms were those of dementia, and the physical far ad-vanced. Duration five years.

Autopsy.—Autopsy fifteen hours after death. Body emaciated; bed-sore over right trochanter.

Cranium: Antero-posterior diameter, $7\frac{1}{8}$ inches; transverse, $5\frac{1}{2}$ inches. Diploe congested; dura mata slightly adherent to skull.

Brain: Weight, $38\frac{1}{2}$ ounces; pia arachnoid, very œdematous and opaque, and along the median fissure adherent to dura. The arachnoid at the base thickened; vessels healthy. The left posterior communi-cating artery enlarged, furnishing the main supply to the posterior cere-bral, which is small at its origin from the basilar. The cerebral veins were full of blood and presented white bands on either side, due to cell infiltration of the pia mater. The convolutions much shrunken over the whole convexity, but especially over the anterior and middle regions. The ventricles were much dilated; ependyma granular.

Lungs: Pleuritic adhesions on both sides. Lungs showed bronchitis and some calcareous nodules.

Spleen small and pale; parenchyma firm.

Kidneys reduced in size and weight.

Liver and other organs normal.

Microscopical examination.—The vessels showed great cellular pro-liferation in their walls and perivascular spaces. Along the course of vessels much yellow pigment was seen.

The cells were much degenerated. Many of the smaller pyramidal cells were yellow and granular, with disintegration of the protoplasm, and the large ganglionic bodies exhibited patches of yellow granules, in some cases occupying the whole cell body and obscuring the nucleus.

SUMMARY.

In the preceding report of thirty-one cases of paralytic dementia, only the main points in the clinical history have been given, and those only when of special service in the study of the cases. It has been thought proper, for the same reason, to give cause of death, and dura-tion of the disease, when known, especially when either may have had a modifying effect upon the appearances of the brain. The salient points

of the general autopsy have been given particularly when organs have been diseased, the disturbed functions of which might have had some influence in the causation of the mental disease. Also certain appearances which seem to have indirect relation to the disease as the hypostatic condition of the lungs so frequently found.

The age, occupation, and nativity are also given, not as a basis for statistics, as the number is too small, but as a matter of interest and assistance in the study of cases.

Of the thirty-one cases, it is right to say that in twenty-three, well-marked histological and gross lesions were found, and that of the other cases at least three were considered doubtful, one of which was (case 25) probably dementia with paralysis due to organic disease of the brain.

The various lesions occurred with the following frequency:

The dura mater was adherent to the bone in ten cases, internal pachymeningitis in eight.

The pia mater and arachnoid were opaque and slightly thickened in twenty-seven cases, and adhesion of pia to cortex occurred in eleven cases.

The convolutions were more or less shrunken in twenty-two cases, and in the majority of these the shrinkage was more marked in the anterior and middle regions of the convexity.

The ventricles were more or less dilated and the ependyma granular in twenty-six cases. The cerebro spinal fluid was of course increased in all the cases of shrunken convolutions and dilated ventricles.

Atrophy of the pons and medulla was noted in a few cases. Under the microscope, alterations in the walls of the vessels and degeneration of the cells were found in all the well-marked cases.

Of the brain weights the average for males was $41\frac{1}{2}$ ounces, of the females (only three cases), the average $36\frac{1}{4}$ ounces.

The smallest male brain weighed 33 ounces, the heaviest 47 ounces.

Of the female brains the smallest weighed $30\frac{3}{4}$ ounces. These weights are much below the average in each sex. The ventricles were always emptied before weighing the brain.

The portions of brain examined microscopically always included the motor region of the cortex and the frontal and occipital lobes. The portion of the cord examined was usually the upper cervical, removed with the brain.

The cell lesions were studied in carmine-stained sections.

The above report is respectfully submitted to the Superintendent.

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The first part of the book is devoted to a general history of the United States from its discovery to the present time. It is divided into three volumes. The first volume contains the history from the discovery of the continent to the establishment of the first colonies. The second volume contains the history from the establishment of the first colonies to the declaration of independence. The third volume contains the history from the declaration of independence to the present time.

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