

**Twenty-eighth annual report of the managers of the State Lunatic Asylum  
for the year 1870 : transmitted to the legislature March 25, 1871 / New York  
State Lunatic Asylum.**

**Contributors**

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TWENTY-EIGHTH

ANNUAL REPORT

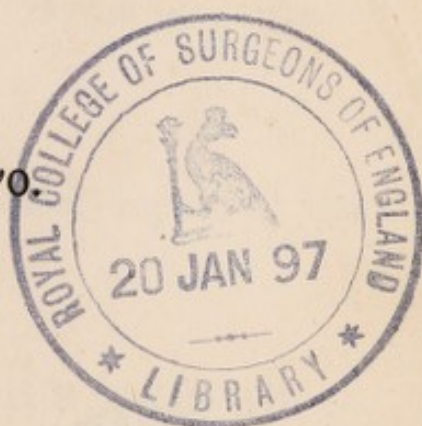
OF THE

MANAGERS

OF THE

STATE LUNATIC ASYLUM,

For the Year 1870.



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TRANSMITTED TO THE LEGISLATURE MARCH 23, 1871.

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ALBANY:  
THE ARGUS COMPANY, PRINTERS.  
1871.



STATE OF NEW YORK.

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No. 53.

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IN SENATE,

March 25, 1871.

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TWENTY-EIGHTH ANNUAL REPORT

OF THE

MANAGERS OF THE STATE LUNATIC ASYLUM,  
FOR THE YEAR ENDING THE 30TH NOVEMBER, 1870.

UTICA, *March 8th*, 1871.

Hon. A. C. BEACH,

*President of the Senate:*

SIR. — We submit herewith the annual report of the  
Managers of the State Lunatic Asylum.

Very respectfully,

CHRISTOPHER MORGAN.

E. A. GRAHAM.

D. P. BISSELL.

FRANCIS KERNAN.

SAMUEL CAMPBELL.

S. O. VANDERPOEL.

HORATIO SEYMOUR.

J. WATSON WILLIAMS.

P. V. KELLOGG.

## OFFICERS OF THE ASYLUM.

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### MANAGERS.

CHRISTOPHER MORGAN .....	AUBURN.
EDMUND A. GRAHAM.....	UTICA.
DANIEL P. BISSELL, M. D.....	UTICA.
FRANCIS KERNAN.....	UTICA.
SAMUEL CAMPBELL.....	WHITESTOWN.
S. O. VANDERPOEL, M. D.....	ALBANY.
HORATIO SEYMOUR.....	UTICA.
J. WATSON WILLIAMS.....	UTICA.
PALMER V. KELLOGG.....	UTICA.

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### TREASURER.

EDMUND A. WETMORE .....	UTICA.
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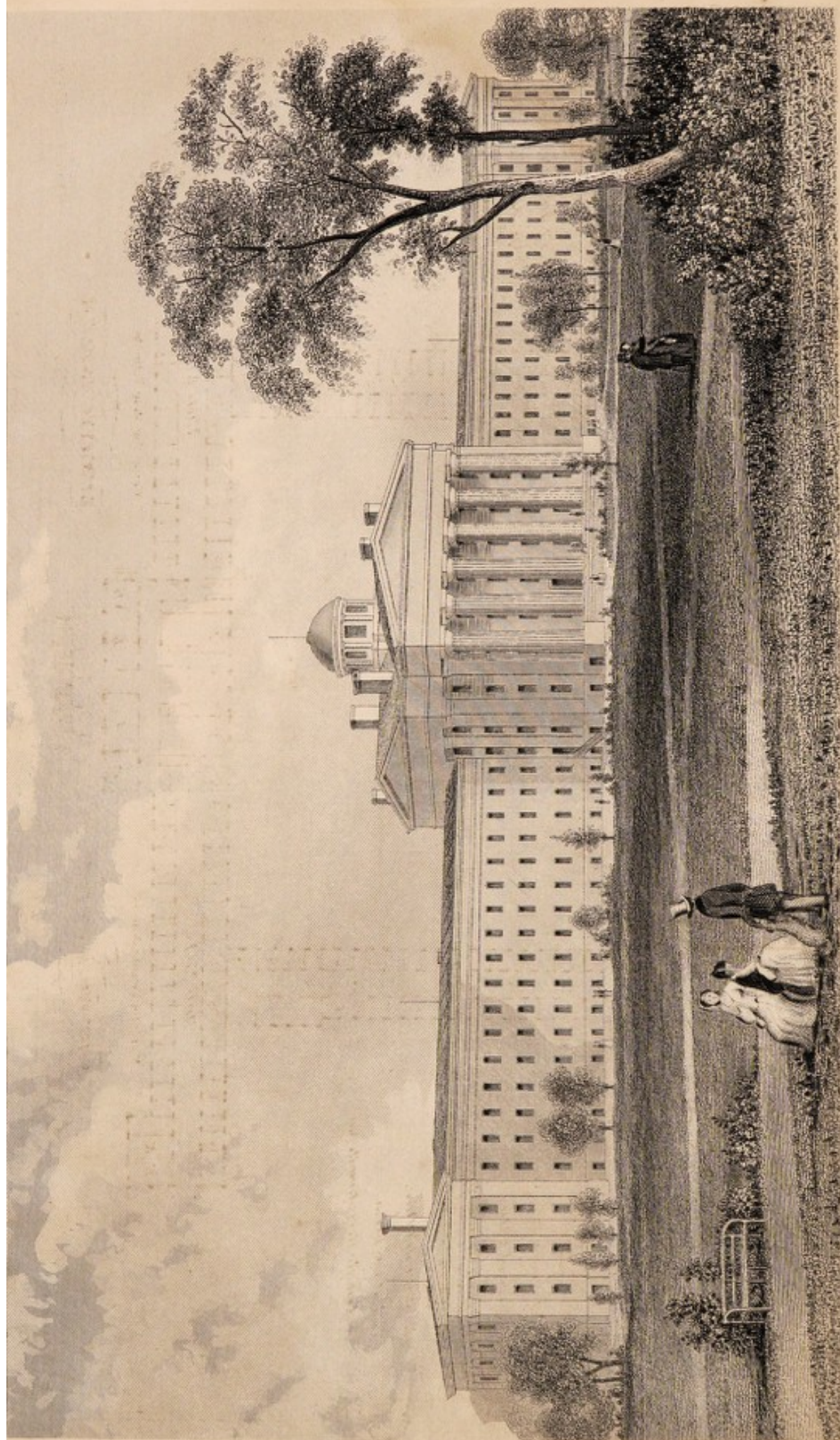
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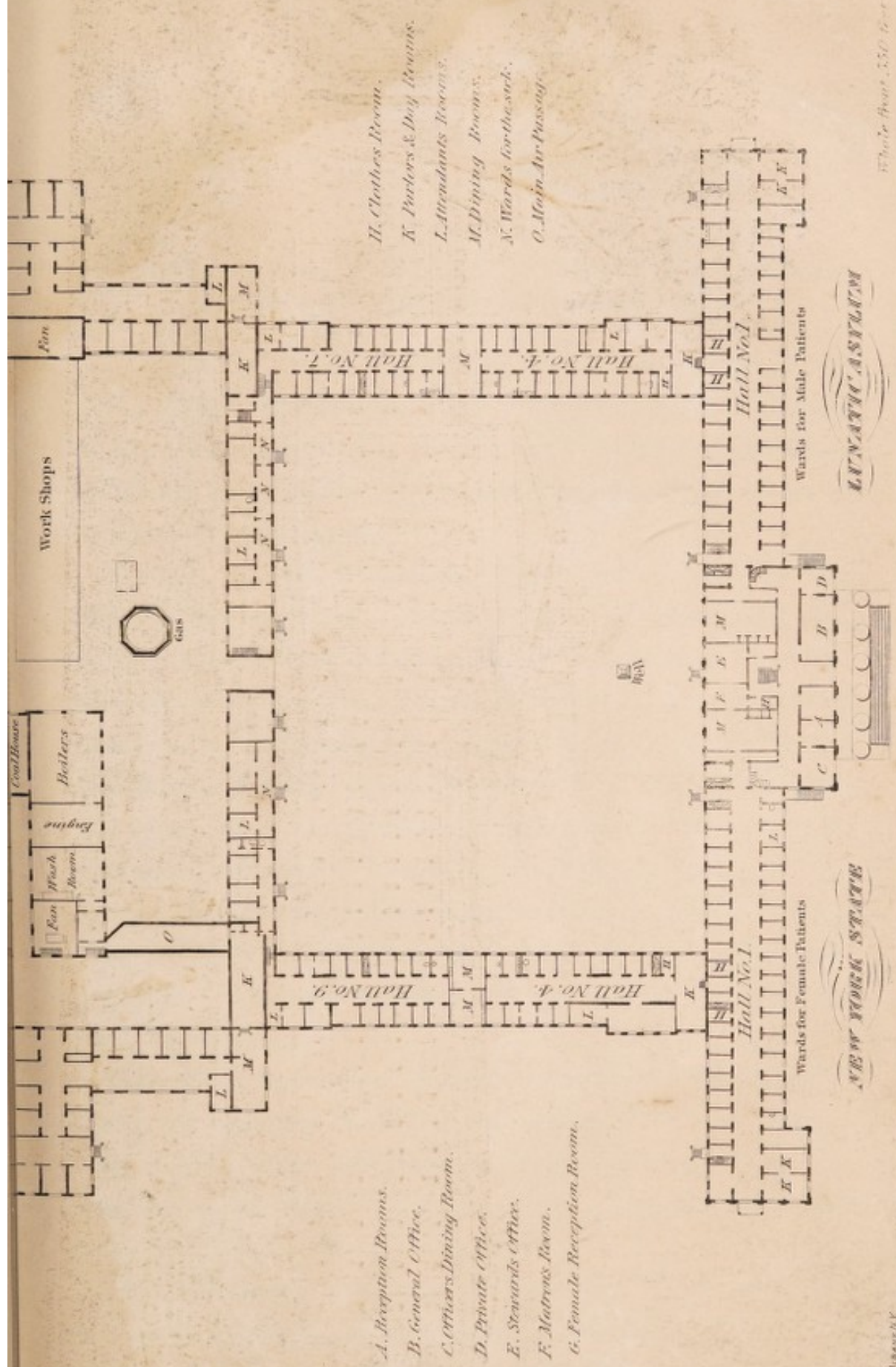
### RESIDENT OFFICERS.

JOHN P. GRAY, M. D.....	SUPERINTENDENT AND PHYSICIAN
A. O. KELLOGG, M. D.....	FIRST ASSISTANT PHYSICIAN.
JUDSON B. ANDREWS, M. D.....	SECOND ASSISTANT PHYSICIAN.
WALTER KEMPSTER, M. D.....	THIRD ASSISTANT PHYSICIAN.
E. R. HUN, M. D.....	SPECIAL PATHOLOGIST.
HORATIO N. DRYER .....	STEWARD.
EMMA BARKER.....	MATRON.



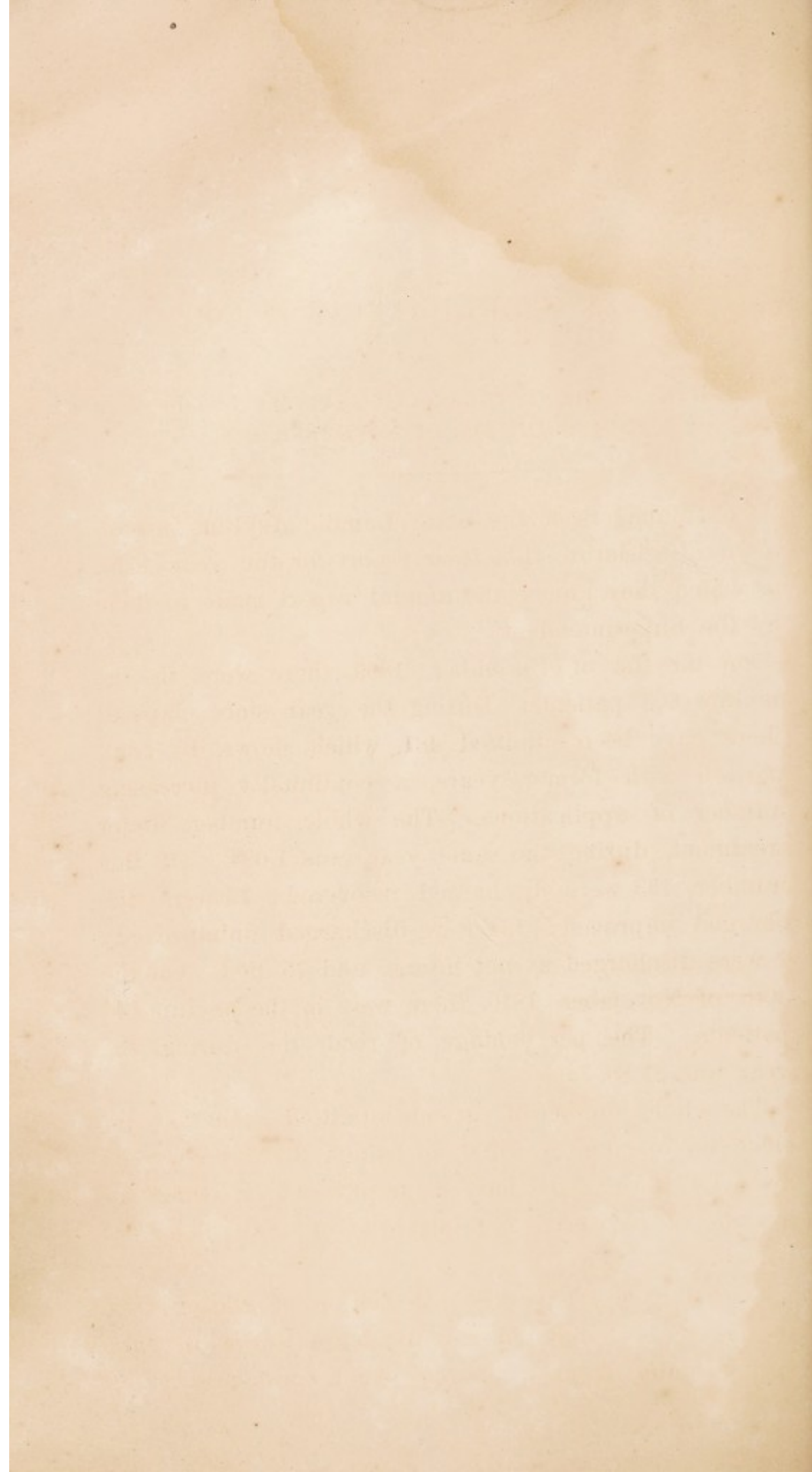
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- A. Reception Rooms.
- B. General Office.
- C. Officers Dining Room.
- D. Private Office.
- E. Stewards Office.
- F. Matrons Room.
- G. Female Reception Room.

- H. Clothes Room.
- K. Porters & Day Rooms.
- L. Attendants Rooms.
- M. Dining Rooms.
- N. Wards for the sick.
- O. Main Air-Passage.



# TWENTY-EIGHTH ANNUAL REPORT

OF THE

MANAGERS OF THE STATE LUNATIC ASYLUM FOR THE YEAR  
ENDING THE 30TH OF NOVEMBER, 1870.

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The Managers of the State Lunatic Asylum present to the Legislature this their report for the year 1870, to which they annex the annual report made to them by the Superintendent.

On the 1st of December, 1869, there were in the asylum 603 patients. During the year since elapsed, there have been admitted 481, which shows, by comparison with former years, a continually increasing number of applications. The whole number under treatment, during the same year, was 1,084. Of this number, 153 were discharged recovered; 72 were discharged improved; 134 were discharged unimproved; 7 were discharged as not insane, and 75 died. On the 30th of November, 1870, there were in the asylum 643 patients. The per centage of recoveries during the year was 31.80.

The whole number of patients admitted to the asylum since its opening is 9,706, of which 3,725 recovered, and 1,471 were discharged improved; showing an average of recovered and improved of more than fifty per cent.

The Managers have the satisfaction of stating that the asylum is now abundantly supplied with pure spring water from a source which promises to be

inexhaustible, and which is wholly within the control of the State. The works for conveying the water to the asylum have been completed during the past season, according to the specifications of the State Engineer, with the exception of some grading, filling and fencing, which will be finished the ensuing season; and the expense of the whole will fall within the amount appropriated for that purpose.

They have also during the year constructed an oval brick sewer of nearly 1,100 feet in length, which requires for its entire completion a considerable amount of embanking for its thorough protection, which it is proposed shall be done at the earliest favorable time. The whole cost of this work, all complete, will not exceed the appropriation for it.

In their report of last year, the Managers stated that they had paid out of the current funds, from the receipts for the board of patients, for additions, alterations, and the repairs of the buildings, within ten years preceding, the sum of \$162,518; of which sum the State has returned, by special appropriations, only \$80,500; leaving \$82,018 to be borne by the ordinary receipts. Since that report, the Legislature has made a special appropriation, to refund such advances, of \$30,000. It will appear by the treasurer's summary, herewith, that the Managers expended, during the year ending November 30, 1870, for additions, alterations and repairs, the sum \$21,205.86. After deducting this from the appropriation of \$30,000, there remains, toward extinguishing the balance of the advances, then (1869) stated to be \$82,018, only the sum of \$8,794.14, which reduced that balance to \$73 223.86. As the Managers

have always claimed that all expenditures, except for the ordinary support of the patients, should be provided for by special appropriations, they trust that the large balance above specified as in arrears to the ordinary current receipts for the maintenance of patients, may be discharged by a special appropriation.

The Managers think it proper to remind the Legislature that the expenditures referred to provided, among other things, and principally, for 100 additional patients; the expense of two wings and necessary changes of a permanent character having been incurred for that purpose; thus increasing the accommodations originally designed for 500 patients, to a sufficient capacity for 600.

It is not needless to repeat, in connection with this matter, that, under the head or term of *maintenance*, the Managers include board, medicines, attendance, fuel, furniture, washing, the compensation of the chaplain, apothecary and book-keeper, and all wages of laborers within the buildings and on the grounds and farm.

Occasions sometimes arise that require an investigation by the Managers of complaints or charges, well or ill founded; and in the course of the investigation, they find themselves powerless to enforce the attendance and the responses of witnesses, and the production of papers, necessary to the disclosure of the truth. At this moment, serious charges are in circulation through the newspapers, the author of which is known to the Managers as a former inmate of the asylum, and who is, on that account, popularly supposed to be well informed as to the facts which he alleges on his personal experience and knowledge. Although of

all the facts he confidently asserts, not one is true, except that of his having been an inmate and insane, yet the mere denial of them by the records of the asylum, and the affirmations of all the officers and attendants, is not so satisfactory to prejudiced and suspicious minds as a formal investigation would be. In so flagrant a case, we might deem it our duty to demand the evidence to sustain or refute such infamous charges; but we cannot command the attendance of a witness, or, should he voluntarily attend, we cannot command an answer to a pinching question, or the production of a single paper. This impediment has heretofore caused the Managers serious inconvenience; and unless some aid is given by law to remove it, the public charities of the State, and all their officers and servants are at the mercy of busy-bodies, tale-bearers, and anonymous writers for the newspapers, unscrupulous enough to poison the general mind with horrible fictions, sometimes the offspring of insane delusions; sometimes of premeditated malice and vindictiveness, and occasionally and rarely of sincere conviction that they are true. We trust that the Legislature will see the propriety of enabling the managers or trustees of such public charities to pursue necessary investigations with authority and effect, and not leave them, as now, in entire dependence on voluntary witnesses, who respond or decline responding, as may be agreeable to themselves, and whose testimony is free of all the legal pains and penalties which follow perjury. We therefore press on legislative consideration the importance of some legal provision which shall make such investigations authoritative.

The general condition of the asylum, the Managers are gratified to say, from frequent personal visits and observation, is such as to call for their grateful recognition of the eminent services of the Superintendent and his assistants and subordinates in all departments; and they commend this great charity to the continued care and liberality of the Legislature, and to the confidence and pride of the people.

The details of receipts and expenditures will be found in the summary of the treasurer appended hereto; and for a more particular record of the state of the asylum, we refer to the interesting report of the Superintendent.

CHRISTOPHER MORGAN.

FRANCIS KERNAN.

D. P. BISSELL.

SAMUEL CAMPBELL.

E. A. GRAHAM.

S. OAKLEY VANDERPOEL.

HORATIO SEYMOUR.

J. WATSON WILLIAMS.

P. V. KELLOGG.

The general condition of the country, the manner in which the people are treated, the amount of money that is being expended for the purpose of the government, and the condition of the people in general, are all factors that are of great importance in the determination of the health of the nation. The health of the nation is not only a matter of individual health, but it is also a matter of the health of the community as a whole. The health of the community is determined by the health of the individual members of the community, and the health of the individual members of the community is determined by the health of the community as a whole. The health of the community is a matter of great importance, and it is one that should be given the highest priority in the minds of the people.

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- CONTENTS
- ORIGINAL ARTICLES  
The Health of the Nation  
The Health of the Community  
The Health of the Individual  
The Health of the Family  
The Health of the Society  
The Health of the World
- DEPARTMENTS  
The Health of the Nation  
The Health of the Community  
The Health of the Individual  
The Health of the Family  
The Health of the Society  
The Health of the World

## TREASURER'S REPORT.

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*To the Managers of the State Lunatic Asylum :*

The treasurer of the asylum respectfully submits the following summary of his receipts and expenditures, for the year ending November 30, 1870 :

### RECEIPTS.

Dec. 1, 1869.	Balance in the treasury .....	\$2,381 83
Dec. 1, 1869,		
to		
Dec. 1, 1870 :		
June 9, 1870.	From State Treasurer, part of \$11,651.02 appropriated by supply bill of 1870, for deficiency in the appropriation for a supply of water.....	6,299 25
June 9, 1870.	From State Treasurer, appropriation in supply bill of 1870, to refund advances for repairs of buildings,	30,000 00
Sept. 10, 1870.	From State Treasurer, appropriation in supply bill of 1870, for the extension of the main brick sewer to the Mohawk river .....	7,170 00
Nov. 25, 1870.	From State Treasurer, on account of appropriation for supply of water, chap. 228, 1868, and chap. 492, 1870 .....	1,580 66
	From sundry counties, for the support of patients.....	114,067 43
	From sundry private patients .....	50,403 11
	From State Treasurer, for support of female insane convicts .....	448 96
Carried forward .....		\$212,351 24

Brought forward .....	\$212,351 24
From State Treasurer, for support of Mark Jack, an Indian.....	224 82
From State Treasurer, for officers' salaries .....	10,000 00
From steward, for hides, pigs, tal- low, peltry, drippings, etc., sold by him .....	3,565 00
	<hr/>
	\$226,141 06
	<hr/>

## PAYMENTS.

Dec. 1, 1869, to		
Dec. 1, 1870.	For provisions.....	\$65,879 70
	For household stores, soap, brooms, crockery, etc.....	3,690 98
	For furniture of all kinds, including beds and bedding.....	9,962 22
	For attendants, assistants and labor, including the salaries of the chap- lain, engineer, apothecary, butcher, tailor, farmer, book-keeper, etc...	38,508 33
	For additions, alterations and re- pairs .....	21,205 86
	For farm, barn, garden and grounds,	9,218 18
	For fuel, and lights besides gas....	11,054 06
	For books, stationery, printing, etc.	3,196 63
	For medicines and medical stores..	3,735 81
	For miscellaneous expenses.....	2,263 00
	For clothing of patients (advanced)	13,311 29
	For patients' miscellaneous expenses	2,221 28
	For city gas, including machinery expenses .....	3,612 80
	To the steward, for petty expenses,	800 00
	For officers' salaries.....	10,000 00
	For additional supply of water (ap- propriation of \$6,332).....	736 25
		<hr/>
Carried forward.....		\$199,396 39

Brought forward . . . . .	\$199,396 39
For supply of water (ordinary funds)	3,270 25
For cash refunded to patients on leaving the asylum . . . . .	267 20
To Oneida National Bank, to take up a protested draft of the trea- surer of Niagara county . . . . .	498 16
For brick sewer to Mohawk river..	5,631 37
	<hr/>
	\$209,063 37
Balance due to new account . . . . .	17,077 69
	<hr/>
	<u>\$226,141 06</u>

E. A. WETMORE,  
*Treasurer.*

UTICA, *December* 1, 1871.



# TWENTY-EIGHTH ANNUAL REPORT

OF THE

SUPERINTENDENT OF THE NEW YORK STATE LUNATIC  
ASYLUM, FOR THE YEAR ENDING NOVEMBER 30, 1870.

*To the Board of Managers:*

GENTLEMEN.—In compliance with the act organizing the asylum, the following report of its operations during the past year is respectfully submitted:

	Men.	Women.	Total.
Number of patients at the commencement of the year.....	298	305	603
Received during the year .....	247	234	481
Whole number treated.....	545	539	1,084
Daily average under treatment.....			629 $\frac{1}{3}$

	Men.	Women.	Total.
Discharged recovered.....	75	78	153
Discharged improved.....	38	34	72
Discharged unimproved .....	71	63	134
Discharged not insane .....	6	1	7
Died.....	42	33	75
Whole number discharged .....	232	209	441
Remaining November 30, 1870.....	313	330	643

The number of patients admitted the past year exceeds that of any former year in the history of the institution. The whole number admitted, as will be observed by the tabular statement above, has been 481.

This is eighteen more than last year, and fifty-three more than any previous year. A large proportion of these were chronic cases, unwisely retained at home through the early and curable stages of the disease; many of them being brought to the asylum only as a last resort, and because it was impossible to keep them longer in a private family. The sufferings of some of them in their own homes would show a sad chapter. Some are thus retained from family pride; some from motives of economy; some from the reluctance people naturally have to consigning the care of their friends to others; but, as I have reason to believe, and have stated in former reports, mainly because of the ignorance that prevails in regard to the nature and curability of insanity, and the unjust prejudice and distrust of hospitals for the insane, which exist everywhere, and which are fostered mainly by ignorance and credulity. All these causes operate on all classes of society, and they compromise, not only the health, comfort and recovery of those who are so unfortunate as to become insane, but also the life-long comfort and welfare of families. Patients, not wholly recovered, are apt to tell marvelous and absurd stories, which the credulous readily accept, and freely circulate, and not infrequently add to "by way of improvement." The delusions of such patients are often accepted as truth, in all statements pertaining to the asylum, even by their friends and family. The same people, however, are not willing to have us credit what the patient has said about them. A man visited his wife, in the asylum, and she gave him an account of her associations and treatment, from her insane

point of view. He came to the office much excited, and stated what his wife had told him. When asked if he credited the statement, he said he did, as his wife was a truthful woman. I turned to her case and read him the record of her statements in regard to his conduct and character. This he indignantly denied, and at once proposed to disprove it by the best people in his neighborhood. There are other patients who do fully recover, and who deliberately give highly colored statements, and draw on their imagination for facts, in order to tell a good story, as the same class of persons do who have never been insane or in the asylum. There are others who make false statements deliberately and maliciously, just as they have been accustomed to do before becoming insane. It sometimes, indeed, happens that on recovery from an attack of insanity, persons become more thoughtful of their conduct and character, and reform their lives; but this is by no means the rule, and the unamiable and bad people are quite as liable to insanity as the amiable and good.

Again, as I have taken occasion to say in former reports, employes who have been discharged for incompetency or neglect of duty, and officials who have been superseded, often take revenge, or gratify their natural propensities in misrepresentations, evil insinuations and detractions. Friends bringing patients give the statements and stories emanating from all these sources, as having influenced them in delaying treatment. The timely treatment and recovery of many insane persons have been prevented by such inconsiderate and vicious conduct; and those who are necessi-

tated to place friends in asylums are often made very unhappy by such people.

The institution has been constantly overcrowded, and we have been obliged to refuse admission to many applications from this State and other States. A number of applications have been made to us to receive patients confined in private asylums.

It will be observed that we have received a large number of old people. One would be tempted to say at once that such old people, especially those over seventy years, should be retained at home. The natural decay of age is ordinarily accompanied by a state of repose of body and mind. Yet there are instances, and not few, where old people manifest unusual activity of mind and body. While such a condition cannot be said to be one of health, yet it can hardly be said to be one of disease. It is due, however, to the tissue changes of age. This state often exists without passing into any further marked disturbance of mind. However, there are instances, constantly occurring, where the change is more than mere increased activity, where ordinary physiological action is more than excess, where sleeplessness and restlessness appear, and soon usher in a state of actual insanity. In these cases we often have partial paralysis or epileptiform convulsions associated with maniacal manifestations. Some are noisy, boisterous, violent, and indicate strength. Others are deeply melancholic, suicidal, frenzied; and others, again, are the unhappy victims of unnatural morbid sexual appetite. It is true, all these things are but evidences of decay, of failing power; premonitions of death; but people do

not all know this, and many who do know it, and realize it, are so situated in their homes as to be helpless in such an affliction. They are compelled to seek help; and it is not strange that they should seek it in a hospital, where, if there may not be hope of relief, there are the means of proper care. A rigid utilitarianism would exclude all such cases, but a decent regard to humanity must admit them. We have received a number this year, old, feeble, helpless, hopeless of relief, only to die.

Thirty-one of those admitted had consumption in an advanced stage; forty were feeble and anæmic; forty-one had scrofulosis; six were epileptics; nineteen were paretics; two had paralysis; thirty-four were feeble and broken down under chronic diseases; one was blind; and one was a deaf-mute. Three were brought in a condition of extreme exhaustion, and died within a few hours or days after admission. These latter were maniacal cases, and seemed stronger, to their friends, than they really were. One of these, a young man, walked up the steps and into the office, although he was actually moribund. He was cold and pulseless, and in spite of efforts to revive him, he sank into a state of coma, and died in a few hours. Another, a highly maniacal and feeble man, was brought literally tied up with ropes. A number were brought in irons. One had been for some time chained to a ring in the floor, in his father's house, and naked, and was in a very filthy condition. Another had been chained to a ring in the floor at home, and the manacles were so rusted on his wrists and ankles that we had to file them off. Another had been simi-

larly restrained for three months at home. Of nine admitted, no history could be obtained further than that they were picked up by the authorities and sent here. Of one of these, the authorities could not even obtain the name, and sent him as "John Doe." A maniacal patient was brought by his friends, who had received a fracture of a rib on the left side, while being conveyed to the asylum. He was quiet when he left home, but on the way became noisy, boisterous and violent, and was handcuffed. Notwithstanding this he broke off the side of the seat in the car by pressing against it. He reached Utica at an early hour, and was confined in the police station-house, whence he was brought to the asylum on the bottom of a box sleigh, with two men sitting upon him to hold him down. He was very profane and excited, and was hallooing. When asked here why he made so much noise, he replied, "I am General Grant and God Almighty, and will make all the noise I please." A careful examination revealed the fracture of a rib on the left side. The patient was weak and exhausted, and had not eaten for three days. He was placed in bed, and food administered forcibly, with stomach tube, for ten days, after which he began to improve and to take food voluntarily. He had hallucinations of hearing, and among these that cannons were being fired over and under his bed. This delusion caused him to keep quiet, and thus facilitated his restoration to health. He fully recovered.

Of those admitted, fifty-six were strongly suicidal, and forty of them had attempted self-destruction. One had attempted both homicide and suicide. Twen-

ty-five were homicidal, two of whom committed, and seven attempted homicide—all under delusions. One committed arson. One of the cases in which suicide was attempted, was a boy only fifteen years old. He shot himself in the forehead. He fully recovered.

Of the seven discharged as not insane, there were six men and one woman. Five of them, four men and one woman, were cases of intemperance. Of these, two had delirium tremens. One was a case in which delirium followed sun-stroke. The delirium was of short duration, and had entirely subsided before the patient was brought to the asylum. The last case was one of slight meningeal trouble, arising from the poison of lead used in painting. The patient had a severe attack of lead colic some six months before, from which he recovered slowly and imperfectly. Attacks of headache followed, and at times he had spasms which were preceded by pain in the abdomen, whence an aura, simulating epilepsy, seemed to arise to the head, and he became unconscious for a moment. On a few occasions he talked incoherently, and for an instant lost his identity. After admission, all these symptoms subsided, and there were no indications of insanity. After some months he regained his usual health and was discharged.

Two years ago I recommended for your consideration the appointment of a special pathologist. I had long felt the great importance of more thorough pathological investigations, and that the large opportunities for such study were too much neglected in asylums, to the detriment of medical science. Your prompt and hearty response to the proposition, and the appoint-

ment of Dr. E. R. Hun to the position, enabled me to inaugurate the work at once. The plan I proposed embraced :

*First.* Examination of secretions in all stages of the disease.

*Second.* The pulse under the sphygmograph, to determine its force and character, and whether any, and if so, what coincident relations its various phases may bear to physical states and psychological manifestations.

*Third.* The pulse under the sphygmograph, to show the influence of medicines on the circulation.

*Fourth.* Examination with the ophthalmoscope, to ascertain the relations of morbid changes in the optic nerve, vessels, etc., of the eye, to pathologic conditions of the brain and its membranes.

*Fifth.* The skin, its temperature, color, elasticity, sensibility, etc., in the several forms and stages of the disease.

*Sixth.* *Post-mortem* appearances, generally and microscopically.

*Seventh.* Photographic representations of morbid conditions and specimens.

The subject was presented to His Excellency, Governor Hoffman, with the reasons therefor, and met his approval, and he made the following recommendation in his annual message, January, 1870 :

“In connection with the subject of insanity, I respectfully suggest that you will give favorable consideration to the application which will be made on behalf of the State asylum at Utica for authority to appoint a special pathologist for the duty of making such investigations as seem to be now demanded by medical science. The

reasons for this will be fully stated in the report of the superintendent of that institution, which will be transmitted to the Legislature."

A law was passed by the Legislature authorizing this addition to the medical staff, and Dr. E. R. Hun received the permanent appointment. Before entering on this work, I consulted Surgeon-General Barnes, of the United States army, and Assistant-Surgeon J. J. Woodward, as to the best instruments and general arrangements for carrying on these investigations. The Army Medical Bureau, under its present organization, has been engaged in most important pathological inquiries, and has carried to a high degree of perfection the mechanical means necessary to the best success in such scientific labors. In our arrangements in progress here, we are indebted to the Surgeon-General and Surgeon Woodward for most valuable aid. The special pathological work this year has been mainly in examination of urine, as will appear from the report of Dr. Hun on this subject.

There were seventeen autopsies made during the year, and in thirteen of these careful microscopic examination was made of the brain, and in three also of the spinal cord. Of these thirteen, three were cases of acute mania; one of paroxysmal mania; two of melancholia; two of dementia and five of general paresis. In all the autopsies made, an abnormal condition was found, varying from simple engorgement of the vessels of the cerebral meninges to deep-seated alterations of the brain structure. In most of the cases there was also found a pathological state of other parts of the organism. When a large number of cases shall have

been observed, no doubt most valuable deductions may be drawn, and we may be able to determine the influences which certain degenerative processes in remote portions of the animal economy exert on the brain to induce disease of this organ; and also throw some light on the question as to how and how far the pathologic processes going on in the brain, in insanity, implicate other organs, and the system generally.

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### T A B L E

Showing the General Statistics of the Asylum from its opening, January 16, 1843, to December 1, 1870.

Total number of admissions.....	9,706
Total number of discharges.....	9,063
Total number discharged recovered.....	3,725
Total number discharged improved.....	1,479
Total number discharged unimproved.....	2,534
Died .....	1,213
Not insane .....	112

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## GENERAL STATEMENT

Of the operations of the New York State Lunatic Asylum for the twenty-eight years ending 30th November, 1870.

YEARS.	Number admitted.	Number discharged.	Number treated.	Discharged recovered.	Discharged improved.	Discharged unimproved.	Discharged, not insane.	Died.
1843.....	276	80	276	53	14	6	....	7
1844.....	275	211	471	132	47	16	....	61
1845.....	293	268	553	135	78	34	....	21
1846.....	337	248	622	133	60	33	....	22
1847.....	428	330	802	187	70	25	....	48
1848.....	405	382	877	174	84	38	....	86
1849.....	362	408	857	203	66	70	....	69
1850.....	367	387	816	171	57	108	...	51
1851.....	366	360	795	58	28	57	....	24
1852.....	390	400	825	156	53	152	....	39
1853.....	424	403	849	169	66	129	....	39
1854.....	390	386	836	164	42	115	....	65
1855.....	276	278	725	128	15	79	16	32
1856.....	242	236	697	100	33	65	8	30
1857.....	235	245	606	95	25	83	10	32
1858.....	333	282	784	114	33	99	5	31
1859.....	312	295	814	114	57	86	3	35
1860.....	337	339	856	105	56	133	3	42
1861.....	295	280	812	83	58	104	4	31
1862.....	287	305	819	106	51	115	3	30
1863.....	287	267	801	80	38	101	6	42
1864.....	319	289	853	109	44	84	4	48
1865.....	356	305	920	113	35	91	9	57
1866.....	388	362	1,003	164	39	106	9	44
1867.....	401	439	1,042	159	58	164	7	51
1868.....	382	415	985	157	85	105	10	58
1869.....	463	430	1,033	156	85	117	8	64
1870.....	481	441	1,084	153	72	134	7	75

## TABLE

Showing the per centage of recoveries on the average population, and admissions for twenty-eight years.

YEARS.	ON AVERAGE POPULATION.			ON ADMISSIONS.		
	Average population.	Recovered.	Per centage.	Admitted.	Recovered.	Per centage.
1843.....	106	53	48.52	276	53	19.20
1844.....	236	132	55.93	275	132	48.80
1845.....	265	135	50.94	293	135	46.07
1846.....	283	133	46.99	337	133	39.46
1847.....	415	187	45.06	428	187	43.60
1848.....	474	174	36.70	405	174	42.96
1849.....	454	203	44.71	362	203	56.07
1850.....	433	171	39.49	367	171	46.59
1851.....	440	112	23.45	366	112	36.60
1852.....	441	156	35.37	390	156	40.00
1853.....	423	169	39.95	424	169	39.85
1854.....	444	164	37.16	390	164	42.05
1855.....	467	128	27.40	275	128	46.54
1856.....	454	100	22.24	242	100	41.73
1857.....	463	95	20.52	235	95	40.42
1858.....	489	114	23.31	333	114	34.23
1859.....	509	114	22.40	312	114	36.54
1860.....	516	105	20.33	337	105	31.15
1861.....	519	83	15.99	295	83	27.46
1862.....	526	106	20.15	287	106	36.93
1863.....	528	80	15.15	287	80	27.87
1864.....	560	109	19.46	319	109	31.02
1865.....	591	113	18.95	356	113	31.74
1866.....	643	164	25.50	388	164	42.26
1867.....	610	159	26	401	159	39.65
1868.....	589	157	26.65	382	157	41.00
1869.....	600	156	26.00	463	156	33.69
1870.....	629	153	24.32	481	153	31.80

## TABLE

Showing the per centage of deaths on the whole number treated, and on the average population, for twenty-eight years.

YEARS.	Deaths.	Whole No. treated.	Per centage.	Average population.	Per centage.
1843 . . . . .	7	267	2.53	109	6.44
1844 . . . . .	16	471	3.39	236	6.78
1845 . . . . .	21	553	3.79	265	7.92
1846 . . . . .	22	622	3.53	283	7.77
1847 . . . . .	48	802	5.98	415	11.56
1848 . . . . .	86	877	9.80	474	18.14
1849 . . . . .	69	857	8.05	454	15.19
1850 . . . . .	51	815	6.25	433	11.77
1851 . . . . .	48	795	6.03	440	10.91
1852 . . . . .	39	825	4.72	441	8.84
1853 . . . . .	39	849	4.59	423	9.22
1854 . . . . .	65	836	4.75	444	14.63
1855 . . . . .	32	725	4.41	467	6.85
1856 . . . . .	30	697	4.30	454	6.61
1857 . . . . .	32	696	4.59	463	6.88
1858 . . . . .	31	784	3.95	489	6.33
1859 . . . . .	35	814	4.30	509	6.87
1860 . . . . .	42	856	4.90	516	8.13
1861 . . . . .	31	812	3.82	519	5.97
1862 . . . . .	30	819	3.66	526	5.70
1863 . . . . .	42	801	5.24	528	7.95
1864 . . . . .	48	853	5.02	560	8.57
1865 . . . . .	57	920	6.19	591	8.79
1866 . . . . .	44	1,003	4.38	643	6.84
1867 . . . . .	51	1,042	4.89	610	8.36
1868 . . . . .	58	985	5.88	589	9.84
1869 . . . . .	64	1,033	6.29	600	10.66
1870 . . . . .	75	1,084	6.91	629	12.08

TABLE

Showing the cause of death in the seventy-five who died during the year, and the form of insanity at the time of admission.

FORM OF INSANITY WHEN ADMITTED.	Phthisis pulmonalis.		General paresis.		Exhaustion.		Cerebro spinal meningitis.		Paralysis.		Apoplexy.		Meningitis.	Epilepsy.	Suicide.	Disease of heart.	Albuminuria.	Cerebral congestion.	Dysentery.	Icterus.	Hemorrhage.	Carcinoma.
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	W.	W.	W.	W.	M.	M.	M.	M.
Acute mania.....	10	11					6	5														
Sub-acute mania.....	1	2						1														
Chronic mania.....		1																				
Paroxysmal mania.....	2	13																				
Melancholia.....	6	13																				
Dementia.....	1	4																				
General paresis.....	18	1						2	18	1												
Epilepsy.....		1												1								
Senile dementia.....	3																					
Not insane.....	1							1														
Total.....	42	33	14	13	18	1	3	4	2	3	1	1	2	2	1	2	1	1	1	1	1	1

There were thirteen deaths among the women from phthisis pulmonalis. They are readily classed together, and present some points of interest. They varied in age from nineteen to sixty-five years. They were all more or less emaciated when admitted, and presented the marked physical signs of the disease. Eleven of them had refused food, and were here supported by forced alimentation. Ten of them expectorated profusely a bloody purulent material. In two instances death followed almost immediately upon the sudden discharge of a large pulmonary abscess. In ten of the cases, death occurred within one year of the date of admission, and in six of them within one month. In one case, phthisis progressed during a period of more than two years. The patient, during all this time, was extremely emaciated, and suffered from the most distressing delusions, and during most of the time vomited part of nearly every meal. Her condition was most pitiable; her delusions were, that her food was poisoned, that her stomach and bowels were destroyed, that her soul was lost. She moaned almost constantly, and when awake kept her body continually in motion.

There were fourteen cases of death from phthisis among the men. Eight of these were over fifty years of age, and four were under thirty. Twelve of them had been in the asylum less than one year, and five of them for periods of from two days to two months.

In six of them there was a profuse bloody and muco-purulent discharge of a very offensive character. Two of them died of hæmoptysis, and two immediately after the discharge of the contents of an abscess. In none of the cases was cough a troublesome symp-

tom. Some of them refused food, and were sustained for varying periods by forced alimentation. Nine of these had acute mania when admitted, two melancholia, two dementia, and one was not insane. He had been in the asylum years before for an attack of acute mania; finding his health failing, and fearing he might pass into his former state, he procured from a county officer an order for his admission. After reaching the asylum he was too feeble to be returned, and was permitted to remain until he died, after a period of two months.

Many of the cases of death attributed to phthisis are not those of the ordinary tubercular form of the disease, but of a degeneracy and destruction of lung substance, which is consequent upon insanity, and originates in the defective innervation which occurs as a result of the anæmic condition of the nerve centers. In these cases there is not only loss of appetite, indifference to nourishment, but there is enfeebled digestion and imperfect assimilation. The action of the heart is lowered in force and volume until the sphygmographic pulse trace is little more than a wavy line. The respiratory action of the lung is scarcely to be detected, and the whole organism manifests the same enfeeblement. These persons often live for weeks and months in this low state of cerebral and organic life, and *post-mortem* examinations reveal extensive breaking down of lung structure. This failure of nerve force has been observed by others as a pathologic cause of phthisis.

Dr. Laycock remarks (Med. Times and Gazette, 1862):  
“The defect of pneumogastric innervation, consequent

on defective cerebro-spinal power, is a very common, predisposing and exciting cause of phthisis."

We subjoin the history and autopsy of one case occurring in a man aged thirty-seven ; married, laborer. Some five weeks before admission he suffered from a severe attack of inflammation of lungs, and immediately thereafter developed insanity. Was restless, agitated, inclined to wander away, out at night "watching the stars." He lost appetite and became sleepless, and when admitted was thin in flesh. Had religious delusions ; prayed much ; made many motions in imitation of a priest while conducting services ; pounded his head. He continued noisy and maniacal ; developed delusions successively that he was the devil, the Holy Ghost and God. Had frequent paroxysms of excitement and violence ; became very filthy in his habits, and, after some eight months, strongly suicidal ; made many efforts to accomplish his purpose, threw himself around, bit his tongue severely, knocked his teeth out and refused food. He continued in a state of frenzy for more than two months, during which he gradually failed, and died a few hours after the discharge of a large quantity of bloody pus from an abscess of the lung.

*Autopsy.* — Body somewhat emaciated ; rigor well marked.

*Head.*—Skull-cap and dura mater, normal ; considerable thickening of the arachnoid, with adhesions between it and the pia mater. The vessels of the meninges were engorged with blood. The cerebral substance appeared of normal color and consistency, and microscopic examination revealed pathologic change.

*Thorax.*—Extensive pleuritic adhesions on both sides. In the lower lobe of the right lung were two large communicating abscesses, containing a large quantity of dark, grumous and very fetid matter. One of these abscesses had opened into the pleural cavity, and was circumscribed by firm pleuritic adhesions. The apices of both lungs were indurated and contracted, from former tubercular deposits. The heart was normal.

*Abdomen.*—Liver hard and firm, and the capsule thickened and opaque on its convex surface. Kidneys, intestines and bladder healthy.

There were five cases of cerebro-spinal meningitis, two among the men and three among the women.

Man, aged thirty-nine, married; mother died insane. Patient had not been in good health for some years; was subject to paroxysms of severe pain in the occipital region, which constantly increased in severity. Three weeks before admission he lost sleep for two nights, and immediately thereafter became depressed and had delusion that a plot was laid to kill him. Lost sleep and flesh rapidly; ate little; attempted suicide; then became maniacal; said he was "Jesus Christ and the strongest man in the world." When received he was emaciated; tongue dry and coated; secretions offensive; skin dry and hot; conjunctiva injected; was noisy and incoherent; brought in irons; had taken little food for several days. Food was administered; patient continued noisy day and night, and made strenuous efforts to injure self. Disease steadily progressed; tongue continued dry and coated; was sleepless and restless, rolling head from side to side, and alternately flexing and extending legs. At times there was opisthotonos,

and head was constantly retracted. These symptoms increased in severity, patient steadily failed and died on the nineteenth day.

Man, aged twenty-seven, laborer, was a strong, hard-working man, became insane three months before admission; was maniacal and violent; was arrested and brought to asylum in irons; was in full flesh, head hot, face flushed, eyes injected. For three weeks continued maniacal, noisy and at times destructive, and complained of lightness and dizziness of head. Then became quiet, and for two weeks seemed convalescing favorably. Suddenly became maniacal again, noisy and violent, complained of being dizzy and could not stand. In bed moved feet up and down, rotated head on pillow, refused food, lost control of sphincters, secretions offensive, head hot, eyes injected, tongue dry and heavily coated, body in almost constant motion. Patient failed, and died in eighteen days.

Woman, aged thirty-two, single, clerk; maternal grandmother had been insane. At the age of thirteen, patient received an injury to the spine by falling from a swing, and always afterward complained of pain in lumbar region. At twenty-four years of age she had an acute attack of localized spinal meningitis; was incapacitated for a year. Four years after this she had a severe attack of typhoid fever, which left her in feeble health. Four years thereafter she was admitted to the asylum. She became depressed a year or so before, and was maniacal for some two months. She was pale, anæmic and feeble; improved for some three months; then she complained of pain along the spine; muscles of the back were rigid; there was ten-

derness over the course of the sciatic nerve of the left side, extending to the popliteal space, and thence to the foot. At times she complained of inability to use the leg; said it seemed paralyzed. The pain and tenderness lasted some three months, and were at times excruciating; vomiting also occurred without nausea; she then became maniacal, profane, obscene, noisy and destructive. This continued about two months, and was followed by a period of depression, after which patient became quiet and lady-like, and had a partial appreciation of her condition. She had many similar attacks.

For some time before death the pain, tenderness and stiffness also involved the cervical region to the base of the skull. At times she had opisthotonis. Chapman's spinal ice bag was the only thing that seemed to give relief. During a period of suffering, and just before a maniacal attack, she described her feelings in a letter to a friend, as follows:

“Just imagine me sitting, day after day and month after month, idle! Not a particle of interest in any thing or any one; seeing no beauty whatever in a flower; incapable of emotion of any sort, except a dumb agony at my utter worthlessness. When to speak or move, even, is a burden; fearing constantly some impending evil, which I am powerless to avert; wrapped in an impenetrable cloud; all faculties benumbed, energies exhausted; and if I were starving or freezing, could not make the least effort; and you can imagine something of the condition in which I've been, at intervals, for the past nine years. I have the appearance of *acute dementia*; yet, at all times have an entire appre-

ciation; my brain is never still—ever active, while I am in a torpor—a living death!” Shortly after, she was attacked by cerebro-spinal meningitis, of which she died suddenly.

*Autopsy.*—The membranes and cerebral substance were deeply congested, and the former strongly adherent. There was little fluid in the ventricles. The membranes of the cord were congested in the cervical and lumbar region, and were considerably thickened. Attached to the posterior root of one of the lumbar nerves, was a tumor the size of a small bean; this was composed of a gelatinous material. Opposite the third and fourth cervical vertebræ, on the posterior column of the cord, was another tumor, smaller than that in the lumbar region, but much more dense in substance. On the body of the fourth cervical vertebra, and pressing on the cord, was an exostosis, about the eighth of an inch in diameter, with a rounded extremity. The sixth dorsal vertebra was twisted toward the left side, making an abrupt ridge in the osseous canal. There was no diseased condition manifest, and the malformation was not detected during life. The thoracic and abdominal organs were in normal condition.

Woman, aged thirty-eight; married; had borne four children, youngest two years old. While nursing the infant she suffered from nervous exhaustion; this continued, and she complained of dullness and heaviness, of pain in the back, and sensations which she denominated “cramping of the womb;” said they were so severe at times as to produce faintness. For these symptoms she consulted a physician, who bled her and put her upon large doses of opium, but without relief.

She was again bled, which further aggravated her symptoms. She lost appetite, became restless, sleepless, and had several attacks in which she threw herself about and made the most violent muscular exertion, and at intervals talked wildly and incessantly; eyes wide open; asked for water; asked and answered questions. These attacks lasted for several hours, and she was restrained by three or four persons, to prevent injury to herself. They subsided gradually, and she passed into a profound sleep, from which she awoke fully conscious and entirely rational, but said she had no recollection of what had transpired. She was brought to the asylum at her own urgent request. She had a similar attack the first night after admission; then became violent and talked incessantly to persons not present; called her daughters by name; directed her servant to bring a bottle from a certain position, but to tell no one of it; and being handed a glass of water, drank it off, and said in a whisper: "Fill it out of the bottle, quick! quick!" She gradually quieted and regained her consciousness, but was without any knowledge of the occurrence. When told what she had said about the bottle, said she had concealed at home a bottle of poison which she intended to take. After an interval of three weeks, in which she was rational, though mentally exalted, she had more violent and protracted seizures, in which there was extreme opisthotonos and general muscular straining, greatly embarrassing respiration. This was followed as before by talkativeness, in which she described minutely the peculiarities of patients whom she had met; commented on sermons she had heard in the chapel. Although

her eyes were open and she seemed to be looking at and addressing those about her, it was impossible to divert her by any question. This lasted for nine hours, and left her exhausted and sore from muscular action. Sometime after this she became maniacal and noisy; declared that her daughters were here, and were being murdered; said she could hear their voices. From this condition she did not rally; she soon showed the most marked symptoms of cerebro-spinal meningitis; confusion and obtuseness of mind; contraction of the eyebrows; pulse rapid and skin hot. Then rigidity of the muscles, of face, back and legs particularly; opisthotonos was so severe that she rested on her heels and head; convulsions followed. She passed into a comatose state, in which she remained for three days, and died.

Woman, aged fifty, married, had borne children, good habits, native of New York, no hereditary disposition. Patient had always enjoyed fair general health, but usually looked upon the dark side of life, yet had not been called gloomy. Ten years previous she lost two children suddenly, and since that time had been more despondent, and grieved over their death. During the summer before admission, she complained of general debility, loss of appetite, and indisposition to enter into social enjoyments. These symptoms increased in intensity, until three weeks before coming to the institution, when she manifested the first symptoms of insanity—developed the delusion that she had committed the unpardonable sin, and that through her unworthiness the whole world would suffer. Is fearful of some impending danger, especially

at night, and tries to get away. Has lost much flesh and takes little nourishment, because she says she is so sinful, but has not absolutely refused food. Did not sleep, and talked of her lost condition all night. Bowels obstinately constipated when admitted; bruises were found upon the limbs and various parts of the body. Tongue very dry and brown; sordes on teeth; pulse rapid; secretions vitiated. Two days after admission, became more quiet and took food more willingly, but soon relapsed and was noisy and destructive of clothing. During menstruation, which occurred at this time, the severity of the symptoms was increased; seven days afterward, all the indications of cerebrospinal meningitis became marked. Tongue continued dry and brown; pulse small and frequent; skin hot; there was constant jactitation, and she moved her limbs rapidly up and down in bed; the head was retracted, and there were paroxysms of muscular rigidity. Two days previous to death she persistently refused food, and would not take even water. There was opisthotonos, but not so severe as in the other cases. She died nine days after admission.

We give the following examples of the cases dying from exhaustion:

Man, aged thirty-three, single, farmer. This case is of interest, as exemplifying most fully the statements made in former reports, in reference to the removal of patients from home, when in a greatly enfeebled condition. This young man had been watching with his sick mother at night, for two weeks in succession, and working hard during the day. Informant says he suddenly became violently insane, without previous

complaint of ill-health; said he was going to hell on hot bricks and in hot chains. Became very maniacal and violent, and attacked every one who approached him, without apparent cause. This was two weeks previous to admission. He was kept at home confined in a room, where he refused medicine, food and care. A paroxysm, more violent than the preceding ones, induced his friends to bring him to the asylum, heavily ironed. On admission he was very feeble and anæmic, and in a typhoid condition. Tongue dry and coated; sordes on teeth; pulse 120. He was carried to ward and given a milk punch, which he took willingly. His wrists were found abraded, and he had many bruises on various parts of the body. When his friends were informed that he was moribund, they doubted the statement, and said he had more strength than any man in the party, and with the remark that "you will have your hands full in taking care of him," they left. He failed steadily, and died thirty-six hours after admission.

The case is similar, in many respects, to others that are received from time to time. It is difficult for those not familiar with the disease to reconcile the exhibition of so much apparent strength with such real enfeeblement. The danger in these cases is that friends may over estimate the patient's strength by forming a judgment from the manifestations of power exhibited in a maniacal paroxysm.

*Autopsy.*—Body well formed and muscular; slight emaciation; rigor mortis well marked.

*Head.*—Skull-cap normal; great engorgement of the

vessels of the meninges ; brain itself presented no abnormal appearance.

*Thorax.*—Lungs and heart perfectly normal.

*Abdomen.*—Liver, stomach, spleen and kidneys normal. The lower portion of the small intestine was much reddened and vascular ; upon laying it open, the patches of Peyer were found elevated, and presented the strawberry-like appearance which precedes the ulceration in typhoid fever.

Woman, aged twenty-six, married ; had a severe attack of intermittent fever, and while suffering from this attended a series of religious meetings. She became much interested and anxious in regard to her spiritual condition ; lost sleep, became still more debilitated, and about two weeks before admission manifested indications of insanity ; was incoherent and talkative ; spoke continually upon religious subjects ; said she was “a little babe, just like Christ, and must be treated as an infant.” Lost flesh rapidly ; refused food ; talked loudly ; said she was fighting a battle for Jesus. On admission was menorrhagic, pale and feeble ; lips quivered, and she was generally tremulous. At first took food, but soon persistently refused it ; continued noisy and talkative ; was sleepless and restless. The third day after admission, manifested symptoms of cerebro-spinal meningitis ; lost control over sphincters ; tongue was dry and coated ; sordes on teeth ; eyes fixed ; pulse 140, and feeble ; skin was hot and dry ; she was constantly flexing and extending limbs, and respirations were increased in frequency. Her attention could not be arrested, and she seemed unconscious. These symptoms were met

by frequently sponging the surface with tepid water. Chapman's ice bag was applied to the cervical region, and chloral hydrate given; grs. xx, repeated every hour. Brandy and beef extract were administered when she could be induced to swallow. In a few hours the pulse fell to ninety. There was an amelioration of all the symptoms, and she slept quietly. She improved steadily, took food, slept well, and gained flesh; began to talk rationally about herself; manifested an interest in her personal appearance; conversed freely with her physicians and attendants, and walked out daily in the grounds. At this time she was visited by her husband, who removed her, contrary to the advice of the superintendent and his own friends at home. Five days afterward she was returned to the asylum. She had strenuously refused all nourishment, been restless and sleepless, and lost flesh rapidly. When readmitted she was very feeble, and did not converse or even answer questions. She was put to bed, and nourishment was administered; she failed steadily; the meningeal troubles returned, and continued till the time of her death.

Woman, age twenty-five, married. Patient enjoyed good health till the past summer, when she suffered from a persistent attack of malarial fever, which greatly debilitated her. During her illness her brother died. This produced much mental anxiety, and she became sleepless, gloomy and depressed; developed delusions and hallucination; said her father and mother who had been dead for years were at her bed-side. From this state she passed to one of maniacal excitement; complained of great pain in her head; lost

appetite, and finally refused food. In a few days she was brought to the asylum and when admitted was moribund. She swallowed part of a milk-punch which was brought her, but was apparently unable to take it all; was carried to the ward and placed in bed. Obstinate refused to take any drink or nourishment. Liquid food and stimulants were administered, but she steadily failed, and died in two days.

Man, aged twenty-four, single, laborer. Intemperate and used tobacco. He was found wandering about and insane; arrested and taken to the poor-house, whence he was brought to the asylum. He was profoundly melancholic, and the officer bringing him said he had been silent, refused food, and had attempted suicide by strangulation; was thin and anæmic; had an anxious expression of countenance, but did not complain of pain or suffering. He answered questions about himself, and took freely of nourishment in liquid form. Three days after, while sitting at the breakfast table, he suddenly screamed, and immediately blood spurted from his mouth, and he fell from his chair to the floor. The hemorrhage was profuse. There was also a profuse discharge of coagulated blood from the bowels, and he died in five hours.

*Autopsy.*—Body slightly emaciated; surface pale and exsanguinated; rigor mortis well marked.

*Head.*—Skull-cap and membranes normal; brain soft and watery; limited sclerosis of the left crus cerebri.

*Thorax.*—A small amount of frothy sanguinolent mucus in the trachea. Lungs very pale, but perfectly normal. No pleuritic adhesions. Heart normal. The œsophagus was removed with the aorta attached to it.

Upon laying open the canal of the œsophagus, a triangular piece of crockery, consisting of the broken edge of a plate, and measuring two and a half by one and five-eighth inches, was found impacted in it at a point corresponding to the bifurcation of the trachea. The inner surface of the œsophagus was much lacerated by the sharp angles of the plate, and at one point a perforation had been made through the walls of this canal, which penetrated the descending aorta. At the point of impaction, the œsophagus was dilated into a pouch.

*Abdomen.*—The stomach was distended by four pounds, seven ounces of coagulated and fluid blood, and the intestines also contained a considerable quantity. Liver and spleen normal; kidneys of normal size, but rather pale.

Three patients died from apoplexy; one, a negro man, had hereditary tendency to insanity. Suffered from sun-stroke, and had frequent maniacal seizures of short duration, following periods of overwork or excitement. He was arrested for an attempt to commit rape; subsequently, he said he was stunned by lightning, which struck some object near him; that he lost consciousness, and after this committed the assault. He was lodged in jail, where he had a violent maniacal paroxysm; was brought to the asylum a few months afterward, where he was quiet, well-behaved and industrious. He had the delusion that he was called to preach, and had for his special mission the organization of a "Great Reform Association." He wrote much upon this subject, and prayed and read the Bible a great deal. After a residence here of some eighteen months, he became maniacal, violent, and made fre-

quent efforts to commit suicide. After two days of excitement, while taking his breakfast, he suddenly died. Upon *post-mortem* examination, the brain was found to be very anæmic, and there was also an extensive effusion of serum in the ventricles. The apices of the lungs contained tubercular deposits scattered through the pulmonary tissues.

The second case was that of a woman, single, good habits. She had been insane many years, and was subject to maniacal paroxysms. She had for a long time suffered from severe catarrh, which was accompanied with a profuse and offensive discharge. It was observed by her friends that when the discharge was least in quantity, she was most disturbed. During a period of quietude, and while no change from her ordinary condition of health was observed, she was suddenly attacked with paralysis and became unconscious. She died in thirty-six hours.

*Autopsy.*—Body, slightly emaciated; rigor, not well marked.

*Head.*—Skull-cap, very thin at some points; dura mater appeared normal; arachnoid, thickened, opaque and raised by sub-arachnoidean serous effusion. The pia mater was much injected, but did not adhere to the surface of the convolutions.

*Thorax.*—Lungs, œdematous; heart, normal, except a large accumulation of fat on its surface.

*Abdomen.*—The uterus was antiflexed to such a degree that the canal of the cervix was at right angles to the body of the organ. The whole uterus, as well as the ovaries, was much congested. Other abdominal organs were in normal condition.

The third was a woman, fifty-three years of age, who had been twice insane; was highly maniacal when admitted, violent and destructive. After a residence of a few months, she had an attack of paralysis, from which she partially recovered. Subsequently, had an apoplectic seizure, and died in two days.

One woman committed suicide. She was a widow, forty-six years of age; had considerable property, which she had acquired by her own exertions. She had suffered from profound melancholy for some months before admission, with delusions of personal injury and conspiracies, both to destroy her life and rob her of her property; had thrown herself from the window, and so severely injured her ankle that she was obliged to walk upon crutches; was in feeble bodily condition, and under most intense mental anxiety, with paroxysms of frenzy. She steadily improved physically, and manifested less disturbance of mind; after a time was able to go out walking with other patients, and exhibited considerable self-control, though she retained her delusions of conspiracy. While out walking in the streets she escaped from the attendants, and was arrested by the police. They, recognizing her condition, returned her to the asylum. The day following she complained of being unwell, and asked permission to go to bed. Soon after this, smoke was discovered issuing from her room. The attendant immediately entered it, and found her bed on fire, and, with great presence of mind, quietly smothered the flames with a quilt. The patient was entirely conscious, yet made no outcry; she had kindled the fire with two matches, the stumps of which

were found. She refused to say where she had obtained the matches, but said that no attendant or person in the house was in any way to blame; that it was her own deliberate act. She was so severely burned about the hands, face, chest and abdomen, that she died a few hours afterward. The patient was a member of the Roman Catholic Church, and a priest was immediately sent for, who administered the last rites of the church. The only reason she assigned for the rash act was, to escape from the conspiracies of which she believed herself the subject. This case illustrates the wonderful power which delusions may and do exert.

One case of acute mania of one year's duration died suddenly.

Autopsy revealed cerebral congestion. Two cases died of paralysis. One was a woman, a case of acute mania, of a few weeks' duration. Some six weeks after admission, she became paralytic, and died in two days.

*Autopsy.*—Body, much emaciated; large eschars on the back; rigor mortis, not marked.

*Head.*—Skull-cap and dura mater, normal; arachnoid raised by a considerable amount of serum; vessels of the pia mater contained but little blood; surface of the brain unusually pale, and at two corresponding points on each side of the longitudinal fissure, the convolutions appeared depressed and flattened. Upon section, the cortical substance seemed to consist of two distinct layers, the outer one much darker in color than the inner one. The puncta vasculosa were very well marked. The ventricles contained a small amount of clear serum; choroid plexus and central ganglia, nor-

mal; pineal gland, unusually large and soft; on the posterior surface of the right lobe of the cerebellum, was a clot of effused blood as large as a pea.

*Thorax.*—Lungs, healthy; left ventricle of the heart, hypertrophied; the mitral, tricuspid and pulmonary valves and orifices, normal; the aortic orifice was encircled by a complete ring of ossific deposit, and one of the valves was perforated so as to permit of considerable regurgitation.

*Abdomen.*—Liver and spleen, normal; kidneys, granular. The transverse portion of the colon descended downward to the pelvis, so as to form a long loop. Bladder contained a small quantity of purulent urine; its walls were thickened and reticulated, and the mucous membrane presented distinct points of intense local hyperæmia.

*Microscopic examination of the brain* revealed nothing abnormal.

The second case occurred in an old man eighty-three years of age. Five years before admission he had an attack of paralysis, which seriously disturbed his mental condition. A short time after admission, a second attack rendered him still more feeble, and before he rallied, a third attack occurred, in which he died.

The case of Icterus occurred in an old man aged seventy. This was the second attack of insanity from which he suffered. He continued very noisy and maniacal during the two months preceding the attack from which he died. At this time his skin was much discolored, and his urine gave evidence of the presence in the blood of a large amount of bile.

The case of dysentery occurred in a young man, a

case of acute mania. He was feeble and emaciated when admitted, and had diarrhœa; was one of a family of thirteen; five had already died of phthisis. The diarrhœa continued, accompanied by *bloody and mucous* discharges till he died, on the twentieth day after admission.

There were two cases of spinal meningitis; one, that of a young girl, who was brought to the asylum a few weeks after her arrival in the country from Ireland. She had typhoid fever, and when admitted was also maniacal and very feeble. Before death, symptoms of spinal meningitis were developed; she gradually failed, and died in three weeks. The spinal meningitis in this case was an intercurrent condition, which supervened toward the close of the fever, when the patient was in a state of great nervous prostration, and may properly be assigned as the proximate cause of death. The second was a case of chronic insanity. The spinal disease was of a low type, and slow in its progress. This mode of death occurs in cases of insanity, as the result of a process of degeneracy of the nerve center.

The death from epilepsy occurred in a woman twenty-four years of age. She had suffered from convulsions since early life which were the sequela of scarlatina, and were both frequent and severe. She was very feeble in mind, and difficult of care, on account of her demented condition. After a residence of only a few weeks, she had a severe fit, in which she died.

The death from carcinoma was in a case of chronic mania of many years' duration. She had, besides, phthisis, and evinced a strongly marked cancerous cachexia. Before admission, a cancer had been re-

moved from the right side, beneath the shoulder. Some two years before death, this disease reappeared in the right breast. This was removed at the asylum, and she improved in general health and appearance. About eighteen months afterward, the disease reappeared in the same place, steadily progressed, and she died six weeks after its full development.

One case of death from disease of the heart occurred in a woman sixty years of age. She had been a hard-working woman, and had, alone, conducted a farm. Six months before admission she became depressed and melancholic; attempted suicide by drowning, taking laudanum and poison. She was suspicious, and had refused food. Valvular disease of the heart was diagnosed, and thirteen days after admission she died suddenly.

The other case of death from this form of disease, occurred in a woman fifty-one years of age. She had been insane, and an inmate of the asylum for many years. Her form of insanity was dementia; was then anæmic and feeble, and presented marked physical signs of pulmonary disease. One evening, while going to her room from the tea-table, she fell in the ward, and died in a few moments. The *post-mortem* examination revealed extensive degeneracy of the lungs, complicated with organic changes in the heart, as follows:

*Autopsy.*—Body well nourished; rigor mortis marked; some dark, purple discolorations of skin about the face; skin waxy, and legs and feet œdematous.

*Head.*—Skull-cap and inner surface of the cranium normal; dura mater very adherent to the calvarium;

pacchionian glands enlarged ; no abnormal appearance of the meninges or brain except that the pineal gland was firmly attached to the posterior commissure, and when detached left a gritty substance adhering to the commissure ; brain weighed forty-three and three-quarter ounces.

*Thorax.* — Upon removing the sternum, a large quantity of sero-purulent fluid escaped from an abscess occupying the whole anterior portion of the right pleural cavity, and extending across the mediastinum ; left pleural cavity obliterated by adhesions ; tubercular deposits at both apices ; all the cavities of the heart were distended with blood, and the walls were *flaccid, friable and fatty*.

*Abdomen.* — Liver large, hard and portal vessels congested ; right kidney weighed seven ounces, and was in an early stage of fatty degeneration ; left kidney weighed six ounces, and its tissue had undergone more advanced, degenerative changes ; spleen normal ; uterus of normal size, and very much retro-flexed.

One death from albuminuria is reported. This was in the person of a colored woman, aged twenty-seven years. She became insane but a few weeks before admission. She had an ovarian tumor of such size as at times to disturb respiration, and her general health was also suffering ; the extremities were dropsical, and there were indolent ulcers upon her legs, from which there was a fetid discharge. The patient improved somewhat for a time in general health, but after a few months became feeble, and retained her bed constantly. There was little change in the size or position of the tumor during the whole period. She failed gradually,

losing flesh and appetite, and died two years after admission. The post-mortem examination revealed the following changes :

*Autopsy.* — Body moderately well nourished ; rigor mortis present ; slight abrasion of the skin at the external angle of the left eye ; sternum very prominent ; abdomen enlarged and rendered uneven by a number of nodular masses contained in its cavity ; left knee joint ankylosed ; three cicatrices over the lower part of the left tibia.

*Head.* — Dura mater adherent to calvarium, and arachnoid at the vertex ; a large amount of sub-arachnoidean serous effusion ; exudation of lymph along the course of the vessels ; the gray matter of the brain pale, but of normal consistency ; a small amount of serum in the lateral ventricles ; choroid plexus pale and exsanguinated ; the whole brain had a watery look, and felt œdematous.

*Spinal cord* presented nothing abnormal.

*Thorax.* — Extensive pleuritic adhesions on both sides ; the capacity of the thoracic cavity was much diminished by the extreme convexity of the diaphragm ; slight induration with puckering at the apex of the left lung ; heart uniformly enlarged, and its structure of lighter color than usual, but not friable ; white clots in all its cavities, one of which extended far into the pulmonary artery ; cardiac valves and orifices normal.

*Abdomen.* — Liver in an advanced stage of fatty degeneration ; spleen of normal size, but firmer than usual ; the peritoneal cavity contained a few ounces of yellow serum, but there were no signs of peritonitis

except some old adhesions between the liver and diaphragm ; the lower part of the abdominal cavity was filled with a mass of hard, rounded tumors, which varied in size from a pea to a foetal head ; they were all imbedded in the walls of or attached to the uterus, and those nearest the anterior abdominal walls were attached by long, narrow pedicles, and freely movable ; the ovaries and fallopian tubes were not implicated in the disease ; the vagina was normal, and the cervix uteri much elongated and its canal tortuous from the pressure of some of the tumors ; the cavity of the uterus was enlarged and contained a glairy, sanguinolent matter ; one of the tumors had undergone calcareous or ossific transformation ; the entire mass when removed weighed six pounds six ounces ; the kidneys were large and pale and in an advanced stage of fatty degeneration ; the lower part of the ureters were firmly adherent to the uterine tumors ; the bladder contained a gill of very albuminous urine.

There have been eighteen deaths from general paresis ; some of the cases present points of interest in the causation or progress of the disease.

A young man, single, aged twenty-four, was received with the following history : He had been for some years intemperate in his habits, in the use of liquor and sexual indulgences. Had contracted syphilis, and had an ulcer upon leg. The physical evidences of the disease preceded the mental disturbance. He first complained of difficulty of speaking ; said it seemed as if his tongue was paralyzed. He had been thought insane for only a week ; had delusions of being engaged in extensive business affairs, of having made

large purchases of real estate, and of being in possession of large sums of money. Was talkative, excited and boisterous in speech. Was on the street most of the time, as he claimed, looking after his business interests. Was irregular in sleep and in eating; had spent his money recklessly, and lost flesh rapidly. When admitted, paresis was readily diagnosed by the marked hesitancy of speech, tremulousness of fingers and tongue, complacent countenance, exalted delusions of wealth, and straddling and unsteady gait. He became more maniacal, noisy and destructive, broke furniture of ward and smashed windows. The syphilitic ulcer upon leg was large, and discharged profusely; he was thin in flesh and much debilitated. Delusions of wealth and power rapidly increased, till he said he owned the world, that he was a bishop, a cardinal and the pope. He was good-natured and humorous, careless of appearance, and filthy in habits. After a few weeks he had a decided remission in his disease, became quiet and comfortable, and employed himself in labor of the ward. In about four months he had an apoplectic attack, resulting in hemiplegia. For four days he was comatose, and deglutition was impossible. From this he partially rallied, was conscious, took food readily, but died in a few days.

A man, aged thirty-seven, laborer; had syphilis, and indulged in sexual excesses. Two years before admission he had an attack of paralysis, attributed by his friends to exposure to the sun and hard work. This was markedly paretic, though not recognized as such. After this, paretic seizures were frequently repeated, and, when admitted to the asylum, the patient was

nearly helpless. He could not articulate, and had lost control of the sphincters of the body. He slowly failed, and six weeks afterward a fluctuating tumor appeared near vertex of the head, which communicated with the brain through a carious opening of the skull-cap. On examination after death, about eight ounces of purulent matter escaped. The brain was generally broken down. The opening was about a half inch in diameter, and the outer table of the skull was exfoliated for a space of two inches square.

A man, age thirty-five, sailor, married, no children. Patient had for a few years spent most of his time in traveling on business. Friends first suspected insanity from the tenor of his letters, in which he wrote exaggeratingly of his affairs, and seemed to have an unusual flow of spirits. He soon became violent in action; was arrested for assault and battery; his insanity was recognized, and his friends informed; by them he was brought to the asylum. He had exaggerated delusions of his own wealth, power and personality; said he was a great writer, and received large sums for his literary efforts; was sleeping well and eating voraciously; said he had some years before contracted syphilis; at this time had gonorrhœa. For some months he was maniacal, violent and destructive; exaggeration and incoherence in speech were well marked. For more than a year he gradually failed, became filthy in his habits and weak in mind. He continued constantly maniacal, and for some weeks before death refused all solid food, and made many efforts to injure himself. He died apoplectic.

*Autopsy.*—Body spare; rigor mortis slight.

*Head.* — Skull-cap normal ; vessels of meninges much engorged with blood ; exudation of limited patches of lymph upon the arachnoid, with considerable effusion of serum in the sub arachnoidean space ; intimate adhesion of the pia mater to the surface of the cerebral convolutions, rendering separation impossible without laceration of the cortical portion ; no perceptible alteration of the brain tissue.

*Thorax.*—Heart and lungs normal.

*Abdomen.* — Liver dark colored and engorged with blood ; kidneys mottled and granular.

A young man, aged thirty-five years ; drank and smoked to excess ; had chronic purulent discharge from ear, and was somewhat deaf. Had been insane but a few months, and when admitted had gonorrhœa. The physical symptoms were characteristic of paresis ; hesitancy of speech, tremulousness of fingers, shuffling gait, and very contracted pupils. Delusions in regard to his business relations were greatly exaggerated. He was at no time maniacal, but gradually demented ; became filthy in his habits, and for a few weeks before death was helpless. He died paralyzed, after an apoplectic seizure.

Man, age forty, married, captain of a vessel. In this case paresis was developed in advance of the mental disturbance. About two years before admission the patient had a paretic seizure. The lips and lower part of face were convulsed, and the power of speech lost for a few moments. Hesitancy of speech remained as a permanent symptom. Some time after this the mental disturbance was manifest ; memory was impaired, and the natural firmness of character gave way to indeci-

sion. He continued his duties for a year, when he had another paretic seizure, after which he became manifestly insane; was violent, threatened to kill his wife, and attempted injury to her and others, and also made an attempt to burn a building. He was placed under treatment in a "water cure," and was subsequently sent to the asylum. When admitted he could not walk, protrude his tongue, or articulate. Another paretic seizure then occurred, which produced temporary loss of vision and increased helplessness. These seizures were frequently repeated, and alternated with periods of partial consciousness, when patient had some realization of his condition, and was melancholic and complained of severe pain in his head. He had a remission in his disease, and for some weeks was able to walk out in the asylum grounds. For eight months before death he lay helpless in bed; from the long continued pressure, deep sloughs were formed on different parts of the body. He emaciated, failed slowly and died paralyzed.

*Autopsy.*—Brain: Dura mater, normal; arachnoid opaque and at several points adherent to the pia mater. A large amount of clear serum occupied the sub-arachnoidean cavity. Pia mater was thickened and opaque, and its vessels much injected. It was firmly attached to the convolutions of the cerebrum, and could not be detached without tearing the gray matter. The gray substance was of a lighter color than usual, and both it and the white substance were universally softened; a small quantity of serum in the lateral ventricles; choroid plexus and central ganglia, normal.

*Spinal cord.*—Membranes much congested, and some

thickening and adhesions of the meninges. Careful examination revealed more of the patches of sclerosis mentioned as occurring in the cord of paretics, but a descending degeneration of the right lateral column was plainly visible, both to the naked eye and under the microscope. There was an intense congestion of the central gray axis, which was most marked in the region of the lumbar enlargement.

Man, age forty-four, married. Was strong and healthy, but smoked to excess. Four years before admission had paralytic seizure, with hemiplegia of right side. After a few months regained his usual physical condition, but mind was weak. During this period, the mental disturbance increased, and the patient became irritable, lost judgment, made foolish purchases, was restless, traveled about, and appropriated property of others. He passed to a condition of excitement which culminated in violence, and was arrested for assault and battery; condition was recognized, and he was sent to the asylum. There was embarrassment of speech, difficulty in protruding tongue; facial lines were obliterated, giving a dull and heavy expression of countenance. He was incoherent in speech, and had exalted ideas of his business capacity. Was profane, and at times violent, and made many attempts to escape, under the delusion he was telegraphed to on important business. Several apoplectic attacks followed, with gradually increasing paralysis. After more than two years, he died of apoplexy.

Man, age forty-four, married and two children. Two years before admission complained of a weakness of left

arm, and at periods could not use it. These attacks became general, and patient was compelled to sit or lie down; they lasted at first about fifteen or twenty minutes, and were repeated every three or four weeks. They slowly increased in frequency, and at last were of daily occurrence. These attacks long preceded the mental disorder; this was not marked, and patient worked steadily till a month before he was sent to asylum. In that time he became abusive and violent to his wife; was controlled by depressing delusions; said his family would come to want and starve to death; was suspicious and fearful; from this condition he passed to a state of great exaltation, and had extravagant delusions. Paretic seizures were frequently repeated, and he became extremely feeble in mind, and after a residence of some ten months, died paralyzed.

*Autopsy.*—Brain: Arachnoid and pia mater, opaque from deposit of lymph. Pia mater firmly adherent to surface of the brain. Brain appeared to be of about normal consistency, except at a few points on its external surface, where it formed distinct indurated patches. No effusion in the ventricles. Great engorgement of the choroid plexus, and in fact of all the cerebral vessels, more especially on the left side. The cerebral peduncles appeared to consist of a gelatinous gray matter, which, to a great extent, replaced the normal structure. This grayish appearance extended downward, and disappeared in the transverse fibres of the pons varolii.

Woman, colored, age forty-four, married, no children, good habits. Patient was of a scrofulous diathesis, and previous to admission had abscesses on head and

neck. In the fall of 1869 she began to tremble in her limbs and hesitate in speech, also complained much of pain in head and bowels. When admitted had paretic seizures, in which she fell down and remained unconscious for hours. The physical symptoms of the disease were fully marked, and she had delusions of wealth; said she was richer than any one in the city; mind much enfeebled. A month after admission had severe paretic fit; the attacks were, from this time, frequently repeated; patient never rallied, and in a few weeks died paralyzed.

Man, age forty, single, good habits; was admitted with the following history: Six months ago was observed to have lost the power of distinct utterance, and was also partially paralyzed in lower extremities. Delusions of great wealth and importance soon followed, and he now asserts he owns the whole world; tongue tremulous, articulation defective, talks incoherently and has to be supported between two persons. His history after admission was one of continuance of paretic seizures; gradual loss of mental strength; complete helplessness from paralysis; the formation of extensive sloughs from bed-sores, and finally death.

Man, age thirty-three, single. Three months ago gave first indication of insanity; became disputative in conversation; changed in manner, gloomy, and had marked thickness of speech. Some two weeks before admission, became decidedly melancholic; talked of suicide; said he had committed a great wrong, and must die for it; attempted to knock his brains out against the wall, and bruised his head severely. Physical symptoms: tremulousness of fingers, unsteadiness

of gait. On being protruded, tongue is involuntarily drawn back, and speech so much disturbed that patient can with difficulty be understood. Appetite poor; thin and emaciated; refused food under delusion that it was poisoned; became violent and destructive, tore his clothes, threw self about, pulled his hair; was sustained by forced alimentation; the gloomy and depressing delusions continued, and fully controlled him. He gradually failed; the symptoms increased in severity, and he died from exhaustion a month after admission.

Man, age forty-five, married, one child, native of Germany. Had been in this country fifteen years, and for eleven years kept a saloon, smoked and used liquor; for past two years has worked upon railroad. Three months before admission presented first signs of insanity; became irregular and inefficient in labor. His conduct excited apprehension among the citizens, and he was placed in jail, where he was destructive and violent, and expressed delusions of the possession of wealth and power. Was brought to asylum by deception, being told he was going to work upon a farm. Symptoms present: Could not protrude tongue, had hesitancy and thickness of speech and unusual width and weakness of gait; was for a short time noisy and destructive, but soon became quiet; weak in mind and foolish in speech. There was a gradual failure of both mental and physical powers. During the last year, parietic seizures were frequent and well marked. He died completely paralyzed.

*Autopsy.*—Body, emaciated; cutaneous sloughs on hands and back of the body; sallow color of the face; rigor mortis well marked.

*Head.*—Skull-cap considerably thickened; dura mater adherent to the skull and very thick; arachnoid, opaque and raised in a blister-like sac by serum; pia mater injected with blood, and closely adherent to the cerebral convolutions, so that the cortical substance was torn in the attempt to detach this membrane. Brain tissue generally indurated; ventricles distended, with serum; foramen of Munroe, much enlarged.

*Spinal cord.*—Membranes thickened, adherent and injected with blood; considerable serous effusion in the sheath. The cord presented no abnormal change, upon careful examination with the naked eye and with the microscope.

*Abdomen.*—Liver, spleen and intestines, normal; kidneys of normal size, but of a lighter color than usual, and their pelves were dilated and full of urine. The walls of the bladder were thickened, and contained several saculi. The orifices of the ureters were obstructed by the hypertrophy of the vesical walls.

Man, aged fifty-nine, merchant. Some six months before admission he showed evidences of insanity; became taciturn and seclusive, and complained of a great sense of weakness in his legs. In a short time delusions of wealth and importance were developed. He originated schemes for amassing a large fortune, which he divulged to his brother. This state was soon followed by one of maniacal excitement and violence, in which he was careless in his habits and destructive of clothing. He soon became quiet, and at this time was admitted to the asylum. Here his exalted delusions were repeated; said he was the "Son of God, also major-general, and ready to take charge of the

affairs of the nation." A remission from seizures now occurred, of nearly two years' duration, during which time patient was comfortable and quiet, though weak in mind, foolish in action, and exalted in delusions. A paretic attack then supervened, from which he never fully recovered. These recurred at frequent intervals, for some eight months, when patient died apoplectic some two days after a more than usually severe fit.

Man, age twenty-four, single, good habits, laborer. Three months before admission showed first signs of insanity, by talking incoherently and boastingly of his wealth and power. In his work upon the railroad, was irregular and inefficient, and at last became dangerous to others. Was noisy, singing and talking boisterously and excitedly. On admission, said he was going to buy the capitol at Washington for his friends; complained of pain in his head; staggered in gait; was indistinct in speech; tongue and hands were tremulous; appetite, voracious; was sleepless. Became very maniacal, and refused food, which was forcibly administered. He emaciated rapidly; sloughing took place in axilla, extending into vessels, from which the bleeding was extensive, but was controlled by pressure and styptics. He began to take food freely, and regained flesh and strength, to a great degree, but failed in mind, and gradually sank into a fatuous condition, and for twelve months he never spoke. Evincing no intelligence, and had no control over sphincters. For the last two months, there was great degeneracy of skin and tissues, which terminated in deep sloughs. He died paralyzed.

*Autopsy.*—Body, much emaciated ; large and numerous cutaneous sloughs on its dorsal aspect ; feet and legs much swollen ; rigor mortis, present.

*Head.*—Dura mater, much thickened ; arachnoid, thickened, opaque and separated from the pia mater by a large amount of serum. Pia mater adherent to the gray matter, so that efforts to detach it tore away the surface of the convolutions. Brain tissue firmer than usual. Lateral ventricles contained about two ounces of serum. Foramen of Munroe large enough to admit the passage of an ordinary lead-pencil.

*Spinal cord.*—Membranes all thickened and adherent to each other, as well as to the cord itself. Intense congestion of the vessels of the pia mater. No noticeable change in the structure of the cord.

*Thorax.*—Lungs, heart and vessels apparently normal.

*Abdomen.*—Liver, large and dark colored. All the other abdominal viscera examined, and found normal.

A man, aged fifty, laborer. Contracted syphilis three years before admission ; intemperate ; had been insane for a year, and during this time had employed himself in picking up old rags, hoops, bits of wood and broken furniture, and said he was barreling gold ; had periods of violence and excitement directed chiefly against his wife. The physical signs of paresis were well marked ; he was in fair state of flesh, sleeping well and eating ravenously. There were no apparent indications of syphilitic disease. A month after he had a severe paretic attack, followed by apoplexy, of which he died.

Of the remaining five cases, one was a man sixty-seven years of age, of good habits, who died thirteen months after commencement of disease. Few cases are

on record occurring in persons beyond the age of fifty. Another was that of a man forty-six years of age, who had used liquor and tobacco to excess, and was described as a good liver; before admission his parietic seizures so closely resembled epilepsy that this was diagnosed. Three were under forty years of age, laboring men of good habits.

In analysing the above cases, we find syphilis as a preceding condition and an accompanying disease in four; that four were accustomed to the use of stimulants or tobacco, or both, to excess; that in one of them the form of mental disturbance was melancholia; and that in eight cases the physical disease preceded the disordered mental manifestations. This fact is now attracting more attention, and we feel confident that a more complete and thorough knowledge of the incipency of the disease will place a large number in this list. In our report of last year, particular attention is drawn to this fact. In some more recent works on insanity, we find the same facts commented upon.

The following is the report of Dr. E. R. Hun, embracing the results of his examination of the urine of 500 patients. Both a chemical and microscopic examination was made in all the cases, for the purpose of discovering what evidence of disease might be manifested in this secretion. The tables subjoined show the several facts elicited:

DR. JOHN P. GRAY, *Superintendent, etc.*:

Herewith is submitted a tabulated report of analyses of urine of patients in the asylum, made during the past year:

ACUTE MANIA.		
Total number of specimens examined		56
Sp. gr.	Highest specific gravity	1034
	Lowest " "	1003
	Average " "	1020
Reaction.	Acid	53
	Alkaline	2
	Neutral	1
Chem. ex.	Phosphates	9
	Urates	2
	Normal	45
Mic. ex.	Oxalate of lime (octohedral crystals)	15
	Oxalate of lime and granular phosphates	4
	Oxalate of lime and triple phosphates	1
	Oxalate of lime and uric acid	1
	Oxalate of lime and spermatozoa	1
	Granular phosphates	4
	Triple phosphates	2
	Urates	1
	Spermatozoa	2

CHRONIC MANIA.		
Total number of specimens examined		136
Sp. gr.	Highest specific gravity	1037
	Lowest " "	1002
	Average " "	1017
Reaction.	Acid	132
	Neutral	4
	Alkaline	....
Chem. ex.	Trace of albumen (due to the presence of pus)	3
	Phosphates	16
	Urates	1
	Normal	116
Mic. ex.	Oxalate of lime (octohedral crystals)	31
	Oxalate of lime and granular phosphates	8
	Oxalate of lime and uric acid	4
	Granular phosphates	19
	Urates	1
	Uric acid	5
	Phosphate of lime (crystals)	1
	Spermatozoa	2
	Pus corpuscles	5

## SUB-ACUTE MANIA.

Total number of specimens examined .....	37
Sp. gr. Highest specific gravity .....	1030
Lowest " .....	1003
Average " .....	1018
Reaction. Acid .....	37
Alkaline .....	....
Neutral .....	....
Chem. ex. Trace of albumen (due to presence of pus) .....	1
Phosphates .....	10
Urates .....	1
Mic. ex. Oxalate of lime (octohedral crystals) .....	12
Oxalate of lime and uric acid .....	1
Granular phosphates .....	4
Uric acid .....	1
Pus corpuscles .....	2

## PAROXYSMAL MANIA.

Total number of specimens examined .....	6
Sp. gr. Highest specific gravity .....	1020
Lowest " .....	1010
Average " .....	1016
Reaction. Acid .....	6
Alkaline .....	....
Neutral .....	....
Chem. ex. Perfectly normal .....	....
Mic. ex. Oxalate of lime (octohedral crystals) .....	5
Granulated phosphates .....	1

## PERIODIC MANIA.

Total number of specimens examined .....	2
Sp. gr. Highest specific gravity .....	1024
Lowest " .....	1020
Average " .....	1022
Reaction. Acid .....	2
Alkaline .....	....
Neutral .....	....
Chem. ex. Urates .....	1
Mic. ex. Oxalate of lime .....	1
Urates .....	1

## PUERPERAL MANIA.

Total number of specimens examined .....	1
Sp. gr. Specific gravity .....	1018
Reaction. Acid .....	1
Chem. ex. Perfectly normal .....	....
Mic. ex. Oxalate of lime (octohedral crystals) .....	1

## EPILEPSY WITH INSANITY.

Total number of specimens examined .....	11
Sp. gr. Highest specific gravity .....	1028
Lowest " .....	1007
Average " .....	1015
Reaction. Acid .....	11
Alkaline .....	....
Neutral .....	....
Chem. ex. Phosphates .....	2
Mic. ex. Oxalate of lime (octohedral crystals) .....	1
Granular phosphates .....	1
Pus corpuscles .....	1

## MELANCHOLIA.

Total number of specimens examined .....	82
Sp. gr. Highest specific gravity .....	1034
Lowest " .....	1007
Average " .....	1017
Reaction. Acid .....	79
Alkaline .....	....
Neutral .....	3
Chem. ex. Phosphates .....	24
Urates .....	2
Mic. ex. Oxalate of lime (dumb-bell crystals) .....	1
Oxalate of lime (octohedral crystals) .....	31
Oxalate of lime and granular phosphate .....	4
Oxalate of lime and triple phosphate .....	1
Oxalate of lime and uric acid .....	2
Oxalate of lime and spermatozoa .....	2
Granular phosphates .....	17
Triple phosphate .....	1
Uric acid .....	1
Spermatozoa .....	1

## DEMENTIA.

Total number of specimens examined .....	155
Sp. gr. Highest specific gravity .....	1034
Lowest " .....	1001
Average " .....	1019
Reaction. Acid .....	150
Alkaline .....	1
Neutral .....	4
Chem. ex. Phosphates .....	43
Urates .....	3
Mic. ex. Oxalate of lime (dumb-bell crystals) .....	1
Oxalate of lime (octohedral crystals) .....	30
Oxalate of lime and granular phosphates .....	5

Mic. ex.	Oxalate of lime and uric acid.....	4
	Oxalate of lime and spermatozoa .....	2
	Granular phosphates.....	21
	Triple phosphates.....	2
	Uric acid .....	1
	Urates .....	1
	Spermatozoa .....	5
	Pus corpuscles .....	4

## GENERAL PARESIS.

Total number of specimens examined	19
Sp. gr. Highest specific gravity	1030
Lowest	1004
Average	1017
Reaction. Acid	19
Alkaline	0
Neutral	0
Chem. ex. Trace of albumen (due to the presence of pus)	1
Phosphates	3
Mic. ex. Oxalate of lime (octohedral crystals)	3
Urates	1
Pus corpuscles	2

The most remarkable fact to be deduced from an examination of the above is, that in more than 500 analyses of urine, taken from a class of patients, the majority of whom are in a low condition of physical health, and are suffering from degenerative alterations of tissue, not a single case of albuminuria or morbus Brightii was observed.

It is also to be observed that a diabetic condition of the urine is not recorded in a single instance, although the tests for determining the presence of sugar were applied in all cases where the specific gravity reached 1030.

The abnormal appearance which seems to be most worthy of notice, is the great frequency of deposits of crystals of oxalate of lime.

This condition of the urine, which is so often found among those who are not insane, is considered by authors to be symptomatic, of a faulty action of the functions of digestion and assimilation, and in connection with it there is almost always a kind of nervous depression, giving rise to hypochondriasis or melancholy.

Such being the symptoms of oxaluria in the sane, it is not surprising that we should find a deposit of oxalates very commonly among the insane, where the nervous system is always implicated to a greater or less extent.

An excess of phosphates was found in a large number of instances, as might be expected where there is an increase of cerebral action; but, as no quantitative analyses were made, the question with regard to phosphuria will be reserved until the next report, when more extended and complete investigations shall have been made.

In concluding this report, I may state that the pathology of insanity is a field so new, and hitherto so little explored, that it will take some time to collect a sufficient number of cases from which to deduce definite conclusions.

The past year has afforded many opportunities for valuable investigation, which have not been neglected. Each case has been recorded; and when a large number of them has been collected, they will be tabulated and arranged according to the symptoms observed during life, and the pathological appearances presented at the autopsy. By the aid of such investigations, alone, can the lesions peculiar to insanity be discovered.

Respectfully submitted.

EDWARD R. HUN.

ALBANY, *Dec.*, 1870.

## TABLE

Showing number of cases of general paresis admitted and died since 1849.

YEARS.	ADMITTED.			DIED.		
	Men.	Women.	Total.	Men.	Women.	Total.
1849 .....	.....	.....	.....	4	.....	4
1850 .....	1	.....	1	2	.....	2
1851 .....	1	.....	1	2	.....	2
1852 .....	1	1	2	.....	1	1
1853 .....	6	1	7	4	1	5
1854 .....	4	1	5	4	.....	4
1855 .....	7	.....	7	4	.....	4
1856 .....	2	.....	2	3	.....	3
1857 .....	9	.....	9	3	.....	3
1858 .....	4	1	5	4	.....	4
1859 .....	5	1	6	3	2	5
1860 .....	9	.....	9	9	.....	9
1861 .....	8	1	9	10	.....	10
1862 .....	7	.....	7	4	.....	4
1863 .....	11	.....	11	9	1	10
1864 .....	15	2	17	12	.....	12
1865 .....	22	.....	22	12	2	14
1866 .....	10	3	13	9	.....	9
1867 .....	13	.....	13	8	.....	8
1868 .....	22	.....	22	9	1	10
1869 .....	29	.....	29	15	.....	15
1870 .....	17	2	19	18	1	19
Total .....	203	13	216	148	9	157

## TABLE

Showing the ages of those admitted and those discharged recovered during the year ending November 30, 1870.

YEARS.	ADMITTED.			DISCHARGED RECOVERED.		
	Men.	Women.	Total.	Men.	Women.	Total.
From 14 to 20 ....	17	11	28	11	4	15
From 20 to 30 ....	84	77	161	21	21	42
From 30 to 40 ....	55	66	121	18	25	43
From 40 to 50 ....	48	49	97	15	14	29
From 50 to 60 ....	19	22	41	5	8	13
From 60 to 70 ....	19	9	28	4	4	8
From 70 to 80 ....	3	.....	3	1	2	3
From 80 to 90 ....	2	.....	2	.....	.....	.....
Total .....	247	234	481	75	78	153

## E D U C A T I O N .

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Of 481 admissions, eight had received a collegiate, twenty-nine an academic, and 369 a common school education; twenty-three could read and write, nineteen could read only, twenty-nine had no education, and in four cases the degree of education could not be ascertained.

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## C I V I L   C O N D I T I O N .

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Married, 106 men, 129 women; single, 129 men, eighty-four women; widowed, nine men, twenty-one women; divorced, two men; unascertained, one man; total, 481.

## T A B L E

Of alleged exciting causes in those admitted during the year.

	Men.	Women.
General ill health.....	64	117
Ill health from overwork, grief and anxiety.....	32	32
Vicious habits and indulgences.....	42	..
Phthisis pulmonalis.....	14	14
Puerperal.....	..	28
Intemperance and vice .....	25	2
Paresis .....	17	2
Epilepsy.....	5	5
Exhaustion from heat and sunstroke.....	6	2
Injury to head.....	6	1
Meningitis .....	4	2
Change of life.....	..	4
Menstrual irregularities .....	..	3

Apoplexy.....	1	..
Paralysis .....	1	..
Imbecile .....	..	1
Lead poisoning.....	1	..
Not insane.....	9	1
Unascertained.....	20	20
	<hr/>	<hr/>
	247	234
	<hr/>	<hr/>

## TABLE

Showing the nativity of those admitted.

New York.....	286
Ireland .....	92
Germany .....	26
England .....	14
Canada .....	10
Vermont .....	8
Pennsylvania.....	6
Massachusetts.....	6
Connecticut .....	6
Wales .....	5
Scotland.....	4
Switzerland .....	2
Prussia .....	2
Bavaria .....	2
Holland .....	2
Maine .....	1
New Hampshire.....	1
Michigan .....	1
Maryland .....	1
Virginia .....	1
North Carolina.....	1
France .....	1
Wurtemberg.....	1
Saxony .....	1
Unascertained.....	1
	<hr/>
Total.....	481
	<hr/>

## TABLE

Showing occupation of those admitted.

Housekeepers .....	147
Farmers .....	74
Housework .....	55
Laborers .....	41
Seamstresses .....	15
Workers in wood .....	15
Workers in iron .....	13
Clerks .....	12
Students .....	11
Teachers .....	11
Workers in leather .....	9
Merchants and bankers .....	7
Boatmen .....	6
Painters .....	4
Agents .....	4
Clergymen .....	3
Physicians .....	3
Barbers .....	3
Peddlers .....	3
Stone cutters .....	3
Dentists .....	2
Civil engineers .....	2
Watchmakers .....	2
Gardeners .....	2
Coopers .....	2
Factory operatives .....	2
Plumbers .....	2
Policemen .....	2
Lawyer .....	1
Iron manufacturer .....	1
Photographer .....	1
Stenographer .....	1
Tailor .....	1
Brass moulder .....	1
Brickmaker .....	1
Baker .....	1
Soldier .....	1
Ice dealer .....	1

Cigar maker .....	1
Newsboy .....	1
Nurse .....	1
No occupation .....	13
Total.....	<u>481</u>

## TABLE

Showing the form of mental disease in four hundred and eighty-one cases.

FORM.	Men.	Women.	Total.
Melancholia .....	45	71	116
Acute mania.....	60	50	110
Dementia.....	46	30	76
Sub-acute mania .....	36	35	71
Chronic mania .....	18	16	34
General paresis .....	17	2	19
Periodic mania .....	5	2	7
Senile dementia .....	4	1	5
Puerperal mania .....	.....	19	19
Paroxysmal mania .....	1	2	3
Epilepsy .....	5	5	10
Mania a potu .....	1	.....	1
Not insane .....	9	1	10
Total .....	247	234	481

## TABLE

Showing the statistics of hereditary transmissions, in four hundred and eighty-one cases.

WHERE FOUND.	Men.	Women.	Total.
Paternal branch .....	26	15	41
Maternal branch .....	16	24	40
Paternal and maternal branches .....	2	1	3
Insane relatives .....	15	17	32
Total.....	59	57	116

## TABLE

Showing the duration of insanity, previous to admission, in four hundred and eighty-one cases.

	Men.	Women.	Total.
Under 1 month .....	47	37	84
Under 2 months .....	46	45	91
Under 3 months .....	33	49	82
Under 6 months .....	25	26	51
Under 9 months .....	9	11	20
Under 12 months .....	18	18	36
Under 18 months .....	5	4	9
Under 2 years .....	16	6	22
Under 3 years .....	3	6	9
Under 4 years .....	6	2	8
Under 5 years .....	5	2	7
Under 6 years .....	2	.....	2
Under 7 years .....	9	8	17
Under 8 years .....	2	.....	2
Under 12 years .....	.....	2	2
Under 13 years .....	.....	1	1
Under 14 years .....	.....	2	2
Under 15 years .....	1	.....	1
Under 16 years .....	.....	3	3
Under 17 years .....	.....	1	1
Under 20 years .....	.....	1	1
Under 21 years .....	1	.....	1
Unascertained .....	19	10	29
Total .....	247	234	481

## TABLE

Showing the duration of insanity previous to admission, and the period under treatment, in one hundred and fifty-three cases discharged recovered.

	BEFORE ADMISSION.			UNDER TREATMENT.		
	Men.	Women.	Total.	Men.	Women.	Total.
Under 1 month .....	23	17	40	.....	1	1
Under 3 months .....	24	21	25	10	10	20
Under 6 months .....	13	15	28	26	18	44
Under 9 months .....	5	8	13	20	13	33
Under 12 months .....	1	5	6	4	11	15
Under 18 months .....	6	1	7	7	12	19
Under 2 years .....	.....	1	1	5	8	13
Under 3 years .....	.....	2	2	2	4	6
Under 4 years .....	.....	2	2	1	1	2
Several years .....	.....	1	1	.....	.....	.....
Unascertained .....	3	5	8	.....	.....	.....
Total .....	75	78	153	75	78	153

The matron reports the following articles made in the house, in addition to the mending:

Aprons .....	431
Bureau spreads.....	36
Chemises .....	404
Comfortables .....	100
Cupboard spreads .....	94
Drawers, pairs .....	338
Dresses .....	631
Handkerchiefs .....	1,027
Hose, pairs .....	47
Ladies' sacques .....	13
Night dresses.....	127
Pillow cases .....	1,015
Sheets.....	656
Shirts .....	793
Skirts .....	353
Socks, pairs.....	35
Stand spreads .....	36
Table cloths .....	50
Towels .....	880
Window curtains.....	63
Wrappers .....	602
Whole number of articles .....	<u>7,731</u>

Made in the tailor's shop:

Strong waists .....	43
Coats .....	1
Drawers, pairs .....	20
Full suits.....	20
Overalls .....	38
Overshirts .....	18
Pants, pairs.....	2
Straw ticks .....	175
Vests .....	2
Whole number of articles .....	<u>319</u>

The steward makes the following report of the farm and garden :

Apples, 96 bushels, at 62½ cents.....	\$60 00
Asparagus, 1,241 bunches, at 8 cents.....	99 28
Beans, butter, 26 bushels, at \$2.50.....	65 00
Beans, lima, 17 bushels, at \$3.....	51 00
Beans, string, 18 bushels, at \$2.....	36 00
Beans, dry, 48 bushels, at \$2.....	96 00
Beets, green, 246 bunches, at 20 cents.....	49 20
Beets, 1,927 bushels, at 40 cents.....	770 80
Cabbages, 6,826 heads, at 4 cents.....	273 04
Carrots, 750 bushels, at 40 cents .....	300 00
Cauliflowers, 376 heads, at 10 cents.....	37 60
Celery, 7,842 heads, at 5 cents .....	392 10
Corn, sweet, 261 bushels, at \$1.50 .....	391 50
Corn stalks, green, 40 tons, at \$3.....	120 00
Corn stalks, dry, 10 tons, at \$9.....	90 00
Cucumbers, green, 32 bushels, at \$2 .....	64 00
Cucumbers, Martino, 18 bushels, at \$2.25 .....	40 50
Cucumbers, pickled, 24 barrels, at \$4 .....	96 00
Currants, 427 quarts, at 10 cents .....	42 70
Egg plants, 68, at 25 cents .....	17 00
Hay, 130 tons, at \$18.00.....	2,340 00
Kohl Rabi, 49 bushels, at 60 cents.....	29 40
Lettuce, 2,249 bunches, at 60 cents .....	134 94
Melons, musk, 986, at 15 cents .....	147 90
Melons, water, 279, at 25 cents.....	69 75
Milk, 108,312 quarts, at 6 cents .....	6,498 72
Oats, 140 bushels, at 65 cents .....	91 00
Okra, 26 bushels, 50 cents.....	13 00
Onions, green, 342 bunches, at 10 cents .....	34 20
Onions, dry, 289 bushels, at \$1.50 .....	433 50
Parsley, 42 bunches, at 6 cents.....	2 52
Parsnips, 284 bushels, at 40 cents.....	113 60
Pears, 18 bushels, at \$3.50.....	63 00
Peas, pods, 87 bushels, at 75 cents.....	65 25
Peas, dry, 16 bushels, at \$3.....	48 00
Peppers, 6 bushels, at \$2 .....	12 00
Carried forward.....	\$13,188 50

Brought forward .....	\$13,188 50
Pie plant, 6,427 bunches, at 6 cents.....	385 62
Potatoes, 3,140 bushels, at 62½ cents.....	1,962 50
Salsify, 327 bushels, at 75 cents .....	245 25
Squash, summer, 9,220, at 8 cents and 4 cents.....	737 60
Squash, winter, 4,782, at 20 cents.....	956 40
Tomatoes, 429 bushels, at \$1.00 .....	429 00
Tomatoes, strawberry, 1,242 quarts, at 10 cents...	124 20
Turnips, 287 bushels, at 38 cents .....	109 66
	<hr/>
	\$18,138 73

Stock on farm: Nine horses, one pony, three yoke of oxen, two bulls, two calves, thirty-one cows, 116 hogs.

Amount received for pigs and pork.....	\$396 50
Pork slaughtered for use of house .....	3,390 00
Value of swine on hand .....	2,145 00
	<hr/>
	\$5,931 50
Value of swine on hand, Dec. 1, 1869 ....	\$2,433 00
Amount paid for feed .....	630 23
	<hr/>
	3,063 23
	<hr/>
	\$2,868 27

There have been no changes of officers; I have, therefore, had the aid and active efforts of a corps of able, experienced and conscientious officers in the administration of the affairs of the asylum. I wish again to record my full appreciation of the earnest devotion to their respective duties, and to the general interests of the institution, which has uniformly characterized the conduct of my medical staff, Drs. Kellogg, Andrews and Kempster, and the steward, Mr. Dyer, and the matron, Mrs. Barker.

The attendants and employes deserve thanks for the manner and spirit in which they have performed their duties. Their services, generally, are poorly appre-

ciated by those on whom they are bestowed, and are arduous and often extremely disagreeable. As a body, I can well commend them for efficiency and fidelity. Some are found inefficient and unfaithful, and this is to be expected, especially when so large a number is employed, and there are changes constantly occurring. The regulations of the institution, anticipating this common experience of life, provide for the prompt dismissal of such persons, and this is the course pursued.

To you, gentlemen, I need hardly say that increasing years of experience do not lessen my duties and sense of responsibility, but, on the contrary, increase their weight. I, therefore, feel that I must lean upon you for counsel and support. I have always earnestly endeavored so to discharge the great trust confided to me, that the highest results of the efforts of all might be secured, both for the public and individual, and that all the benefits of advancing medical science should be secured and applied to the welfare of those afflicted. In thus consecrating my energies to public service, I have also sought the constant guidance of that Divine wisdom through which alone men can hope for the greatest measure of success in their labors for the good of mankind.

JOHN P. GRAY.

*Dec. 13th, 1870.*

