

MAINE STATE LEGISLATURE

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Public Documents of Maine:

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

PUBLIC OFFICERS AND INSTITUTIONS

FOR THE YEAR

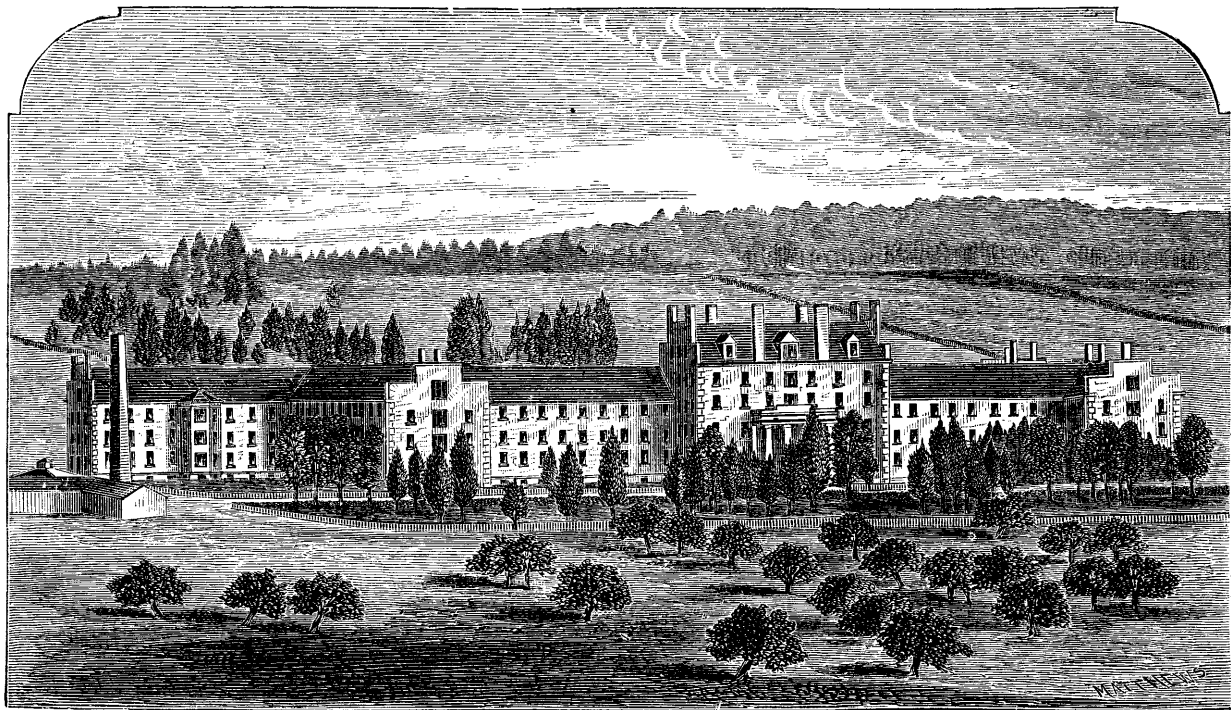
1881.

VOLUME I.

AUGUSTA :

SPRAGUE & SON, PRINTERS TO THE STATE.

1881.



MAINE INSANE HOSPITAL.

REPORTS

OF THE

TRUSTEES, RESIDENT OFFICERS

AND THE

VISITING COMMITTEE,

OF THE

MAINE INSANE HOSPITAL.

DECEMBER 1, 1880.

Published agreeably to a Resolve approved February 25, 1871.

AUGUSTA :
SPRAGUE & SON, PRINTERS TO THE STATE.
1880.

OFFICERS FOR 1881.

TRUSTEES.

J. S. CUSHING, M. D., SKOWHEGAN, *President*.
J. H. MANLEY, AUGUSTA, *Secretary*.
JOHN T. GILMAN, M. D., PORTLAND.
SILVESTER OAKES, M. D., AUBURN.
CHARLES W. JOHNSON, M. D., EAST MACHIAS.
MRS. C. A. QUINBY, AUGUSTA.

RESIDENT OFFICERS.

DR. H. M. HARLOW, *Superintendent*.
DR. B. T. SANBORN, *Assistant Superintendent*.
C. B. LAKIN, *Steward and Treasurer*.
WILLIAM J. McCALLUM, *Clerk*.
MISS ALICE G. TWITCHELL, *Matron*.
VERMONT R. LUCE, *Supervisor of Male Wards*.
MISS HANNAH W. HAM, *Supervisor of Female Wards*.
MISS M. L. CLOUGH, *Head Nurse*.

STANDING COMMITTEES FOR 1881.

On Finance—Oakes, Johnson, Manley.
On Improvements—Cushing, Quinby, Gilman.
On Conference with Legislative Committee—Manley, Quinby, Oakes.
On Library—Gilman, Harlow.

VISITING COMMITTEES FOR THE YEAR.

<i>January</i> —Oakes, Johnson.	<i>July</i> —Manley, Quinby.
<i>February</i> —Cushing, Manley.	<i>August</i> —Cushing, Oakes.
<i>March</i> —Full Board.	<i>September</i> —Full Board.
<i>April</i> —Gilman, Quinby.	<i>October</i> —Johnson, Gilman.
<i>May</i> —Oakes, Cushing.	<i>November</i> —Quinby, Cushing.
<i>June</i> —Full Board.	<i>December</i> —Full Board.

TRUSTEES' REPORT.

*To the Honorable the Governr and the
Executive Council of the State of Maine:*

As the law directs, the Trustees have the honor to submit to you the Fortieth Annual Report of the condition of the Maine Insane Hospital, and of their doings pertaining to it, for the year ending November 30, 1880. We also pass to you the reports of the Superintendent, the Steward and Treasurer, and other officers of the hospital, as they come to us, trusting that they will receive the consideration they severally merit.

THE SANITARY, STATISTICAL AND MORTUARY RECORDS.

For full information on these subjects, we respectfully refer you to the report of the Superintendent. From this may be learned that the sanitary condition of the hospital during the past year has been very good, and that the death-rate from accidents, suicides, epidemics and acute diseases, has been remarkably low.

Thirty-eight, only, have died during the year. Of this number, a larger portion were those who have been for a long time inmates of the institution, and who broke down from the force of disease and the infirmities of age. One hundred and eighty-eight patients have been received during the year, and one hundred seventy-one discharged. Of this number, fifty-seven are recorded as recovered, thirty-three improved, and forty-three not improved. The daily average for the year has been four hundred and twelve. The year commenced with four hundred nineteen patients, and closes with four hundred thirty-six—the largest number at the close of the year ever recorded. A few applications for admission

have been refused by the Superintendent, owing to the crowded condition of the wards at the time. This brings us, in our report, to the question of increased

HOSPITAL ACCOMMODATIONS

for the insane of our State, the importance of which has been presented in previous reports, both by the Trustees and the Superintendent, and recognized and acknowledged by the last two Legislatures, in directing the Trustees to build what will furnish more room for patients, and admit of their better classification. Upon the organization of the present Board, in April, they immediately took into consideration the resolve of the last Legislature, authorizing the Trustees to erect a suitable building for increased hospital accommodations. We gave the whole question careful consideration and investigation, coming to the conclusion that the proposed new pavilion should be made to accommodate at least forty-five patients—with a French roof, which could be made to receive twelve to fifteen more when needed. The preparation of plans and construction were put into the hands of a committee on the part of the Trustees, and the Superintendent, and the Steward and Treasurer, were associated with it. That there might be incorporated into the new building whatever time and experience have tested and proved to be real improvements in similar institutions, two members of this committee made a brief visit to several of the best arranged insane asylums in New England. Having decided about what the new building should embody, Mr. F. H. Fassett of Portland, was employed to draft a plan, with specifications of the same, for the construction of which lowest bids were called for by advertisement in several papers. A number of proposals were received, the lowest of which carried the cost some thousands of dollars beyond the limit of expenditure fixed by the Legislature, in erecting what might be considered by the Trustees a "suitable building." Ordinarily, it would be conceded that enough should

be expended to secure a suitable building, if it were agreed that there existed a demand for it. The whole matter was then referred to the full Board. The unanimous sentiment of the Trustees was : that it was not advisable to pass beyond the sum named in the resolve of the Legislature ; neither was it, in their judgment, wise, or in the interests of public economy, to erect a building of less capacity than that of the proposed plan. The future, with its probable and almost certain demands, must be considered.

It is apparent to every mind conversant with the history of our own hospital, and the crowded condition of insane hospitals in other States, that insanity is a malady not on the decreasing, but the increasing scale. Much as it is to be lamented, the fact is not to be ignored. In the year 1860, the records of our hospital show a daily average of two hundred forty-eight patients. In 1870, three hundred sixty-three—an increase of one hundred and fifteen. In 1880, the daily average is four hundred and twelve, making an increase of one hundred and sixty-four in the last two decades. While the relative increase in the future may not equal that of the past, the above figures render it conclusive that the future will demand more hospital accommodations than at present exist. Therefore, we say, when we build let us recognize this fact, and look beyond what the crowded condition of our hospital now demands. The increased expense in the erection of a building to accommodate forty-five patients, is comparatively small over that for thirty patients.

With these facts and considerations before them, the Trustees decided to stay all proceedings looking to the erection of a new pavilion this season, and refer the whole matter to the Legislature for its directions. The Trustees are of the opinion that the proposed building can be constructed without special appropriation from the State, from the funds and income of the hospital, if they are allowed to do the work without restriction as to cost, or limit as to time for its completion. It was designed, as is proper, that

the building was to be put up under contract, by the "lowest bidder." The Superintendent has frequent applications for private rooms by those who are able and willing to pay for special care and attention, by themselves, and not infrequently they are refused, because all such rooms are occupied. It is in the plan of the new additional building for one story to be occupied by private patients, thus leaving some of the rooms now occupied by this class vacant, to be used as a sick ward, for which they are far better adapted than those now in use for that purpose.

IMPROVEMENTS.

In the last six years very great and important improvements have been made in and around the buildings of the institution. The introduction of a large additional supply of water into the hospital; a new and thorough system of ventilation throughout the wards; the remodeling of the laundry; the establishing of the gas-works on the premises; the building of the chapel, coal-house and greenhouse, are all now regarded as indispensable to the comfort and welfare of the patients and the convenience of the working force of the hospital. Still further repairs and improvements being required, the following have been attended to this past season as described: Very extensive repairs have been made upon the main building. A complete renovation of the entire roof has been made in the most thorough manner. The slating and the zinc and lead work have been put in complete repair. On the side corridors, connecting the wings with the main corridor, leading to the chapel, a coat of soapstone roofing has been laid by Messrs. William Rice & Son, of Bath. The roofs of the new buildings erected last year having been of this material, have proved very satisfactory. The material in this case has been laid directly upon the very leaky tin roof, and it is expected to prove effective and durable. The pointing of the stone-work has been most thoroughly repaired on both end walls of the center building,

the north wall of the third female wing, both end walls of the third male wing, and a large amount of the side walls adjoining each of the several main jobs named. This work has involved the rebuilding of the battlements at the junction of the roofs with the end walls repaired, and the four large stone chimneys, from the roof up, on the center building. The mortar joints of these chimneys and battlements had reached such a state of decay, and the ashlar composing them had become so much dislocated, as to be in some danger of falling apart. There are other chimneys requiring the same treatment, and much more pointing will be necessary to keep the buildings in proper condition. Some of the out-buildings were in need of repairs, and a considerable expenditure has been made upon them during the past Summer season. Certain other portions will require similar renovation. In recognition of the value of whatever will contribute to render the hospital as home-like and cheerful as possible, we have caused certain improvements to be made on the grounds in the vicinity of the buildings. Lawns have been laid out, graded and grassed, and a fountain, flower-beds, walks, seats, play-grounds and arbors provided. A small greenhouse has been erected in connection with that built by our predecessors. This has been done at very small expense, and the cost of attention to both houses will be no greater than for one. It is expected that a portion of the expense can be returned from sales of plants. By this arrangement considerable quantities of cut flowers are now daily taken into the wards, and as the plants gain age and strength, a still greater quantity will be produced.

Concrete walks, amounting to four hundred and sixty square yards of surface, have been laid, connecting portions of the building not previously thus provided.

REPORT OF LEGISLATIVE COMMITTEE.

The report of the Committee of the Legislature of 1879-80, calling the attention of the Trustees to certain changes and improvements deemed by it important to be made in the

wards, was considered by the Board, and referred to the committee on improvements. In this report it was thought that the number of patients in charge of each attendant was too large. A correspondence was opened with all the Superintendents of insane asylums in the country, asking for the average number of patients to each attendant in their institutions. As a result of this correspondence, it was ascertained that the general average in those institutions heard from was about eleven patients to an attendant. A careful inquiry in our own hospital showed that the average number of patients in care of an attendant was not above that of the best regulated hospitals in the country, with one or two exceptions. Two of the male wards especially crowded just at this time, showed a larger number to an attendant than above given, therefore another attendant for these two wards was employed by our direction. It is the design of Dr. Harlow, that the patients, both in the male and female departments, shall in no way suffer for want of proper care and attention, by a suitable number of attendants, who are true and faithful to their duties, and kind and courteous to the unfortunate ones under their charge. The attendants are now, as they have been, under strict regulations, a violation of which subjects them to a dismissal from the service. No blows to a patient are allowed. Restraint and force are only resorted to when necessary to prevent the patients from inflicting injury to their own persons or those of others.

Our attention was also called to the temperature of the wards and lodges, more especially as regards the latter. A feeling was expressed that, during the cold nights of winter, in the lodges, when patients in their wild delirium might strip themselves of clothing, the temperature was allowed to reach too low a point. This was carefully investigated with thermometers on a cold March night, past the hour of midnight, when the mercury did not go below 65 degrees in the lodges, a temperature certainly not too low for invalids to sleep in, more especially the insane; for it will be borne in mind, that

the wildly insane do not require the same amount of heat as those in reason. Still, to guard against the risk of the patients in these rooms being too much exposed in the severe cold nights, a special arrangement has been made for heating them without increasing the temperature of the wards, when necessary.

BATH-ROOMS.

It has been deemed advisable to make some improvements in the system of bath-rooms; and with a view of testing certain appliances in that direction, we have fitted up the private ward for gentlemen with complete bathing appliances, and have thoroughly renovated the three bath-rooms of the first male wing, and furnished the three male dining-rooms with suitable sinks. The most desirable modern appliances known to us, perhaps, excepting some of the more expensive sorts, have been used. The work has been performed in the most thorough and substantial manner, and the bath-rooms fitted up with a special ventilating system. So far as can be ascertained in the short time since the completion of the work, the experiment is quite satisfactory.

We are of the opinion that similar alterations should be made in the bath-rooms of the other wards. Such appliances, to be efficient and durable, are somewhat expensive, but, considering the large number of persons in each ward, and that they are confined, it seems important to have whatever will conduce to their highest sanitary condition.

HEATING AND VENTILATION.

In pursuance of the plan of ventilation wisely begun and mostly completed by a former Board, we have provided for the introduction of pure air into the large steam coils which furnish most of the heat for the wards. Ducts, furnished with dampers to regulate the flow of air, have been connected with the heating chambers, the supply of air being taken directly from outside of the building. These ducts are of sufficient size to admit a very large quantity of air into the

halls in the summer. Thus far the quality of the air in the wards both by day and night appears to be much improved. Each ward and section has been provided with a reliable thermometer, and, by means of the telephone, any deviation of temperature from a standard fixed by the Superintendent, is reported and quickly corrected. It will be seen that the whole arrangement for the passage of pure air through the heating coils, thence through the rooms above, and out through the ventilating shafts previously provided, is very perfect, and that the regulation of the system to conform to changes of wind and temperature outside is completely effected by the means indicated. Further experience will be necessary to determine the economic points involved, but we already have good reason to expect satisfactory results.

TELEPHONES.

The telephones introduced by our predecessors having proved extremely useful, it has been considered proper to extend the system, and we have caused the establishment of a complete telephonic exchange comprising twenty stations. The arrangements are such that no additional person is employed as an operator.

By this improvement great advantages are secured in the many details of the daily management of the institution. In the matters of preparation and distribution of some fifteen hundred meals daily; the regulation of heat and ventilation; gas, steam, water, etc., as well as the power of instant communication between the Superintendent and subordinates in any part of the Hospital, or with the various stations in the city, it will be seen that this is a most desirable aid in such an establishment.

WIRE MATTRESSES.

The use of wire mattresses for the beds in certain wards, having been deemed desirable by the Superintendent, we first authorized the purchase of a small number from the

Tucker Manufacturing Company, of Boston. These proved so satisfactory, and the patients expressed so much delight with them, that we have put in one hundred and seventy-nine in all. They are adapted to the iron bedsteads now in use, and the only expense is for the mattresses. The important advantages of this style of beds over ticks filled with straw, in point of comfort, cleanliness and economy, may justify further expenditure in this direction.

GAS-WORKS.

As was reported by our immediate predecessors, a system of works for the production of illuminating gas, was among the useful improvements of last year. This had been long in contemplation, as appears by the records of the trustees, and had been deferred by reason of more pressing needs, and their inability to provide at the same time all they might desire. It is but justice to say, that the works was well designed and constructed in a very substantial manner. The works has, since its completion in September, 1879, furnished an uninterrupted supply of good gas at all times, producing a light clearer and more brilliant than that heretofore used, and at a very considerable saving as compared with the expense of lighting in former years. While there is, perhaps, no disposition to be wasteful, the entire building is much more thoroughly lighted, as appears from the reports of the Superintendent and his subordinates. The following items are given by the Treasurer as showing the cost of lighting for one year from September 19, 1879 :

Net cost of oil purchased,	\$466 01
Interest and wear of works at 10 per cent.,	250 00
Interest and wear of half cost of building at 10 per cent.,	124 71
Cost of operator, including board,	130 00
Cost of coal consumed,	50 00
	<hr/>
	1,020 72
Deducting value of oil on hand,	66 48
	<hr/>
Net cost of lighting for one year,	\$954 24

This shows a large saving on former years, even after allowing liberally for interest and depreciation of the works, and that part of the building used for this purpose.

FARM.

The general system of farm operations has been much the same as in former years. While the productions of the farm are increasing year by year, measures are being taken every season to improve and enrich the fields for still richer harvests. The drouth which so seriously affected the water supply was tempered by light showers which rendered it less oppressive to crops. Here, as elsewhere throughout the State, the occasional showers, though not sufficient to affect the wells, springs and streams, did moisten the surface of the ground, thereby keeping the crops in a tolerable condition of growth. Some crops, as barley and potatoes, produced but about one-half the average, but they were of good quality. Potatoes were not affected by disease, and they are keeping without loss.

As a piece of information useful to agriculturists, we may mention that a field planted to squashes not only yielded a very excellent crop, but at the same time completely destroyed a heavy mass of witch-grass, with which the ground was filled. This is a simple and inexpensive process for eradicating this pest, and we can say from personal observation that it is a thorough one. We learn, that by this method a considerable area of land formerly almost worthless for tillage has thus been cleared of this incumbrance, and is now in good condition for gardening. We passed over it several times in the growing season, and it certainly bore no evidence of the presence of witch-grass or of weeds. To the clean cultivation practised, is due, in our judgment, much of the success in this department. The garden produced a large variety and abundance of excellent truck for use during the season, and a very large amount has been preserved by canning, and otherwise, under the direction of the accomplished and efficient matron. We are informed that no canned goods have been

purchased, a sufficient quantity having been thus provided, and that a much larger quantity is now consumed than when the goods must be purchased.

SEWAGE.

We deem it worthy of report, that we have taken measures further to utilize the sewage of the Hospital in enriching the fields. Large amounts of sewage from the hospital have formerly flowed directly into the river. A few years since certain experimental improvements were made upon two of the three sewers, and experience shows that the fertilizing matter carried is of very considerable value, when properly applied to the soil. In view of this, we have authorized the erection of works for saving the fertilizing material which has been running to waste from the remaining sewer. The sewage was taken by a cut through a slight elevation just north of the outlet of the old sewer, and conducted through about 150 feet of 15-inch vitrified pipe to a brick vat some thirteen feet square. Situated in this vat is a suitably constructed pump, driven by a windmill, the tower of which rests on and is anchored to the walls of the vat. The pump moves the sewage through a line of three-inch pipe running thence about 800 feet in an easterly direction, and raising it when carried to its greatest elevation about seventy feet. Suitable arrangements for drawing off the flow at a less elevation, when desirable, have been made, and proper means provided to prevent trouble from frost at the points of delivery upon the surface of the ground. The works were completed about November 10th, and so far they seem well adapted to the purpose. It will be possible to reach and greatly enrich many acres of ground by this arrangement, and the only cost is in providing the apparatus and keeping it in repair, which is comparatively small. There will probably be at times more sewage than the pump can move. This surplus will be disposed of on the lower fields by gravitation. It is designed to make use of the sewage during the entire year, as experi-

ence has shown that its use on these same fields when drawn on in winter by teams produced excellent results.

WATER-WORKS AND WATER-SUPPLY.

Considering the recent disaster in the West, of the burning of an Insane Asylum, causing the death of thirty-two insane persons and the sufferings of many others, aside from the property loss of \$300,000, the question may very naturally arise in the public mind and in the minds of those who have friends locked within our own hospital walls, has the Maine Insane Hospital all the necessary means and appliances for protecting it and its inmates from such a calamity as occurred in Minnesota?

In answering this inquiry, we purpose to give a brief, and, as we think, a correct statement pertaining to our water works, our water supply during the past season, and our water capacity. It was supposed by those who have preceded us, that a sufficient supply of water to meet all the demands of the hospital had been provided by them, but the remarkably severe drouth of the past summer, continuing from April to November, and being, as it is stated, the most serious in forty years, proved too great for the capacity of the works. From the last of August to the middle of October, there was, it is true, a scarcity; and at intervals this was so severe that the works provided no water for fire purposes. During this period three hundred and ninety-five hogsheads of water were hauled from the river. This is equivalent to about two days' full supply. The water of the river at that time being lower than at any time for forty years, and receiving the sewage of the city of Augusta at a point very near the hospital, it was deemed best to take the water from a point equi-distant from Hallowell and Augusta.

Our attention was several times called to the exposed condition of the Hospital, by its local officers, and, after an investigation of the subject we instructed the Steward to provide more storage against similar emergencies in the future,

and to adopt such measures for an immediate supply as seemed best. It was proposed by some that water should be pumped from the river into the reservoirs. This would involve the lifting of the water two hundred and seventy feet vertically, through some seven thousand feet of pipe, and as it seemed entirely probable that long before this arrangement could be completed there would be rain, the heavy outlay required would probably not be justified. The Steward, in pursuance of our instructions, proceeded to enlarge the second storage reservoir, increasing its capacity to about 2,500,000 gallons.

With a view of meeting the immediate demands for water, Mr. Lakin, with his characteristic push and forethought, had commenced boring for water on the flat in the region of the springs. Fortunately, after a few attempts, within five hundred feet of the pump-house, he struck a large vein of water-bearing gravel, underlying the compact clay, at a depth of sixteen feet from the surface of the ground. The result of this little experiment furnishes another instance where it pays to have the "right man in the right place." This water was immediately made available by the use of the hand engine, which was manned by attendants and patients, and a large amount of water obtained. Pipe was immediately sent for, to connect the steam-pump, but the Boston market was found to be bare of the required pipe. This occasioned a delay of a week, until the pipe could be brought from Philadelphia. Meantime, the hand engine was worked daily, and by its means the most pressing wants were supplied. The pipe having arrived, was quickly put in place, the suction end driven twenty-eight feet into the earth by means of a pile-driver, and the pump connected with the well. Wonderful, as it is valuable, in three days 75,000 gallons of water were pumped from this source with the appliances named, when, rain having fallen, a sufficient supply was available from the storage reservoirs. We cannot with certainty predict what may be expected of this well. It was opened after a period of drouth, almost, if not quite unprecedented in the history

of the State, and the steam-pump, working on five hundred feet of three-inch pipe, drawing vertically twenty-eight feet, produced the results stated above.

As will be shown, there is now storage sufficient for even such a drouth as we experienced last summer, and more than sufficient. Still, it may be well to further explore the vein of water in which this well is driven, during the dry period of another summer, as it can be done at small expense, and is already known to afford an immense supply of most excellent water, very different in quality from that in the Kennebec at its lowest flow. With the storage already provided we can retain 5,000,000 gallons of water. By a careful estimate the consumption is about 20,000 gallons per day, or about forty gallons *per capita* for the people supplied. At this rate, and allowing for a rain-fall only sufficient to compensate for evaporation, this supply would last from April 30, (when the reservoirs are certain to be full) to January 1, or eight months. All the reservoirs were full as late as April 30, last spring, and had they been of their present capacity there would have been water to spare throughout the drouth. No year has been known when the rain-fall did not exceed the evaporation.

It may be well to give in this connection a brief history of the works for water supply. As will be seen in the annual reports of the Hospital, the Superintendent has, for many years past, called attention to the lack of water for domestic and fire purposes, but up to the year 1876 no organized effort was made to remedy the deficiency. During the year 1874, the east fountain, so-called, the principal source of supply, was much improved, more especially in respect to its power to supply water during drouth. This, however, furnishes an inadequate amount for domestic purposes, and gives no pressure for suppression of fire. During the year 1875 a plan was proposed by Mr. Lakin, the Treasurer, and in some respects favorably received by the Trustees then in charge, a Board of very able and competent men. It was a

matter of such moment that the Treasurer was instructed in June, 1876, to employ an engineer to examine the whole subject and report. He accordingly obtained the services of Luther H. Eaton, Esq., an engineer of repute, then in charge of the water-works for the city of Bangor. During his examination, and pending his report, James B. Francis, Esq., of Lowell, Mass., an hydraulic engineer of large experience and eminence in his profession, was, by direction of the President of the Trustees, associated with him. These gentlemen reported substantially in favor of the plan suggested in 1875. Their reports were dated June 24th and 26th, 1876, respectively, and, as they seem to be of importance in this connection, they are appended to this report.

In pursuance of these reports, Mr. Eaton, under minute instructions from Mr. Francis, prepared drafts from which Mr. Lakin, the Treasurer, made working plans which were submitted to Mr. Eaton, and by him approved. By direction of the Trustees work was immediately commenced and carried out in accordance therewith, as far as possible, before winter. So great was the need, that they came into use while yet in the process of building. Previous to the execution of this work the supply for domestic use was not in excess of 7000 gallons per day when water was most abundant. With no important increase of the number of consumers it has now reached at least 20,000 gallons. Formerly the only fire protection was by means of a hand-engine and some small underground cisterns, and some six or seven chemical fire extinguishers, all of which are now in existence, in as good condition as then. Since the building of the water-works the laundry has been greatly improved, and much more water is consumed in that department. Gas-works have also been erected, requiring a large supply. During each summer a large quantity is used in the lawns and gardens; and in flushing the sewers, washing basement floors, and in all other domestic departments consumption of water is greatly increased.

It will be seen in the reports of the engineers that, this was anticipated, and that the available supply will be more than four times as great as our present consumption, whenever by the provision of sufficient retaining reservoirs the whole shall be utilized.

In these reports, the reasons for the adoption of the present plan were clearly set forth, and your attention is respectfully called thereto. The construction of the impounding reservoirs has cost only about five hundred dollars per million gallons capacity, and they can be readily increased at similar cost. A million gallons is full supply for fifty days. An entire year's supply would be between seven and eight millions of gallons. We already have capacity for five millions, or a supply for two hundred and fifty days. For fifteen hundred dollars a full year's supply would be secured. This, of course, should be done, if necessary, but if not, the unnecessary use of means would be improper when other things are so much needed.

It should be considered that, the entire works were constructed from the savings of the institution while being conducted on as small an income per patient as any in the country, and smaller than most; and that, it is doubtless to-day the best system of domestic supply and fire protection enjoyed by such an institution in New England, and perhaps in the entire country. Whatever savings have since been realized have been expended by successive boards of trustees upon other improvements nearly as much needed as this, and which, like this, might not have been otherwise provided. During the past summer and fall there were only about fifteen days when the works did not afford some protection against fire, and of the forty-eight months since they have been in use not so much as two months have been without protection. It should be borne in mind, that the amount of water required was not fully known as now, nor was the coming of such a season as the last foreseen. Had these points been known, storage for more water would, doubtless, have been provided. In this respect every family and every man-

ufacturing establishment in Maine, as well as every place where people are confined were taken quite as much by surprise as this institution. It is yet fresh in the minds of the people in most of the cities of New England, that a "water famine" was imminent. We have shown above that we have provided all the additional storage that even such a severe drouth as that of 1880 would call for. We cannot say what the future may bring forth, but should it appear necessary more storage can readily be supplied at small expense. As is shown by Mr. Francis' report, and proved by experience, at least four times as much as we are now using can easily be secured, while it is our desire to furnish all that may be required, it appears to be our duty to carefully husband what means come into our hands, and apply it where it is most needed. It is well known that a strong demand exists for more room to accommodate patients, and in our judgment it is well founded. It has been the policy of successive boards of trustees to provide so far as in their power, whatever might be needed, without asking for special appropriations, or, in other words, to practice the most careful economy for the relief of the people of the State from the burdens of taxation. Such a policy seems to us wise and right. It will, we trust, be remembered that, in conformity to law, no local officer of this institution can undertake any important work of building or improvement without authority from the trustees. No violation of this wise provision has ever, in recent years, been reported, or in any way come to our knowledge. Nor does it to us appear that the trustees have exceeded their authority, or taken action without due consideration or competent advice. Concerning the care taken by the Superintendent and those under his control, in point of guarding against fire, we have made examination, and find that every requisite precaution is adopted. There are four persons constantly on duty during the night, visiting every part of the buildings constantly. The attendants, without exception, sleep in the wards. Several able-bodied men, not attendants, sleep in the buildings within easy call. Hose and

appliances hang in every hall, and are kept in readiness for use. The officers have for years, so arranged their hours for sleep that from midnight until five A. M. are the only hours when there is not at least one on duty.

The above statements, made somewhat in detail, pertaining to our water-works and supply, having described the system as we found it, we here leave to your earnest consideration. If in the future the supply proves inadequate, as we believe it will not, we could resort to the Holly system, taking the water from the river; but if this system were adopted, it would be wise to take it at a point above the dam. The expense involved would necessarily be such a sum as to require a large appropriation from the Legislature, and the annual expense of maintenance would be much greater than by the present system.

CHANGES OF OFFICERS AND EMPLOYEES.

Several changes have occurred during the year in the *personnel* of the hospital service. In March Mr. A. P. Hodgkins, for several years Supervisor of the Male Wards, retired from duty, and Mr. Charles V. Hamilton, for some years an attendant, was promoted to fill the vacancy. After a few months of acceptable service declining health compelled him to resign, when Mr. Vermont R. Luce, an experienced and faithful attendant and night watchman, was elected to the position of Male Supervisor. Thus far he has attended to his duties in a manner very satisfactory to the local officers and Trustees. In May last, Mr. Wallace W. Morse having retired for other business, Mr. William J. McCallum was appointed Clerk in the Treasurer's office. Mr. McCallum, being an experienced and well-educated accountant, and very faithful to his duties, is highly esteemed by all the officers of the institution.

For several years the question of employing an experienced and skilled female nurse for the female department has been under discussion. After a careful consideration of the matter thinking it might add to the benefit and comfort to the sick

ones, as well as valuable aid in other directions, it was decided to make the experiment. After repeated efforts by correspondence with different parties in different sections, Miss M. L. Clough, of Boston, was engaged. She was experienced as a hospital nurse, and educated as such, and came to us with good recommendations. She has acted as nurse since August. Thus far she has shown herself well informed as to her duties, and manifests a disposition to make herself useful to the patients and the Hospital. We trust this additional help may prove useful and advantageous. Should it not, a change will be made.

Considering the many demands made upon the funds of the Hospital, arising from the many repairs and improvements in and about the buildings, made in this and former years, the Trustees felt called upon to husband their resources in the exercise of economy in any and all directions possible, without detriment to any of the best interests of the Hospital. Actuated by this motive, we made enquiries into the labors of the medical staff of the institution, as to the amount of time consumed by each of the physicians in their professional care and attendance upon the patients. We were informed by the Superintendent and his assistants, that more time was consumed by some one of them in their attentions to visitors and the friends of the patients, and in the dispensatory department, than was spent by either in his professional attendance upon the patients. They also informed us that in their judgment any well informed and educated young man could attend to the above unprofessional duties. In brief, after taking the whole subject into careful consideration and investigation, we decided to dispense, for the present, with the office of Assistant Physician. This necessarily relieved Dr. E. C. Neal of his connection with the Hospital. In this change we are saving the State an expense of \$1,200 to \$1,500 annually. With the kindest feelings toward Dr. Neal, we can say, while in his position as Assistant Physician in the Hospital for nearly six years, so far as we had knowledge, he was faithful to his duties and to his patients, and well informed

in the special department of his profession which he has chosen. By this new division of labor, relieving the Superintendent and his assistant of much work not strictly professional, and not necessarily requiring the skill of an experienced physician, which has cost the State not less than \$1.500 yearly, they have expressed the conviction that they can have all needed time for looking after the patients, and for counseling in all that may contribute to their comfort and welfare.

FINANCIAL MATTERS.

For the annual history and present condition of our finances, we respectfully refer you to the report of the Steward and Treasurer. It will be seen that they are in a very satisfactory condition, considering the large expenditures of the past year upon the many repairs and improvements in and upon the Hospital. The cost of some articles of consumption has been above that of some former years. The expense for coal this past year has been rising five thousand dollars above that of the preceding year. This is attributable both to the increased cost of that article, and to a deficiency in the supply purchased last year. We would say that, in our judgment, our finances are very wisely and judiciously managed by Mr. Lakin. Being a man of strict integrity, sound judgment, and of a capacity that renders him capable of meeting untried emergencies, his services have become invaluable to the institution. His duties are varied and laborious, requiring his time from early morning to a late hour at night. He has in charge, under direction of the Board of Trustees and the Superintendent, the purchasing of all the supplies for the domestic uses of the Hospital, the various materials entering into the repairs and improvements, the employment of employes with their accounts, and those of all patients, all collections and payments, a special charge of all improvements, and a general supervision of all farming operations. In consideration of these cares and duties, we do not think the sum of nine hundred dollars is sufficient compensation for the service rendered.

As the law provides, the regular monthly visits have been made by two of the Trustees, the full Board meeting quarterly. Our visits of inspection and examination have been made at very irregular hours, at midnight, at early morning and at meal times. The temperature of the halls both by day and night, the cleanliness and ventilation were carefully observed and usually found correct and in a very satisfactory condition. The food, in quantity and quality has been frequently noticed. We have reason to believe that no similar institution furnishes better food or in more abundance than our own. The attendants appear kind, and watchful over those under their care, and ever ready to meet if possible all their necessary wants. At our quarterly meetings the vouchers, books and bills of the Treasurer have been carefully examined in detail, and the source from which every dollar came, and for what it was expended has been ascertained.

We have frequently, at our meetings, had the pleasure of the presence of the Committee of the Executive Council charged with hospital affairs; have received the benefit of their valuable advice and counsel in our administration of the affairs of the hospital; and, in all important transactions, have submitted our doings to their consideration. We desire to state in this connection that, we found Mrs. Whidden, the lady member of the Visiting Committee, an earnest worker for the comfort and welfare of the patients and the general interests of the institution.

In closing our report we would speak in commendatory terms of all the officers of the Hospital. They have rendered another year of valuable service to the institution, in helping to place it on a higher plane of usefulness, and to render it a comfortable home for all those who may need its ministrations, where they shall be kindly and humanely treated and receive the benefits of all necessary medical aid and counsel.

It is proper to state here that, one member of this Board, Mrs. Quinby, dissents from the opinion of the remainder of the Board, regarding the question of water-supply, and is decidedly of the opinion that, inasmuch as the system proved

inadequate last season, it would be wise to make certain of an inexhaustible supply against all want by taking water directly from the river ; and, further to say, that Mrs. Quinby believes that the requirements of the institution demand the employment of three physicians, one of whom should be a woman.

(Signed)	J. S. CUSHING, SILVESTER OAKES, J. H. MANLEY, CHARLES W. JOHNSON, MRS. CORDELIA A. QUINBY,	}	<i>Trustees.</i>
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MAINE INSANE HOSPITAL, }
December 1, 1880. }

NOTE.—The signature of Dr. J. T. Gilman is not appended to the above report, as he was not present at the annual meeting of the Trustees, being prevented by sickness.

SUPERINTENDENT'S REPORT.

*To the Board of Trustees of the
Maine Insane Hospital :*

The lapse of another year brings again the duty of reporting the condition and prospects of the Maine Insane Hospital.

Recognizing that benignant hand of God in all the ways of life, we render to Him grateful thanks for the prosperity and success which has crowned the year just closed.

A good degree of general health has prevailed throughout the entire household. No special sickness or epidemic disease has appeared to mar the comfort and happiness of the inmates. In observing the ordinary ills incident to change of seasons, it was a noticeable fact that there were but few cases of affection of the digestive organs, but instead thereof there appeared quite a disturbance of the air passages in the form of catarrh or influenza, which yielded readily to the usual treatment.

In the realm of mind, we have had to deal with every variety of affection, from mind in ruins to the most exalted and disturbed.

ADMISSIONS AND DISCHARGES.

There were four hundred and nineteen patients on our register at the commencement of the year, two hundred and thirteen men and two hundred and six women. There have been admitted since one hundred and eighty-eight, one hundred and one men and eighty-seven women, making the total number under care six hundred and seven, three hundred and fourteen men and two hundred and ninety-three women.

The monthly admissions are as follows: Ten men and four women in December; five men and five women in Jan-

uary ; seven men and three women in February ; seven men and five women in March ; twelve men and nine women in April ; seven men and eleven women in May ; eight men and eleven women in June ; ten men and eleven women in July ; seven men and seven women in August ; twelve men and five women in September ; eight men and nine women in October ; eight men and seven women in November.

There have been discharged one hundred and seventy-one, eighty-eight men and eighty-three women.

Of those discharged, fifty-seven, twenty-five men and thirty-two women, recovered ; thirty-three, twenty-three men and ten women, improved ; forty-three, twenty-two men and twenty-one women, were not improved ; seventeen men and twenty-one women died.

Of the fifty-seven discharged recovered, thirty-five were on the first admission, thirteen on the second, three on the fourth, two on the fifth and one on the sixth.

Twenty-seven weeks has been the average time in the Hospital of those recovered the past year.

THE RECORD OF DEATHS

the past year is a little larger than that of 1879, being nine per cent. on the daily average number resident. Quite a number of the old residents have reached the end of their pilgrimage, and it is gratifying to know that their pathway to the tomb was made smooth, and their eyes closed by kind and gentle hands.

The average age of those who died was 49, the youngest 23, and the oldest 84. One had been a resident of the Hospital thirty years, two eighteen years each, one seventeen years, two thirteen years each, two twelve years each, one eleven years, one ten years, one nine years, one seven, one six, one four, three three years each, and three one year each. The shortest time in the Hospital before death was two weeks. We are happy to state that no suicide has occurred in the Hospital for more than two years.

THE CAUSES OF DEATH

were as follows: consumption, nine; chronic insanity, nine; general paralysis, seven; epilepsy, four; paralysis, three; exhaustive mania, two; paralysis of heart, two; apoplexy, one; dropsy, one.

THE ASSIGNED CAUSES OF INSANITY

are as follows: ill health, thirty-three; intemperance, sixteen; masturbation, sixteen; domestic affliction, nine; critical period of life, nine; over exertion, six; religious excitement, six; decay of age, six; epilepsy, six; lewdness, three; puerperal, three; loss of property, two; apoplexy, two; disappointed affection, two; pecuniary embarrassment, two; injury of head, two; sun-stroke, two; ill treatment of husband, one; syphilis, one; erysipelas, one; spiritualism, one; suppressed measles, one; general paralysis, one; paralysis, one; unknown, fifty-six.

THE CIVIL CONDITION

of those admitted during the year appears as follows: Thirty-six men and forty-two men are married; fifty-eight men and twenty-nine women are single; nine are widowers and fourteen widows.

TOTAL NUMBER OF ADMSSIONS AND DISCHARGES.

Five thousand five hundred and forty-four patients have been admitted since the Hospital was opened in 1840, and five thousand one hundred and eight have been discharged. Of these, two thousand one hundred and forty-five recovered, nine hundred and ninety-seven improved, nine hundred and one were not improved, and ten hundred and sixty-five died.

DAILY AVERAGE NUMBER AND SUPPORT OF PATIENTS.

The daily average number of patients for the year has been four hundred and twelve. They have been supported as follows: thirty-six have been supported by their own means or that of their friends; sixty-three entirely by the State; three hundred and thirty-seven have received State aid of \$1.50 per week; cities, towns, or individuals paying the balance.

Table showing the operations of the Hospital from its commencement to the present time.

YEAR.	Admitted.	Discharged. Whole number under treatment.	Recovered.	Improved.	Unimproved.	Died.	Greatest No. in Hosp. on any day.	Least No. in Hos- pital on any day.	Remaining at end of year.	Daily average No. for the year.	
1840-1.....	120	80	129	30	14	24	5	70	1	52	48
1841-2.....	89	72	141	32	16	19	5	73	50	65	59
1842-3.....	86	84	151	32	16	31	5	72	58	68	65
1843-4.....	83	75	151	30	16	23	3	79	55	75	70
1844-5.....	99	90	175	39	21	26	2	89	71	85	80
1845-6.....	102	87	187	41	22	14	5	107	80	101	93
1846-7.....	124	100	125	53	17	20	10	125	98	124	108
1847-8.....	128	125	152	60	31	14	20	135	117	127	112
1848-9.....	123	110	150	65	22	19	14	139	121	139	126
1849-50.....	110	120	149	66	35	21	14	165	123	124	137
1850-1.....	75	122	199	22	28	40	32	125	30	76	75
1851-2.....	48	42	124	23	4	8	8	76	34	84	79
1852-3.....	126	89	210	45	14	15	15	120	84	119	108
1853-4.....	109	114	228	49	15	18	32	140	114	115	127
1854-5.....	123	88	243	41	14	14	19	155	114	155	134
1855-6.....	149	114	304	54	22	19	19	194	151	190	167
1856-7.....	144	126	334	69	24	29	14	215	190	208	204
1857-8.....	126	126	334	59	25	18	24	225	205	208	213
1858-9.....	149	120	357	58	22	23	17	240	205	237	222
1859-60.....	136	133	373	63	22	17	31	246	227	240	236
1860-1.....	135	123	375	55	25	16	27	255	239	252	248
1861-2.....	125	119	377	57	24	19	19	267	244	258	254
1862-3.....	118	111	376	52	21	14	24	266	242	265	254
1863-4.....	124	135	389	49	22	11	53	273	247	254	253
1864-5.....	142	110	396	47	25	23	24	282	254	277	272
1865-6.....	135	136	412	61	29	13	33	287	267	276	277
1866-7.....	150	123	426	54	27	11	21	303	276	303	291
1867-8.....	165	129	468	63	23	16	27	341	302	339	319
1868-9.....	150	153	489	68	28	14	42	351	332	337	342
1869-70.....	130	122	467	48	19	18	37	348	330	345	339
1870 1.....	174	151	519	58	28	21	44	376	345	368	363
1871-2.....	202	177	570	79	34	19	45	404	368	393	385
1872 3.....	200	182	593	85	36	20	53	416	388	411	400
1873-4.....	183	207	600	61	33	61	52	420	393	393	406
1874-5.....	188	178	581	66	31	27	52	408	389	403	398
1875-6.....	186	184	589	68	33	31	52	408	384	405	398
1876-7.....	194	183	599	72	35	28	46	423	397	416	411
1877 8.....	188	186	604	56	45	37	48	423	406	418	415
1878 9.....	196	195	614	53	52	60	30	432	399	419	415
1879 80.....	188	171	607	57	33	43	38	439	390	436	412

We have so frequently alluded to the causes of insanity, its treatment, prevention, etc., it seems hardly necessary to remark further upon these topics at the present time. It is a well attested fact that the disease is increasing from year to year, and the only way to prevent it that we know is to live soberly and righteously, obeying at all times the appointed laws of a just God, watching with carefulness what we use to

feed the body, and how we nourish the soul. The aliment for the growth of the mind needs to be selected with even more care than that which goes to nourish and strengthen the body.

When we consider the great mass of mind that is being fed upon the floods of light literature, even the vulgar and obscene literature of the present time, it is not surprising that the average mind of to-day is being dwarfed by what it feeds upon. And when taken in connection with the various excesses of life so freely indulged in, it is a marvel that there are not more who go down in this mighty maelstrom. Holy living is the only sure way of retaining a sound mind in a sound body.

THE USE OF ALCOHOLIC STIMULANTS

has long been reckoned as a prolific source of insanity and other neurotic diseases. Perhaps no single cause is so prominent and unmistakable—so easily traced from effect back to cause, or from cause to effect, as is this one potent influence. In certain constitutions it leaves no masked trail, its steps are open and plain from the first indulgence to the culminating point, when the long bent bow loses its elasticity, and the poor enslaved victim is left writhing in his own agony, from which no earthly power can extricate him. Could the use of alcohol, either as a luxury or a medicine, be stricken from the land, many a room in our lunatic hospitals would be vacated, and many an ill to which flesh is heir, deprived of its vitalizing power.

In the animal economy, alcohol is a monster hydra headed evil, spending its chief force upon the nerve centres, and deranging every part of the vast neurotic system. It should never be used in health, and I am persuaded after many years of observation, that it seldom does any permanent good even in sickness. Where one life is saved by it, thousands are destroyed by its use.

MORAL APPLIANCES.

The usual moral appliances have been applied in the treatment of patients. Foremost of these, we regard the law of

kindness, which we guard with scrupulous care. Everything that is calculated to soothe and quiet the perturbed mind is brought into requisition, and on those over whom the shadows lie heavy and deep we diffuse moral sunshine in the form of music, pictures, flowers and plants, lively reading, social and dramatic entertainments.

During the summer, all who are able and willing, are out of doors for exercise, either walking, riding, working on the farm, in the garden, or about the grounds.

As soon as a patient enters the Hospital his moral treatment begins, and is gently kept up till he leaves.

SUNDAY SERVICE.

The four o'clock Sunday service has been held regularly through the year. The kind, good chaplain, Rev. C. F. Penney, has furnished stated preaching, either supplying the desk himself or procuring a substitute, so that all having willing minds with proper self-control, could attend the pleasing and profitable service in the commodious chapel.

A no unimportant part of the service, has been the excellent singing furnished by the chapel choir.

LIBRARY.

The patients have had greater advantages for reading the past year than ever before. Besides the many hundred volumes in the library, there have been added to the usual supply of newspapers, two or three hundred exchanges from the offices of the Maine Farmer, Kennebec Journal and Gospel Banner.

THE FARM,

A most important adjunct of the Hospital, was never in a better condition. Under the skillful management of Captain Lakin, with Mr. Ashford Sampson as head farmer, it is improving every year. Its fertility and productiveness have already reached a point of great value as a means of support, and there is no lack of resources for keeping the farm up to a high state of cultivation.

Besides the dressing which comes from the barns and farm yards, the sewage is being utilized for irrigation. That from the north and east wing, the kitchen and laundry, is pumped on to the high land north of the Hospital, by means of a powerful wind-mill, erected the past season.

The estimated value of the products of the farm the past year, may be seen by referring to the report of the Steward and Treasurer.

WATER SUPPLY.

The supply of water has been abundant at all seasons except for about six weeks, extending from the last of August to the middle of October, when there was a shortness by reason of the extreme drouth, which prevailed not only in this, but other States, and we were obliged to haul from six hundred to a thousand gallons per day.

The supply from the new works, built in 1877, under the advice and direction of two as eminent engineers as there were in New England—James B. Francis of Lowell, Mass., and Luther H. Eaton of Bangor, has not proved adequate to the wants of the Hospital during such an extreme drouth as that of the past season. This contingency was not overlooked by the engineers, and was provided for in their plan of the works.

That plan has been carried out as fast as practicable. There was only time in the summer of 1877 to build the first two reservoirs, the one on Granite hill, and the other below. The first test of their capacity was in the summer of 1878, when the dry season proved them to be of insufficient capacity to hold in reserve all the water necessary to tide us through the drouth. A third reservoir contemplated by the engineers was then promptly commenced, but not completed before the fall rains obliged a suspension of work.

The next year, 1879, there was an abundance of water the year round. Owing to the wet season, the reservoir commenced the year before, could not be completed, and it was left for the test of another dry season.

Had the drouth of this year been no greater than in 1878, the extra reserve in the uncompleted reservoir would have carried us triumphantly through. I am happy to say, that the reservoir is now finished and its capacity more than doubles what was contemplated at first. It is estimated that the three reservoirs now completed and in good order, will hold five millions of gallons,—a quantity sufficient, it is thought, to meet the emergency of any future drouth.

Should it prove that this provision for holding water is inadequate to meet future demands, another pond can easily be made just below the present one, by throwing a dam across the ravine, and connecting it with the one above.

It is highly important to have the supply of water from above the Hospital east, rather than from the river below. It would be very expensive raising it from the latter to the upper reservoir—an elevation of some two hundred and seventy feet, where it is needed for fire purposes, as well as supplying the attics. We much prefer pure water from the hill-side for cooking or even lavatory purposes, to the water of the Kennebec which cannot but be contaminated, since all the sewage of the city flows into it but a few rods above the Hospital.

Through the untiring energy and promptness of Mr. Lakin, a new resource for water has been discovered, by boring wells near the pump house, to the depth of about thirty feet. These have been connected by a three inch iron pipe to the pump. Should this resource prove as large as indicated by the brief trial before the rain-fall, there need be no apprehension as to the future water supply.

RENEWALS AND IMPROVEMENTS.

It is highly important to keep pace with all modern improvements which tend to increase the facilities for managing hospitals for the insane. Whatever can be done to ameliorate the sufferings of this alienated class, we eagerly seize and bring to our aid in promoting their comfort and happiness.

The introduction of a full system of telephones into all the wards and other parts of the Hospital, has greatly facilitated the management of its affairs. The exchange at the central office here is connected with the telephone exchange in the city, through which we can communicate with any city on the river except Bath. In a business point of view, this is a great convenience and saving of time.

The beds in several wards on both sides of the house have been improved by introducing woven wire mattresses in place of straw beds. These are covered with a nice hair mattress, making very comfortable beds, which are much enjoyed by the patients. We hope to extend this improvement till all the wards are supplied with them.

Improvements in the bathing-rooms and water-closets have been commenced on the male side of the house. Those for the first wing have all been changed for the most approved kind, and are thus far highly satisfactory. It is hoped that this work of change and improvement will be carried into the other wings as soon as the means will allow.

A bathing-room has been put in the private apartments for male patients.

Iron sinks with hot and cold water have been put in all the dining-rooms of the male wards, which greatly facilitates the work in those departments.

There has been the usual amount of painting and renewal of furniture throughout all the wards, which, with the outside painting and extensive re-painting of the walls, has put the building in excellent repair.

The warm air chambers for warming the wings have been greatly improved by introducing fresh air directly from outside. This, of course, helps the ventilation in a marked degree.

An extra steam pipe has been laid to the apartments for the most disturbed patients, which serves to keep the temperature the same night and day.

A new hard wood floor has been laid in the upper story of

the centre building. Several of the apartments have been papered, painted and carpeted.

A new green-house has been built in addition to the one erected last year. It is devoted mainly to the cultivation of roses. The products of the two houses are quite liberal, supplying the wards with plants and cut flowers. The latter are distributed in the wards every morning, the sick rooms being specially remembered.

The front grounds have been improved by grading, and laying out walks skirted with flower beds, with a beautiful fountain in the centre.

A wind-mill of the most approved pattern has been erected the past season, for distributing sewage over the field adjacent to the Arsenal grounds. It will serve to irrigate and fertilize some fifty acres of the farm.

Our experience in manufacturing gas the past year, has proved entirely satisfactory. The Hospital has been well lighted at a cost of \$954, about one-half the cost of previous years.

FUTURE WANTS.

The most important want of the present time is *more room*, to meet the pressing calls for help. It is well known that the present accommodations are crowded, and have been so for a long time past. The Hospital has never closed a year before with so many patients as there are now, and some efficient action should be taken at once by the Legislature to give relief.

It is much to be regretted that the work of erecting a pavilion for females could not have been commenced this year, as the resolve of the Legislature provided. It was hoped that the mistake of limiting the Trustees in the expenditure of accumulated funds in the Hospital treasury, by the resolve of 1879, providing for further accommodations for female patients, would not have been repeated, but it proved otherwise. These several mistakes have incurred considerable expense in procuring plans and specifications, as well as loss

in the rise of building materials, to say nothing of the continued discomfort and inconvenience of an over crowded house.

It must be obvious to every one that the want of sufficient room bars all suitable classification, so essential to efficient and successful treatment. We trust that the way will be made easy and practicable for the commencement of a building so much needed.

It is very desirable that the present system of elevators, which are heavy to manage, should be replaced by an improved kind, and we recommend that the change be made at as early a date as practicable.

It has been some eight or ten years since the farm buildings were painted. In order to keep them in a good state of preservation, they should all receive a coat of paint the ensuing year. This, with the further renewal of bathing rooms, water closets, and beds, added to the outlay required to erect a pavilion, will be likely to absorb the surplus funds in the treasury.

AID FOR THE INDIGENT INSANE

committed to the Hospital, was wisely provided by statute many years ago. The rate to be paid by the State was originally fixed at one dollar per week, during the time each certified indigent person remained in the Hospital. This continued till within a few years past, when it was deemed advisable to increase the rate from one dollar to one dollar and fifty cents per week.

The question now arises, whether it would not be proper and wise, both for the State and Hospital, to return to the original rate of one dollar per week. Under the present rate, municipalities sometimes find it for their pecuniary advantage to send incurable patients to the Hospital, who would not be committed if the expense of support was increased by adding the half dollar per week. The change would save the State from seven to ten thousand dollars per year. The suggestion is simply made for your consideration.

PERSONAL CHANGES.

There have been several changes in the resident officers since our last report. In March last, Mr. A. B. Hodgkins retired from the position of Supervisor after a service of twenty years, and Mr. Charles V. Hamilton was appointed to fill the vacancy, but on account of failing health he was unable to attend to the duties, and resigned in September. The place was then given to Vermont R. Luce, who is doing the work in an acceptable manner.

During the summer, Mr. Wallace W. Morse retired from the office of Clerk, and Mr. Willard Chadwick took the place temporarily. It was subsequently given to Mr. W. J. McCallum, who has been appointed to fill the vacancy.

At the semi-annual meeting of your Board, it was deemed advisable to employ an experienced nurse to preside over the female wards.

Mrs. C. A. Quinby and the Superintendent were appointed a committee to find a suitable person. After considerable inquiry by letter and otherwise, Miss M. L. Clough of Boston was engaged, and entered upon the duties of her position in August last. She is a graduate of the Boston Training School for Nurses, and was subsequently employed as head nurse at the City General Hospital. She has in connection with nursing, given considerable attention to the study of medicine. She is well qualified for the position she now holds, and is doing good service.

With the close of the fiscal year, Dr. E. C. Neal took up his connection with the Hospital, as assistant physician, a position he held between five and six years. In his retirement, the inmates have lost a watchful and attentive medical adviser, who was ever ready to minister to their varied wants.

ACKNOWLEDGEMENTS.

As in other years, many friends have contributed to the general good of the patients, through gentle words and kindly deeds, which always tend to carry sunshine to the souls where shadows dwell. Verily, they, one and all, have their reward, and our sincere thanks.

Among these, we mention with pleasure, Miss Gertrude E. Moore of Boston, and Miss Cornelia Mayhew of Mount Vernon, Me., in fine select readings; the Home Minstrels from Togus, and Amateur Club of Augusta, in unique entertainments; Prof. E. K. Harlow and wife in a vocal and instrumental concert.

We are again under obligations to Thomas Goodall, Esq., of Sanford, Me., for several packages of elegant boquets, numbering some fifty in all, which were distributed about the wards, to the delight of all who saw them.

To the Dingee and Conard Co., rose-growers of West Grove, Chester county, Pa., for twenty-five varieties of rose plants for the green-house, which are now producing elegant roses for distribution.

To Mrs. Russell Morrison of Bangor, for quite a variety of valuable plants for the green-house.

To E. C. Allen, Esq., and Hon. P. O. Vickery and Mrs. C. A. Quinby, for a variety of valuable engravings and chromos.

To Mrs. Dr. Oakes, for chromos and a variety of materials for fancy work to interest the patients.

Allow me to express to the members of your Board my grateful acknowledgements for your manifest interest in the welfare of the Hospital, and the kindness shown me in my official capacity.

We have received regular and irregular visits from the Visiting Committee. Mrs. C. R. Whidden, the lady member, has spent much of her time for the good of the institution. She has been vigilant and untiring in her efforts to improve the condition and promote the comfort and happiness of the

patients, who all welcome her as their sympathetic friend and adviser. She has had the largest liberty to go when and where she chose about the Hospital, by night and day.

I am greatly indebted to my associates for their support in the advancement of the humane work in which we are engaged, and to all, with few exceptions, employed in and about the institution, for their industry and faithfulness in the discharge of the duties connected with their varied trusts.

Once more, as we enter upon the duties of another year, we commend the interests of the Hospital to the fostering care of the State, and invoke the blessing of Heaven upon the efforts which may be made in behalf of those who need its care and treatment.

H. M. HARLOW.

MAINE INSANE HOSPITAL, }
Augusta, November 30, 1880. }

STEWARD AND TREASURER'S REPORT.

To the Trustees of the Maine Insane Hospital:

I herewith submit the report of the receipts and disbursements of cash, a statement of the resources and liabilities, and a brief summary showing the results of the farm operations of the Maine Insane Hospital, for the year ending November 30, 1880.

Exclusive of the difference in the amounts brought forward from the respective preceding years, it will be observed, that the receipts of cash have been slightly smaller than for last year.

This is partly due to the lower average number of patients for this year, and, in other part, from diminished receipts from sales of surplus farm productions. The comparatively large excess of expenditures over last year results principally from the higher range of prices for such commodities as we consume. The article of coal in particular, has been much more expensive, and, by reason of short purchases, in 1879, it has been necessary to provide a larger quantity during this year. As is shown in the inventory a large supply is now in stock, and as most of it is in the shed built last year and the balance in that at the wharf, it is beyond the reach of freshets. There has also been larger expenditure in the ordinary repairs and improvements, and in interior re-furnishing.

The productions of the farm and garden have been of excellent quality, and sufficiently abundant to meet all our wants in some respects, while in some others there is a partial supply. It may be well to call attention to the fact, that the amount of money paid for an article during a current year,

does not necessarily represent the cost of what has been consumed during that year. It frequently appears expedient to carry over a considerable quantity of some kinds of goods. As you are aware, careful accounts are kept, showing the quantity of all goods purchased, the same being based upon the vouchers for cash disbursements and corresponding thereto; and correct records made, showing the reception of all such goods into the several departments, and the date, quantity and purpose of each current issue, when the goods pass into use.

Mr. Wallace W. Morse, the capable and efficient Clerk, relinquished his duties in May. The place has since been filled by Mr. William J. McCallum, of Warren, who has performed his work with exceptional faithfulness and ability. It is my desire to express to yourselves and the Superintendent, my thanks, for your kindness in directing the execution of my work, and to all my associates, for much valuable assistance and friendly co-operation.

FINANCIAL AFFAIRS.

RECEIPTS OF CASH—1880.	
Balance from last year.....	\$9,368 23
From towns and individuals.....	45,799 12
sale of horse.....	162 50
interests on deposits.....	160 00
express charges.....	22 93
sales of vegetables.....	73 38
barley for seed.....	104 30
house rent.....	135 00
sales of barrels.....	65 00
medicines.....	1 87
State for support of patients.....	36,005 21
discounts.....	142 83
sales of farm stock.....	18 75
service of stock animals.....	34 90
sales of hides, tallow and bones.....	136 45
lead, rags and iron.....	26 65
pigs.....	589 00
telegrams.....	6 70
sales of tripe.....	1 60
	\$92,854 42

FINANCIAL AFFAIRS—Continued.

DISBURSEMENTS OF CASH—1880.	
Paid for flour.....	\$3,711 97
molasses and syrup.....	939 53
tea.....	162 26
sugar.....	3,542 69
coffee.....	656 20
rice.....	324 38
oatmeal.....	56 00
turkeys and chickens.....	150 99
oysters and clams.....	243 50
milk.....	675 82
salt.....	81 22
crackers and pilot bread.....	286 50
lard.....	410 13
vinegar.....	108 32
berries.....	511 20
honey.....	557 56
croekery ware.....	322 72
glassware.....	19 55
boots and shoes.....	457 80
carpets.....	18 92
postage.....	320 28
stationery and blank books.....	252 19
revenue stamps.....	6 16
telegrams.....	32 91
rent of telephones.....	315 00
tobacco.....	210 60
insurance.....	73 00
oil for lanterns and lubricating.....	118 69
traveling expenses of Steward and Treasurer.....	91 09
wood.....	122 46
starch.....	77 63
freights.....	733 07
seeds.....	128 49
fertilizers.....	436 54
harnesses, robes and blankets.....	49 27
repairing carriages and sleighs.....	128 43
paints, oil and wall paper.....	321 07
flower seeds and plants.....	41 10
confectionery.....	85 69
cocoa.....	147 61
hops and malt.....	7 90
cutting and storing ice.....	223 93
cutlery and spoons.....	46 17
tapioca and corn starch.....	47 51
farm stock.....	35 00
printing.....	32 50
corn and meal.....	2,298 72
soap.....	477 95
spices and extracts.....	106 48
furniture.....	1,066 49
steam, gas and water pipe.....	46 38
cash returned to patients.....	229 45
soda and creamtartar.....	81 19
cheese.....	144 79
beans and peas.....	281 27
medical supplies.....	781 07
potatoes.....	450 33
dry goods and clothing.....	4,689 15
amusements.....	149 07
fruit.....	1,103 71
tools and implements for farm.....	116 78
coal.....	9,783 04
fish.....	1,455 19

FINANCIAL AFFAIRS—*Concluded.*

Paid for physicians' examination of patients.....	\$11 00	
labor for farm.....	1,791 20	
eggs.....	5,860 62	
meats.....	1,042 55	
newspapers and periodicals.....	95 30	
straw for beds.....	445 97	
repairs and improvements.....	6,107 60	
tools and implements for hospital.....	582 61	
express and transportation of patients.....	137 90	
labor for hospital.....	17,451 80	
butter.....	5,222 87	
blacksmith work.....	85 96	
charcoal.....	67 86	
repairing boots and shoes.....	19 15	
millinery goods.....	3 57	
repairing harnesses.....	35 05	
advertising.....	39 22	
green house.....	279 53	
gas materials.....	660 37	
insect powders.....	24 60	
matches and tapers.....	50 30	
musical instruments.....	5 45	
pearl barley.....	15 63	
first male bath rooms and sinks.....	924 09	
steam mangle.....	250 00	
north sewer improvements.....	661 10	
advertising for proposals.....	29 12	
water works.....	463 79	
glass.....	14 80	
wire mattresses for wards.....	708 75	
clocks.....	67 25	
concrete walks.....	207 00	
hats and caps.....	119 35	
macaroni.....	30 00	
refurnishing Superintendent's rooms.....	447 36	
carriages and sleighs.....	270 00	
horses for hospital.....	625 00	
rubber blankets.....	60 00	
		\$85,496 39
Balance cash on hand.....	-	7,358 03
		\$92,854 42

STATEMENT OF RESOURCES AND LIABILITIES.

RESOURCES.		
Cash on hand.....	\$7,358 03	
Due from State for support of patients.....	9,840 96	
Due from towns and individuals for support of patients...	13,304 91	
Provisions and groceries on hand, per inventory.....	4,423 24	
Dry goods on hand, per inventory.....	3,221 26	
Medical supplies on hand, per inventory.....	970 41	
Coal on hand, per inventory.....	7,715 50	
		\$46,834 31

RESOURCES AND LIABILITIES—*Concluded.*

LIABILITIES.		
Due for groceries and provisions.....	\$21 45	
corn and meal.....	214 01	
medical supplies.....	16 74	
freights.....	53 31	
blacksmith work for 1880.....	80 88	
dry goods and clothing.....	15 00	
repairs and improvements.....	26 66	
		\$428 05
Due employees per pay roll.....	-	4,156 43
		4,584 48
Net resources.....	-	42,249 83
		\$46,834 31

STATEMENT OF FARM OPERATIONS.

FARM,		Dr.	
To live stock, per inventory Nov. 30, 1879		\$4,217 00	
farm tools, per inventory Nov. 30, 1879		1,913 27	
hay, grain, &c., per inventory Nov. 30, 1879		3,261 60	
paid for labor		1,791 20	
seeds.....		128 49	
live stock		35 00	
farm tools.....		116 78	
corn, meal and feed.....		502 86	
blacksmith work for 1879.....		12 30	
fertilizers.....		436 54	
threshing grain.....		15 10	
boarding farm laborers at \$2.75 per week.....		1,144 00	
boarding threshers.....		6 00	
paid for sewer improvements.....		661 10	
paid for repairs on farm buildings.....		286 34	
Net profit*.....		-	\$14,527 58
			6,386 54
			\$20,914 12

FARM,		Cr.	
By live stock on hand, per inventory No 30, 1880		\$5,485 00	
farm tools on hand, per inventory Nov. 30, 1880		1,879 65	
hay, grain, &c., on hand, per inventory Nov. 30, 1880.....		2,875 25	
beef furnished to hospital		215 91	
pork furnished to hospital.....		605 54	
milk furnished to hospital.....		2,160 88	
cash from sales of pigs.....		589 00	
cash from sales of hides and tallow		42 21	
cash from sales of live stock		18 75	
cash from sales of vegetables.....		73 38	
cash from sales of barley for seed.....		104 30	
cash from service of animals.....		34 90	
farm products furnished to hospital, per schedule.....		3,561 17	
labor and trucking for hospital.....		2,638 18	
hay for hospital horses		630 00	
			\$20,914 12

* Permanent improvements are allowed to offset interest.

Very respectfully submitted.

C. B. LAKIN, *Steward and Treasurer.*

MAINE INSANE HOSPITAL, }
Augusta, November 30, 1880. }

CHAPLAIN'S REPORT.

To the Trustees of the Maine Insane Hospital:

The time has again arrived when it becomes my duty to present a brief Annual Statement of my work as Chaplain of the Maine Insane Hospital.

Nothing has occurred in the ordinary routine of Sabbath service, during the year, to make this report differ from others made by myself or predecessors in office. Religious services have been held on each Sabbath afternoon of the year, conducted either by myself or some acceptable substitute. With the consent of the Superintendent, I have availed myself, more than any other year, of the privilege of inviting clergymen from the city to conduct the service. That this has been of increasing interest and profit to those in attendance, I cannot doubt.

Burdened with the cares and responsibilities of my own parish, I have had less privilege of visiting the patients in their rooms than I desired, but as occasion has given opportunity, I have done in this way what I could.

In conducting the Sabbath service, I have aimed, so far as possible, to select topics calculated to secure attention and interest. All allusion to the circumstances of the place I seek carefully to avoid, as well as the condition of those before me. Such references to many are both annoying and offensive.

The service does not differ from the ordinary worship of God's house. It consists of singing, reading scripture, prayer, and a short discourse; occupying usually about three-fourths of an hour. The number in attendance on the Sabbath services is unusually large, frequently numbering over two hundred. Interruptions during the service are

rare. The rule is, a quiet, orderly attention, which would be creditable to any Sabbath congregation.

The singing, which is here a most important part of the service, has been a portion of the year under the direction of Prof. E. K. Harlow. The Chapel choir, under his careful training, and with the aid of his voice and skillful playing, has aided very much in all the Sabbath services.

I have attended all the funerals of those who have been interred on the Hospital grounds, or placed in the receiving tomb, subject to the disposition of friends and relatives.

The question is often asked, what real or permanent effect is produced in the minds of the patients by the Sabbath service? This, of course, it is impossible to know. But there is a large class to whom the consolations of the Gospel of Christ are peculiarly adapted to cheer and soothe, and who are helped and comforted by the ministry of the Word. To such as are walking in the valley, and under the cloud, the Gospel of benevolence, love, sympathy and hope, which is voiced in so many of our beautiful hymns, and breathed forth in the life and gracious words of Him who went about doing good, is like cool water to the thirsty soul, or like the shadow of a great rock in a weary land. Who can doubt that His words, which so often brought peace to the troubled, hope to the hopeless, joy to the sorrowing, and comfort to the afflicted, can fail to bless the sick and suffering in mind and body, now.

In conclusion, let me say, I am happy to testify to the uniformly kind, respectful consideration which I have met with in all my intercourse with patients and attendants, as well as the very kind attention that I have at all times received from the Superintendent, his assistants, and all others connected with the government of the institution.

Respectfully submitted.

C. F. PENNEY, *Chaplain.*

Augusta, Nov. 30, 1880.

REPORT OF COMMITTEE ON HOSPITAL LIBRARY.

To the Trustees of the Maine Insane Hospital:

Your Committee on the Library for the year ending Nov. 30, 1880, having attended to the duty, would now ask leave to report:

RECEIPTS.		DR.
1879—Dec. 1.	To cash on hand.....	\$1,233 37
1880—May 3.	“ for coupons.....	60 00
Aug. 9.	To bank dividend.....	35 12
Sept. 18.	To cash for coupons.....	60 00
Nov. 30.	“ from box.....	2 03
		\$1,390 52

DISBURSEMENTS.		CR.
1879—Dec. 11.	By paid for magazines.....	\$6 50
“ Dec. 26.	By deposit in Augusta Savings Bank.....	1,200 00
1880—Feb. 4.	By paid for book.....	2 50
Mar. 19.	“ “ periodical.....	5 00
May 3.	“ “ books.....	7 88
May 22.	“ “ book.....	3 50
June 17.	“ “ hymn books.....	2 80
July 28.	“ “ book.....	2 25
Aug. 16.	“ “ books.....	5 00
Oct. 5.	“ “ books.....	48 36
	Balance.....	106 73
		\$1,390 52

H. M. HARLOW, *Committee on Library.*

Report of Luther H. Eaton, Esq., on Water Supply.

[Copy.]

BANGOR, June 26, 1876.

C. B. LAKIN, Esq., *Steward and
Treasurer Maine Insane Hospital:*

Sir: Having given the subject of supplementary water supply, for extinguishment of fires, and to meet such wants as may arise from an insufficient domestic supply, as careful consideration as I have been able to do, I would report as follows :

The various projects considered were—

1st, The construction of a dam or impounding reservoir at or near the knoll above the spring in the pasture where the barrel is set, thence taking it directly to the Hospital by force.

2d, The construction of an impounding reservoir as above, or in the space now occupied as a potato field, thence raising it by means of a wind-mill, or otherwise, to a distributing or feeding reservoir on the top of the hill near by, thence to be drawn by gravity for use as required.

3d, Planting pumping apparatus at the river and forcing the water to the building. In considering this third project, much would depend upon the question whether steam could be transmitted from the boilers now in use to the river to supply the pumping engine without material loss by condensation. Experiments are now in progress to determine this, but have not yet proceeded far enough to be conclusive.

It has to recommend it an unfailing supply of pure water without expense of reservoir, and would, if the steam could be so transmitted, undoubtedly be the cheapest in construc-

tion of the three methods of supply, but would necessitate the employment of a careful man constantly, for the one purpose of its care and operation, for it would be impossible to tell when he might be needed, and absence at *any time* might result disastrously.

The second-named project has been considered by Mr. James B. Francis of Lowell, Mass., and it is unnecessary that I should consider that, except comparatively. The first mentioned method has, everything considered, impressed me as being the best, and I present below an estimate of the cost of construction.

By the erection of a not expensive dam, across the ravine mentioned, of sufficient height to retain, say one million gallons, the drainage from an area of about 25 or 30 acres water-shed may be secured. This would give an effective daily supply the year round, as I have estimated, of 15,000 gallons, equivalent to a consumption of 30 gallons per head for 500 people. From this impounding reservoir lead a six-inch pipe to the present engine house,—here plant a pump of such description as may be thought best, if for occasional use only, perhaps an elliptical rotary of ten gallons capacity,—or, if for constant use, two reciprocating cylinders of about twenty gallons capacity each. These pumps, whichever might be used, could be driven by an engine situated in the present engine house and supplied with steam from the boilers now in use, and would draw water from the reservoir and force it through the pipes leading to hydrants situated in the yards near the various buildings, and through stand-pipes located at convenient places in the Hospital, preferably near the stairways. To these stand-pipes, hose might be attached where desirable, thus forming the most complete fire protection that has yet been devised, and needing no intermediate agencies, as fire engines. These pumps would be able to throw four one-inch hydrant streams at one time under a pressure equal to a head of two hundred and twenty-five feet, or seven, three-quarter-inch streams under the same pressure,

or sixteen one-half-inch streams under the same pressure. I have considered this the best place for the impounding reservoir, as a greater depth of water can be obtained, giving a lesser surface for evaporation and leaving more water under the ice in the winter. It also occupies ground less valuable for cultivation than the second project. This method avoids the construction of a reservoir upon the hill, and the expense, whatever it may be, of lifting water some sixty feet into the air to supply it, with a fire service of less than half the effective value, I believe, but to have it thorough it will compel the maintenance of steam in one boiler at least sufficient to drive the pumping engine at any time.

By the system above proposed a supply sufficient to meet any contingency, may be obtained and commanded as needed at any time, adaptable to such pressure as required. You use a smaller and less expensive pipe, you have equivalent to as many steam fire engines constantly fired up as you have hydrant openings and ready for service. In the gravitation system the best pressure is at the commencement of the draft, and this constantly decreases as the head is lowered and no reserve force is attainable. By the system proposed you have a reserve of power with an abundant supply of water.

Very respectfully,

(Signed)

LUTHER H. EATON.

Report of James B. Francis, Esq., on Water Supply.

To the Trustees of the Maine Insane Hospital :

As requested, I have examined several plans proposed for furnishing an additional supply of water to the Hospital buildings, for the purpose of extinguishing fire, and for occasional deficiencies in the present supply for the ordinary purposes of the Hospital. Mr. L. H. Eaton and Mr. C. B. Lakin have accompanied me, and furnished me with all the necessary information, so far as the same was attainable.

Three plans were brought to my notice, viz :

1. A supply from the Kennebec river, by means of steam power, on the Holly system.

2. A supply from a reservoir in the low ground easterly of Hospital street, to be supplied by natural drainage from the water-shed in the vicinity, and placed at an elevation adapted to supply force pumps near the present steam boilers, by means of which the water could be elevated for use on the Holly system.

3. A supply from a reservoir in the low ground easterly of Hospital street, to be elevated by a windmill to a reservoir or tank to be placed on the top of Quarry Hill, and from thence delivered by gravity through a conduit pipe to the Hospital buildings.

By the first plan a steam engine and boilers, placed on the river bank, would be required to be kept in constant operation or readiness for immediate use, in fact, a complete Holly system by steam power. From the success of this system elsewhere, it is obvious that this could be arranged to meet all the requirements, and so far as I am informed, I think it is the most perfect arrangement that you would be likely to

get. As a means of additional supply only, it would, however, appear to require a much larger outlay, both in first cost and annual expense, than the circumstances would warrant.

It has been suggested that the expense could be somewhat reduced by taking steam by a pipe, well protected from loss of heat, from the present boilers, but I think the distance is too great to render this practicable.

By the second plan, to meet the requirements, in case of fire, a pressure of steam must be maintained in the boilers, at all times. This of course could be done, but as it is to be hoped, fires will occur at very long intervals of time, I think there would be great danger that at the critical moment it might be found wanting. The first cost and annual expense of this plan would, however, be much less than by the first, and if everything worked as intended, the great advantage of the Holly system, of keeping up a high pressure in the pipe during a fire, would be attained.

By the third plan a constant supply of water would be maintained at an elevation of about ninety feet above the ground in the vicinity of the Hospital, which would be available at any moment for extinguishing fire as well as for making up for any deficiency in the supply from other sources for the ordinary use of the Hospital. Its principal defect, and it is a serious one, is, that the pressure in the pipes will be much less than is desirable for fire purposes, but I do not see that this can be had except by the Holly system, which for reasons before stated, I think even more objectionable.

By the use of a pipe from the reservoir on quarry hill to the hospital buildings, of not less than eight inches in diameter, there will be little loss of head when not more than four streams, from five-eighth inch hose pipes, are played at once from the level of the ground near the Hospital, and a greater number could be effectively used at hydrants inside the buildings at the several stories, if properly piped and connected with the eight inch main.

It is estimated that at least one hundred acres of watershed would be available to supply the storage reservoir in the low ground easterly of Hospital street, and by making it large enough to retain the entire spring flow of water, a supply equal to an average for the whole year of about ninety thousand gallons per day, could be had. This, I am informed, is far beyond your wants; and a reservoir sufficient to retain a part only of the spring flow would be required, allowing the balance to run to waste, part or the whole of which could be made available hereafter, if required. I made a gauge to-day of the quantity of water flowing from the proposed site of the storage reservoir in this plan, and found at the rate of 4,960 gallons per day flowing from the spring near the bridge in the farm road, and about 9,000 gallons per day from a ditch near the same, making about 14,000 gallons per day as the natural drainage at this time, which supply might as stated above be increased to about 90,000 gallons per day by a sufficient storage reservoir.

I have had no experience in the use of wind mills, but from their extensive use in some sections, particularly in the West, I think there can be no doubt of their suitableness for this purpose; at any rate, until a larger supply of water is required from this source than at present.

Of the three plans described above, from the limited attention I have been able to give them, I am of opinion that the third plan is the best adapted to your present wants, although I think it probable that with the increasing wants of the Hospital a more comprehensive scheme may sometime be required.

Very respectfully,

(Signed)

JAMES B. FRANCIS.

APPENDIX.

—•—

[FORM OF MITTIMUS.]

STATE OF MAINE.

To the Superintendent of the Maine Insane Hospital:

WHEREAS, the undersigned, Selectmen of the town of ———, in the county of ———, this day, on complaint to us made in writing, by (*) ——— of the town of ———, in said county, who bears the relationship of ——— to (†) ———, of said town of ———, who therein says that said (†) ——— is insane, and is a proper subject for said Hospital, made due inquiry into the condition of said (†) ———, and called before us such testimony as was necessary to a full understanding of the case; whereupon, it appeared to us that said (†) ——— was insane, and we were of opinion that the safety and comfort of said (†) ——— and others interested, would be promoted by a residence in said Hospital, and accordingly determined that said (†) ——— be sent forthwith to said Institution.

We, therefore, certify that said (†) ——— is insane, and that ——— was residing commorant, and found in the town of ——— aforesaid at the time of arrest and examination aforesaid; and you, the said Superintendent, are hereby ordered and required to receive said (†) ——— into said Hospital, and detain ——— in your care until ——— shall become of sound mind, or be otherwise discharged by order of law, or by the Superintendent or Trustees.

Given under our hands, at said ———, this ——— day of ———, in the year of our Lord one thousand eight hundred and ———

} *Selectmen.*

* Complainant's name.

† Name of person to be committed.

[PHYSICIAN'S CERTIFICATE OF INSANITY.]

We, the undersigned, practicing physicians of the town of —— and State of Maine, have examined into the state of health and mental condition of —— of said ——, and we hereby certify that in our opinion —— is insane.

—— — M. D.

—— — M. D.

Dated at said ——, this —— day of ——, 18

(FORM OF BOND FOR SUPPORT.)

KNOW ALL MEN BY THESE PRESENTS, That we, ——, of ——, in the county of ——, as principal, and ——, of ——, in the county of ——, as sureties, are jointly and severally held and bound unto ——, Steward of the Insane Hospital at Augusta, or to his successor in said office, in the sum of two hundred dollars, to the payment of which sum, well and truly to be made to him, the said ——, or to his successors in said office, we bind ourselves, our executors and administrators, firmly by these presents.

Sealed with our seals, and dated at ——, this —— day of ——, A. D. 18

The condition of the above obligation is such, That, whereas —— of ——, in the county of ——, is about to be admitted as a boarder and patient to the Institution aforesaid; now, if the said —— shall pay to said ——, or to his successor in said office, such sum per week for the board, washing, medicine and attendance, according to the trouble and expense incurred for said patient, as may be determined by the Trustees for the time being, not to exceed ——, and pay for all such necessary articles of clothing as shall be furnished said —— by the said ——, or his successor, and remove the said —— from said Institution, whenever they shall be thereto in writing requested by the Superintendent for the time being,—and shall also pay a further sum, not exceeding fifty dollars, for all damages that may arise from injury to the furniture and other property of said Institution, by said ——, and for reasonable charges that may be incurred in case of the elopement of said ——, payments to be made

semi-annually and at the time of removal, with interest on the amount after it becomes due as aforesaid, then this obligation to be null and void, otherwise to remain in full force and virtue. [L. S.]

Witness :

[L. S.]

QUESTIONS

TO BE ANSWERED BY THE PATIENT'S FAMILY OR PHYSICIAN.

1. Age?
2. Married or single?
3. Occupation?
4. How old at first attack?
5. Date of present attack? What appearances?
6. What changes since?
7. On what subject?
8. Any rational intervals?
9. Any relatives ever insane, and who were they?
10. Ever attempted suicide or homicide, and in what manner?
11. Destructive to clothes or property?
12. Disposed to filthiness of person or habits?
13. Any restraint or confinement been applied? If any, what?
14. If former attacks, how many, and how long did they continue?
15. What natural peculiarities? power of self-control? temper? disposition? predominant passions? disappointment as to property, affections, wounded pride, loss of friends, family troubles, intemperance in the use of ardent spirits, tobacco, &c.?
16. History of any bodily disease, especially suppression of evacuations, eruptions, sores, &c., injuries, epilepsy, palsy, &c.
17. What cause or causes are supposed to have induced the attack?
18. What curative means have been tried? State if blood-letting has been resorted to, if so, to what extent?

REPORT OF THE VISITING COMMITTEE.

*To his Excellency the Governor and
the Executive Council of the State of Maine:*

The Committee of Visitors to the Hospital for the Insane have the honor to submit the Seventh Annual Report for the year ending December 1, 1880.

In compliance with an act of the Legislature of 1874, amendatory of chapter 143 of the revised statutes, the Hospital has been frequently visited during the year by the gentlemen of your Committee, and visits of several days' duration have been made each month by the Lady Visitor.

These visits have been made at irregular intervals, in accordance with section 11 of the act, and it affords us pleasure to be able to report, that we have at all times found humane treatment prevailing, and order and propriety in every department. We have made special endeavors to form acquaintance with the patients individually, and by gaining their confidence, become better enabled to alleviate their griefs, imaginary or real, and thereby to do all that was possible to render their condition more comfortable.

LETTER BOXES.

These, securely locked and opened only by members of the Board, have been accessible to every patient. We have carefully perused the letters addressed to us and deposited therein. All complaints have been noticed and enquired into, and letters to friends have been promptly forwarded. Many letters have been received by us during the year from absent friends of the inmates. These have been promptly and faithfully answered, and we have thus found opportunity to relieve

many anxious friends, by assuring them of the kindness and attention bestowed upon these loved ones.

WATER SUPPLY.

This all-important element, owing to the unprecedented drouth, (from which every section of our State suffered) during the last part of the season, was insufficient. Considerable inconvenience was experienced, and much anxiety felt by the friends of the Institution, lest fire should occur at this time, than which it is difficult to imagine a greater calamity. During the dry season additional capacity was prepared, and provision is to be made for all possible needed supply in the future.

We refer to, and most heartily endorse the able report of the Trustees upon this subject. For the satisfaction of the public, we report that there is at the Hospital an effective fire organization, of which the Treasurer is chief. Hose ready for constant use are to be found in the basement, attics, and in every hall in the building. We have personally observed that these are in good order, and seen their power and efficiency demonstrated. It would seem impossible at any time when the water is sufficient, for fire to have great effect.

VENTILATION AND PROPER DEGREE OF HEAT

have received increased attention during the past year. We can report great improvement in each particular.

BATH ROOMS.

These have received attention, and have been renovated. New ones have been placed in the private apartments, the old ones generally refitted, and improvement made in their arrangement. Better tubs have been placed in several of the wards. The work is as yet unfinished, but will progress until the entire change decided upon is completed. A weekly bath is insisted upon for every inmate, as an important assistance to recovery.

SLEEPING APARTMENTS.

These we have generally found in order, and in a cleanly condition, with a good supply of bed clothing. During the year the dormitories have been furnished with wire mattresses, an introduction that adds very much to the comfort and safety of the patients, and must eventually save expense to the Hospital, as thereby the use of burlaps are dispensed with.

CLOTHING.

This is usually as good as each individual condition will allow. Much depends upon the attendants with regard to the personal appearance of those under their charge. There is a marked change for the better in all the halls over former years, in the appearance of dress, personal neatness, and habit of keeping the feet covered, although there is as yet much room for farther advancement in these respects. In connection with this subject, we could make honorable mention of some who have greatly improved the deportment and condition of those under their charge, by constant interest and attention. Improvements have been made in the Laundry, whereby the clothing receives better care, and the addition of a mangle renders the labor lighter, with improved appearance of the clothing.

FOOD.

Visits have been made to the dining rooms frequently, and purposely at meal times, and the table fare has been found to be ample, wholesome, and well cooked. The long distance at which it is necessarily carried sometimes prevents it from being as warm as could be wished. Suggestions have been made to obviate this difficulty, we hope, to be carried out during the coming year. New rules relating to the duties of attendants, while the patients are at the dining tables, have been made. These have been printed, framed, and placed in each dining room. Marked benefit has resulted from their enforcement.

NIGHT WATCH.

We desire to speak approvingly of the present efficient watch, whose duty it is to pass through each hall, every hour of the night, to attend to the needs of the patients. We have observed them to be ever ready to give the "cup of cold water" to the thirsty, and a kind word to the wakeful, and medicine to the sick. Members of your committee have often been with them unexpectedly during the night season, and have at all times found them punctual, faithful, and efficient. Two are employed on each side. These also visit basement, attics and all out-buildings frequently during the night to guard against accident or fire. We consider this watch a powerful arm of the service.

NURSE.

By order of the Trustees, an educated female nurse has been added to the corps of officers, whose duty it is to have special care of the sick, to seek out the ailing and feeble, for whom there are no accommodations in the sick rooms, and in every possible way to soothe, comfort, relieve, and patiently and tenderly care for their needs. These are the more important, although several lighter duties have been assigned her.

ATTENDANTS.

There have been many necessary changes in this department during the year. Those now employed we find generally efficient and disposed to perform their duties faithfully. In cases where dereliction has been detected, the Superintendent has promptly discharged the offender. We have found him ever ready to discover and punish all undue violence.

The care for the unfortunate class, here gathered, requires patience, evenness of temper, self-control, sympathy, indeed all the better characteristics of our nature. Experience is also needed the better to perform required duties. When attendants are procured possessing these qualifications, it is economy to retain them even if it can be done only by

increase of compensation. Most of the details of daily care, with the utmost vigilance of Superintendent and other officers must necessarily devolve upon them. The whole of their time belongs emphatically to the Institution, the rules to that effect should be implicitly obeyed and every kindness extended. From personal observation, we find that a gentle word or kind act will do more to soothe the most excited than superior strength or other harsh measures. We would here mention the fact that the decrease of mechanical restraint has been noticed in our Hospital during the past year, and in our "march of improvement," we rejoice in the hope that the time is not far distant when more beneficial methods will be universally substituted.

PUBLIC WORSHIP.

This is conducted regularly in the chapel erected for this purpose, and all are invited and urged to attend; order and attention are observed at these services, and it is touching to observe numbers of the inmates quietly listening to the Word of Life, from which even a little child or one with weakest intellect can derive instruction and benefit. The chapel is also used during the winter months for entertainments, and two evenings in each week have been devoted to the amusements of the patients, by dances, readings, and dramatic entertainments, the beneficial effects of which are noticeable.

EXERCISE.

During the summer months the patients have enjoyed the fine grounds, which were greatly beautified during the last season. Many other improvements for their out-of-doors benefit are already commenced, which are to be completed during the coming year. More of the time of the patients has been spent in the open air than during any previous season. The coach has been seen nearly every pleasant day with its load of gratified inmates.

The Park is eminently adapted as a resort for the more ungovernable, and hundreds have enjoyed the pleasant sunshine and shade in its retreat. Invalid wheeling-chairs have also been provided, so that those unable either to walk or ride are enabled to enjoy the equal benefits. Here we would report other additions, which, although small in themselves, greatly conduce to the pleasure and comfort of the boarders. New clocks have been placed in each hall, wheeling house-chairs provided for the lame and crippled, sinks for washing dishes more effectually. Pictures, ornaments, and many little home adornments have been added. These considerations all have a tendency for good, and should be multiplied.

A greenhouse, erected last year, has been a constant source of pleasure. During the winter it was a resort for the patients, who desired to visit it. From it the halls were furnished with fresh-cut flowers and plants, giving them a cheerful and home-like aspect. We are pleased to report that the Trustees have this year authorized the erection of a similar house for winter flowers, and in this way the enjoyment already received will be largely increased.

SICK ROOMS.

We regret to be obliged to report, that the sick rooms remain as they have been in the past. They are located on the ground floor, and near the kitchen, where but little sunshine enters, and they are quite unfit for the purpose for which they were designed. We had hoped that ere this time the erection of a new building would have removed these disadvantages, and have afforded bright, cheerful, health-giving apartments for our invalids. We can only wait, and hope that a liberal Legislature will, during the coming winter, authorize the Trustees to erect such a building, which we believe to be the greatest need of the Institution. Until it is erected, proper care cannot be taken of the sick.

BETTER CLASSIFICATION.

The relief and recovery of the insane largely depend upon pleasant surroundings. Associating the mild, weak, frail and sad with the wildly excited and violent, must retard improvement. The crowded state of the Hospital, at present renders it impossible to effect the classification that would be most beneficial. Dormitories occupied by too many patients, are more common than could be wished, while a number of the milder patients are obliged to occupy beds arranged for them temporarily, in the halls. Until a new building is added, many other methods of improvement cannot be adopted. It would seem to be the imperative duty of the State to provide, as speedily as possible, a suitable building to meet these necessities.

EMPLOYMENT.

The more the attention of the insane can be diverted from their imaginary troubles, the more are their prospects of recovery enhanced. To this end, no method can be adopted so efficacious as work and judicious employment. For obvious reasons, no general and permanent system has as yet been adopted at the Hospital. A number of the men are voluntarily employed on the farm, and in the culinary department, and some of the women assist in the sewing room and Laundry; but in the several wards there are many whose time would pass far more happily, and with greater hope of recovery to their friends, if they were provided with congenial work, and furnished with materials to use for work at such times as they were so disposed. During the past few months we have been successful in a measure, in carrying out these views, and have had the co-operation of several worthy ladies, (to whom we would in this way express our thanks). With system and perseverance, we are convinced that the greatest good can be accomplished by interesting the patients in congenial work.

In Europe, where the treatment of the insane has acknowledged excellence, constant employment of patients is considered one of the most efficient curative means of treatment. Dr. Sequin, of Poughkeepsie, testifies that he has known apparently incurable cases cured by work. Dr. Woodwin of N. Y., says, "that labor is a valuable therapeutic agent, and that he oftentimes considers fatigue more desirable than narcotics to induce sleep." Without particularizing further, we will state that many other officers of similar institutions, also our own Superintendent, consider work a strong curative agency. A system for employing the insane has been adopted at the Willard Hospital, Poughkeepsie, and other asylums, with beneficial results. We would urge the serious consideration of this subject.

In closing, we would express through you, our gratitude to the Trustees of the Insane Hospital, who have in every instance responded to our suggestions, and to the Superintendent and other officers who have uniformly seconded our efforts for the better good of those in whom we are all interested. We have been received at the Hospital at all times with courtesy and respect. While we rejoice at the manifest progress that has been made, we earnestly desire the adoption of every advanced method, calculated to allay the griefs, increase the comforts, or restore the reason of these unfortunate wards of the State.

FREDERICK ROBIE, GORHAM,
JOSEPH T. HINCKLEY, BLUEHILL,
MRS. C. R. WHIDDEN, CALAIS,

Committee of Visitors.

DECEMBER 1st, 1880.