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ON THE
CONSTRUCTION, ORGANIZATION,
AND
GENERAL ARRANGEMENTS
OF
HOSPITALS FOR THE INSANE.
WITH
SOME REMARKS ON INSANITY AND ITS TREATMENT.

BY
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OF AMERICAN INSTITUTIONS FOR THE INSANE; HONORARY MEMBER OF THE
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TO
THE BOARDS OF MANAGERS
OF THE
PENNSYLVANIA HOSPITAL FOR THE INSANE, AT PHILADELPHIA.

FROM 1840 TO 1880,

FOR WHOSE UNVARYING, GENEROUS CONFIDENCE
AND ENLIGHTENED SUPPORT,
THE AUTHOR FEELS UNDER DEEP OBLIGATIONS.

This Volume
IS GRATEFULLY INSCRIBED.

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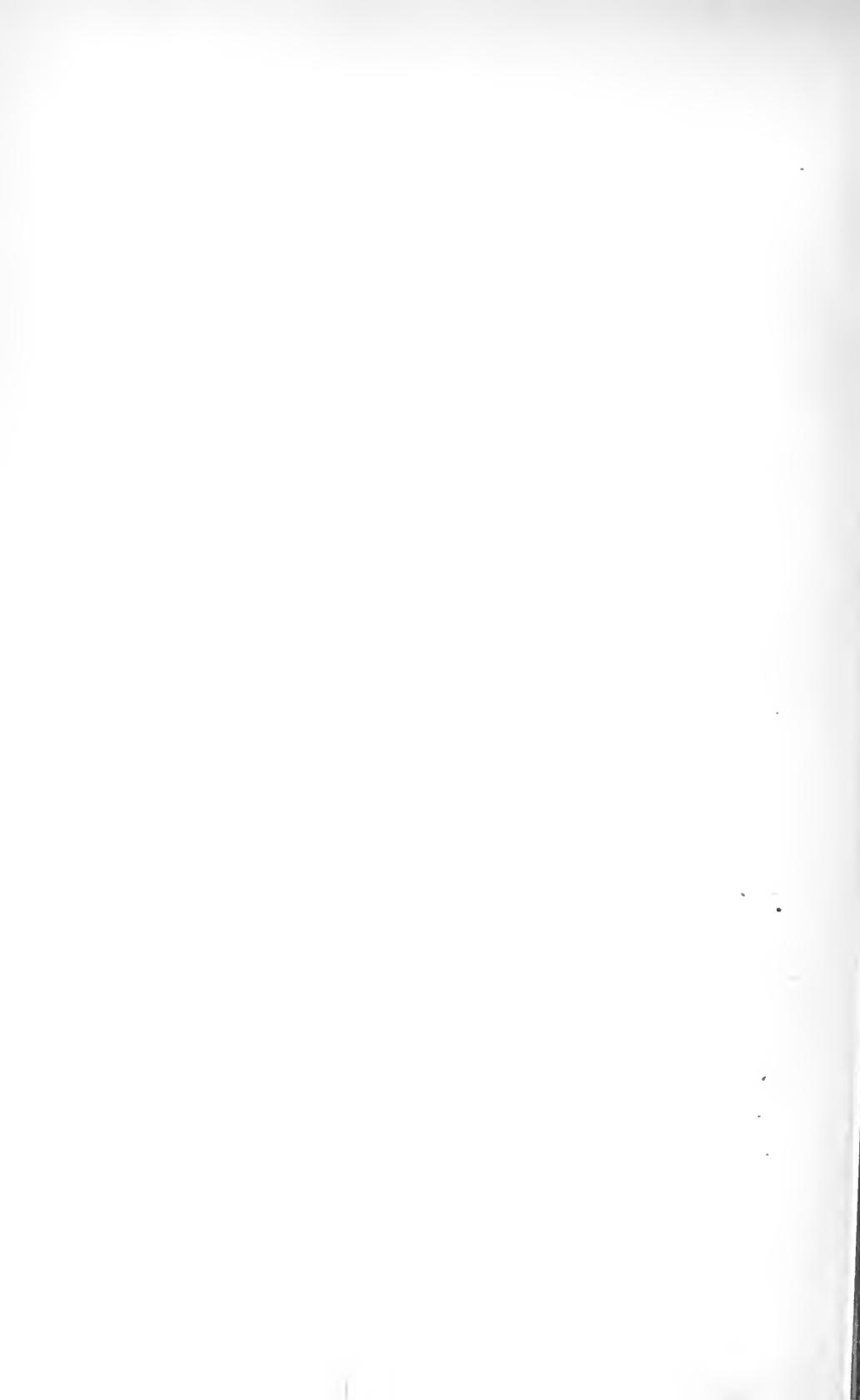
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PART I.

ON THE

CONSTRUCTION OF HOSPITALS FOR
THE INSANE.



THE CONSTRUCTION OF HOSPITALS FOR THE INSANE.

CHAPTER I.

PRELIMINARY REMARKS.

THE proper custody and treatment of the insane are now recognized as among the duties which every State owes to its citizens; and as a consequence, structures for the special accommodation of those laboring under mental disease, provided at the general expense, ample in number, and under the supervision of the public authorities, will probably, before any long period, be found in every one of the United States.

There is abundant reason why every State should make full provision, not only for the proper custody, but also for the most enlightened treatment of all the insane within its borders. Most other diseases may be managed at home. Even with the most indigent, when laboring under ordinary sickness, the aid of the benevolent may supply all their wants, and furnish everything requisite for their comfort and recovery at their own humble abodes. It is not so, however, with insanity; for while all cases need not leave home, the universal

experience is, that a large majority of them can be treated most successfully among strangers, and very generally, only in institutions specially provided for this class of disease. It is among the most painful features of insanity, that for its best treatment, so many are compelled to leave their families; that every comfort and luxury which wealth or the tenderest affection can give, are so frequently of little avail at home; and that as regards a restoration or the means to be employed to effect it, those surrounded with every earthly blessing, are placed so nearly on a level with the humblest of their fellow beings.

Although, with great inconvenience, the affluent might provide suitable accommodations without leaving home, it would really be, by converting their dwellings into hospitals—still a large proportion of our best citizens, all those in moderate circumstances, no less than those dependent on their own daily exertions for support, without some public provision, must be deprived of much that is desirable, almost as completely as the pauper portion of the community. The simple claims of a common humanity, then, should induce every State to make a liberal provision for all its insane, and it will be found in the end, that it is no less its interest to do so as a mere matter of economy, especially as regards the poor.

It is now twenty-six years since the first edition of this volume was published; the substance of it having already appeared in the *American Journal of Insanity*. It was originally prepared to meet what then seemed a prevalent want, and to save the author from the labor of writing long letters in reply to inquiries in regard to the matters referred to, that were constantly being received by him. It is now a long time since the work could be had at the booksellers, and the frequent applications still made for it, especially during the last four or five years, have seemed to show that the want

for which it was at first written, has not yet been adequately supplied.

While for some reasons, the author would have preferred re-writing the whole book, it has accorded more with his own convenience and the time he could take from his steadily increasing engagements, to reprint, substantially, the greater part of the original volume, with only a careful revision, and some rearrangement of its contents, and a moderate number of additions. All the views originally given that have been retained, now have the increased value of being confirmed by many years of additional observation, and the care of a much larger number of patients than were reported in the first edition.

The conclusions that have been arrived at, and which are given in the present volume, are the result of forty-two years' residence among the insane, with the personal responsibility of more than eight thousand patients, in three institutions varying greatly in their character and form of organization, the last thirty-nine years being in that with which the author is now connected, and of which he has had the immediate direction since its opening. During this last named period, too, the author had the experience of eleven years' active service as trustee of a large State hospital.

These opportunities for observation, with a desire to subject everything seeming to give a reasonable prospect of success to practical tests, and a pretty general knowledge of what has been done elsewhere in the care of the insane, in and out of hospitals, have not only confirmed the writer's opinions as to the correctness of the principles in which he has again expressed his confidence, but have also tended steadily to increase his interest in all classes of the insane, and his desire to secure for them such a provision, as will be certain to give them every advantage they can receive from the most enlightened

care and treatment. Nothing will be found advocated in this book that has not been fairly tested in the author's own experience.

It was not originally expected that this essay would have any special novelty, or any particular interest, to those who, like the author, have been engaged for a great length of time in the care of the insane, nor is it now supposed that it will have. It is, nevertheless, believed that it will prove interesting and useful to those, who are just commencing their investigations on the subject, and also to that large class of intelligent non-professional people, who are anxious to be thoroughly informed as to the best mode of making provision for the insane, and of securing to all classes of these unfortunates, the most enlightened form of treatment. It is also thought that it may prove of no inconsiderable advantage to the community, if it aids, though ever so little, in making those to whom the different States entrust the planning and erection of new hospitals, familiar with what are deemed to be sound and essential principles, and thus prevents a waste of the public funds, and saves the people from having imposed upon them, as is too often attempted, ideas in regard to treatment, of the most visionary kind, with building designs which could only come from sources that were without any practical acquaintance with the subject.

CHAPTER II.

DEFINITIONS OF INSANITY.

It is not proposed even to attempt to give, in a few words, a definition of insanity which, while including all its forms, will not embrace anything that does not rightfully belong to it. This has been undertaken over and over again, and has always proved a failure. Nevertheless, there are few persons—either among the learned or unlearned—who do not understand with sufficient clearness for our present purpose, the meaning of the term; and although they may not be competent to decide upon that not rare class of cases, which every now and then come up to puzzle the wisdom of both the legal and medical professions, they still have sufficiently accurate ideas of the disease, and the ordinary forms of it, for the custody and treatment of which institutions have to be provided. They commonly understand that it is in general, functional in its character, a disorder affecting the mind, or more properly the brain, as the organ of the mind. The derivation of the word insanity implying simply unsoundness, it can readily be understood that mental unsoundness actually comprises all its forms, notwithstanding this term may include conditions that are not properly embraced under what is usually styled insanity. All are to remember that insanity is often more clearly shown by what an individual does, than by what he says, and that a change in a man's natural character, without any obvious cause, may safely be regarded as one of the most reliable indications of the disease, and it requires little familiarity with it, to know that an individual, who is unquestionably insane, may still transact ordinary business, or engage in general conversation without any exhibition of delusions.

CHAPTER III.

FREQUENCY OF INSANITY.

WHATEVER may be thought of the actual frequency of insanity in proportion to population, there can be no question but that it is a disease from which no age, sex, class, or profession in life can claim exemption, and that nowhere does it fail to make itself recognized as the great leveller of all the artificial distinctions of society. The number of insane persons in different communities, if we judge by the returns of the official census reports, varies very widely. It has been shown, however, that there are so many inaccuracies in these statements that heretofore they could not be relied on, and only in a few instances has it been possible to learn, with a tolerable degree of certainty, the ratio of persons who are insane in proportion to the whole number of inhabitants. The most reliable authorities in this country make the proportion to vary as much as from one in every thousand, to what is more probable, one to every five hundred of the entire number in a community. The estimate of one to every five hundred inhabitants, I have reason to believe, will not be an excessive allowance for the whole country. This statement is sufficient to give some idea of the prevalence of the disease, and the magnitude of the task of caring for all the cases that require attention. Nothing less than a provision for all, is the task before every State. There is no justification for a State providing accommodations for one portion of its insane, and leaving the rest uncared for.

CHAPTER IV.

CURABILITY OF INSANITY.

INSANITY, when uncomplicated, properly and promptly treated, and having this treatment duly persevered in, may be regarded as curable as most other serious diseases; but its curability mainly depends upon these conditions. Of the class of cases alluded to, it is safe to say that about as many as eighty per cent. may be expected to recover. Where cases of insanity are left without proper treatment, they rarely get well, but are more apt to sink into some form of dementia, and to be for life a source of anxiety and a charge upon their friends or the community.

In all discussions in regard to the character of insanity and its curability, it is important that it should be placed in the same category as other diseases. It is just as possible for any one to have an attack of insanity, to recover from it, and to have another attack at a subsequent period of life, as it is of any other disease, or as any one is liable to have a first attack. It would be quite as reasonable to say that a patient with fever or rheumatism, or dysentery, or any other affection that he may have had in a past year, had not recovered from either of them, because from some cause (understood or not as the case might be) he had suffered from another attack of the same disorder in the same year or in subsequent years, as to insist that any one who had had an attack of insanity, and who had been relieved of every symptom of it, had not been cured, because at some later period of life, from some cause or other, he had another attack of the same disease. Whenever an individual suffering from insanity, is relieved from all indications of mental unsoundness, returns to his home and family with-

out any developed eccentricity, resumes his ordinary relations with society, attends to his business with his usual ability and intelligence, for a year, or even a much less period, there should be no hesitation in recording such a case as "cured," without any reference to the future, about which we can know nothing. There is no power to insure any case, or to say that there may never be another attack. No one has a right to assert that a combination of circumstances, like that which produced the first, may not cause another; that ill health, and commercial revulsions, and family sorrows, and the many other causes that may have originally developed the disorder, may not again bring on a return of the same symptoms, just as they may produce them in one who has never before been insane. Out of seven thousand eight hundred and sixty-seven consecutive cases in the author's observation, five thousand six hundred and ninety-five had never had an attack before. Whatever induced the disease in them, certainly may induce it in those who have already suffered from the same malady, for we cannot expect one attack of insanity to act as a prophylactic, and like measles or smallpox to give immunity for the future. But this new attack is no evidence that the patient was not cured of the previous one. If the patient, then, is well in the sense in which he is considered well from an attack of typhoid fever, or dysentery, or rheumatism, or a score of other maladies,—when another attack is developed, it is as much a new case, and the recovery is a cure, just as much as it would be if he suffered from any other form of illness, and it ought to be so recorded. If he does not recover, in the sense in which a recovery has already been described, he should not be recorded as cured. Insanity uncured does really tend to shorten the duration of life, because individuals thus afflicted do not resist attacks of other diseases as well as the sane, and there are often great difficulties in carrying out a proper form of treatment.

CHAPTER V.

ECONOMY OF CURING INSANITY.

THE cost of curing a case of insanity in a good hospital, and returning the patient to his family and to usefulness in society is not, on the average, one-tenth of what it is to support a chronic uncured case for life. This is the economical point of view, in regard to making adequate provision for the prompt and enlightened treatment of all the insane of every class and description, even if no account is made of the value of restoring to usefulness in a community, one of its producing members.

CHAPTER VI.

HOSPITALS THE BEST PLACES FOR TREATMENT.

As already intimated, the general experience seems to show, that a very large proportion of all the insane are treated more effectively and far more economically among strangers, and in well-managed institutions specially provided for their treatment, than at their own homes, and surrounded by their families, and by familiar scenes and associations.

Much as has been said in commendation of "home treatment" and "family treatment," it is not to be forgotten that these are commonly tried, and fail, before the idea of removing a patient to an institution is seriously discussed. The great danger in unduly protracting these efforts at home, is that the best period for successful hospital treatment is lost, and that

what was recent in its character, becomes chronic, with all the diminished chances of recovery connected with this latter condition.

The history of "home" treatment before the establishment of hospitals is one of the saddest records of inhumanity and cruelty to be found anywhere. It was the discovery of this state of things, and the plain unvarnished recital of what was found by benevolent women and men, that led to the establishment of most of the State and government hospitals for the insane, which now do so much honor to the country and give such blessings to the afflicted and their families.

Very often this simple change from home to an institution, seems to be of itself sufficient to secure the beginning of convalescence, and not unfrequently the improvement in behavior and conversation is, from the first, most remarkable.

As the insane generally cannot be treated successfully nor be properly cared for in private houses, very clearly they cannot be in ordinary hospitals, almshouses, nor in penal institutions. The only mode, then, of taking proper care of this class in a community, it is obvious, as all enlightened experience shows, is to provide in every State just as many special hospitals as may be necessary, to give prompt and proper accommodations for *all* its insane, to cure those that are curable, to give every reasonable comfort to those that are not curable, and to prevent their becoming worse—and, what is of very great importance, hardly to be over-estimated—to protect their families and the community from the acts and influences of irresponsible and often dangerous persons.

The dangers incident to insane persons being at large, are much greater than is commonly supposed. Not a week, scarcely a day, indeed, passes without the public press containing the details of some occurrence resulting in loss of life, or serious injuries to individuals, or destruction of property.

from a neglect of proper care and supervision on the part of their friends or the public authorities, of those who had become insane and irresponsible for their actions. Very many of the cases of suicide that are reported very clearly belong to this class, and of these a large proportion, there is good reason to believe, were curable if their cases had been understood and properly treated. It is worthy of note, too, that many of these acts, even those of peculiar atrocity, are often committed by individuals who, with all their obvious mental infirmity, had previously been regarded as perfectly harmless. This fact shows the importance of proper provision being made for the prompt care and treatment of all classes of the insane, as well as the danger of allowing persons bereft of their reason and not accountable for their doings, a freedom, which only subjects them and others to risks, that benefit nobody.

It is only a few years since the writer of these pages, by a careful comparison of a list of lives lost and of persons injured by this class of irresponsible people being at large, as reported in the newspapers during a twelvemonth, found that these cases actually exceeded in number all the deaths and injuries from railroad accidents occurring in the United States during the same period.

CHAPTER VII.

DIFFERENT CLASSES OF HOSPITALS FOR THE INSANE.

As already said, a very large proportion of all the insane in this country are now, and will unquestionably continue to be, treated in hospitals built and supported by the different States in which they are found, and for this reason it is more particularly to State hospitals that the remarks in this book have a special, although not at all, an exclusive reference. There are, however, other classes of institutions besides those under State control, but they are much less numerous, and there is not likely hereafter to be any great increase in their number.

Next in importance to the State hospitals are the incorporated benevolent institutions in connection with hospitals for the sick, and really branches of them.

The very first hospital for the insane in the United States was a benevolent corporation organized for the care and cure of the insane, and also for the relief of the ordinary sick. This dates back to 1751, and was the original Pennsylvania Hospital at Philadelphia. At a later day the New York Hospital, at New York, made similar provision for the insane, and, subsequently, the Massachusetts General Hospital, at Boston, established a branch of the same general character. After a certain period, however, it was found advisable by all those named, that the wards for the insane should be separated from those appropriated to the ordinary sick, and they are all now regarded as distinct institutions, differently organized, and requiring an entirely different form of management. They have no connection with the parent institutions from which they originally sprung, except in being under the con-

trol of the same Boards of Managers. The number of these hospitals is not likely to be materially increased, at any rate only in the vicinity of large cities.

Besides those already mentioned, there are in different sections of the country a few private establishments, owned and controlled by individuals, but without regular Boards of Management or any special State supervision. Although a limited number of these, wisely conducted, may meet a public want, still, for obvious reasons, it is not desirable that their number should be greatly increased, nor that this mode of providing for the insane should be generally adopted.

In some sections of the country, cities and counties have shown a disposition to make a separate provision for the indigent insane for whom they are responsible, independent of the State. This is to be recommended only where the number under care approaches two hundred, or enough to give a proper classification, and to make the authorities willing to provide an institution of a character that would in all respects be proper for a State, and to have an organization for its management that would give it all the advantages to be expected from a moderate-sized State or corporate hospital for the insane. The same principles of construction and management apply to all these, as to State hospitals. The plan of putting up cheap buildings in connection with county or city almshouses for the care of the insane poor, and under the same management, cannot be too severely condemned. Such structures are sure to degenerate into receptacles of which all humane persons will, sooner or later, be heartily ashamed.

CHAPTER VIII.

STATE PROVISION TO BE FOR ALL CLASSES.

HAVING now shown that insanity is a disease of comparative frequency in all communities; that it is one from which no class or condition can claim exemption; that among its most prominent peculiarities is the fact, that as a general rule it cannot be treated as successfully at home, as in institutions specially provided for the purpose, it may be added that these institutions, too, must necessarily be of so costly a character that in only a few localities can private means be expected to provide them; and as already said, for a very large proportion of all those who are thus afflicted, the different States must be looked to not only for the provision of the hospital buildings, but for the means for properly carrying out their care and treatment.

It would seem that at this day no one could dispute what has been so often said, that the insane are really "the wards of the State," and that every State is bound by all the dictates of humanity, expediency, and economy, to make proper provision for all those not able to provide for themselves. This applies especially to the indigent, but above these are many of the best people in any community, individuals who live comfortably when all are in health, but who, when the heads or other important members of the family are stricken down and become unable to contribute to the support of those dependent on them, are utterly unable to provide for this unusual and often protracted form of sickness, and the extraordinary expenses incident to it. Even those with the largest means, with all their willingness to do so, cannot always secure elsewhere the advantages offered to them in the wards

of a well-constructed and well-managed State hospital. As this last class of citizens furnish the largest proportion of the income of the State in the shape of taxes, it is only right that they should have the privilege, if they desire it, of participating in the advantages offered by the institutions toward the erection and support of which, they are necessarily the largest contributors. It is clear, then, that all classes have a common interest in State hospitals for the insane, and in every State making adequate provision for all within its limits. For the reasons stated, it is obvious that every State hospital should be made good enough for the highest class of its citizens, for it should not be forgotten that what is good enough for them, so far as proper care is concerned, is none too good for the humblest of the unfortunates who are compelled to look to these institutions for custody and treatment. This is believed to be an important axiom, never to be forgotten by those who are making provision for the insane, and it ought to stand side by side with that other, which has been so often repeated, and which is so fully confirmed by all intelligent experience, that the best hospital, best built, best arranged, and best managed, is always most economical in the end; for, a true economy consists not only in avoiding all waste and extravagance, but also in doing thoroughly whatever is undertaken, and this ultimately will give most satisfaction to any enlightened community.

CHAPTER IX.

THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE.

THE most generally recognized authority in this country on the subjects referred to in this volume, is "the Association of Medical Superintendents of American Institutions for the Insane," and its different propositions on the construction and organization of hospitals and the care of the insane, have usually been received with favor by the medical profession, by legislative bodies and boards of management in every part of the country. This Association was formed in 1844, and has held annual sessions in different sections of the United States and Canada, visiting and critically examining a large number of institutions for the insane, and it has among its members, the chief medical officers of nearly every respectable hospital of this class on the continent. A series of twenty-six propositions in reference to construction, adopted in Philadelphia in 1851, and of fourteen adopted in Baltimore in 1853, in regard to organization, have been abundantly tested, and have given ample proof of their adaptability to a provision for any and every class of the insane. These will be found in the Appendix to this volume, and the different plans of construction, organization, and general management recommended, will be found to be strictly in accordance with their requirements. The same may be said of most of the other resolutions, subsequently adopted by the association, but which have had a less protracted period of observation.

The only exception that may be made to this statement, is in regard to the size of hospitals, about which there is still some difference of opinion among the members of the Associ-

ation. In the proposition on this branch of the subject originally adopted, two hundred and fifty patients were recommended as the most desirable maximum number, and on this point the Association was, at that time, unanimous. At the meeting in Washington in 1866, by the vote of a bare majority of the members then present, it was decided that under certain circumstances a hospital might be enlarged "to the extent of accommodating six hundred patients, embracing the usual proportion of curable and incurable insane, in a particular community." This was the only instance in which the Association's propositions did not receive the unanimous or almost unanimous approval of all the members present. It will be observed that while this action of the Association endorses to some extent the larger number, it does not do so, as being best or most desirable, but asserts only that under certain contingencies of an institution it "might be" properly carried to the extent of accommodating six hundred patients.

The writer is fully aware that it is often easier to secure appropriations for additions to hospitals, than for the erection of new ones, and for this reason it is often deemed expedient, if not best, to secure the needed additional provision in a State by a steady enlargement of existing accommodations. No one can doubt this being better than not having the accommodations at all; but inasmuch as this book is intended to show what the writer considers best, he has no hesitation in adhering to the maximum number originally recommended by the Association. At the same time he would suggest a mode of enlargement not interfering with this view, and yet making provision for as many as five hundred, or possibly six hundred in one locality, as will be found detailed in a subsequent chapter, and which has been carefully tested for a period of twenty years, with entirely satisfactory results, under the writer's own observation and direction.

CHAPTER X.

FIRST STEPS TO SECURE A HOSPITAL.

WHENEVER the people of any State or of any large district of a State, are convinced of the correctness of such views as have been already given, it cannot be long before a movement,—that can hardly fail of success,—should be made to induce the legislature of the commonwealth, no matter how small its territory, or how limited its revenues, to commence the work of providing a hospital. This action should be taken with a determination to steadily persevere in this effort till all the insane are well provided for, till all have equal benefits from the State's expenditures, are treated alike, so far as essentials are concerned, and till no insane person is left within its limits without proper care and treatment. A simple statement of such facts as have been already detailed, and of the number of insane confined in almshouses, jails, and private dwellings, with an unvarnished tale of the manner in which they are treated, and the condition of those wandering about unprotected and uncared for, will probably be enough, anywhere, to secure favorable action from the representatives of the people.

It is well, too, to remind the public authorities that none of us know for whom we may be legislating or providing; that as the unsound of mind of to-day were among the well in the past, so the sane of this year may be among the insane of the next, and those that are regarded as recent and curable now, at no distant period may be tabulated as chronic and incurable. As we would have others do for us, so let us always do for those, whoever they may be, that are to occupy these structures. These claims are for the most humane consideration—none for any object can be stronger—and, presented with a proper degree of earnestness, will rarely be refused.

CHAPTER XI.

FORM OF LAW FOR ESTABLISHING A HOSPITAL.

THE bill establishing a hospital for the insane should be carefully drawn, and only after consultation with persons familiar with the requirements of such institutions, and it should always contain fundamental principles that will go far to secure for the hospital a successful and reputable career in the future, and to prevent the modes of proceeding, that in the past, unfortunately, were not of rare occurrence and discreditable alike to the State and all concerned.

CHAPTER XII.

BUILDING COMMISSIONS.

AMONG the provisions of such a law as suggested, should be the naming of the commissioners to select the site, to decide upon the plans, and to erect the buildings, preparatory to the reception of patients. If not thus designated, the law should prescribe the manner in which these officials shall be appointed. If not named in the original bill, they have commonly been selected by the executive, with confirmation by the Senate of the State, or directly by the judges of the Supreme Court.

It is hardly necessary to say that on this selection often depends the future character, and to some extent, the usefulness of an institution. The position is one of great responsibility, and should be filled only by men of perfect integrity,

business habits, high intelligence, liberal views, and if not already familiar with the requirements of such institutions, at least possessing a willingness to profit by the experience of those who have had a practical acquaintance with the subject.

While circumstances may determine the best number for this commission, and while plausible reasons may be given for its being of large size, experience has shown, quite clearly in my estimation, that as few as three will generally be found better than any larger number. The characters of the men in the commission, however, are still much more important than the number composing it.

The duties of this commission last till the completion of the buildings. The institution should then be transferred to a Board of Trustees or Managers, as they may be called, upon whom will devolve the organization of the hospital and its subsequent management, and for whose appointment, provision should be made in the law establishing it.

CHAPTER XIII.

SELECTION OF A SITE.

WHEN it has been determined to erect a hospital for the insane, the first object to be attended to by those to whom this important duty has been delegated, is to select a suitable site for the buildings. The utmost caution should be observed in taking this step, on which may depend to no small extent, the future character and usefulness of the institution; for the best style of building and the most liberal organization, can never fully compensate for the loss sustained by a location,

that deprives the patients of many valuable privileges, or subjects them to varied annoyances. It is now well established that this class of hospitals should always be located in the country, not within less than two miles of a town of considerable size, and they should be easily accessible at all seasons. They should, if possible, be near turnpikes or other good roads, or within reasonable proximity to a railroad. While two or three miles from a town might be named as a good distance if on either of the first named, the facilities afforded by a railroad might make ten or twelve miles unobjectionable; for it is the time spent in passing and ease of access, rather than distance, that are specially important. Facility of access is, indeed, for many reasons, a most important consideration. It has been shown by careful statistics that the use made of institutions, and as a consequence thereof, the number of restorations, depend very largely upon the nearness of a hospital to those by whom it is expected to be used or its ease of access by them. Proximity to a town of considerable size has many advantages, as in procuring supplies, obtaining domestic help or mechanical workmen, and also on account of the various matters of interest not elsewhere accessible to the patients. In selecting a site, facility of access from the districts of country from which the patients will be principally derived, should never be overlooked. Under no circumstances should an unsuitable site be accepted because it is offered as a gift to the State. Such a gift can hardly fail to prove costly in the end. A site thus procured often, indeed, becomes of the dearest kind, from its many permanent inconveniences, and the constant expenditures to which it subjects an institution. As these hospitals are for all future time, a liberal expenditure for the proper kind of site as for a proper kind of building, is always a wise investment. The first cost of the building of a hospital for the insane is a matter of small importance to a

State, in comparison to the wise and economical management of the institution subsequently.

The building should be in a healthful, pleasant, and fertile district of country; the land chosen should be of good quality and easily tilled; the surrounding scenery should be varied and attractive, and the neighborhood should possess numerous objects of an agreeable and interesting character. While the hospital itself should be retired, and its privacy fully secured, the views from it if possible, should exhibit life in its active forms, and on this account stirring objects at a little distance are desirable. Reference should also be made to the amount of wood and tillable land that may be obtained, to the supply of water, and to the facilities for drainage, for enclosing the pleasure-grounds, and also for future extensions of the building.

CHAPTER XIV.

AMOUNT OF LAND.

EVERY hospital for the insane should possess at least one hundred acres of land, to enable it to have the proper amount for farming and gardening purposes, to give the desired degree of privacy, and to secure adequate and appropriate means of exercise, labor, and occupation for the patients, for all these are now recognized as among the most valuable means of treatment. Of the total amount, as much as fifty acres immediately around the buildings, should be appropriated as pleasure-grounds, and should be so arranged and enclosed as to give the patients the full benefit of them, without being annoyed

by the presence of visitors or other strangers, who should never be allowed to pass through them unaccompanied. It is desirable that several acres of this tract should be in groves or woodland, to furnish shade in summer, and its general character should be such as will admit of tasteful and agreeable improvements. To enable the patients generally to have the greatest possible amount of benefit from their pleasure-grounds,—where both sexes are treated in one building,—those appropriated to the men and women should be entirely distinct; and one of the best means of separating them, will be found to be the appropriation of a strip of neutral ground, between their separate limits, properly enclosed by an open palisade, as a park for various kinds of animals, or otherwise handsomely cultivated. While less than one hundred acres should be deemed too little for any institution, State hospitals having a large number of farmers or working men, will find it useful to possess at least double that amount; and extensive walks and drives on the hospital premises offer so many advantages, that the possession of a large tract for this purpose alone, is often desirable. It is hardly possible under any circumstances, for such an institution to control too much land immediately around it.

CHAPTER XV.

SUPPLY OF WATER.

AN abundant supply of good water is one of the necessities of every hospital, and should be secured whatever may be the cost or trouble required to effect it. Any doubt about the amplest supply of water and facilities for drainage, should be fatal to any site proposed for a hospital. The very extensive use of baths, which is among the most important means of treatment, the large number of water-closets that are indispensable in the wards, the great amount of washing that is to be done, as well as the various other arrangements requiring a free use of water, and above all, the large quantity needed for extinguishing fire, in case such an accident should occur, make it of the utmost importance that the supply should be permanent and of the most liberal kind.

The daily consumption of water for all purposes in an institution for two hundred and fifty patients, will not be much less than fifty thousand gallons, and tanks or reservoirs to contain considerably more than this amount, should be placed in the dome or highest part of the building, or on some contiguous point of the grounds.

Nothing less than one hundred thousand gallons a day should be considered sufficient for the possible wants of such an institution. Special care is to be taken to reject streams that fail in dry seasons, or have sources of impurity connected with them.

When a sufficient elevation can be met with to carry the water to the tanks by gravity, nothing can be better; or a steady water-power is both convenient and economical; but so few sites are found having either of these advantages, com-

bined with the other requisites for such an institution, and as steam and a steam-engine are always needed on various other accounts, it is safe to say that these are the best reliance in most locations for raising water to a proper height. The water should be distributed to every part of the building, and arrangements should be made to furnish a full supply, both hot and cold, to every ward and in every section of the house. One or two wells near the building, for furnishing drinking water, will be desirable, and a large cistern outside of the hospital buildings should be provided, to secure an abundant supply in case of fire. So important is the supply of water about a hospital—even its heating being dependent on it—that there should always be a duplication of the means required to secure it, to meet possible emergencies. While waste of water, as of everything else is to be avoided, its use for all purposes should be unrestricted.

CHAPTER XVI.

DRAINAGE.

ALL the drainage should be underground, and in selecting a site, facilities for making this very important arrangement should never be overlooked. All the waste water from the kitchens, sculleries, baths, water-closets, etc., should be carried off beneath the surface, and to such a distance as will prevent the possibility of its proving an annoyance to the hospital. All the entrances to the culverts should be thoroughly trapped, and the culverts should be made so large and with such a descent as to obviate all risks of obstruction. If the rain-

water from the roof and the surface drainage are taken in another direction, the other drainage from the hospital may be made to add greatly to the fertility of the farm: but it is much better to carry everything off through the same culvert and thus lose this advantage, than to incur the slightest risk of having the air in the vicinity of the hospital contaminated by these fertilizing arrangements.

Culverts or drain-pipes may be made of either brick, iron, or terra-cotta; but whatever the material used, it is of the utmost importance that they should be as nearly direct as possible, of abundant size, and with as good a descent as is available. It is quite safe to say that all these arrangements for water and drain-pipes are commonly of a much less size than is best, and thus by frequent stoppages they become a source of expense and annoyance that is wholly unnecessary.

CHAPTER XVII.

ENCLOSURES.

It is desirable that the pleasure-grounds and gardens should be securely enclosed, to protect the patients from the gaze and impertinent curiosity of visitors, and from the excitement occasioned by their presence in the grounds. This, therefore, becomes a matter for consideration in the selection of a site.

This enclosure should be of a permanent character, about ten feet high, and so located that it will not be conspicuous, even if it is at all visible, from the building. The site, as well as the position of the building on it, should have some reference to this arrangement. If sufficient inequalities of

surface exist, the wall or fence, as it may be, should be placed in the low ground, so as not to obstruct the view; but if the country is too level to admit of this, the same end may be attained by placing the wall in the centre of a line of excavation of sufficient depth to prevent its having an unpleasant appearance, and yet to render it entirely effective. Although the first cost of a wall will be about double that of a fence of the proper kind, still its durability and greater efficiency in every respect, will make it cheaper in the end. The amount of land thus enclosed should never be less than thirty acres, while forty or fifty acres are a more desirable amount, so that the pleasure-grounds of the male and female patients, which, as before observed, should be entirely distinct, may be sufficiently extensive. Even a whole farm thus enclosed has great advantages, and such an expenditure is fully justifiable. This has been done at the Government Hospital near Washington, where more than three hundred acres are thus surrounded by a permanent wall, with the greatest comfort and advantage to the institution, and all concerned feel that few expenditures give more satisfaction than those for properly enclosing the grounds of a hospital.

Important as I regard the permanent enclosure of extensive pleasure-grounds and gardens, in the manner suggested, as protecting the patients from improper observation, keeping out intruders, enlarging the liberty of the insane generally, securing various improvements from injury, and permitting labor to be used as a remedy for more patients than could otherwise be done, still it is proper to add, that high walls around small enclosures, and in full view from the buildings, are even less desirable than a simple neat railing, which would neither keep determined visitors out, nor active patients in. The first of these objects—keeping the public out,—it must not be forgotten, is the prominent one thought of, in recom-

mending a wall to be placed around the pleasure-grounds of a hospital. The presence and watchfulness of intelligent attendants must still be the grand reliance to prevent the escape of patients, and any arrangement that does away with the necessity of constant vigilance, is to be regarded as undesirable about a hospital for the insane.

CHAPTER XVIII.

PATIENTS' YARDS.

ALTHOUGH it is not well to have a large number of private yards in immediate connection with a hospital for the insane, it will still be found convenient to have two or more for each sex, of a large size, provided with brick walks, or what is better, stone flagging or artificial stone, which cannot be easily taken up, and with shade trees and such other modes of protection from the sun and weather as may be deemed useful. These yards enable many patients, who at times may wish to avoid the greater publicity of the grounds, to have the benefit of the open air, and to take exercise at hours when the attendants cannot conveniently leave the wards; but most of the patients should have a more active and longer continued kind of exercise than these yards afford. They should look to the walks in the open fields and about the pleasure-grounds, which can readily be made a mile or two long for each sex, for their principal exercise. Four-fifths of all the patients will, under proper regulations, be able to take walks of this kind, for at least a couple of hours morning and afternoon, at all seasons; and in warm weather, when a

suitable number of attractive summer-houses and plenty of comfortable seats are provided, they may thus profitably spend one-half the entire day in the open air. It is, however, always much better for patients to be comfortably seated in a pleasant parlor or hall, at any season of the year, than to be lying on the ground, or otherwise soiling their clothes, and exposing themselves to the risk of taking cold, as is very apt to be the case, when certain classes are allowed to consult their own pleasure as to the mode of passing their time, while in the small yards adjoining the building.

CHAPTER XIX.

IMPORTANCE OF ARCHITECTURAL ARRANGEMENTS.

It is generally conceded that in the past, at least, a more convenient style of architecture and better arrangements were desirable in most establishments for the care of the insane; and those who were personally familiar with the losses sustained in consequence of imperfect accommodations, and the advantages derived from improved ones, were sure to be found most anxious to secure a high character to every one of these institutions, without regard to the class of patients they were intended to receive.

No better proof need be given of the necessity for improvements in the construction and arrangements of hospitals for the insane, than the simple fact, that not a few of those put up within the last half of a century exhibit in many parts most glaring defects, and that nearly all erected till within a few years, have required extensive and costly alterations or addi-

tions: or if these changes have not been made, the buildings still remain unsuited for the proper and convenient treatment of the patients. Many of these lamentable defects,—which frequently can scarcely be remedied without actually rebuilding the hospital,—and the large expenditures of money that have been made in effecting alterations and improvements, have often resulted almost entirely from the buildings having been planned by persons who, whatever may have been their taste, architectural skill, or good intentions, had little knowledge of what is required for the proper care and treatment of the insane.

For the reasons last mentioned, it is hardly possible for most architects, unaided, to plan a hospital thoroughly equipped for this object.

The improvement in these structures in this country during the last twenty-five years has been very great, and it is now no difficult task to find in operation, hospitals that possess almost every thing essential to the comfort, and proper and economical treatment of their patients, and the plans of which can be safely followed by those who are unfamiliar with the subject, or doubtful of what is best to be done.

No reasonable person at the present day, when planning a hospital for the insane, would think it necessary or desirable to propose a building entirely original in its design: for such a structure could hardly fail to lose in usefulness what it gained in novelty. Instead of attempting something entirely new, the object should rather be to profit by the experience of the past, by the knowledge of those who have had a practical familiarity with the wants and requirements of the insane, and after a careful study of existing institutions, to combine, as far as possible, all their good features, and especially to avoid their defects and inconveniences.

These institutions, particularly when put up under State authority, while having a plain, but still good and agreeable

style of architecture, should not involve too large an expenditure of money in their erection; but, nevertheless, should be so conveniently arranged as to be economical in their subsequent management, and should have every possible advantage for the best kind of classification and supervision of the patients, and for their comfort and treatment. All extravagance in the way of ornamentation should be avoided; but such an amount of it as is required by good taste, and is likely to be really beneficial to the patients, is admissible. It does not comport with the dignity of any State to put up its public buildings in a style of architecture which will not prevent their being distinguished from factories or workshops. Especially is this the case with those designed for the treatment of a disease like insanity, in which the surroundings of patients greatly influence their conditions and feelings.

CHAPTER XX.

CHARACTER OF PROPOSED PLANS.

THE plans proposed in the following pages, are specially for State hospitals to accommodate two hundred and fifty patients; this number being, in my estimation, about as many as should be collected in any one institution. It is to be remembered, too, in considering this subject, as already stated, that State hospitals are not for the pauper portion of the community alone, but for every class of citizens, and that all who pay taxes aid in their erection, and therefore have the right to participate in their advantages, while in most of the States, they furnish the only hospital accommodations for the care of any portion

of the insane. The rich pay most of the taxes, and those who do so, certainly should have the right to share in the benefits of institutions provided from this source. And, as cannot be too often repeated, what is right for these, when insane, is none too good for the poor when in the same condition. Except in the vicinity of a few of our largest cities, it is not probable, at least for many years, that any other class of institutions will be put up in the United States; and on that account, it is particularly desirable that public opinion should be settled as to what is indispensable for this description of hospitals. The same general plan and arrangements are applicable, however, to the hospitals intended for the insane poor of large cities, and also, with some slight variations, they would answer for corporate institutions like these connected with the hospitals for the sick in Philadelphia, New York, and Boston, referred to on a previous page, or those provided by the liberality of private individuals.

In nearly all of these different institutions, it is necessary that a strict regard should be had to first cost, and, as before observed, to economy in subsequent management. On these accounts, I propose recommending only what I deem absolutely necessary for the proper accommodation and treatment of the insane in any of the classes of hospitals previously referred to. Where ample funds are available, more costly arrangements may with entire propriety be adopted: but it is with hospitals as with private dwellings, the most pretentious, or those with the highest ornamentation, do not necessarily furnish the most comfort, nor are most desirable for those who appreciate the substantial enjoyments of life.

There are, indeed, several variations that might be suggested, where it is proposed to provide the most perfect arrangements, without regard to cost, or to furnish accommodations exclusively for the wealthy in a community; for there is no reason why an individual who has the misfortune to become insane,

should, on that account, be deprived of any comfort or even luxury, that is not improper or injurious, to which he has been accustomed, or which his income will justify. An insane member of a family, wherever he may be, has really a claim for every thing that will contribute to his comfort and gratification, far beyond those who are in health and who have so many other resources; and the justice or morality of a different course, as occasionally observed, cannot for a single moment bear examination.

It may be repeated here that under no circumstances should the plans for a hospital for the insane be adopted till they have been examined and approved by one or more qualified experts, and that this should be insisted on in the original law, which should also detail the mode of appointment of the Building Commission, Board of Trustees, and Superintendent, and the fundamental character of their important duties.

CHAPTER XXI.

SIZE OF BUILDING AND NUMBER OF PATIENTS.

A SUITABLE site having been selected, it will next become necessary to decide upon the size of the institution. Whatever the number it is decided shall be received, it is very important that at no time should more be admitted, than the building is calculated to accommodate comfortably, as a crowded institution cannot fail to exercise an unfavorable influence on the welfare of its patients. As has been already said, there are still differences among practical men, as to the number of insane that it is most desirable to provide for in

one building. Having no doubt of the correctness of the original proposition of the Association, which limited the number to two hundred and fifty, the suggestions that will be made have reference to a hospital of that capacity. The best mode of extending the provision for the insane for any particular district, will be specially referred to in a subsequent chapter. The precise number that may be properly taken care of in a single institution, will vary somewhat, according to the ratio of acute cases received, and of course to the amount of personal attention required from the chief medical officer. In State institutions, when full, at least one half of all the cases are commonly of a chronic character, and require little medical treatment. They do, however, need a kind of supervision and direction that demand no ordinary ability, and for which only a few are thoroughly qualified. Even when thus proportioned, two hundred and fifty will be found about as many as the medical superintendent can visit properly every day, or nearly every day, in addition to the performance of his other duties. When the proportion of acute or recent cases is likely to be much greater than that just referred to, the number of patients should be proportionately reduced, and two hundred will then be found a preferable maximum. So, if a greater proportion is chronic, the number might without disadvantage be somewhat increased. While it is really best that no more patients should be received into any hospital than can be visited daily, or almost daily, by the chief medical officer, it is desirable that the number should be sufficiently large to give an agreeable company to each class, and to permit a variety of occupations and amusements that would prove too costly for a small institution, unless possessed of some considerable permanent endowment, or filled with patients paying a very high rate of board. It is therefore quite possible to have a hospital too small, as well as too large, to obtain the greatest amount of comfort and the best results for the patients.

It might be supposed that institutions for a much larger number of patients than have been recommended, could be supported at a less relative cost, but in practice, this is not generally found to be the case. There is always more difficulty in superintending details in a very large hospital, there are more sources of waste and loss, improvements are apt to be relatively more costly, and without great care on the part of the officers, the patients will be less comfortable.

Whenever an existing State institution built for two hundred and fifty patients, contains that number, and does not meet the wants of the community, instead of crowding it, and thereby rendering all its inmates uncomfortable, or materially enlarging its capacity by putting up additional buildings, it will be found much better at once to erect an entirely new institution near it, or in another section of the State, and then separate the sexes, as will be detailed hereafter. Under any circumstances, the transfer of acute cases from a great distance, is an evil of serious magnitude and constantly deplored by those who have the care of the insane.

CHAPTER XXII.

POSITION, AND GENERAL ARRANGEMENTS OF THE BUILDING.

THE size of the building, and the number of patients having been determined, its form and general arrangements will next require attention; and no plan, however beautiful its exterior may appear, nor how apparently ingenious its interior may seem, should ever be adopted without, as already suggested, having been first submitted to the inspection and having re-

ceived the approval of one or more physicians who have had a large practical acquaintance with the insane, and who are thoroughly familiar with the details of their treatment, as well as with the advantages and defects of existing hospitals for their accommodation. So different from ordinary buildings or other public structures are hospitals for the insane, that it is hardly possible for an architect, however skilful, or a board of commissioners, however intelligent and well disposed, unaided, to furnish such an institution with all the conveniences and arrangements indispensable for the proper care and treatment of its patients. Nothing but a practical familiarity with what is required can do this. All recent experiments in planning hospitals without consulting experts, or asking their opinions before the adoption of the plan, as should be expected, have proved failures. No desire to make a beautiful and picturesque exterior, should ever be allowed to interfere with the internal arrangements, any more than the wish to have an elevated and commanding site should be permitted to compel the provision of costly roads, and the expense and annoyance of having every thing in all future time carried to its great elevation. The interior should be first planned, and the exterior so managed as not to spoil it in any of its details.

Although it is not desirable to have an elaborate or costly style of architecture, it is, nevertheless, really important that the building should be in good taste, and that it should impress favorably not only the patients, but their friends and others who may visit it. A hospital for the insane should always be of this character, it should have a cheerful and comfortable appearance, every thing repulsive and prison-like should be carefully avoided, and even the means of effecting the proper degree of security should be masked, as far as possible, by arrangements of a pleasant and attractive description. For the same reason, the grounds about the building should be highly

improved and tastefully ornamented; a variety of objects of interest should be collected around it, and trees and shrubs, flowering plants, summer-houses, and other pleasing objects, should add to its attractiveness. No one can tell how important all these may prove in the treatment of patients, nor what good effects may result from first impressions thus made upon an invalid on reaching a hospital,—one who perhaps had left home for the first time, and looked forward to a gloomy, cheerless mansion, surrounded by barren, uncultivated grounds for his future residence, but who on his arrival finds every thing neat, tasteful, and comfortable. Nor is the influence of these things on the friends of patients unimportant; they cannot fail to see that neither labor nor expense is spared to promote the happiness of the patients, and they are thus led to have a generous confidence in those to whose care their friends have been entrusted, and a readiness to give steady support to a liberal course of treatment.

As soon as a building is located, a general plan for the improvement of the grounds should be prepared, and the laying out of roads and planting of shade trees commenced, thus gaining at least three years in the growth of the latter, and allowing the institution to be opened with something like a finished appearance, in place of the barren surroundings so often observed during the first years of hospitals.

Great care should be taken in locating the building, that every possible advantage may be derived from the views and scenery adjacent, and especially as seen from the parlors and other rooms occupied during the day. The prevailing winds of summer and the genial influence of the sun's rays at all seasons, may also be made to minister to the comfort of the inmates, and the grounds immediately adjacent to the hospital should have a gradual descent in all directions, to secure a good surface drainage. The centre building ought to be the

prominent feature in such a structure as that under consideration, and while there can be no excuse for squandering money simply for display, or for giving it unnecessarily large proportions, like all other parts, it should be in good taste and have ample and comfortable accommodations for the convenient transaction of such business as necessarily belongs to it, and for the apartments of the officers, who are expected to reside in it. Not to do this, is neither wisdom nor economy.

CHAPTER XXIII.

FORM OF BUILDING.

FOR an institution like that referred to, it is believed that the best, most convenient, and most economical form will be found to be a centre building with wings on each side, so arranged as to give ample accommodations for the resident officers and their families, and for the classification and comfort of the patients, and all employed in their care. A building having a basement entirely above ground, and two stories above this, is not objectionable, and will generally be adopted on account of its being less expensive, and of smaller extent on the ground than one of only two stories. The centre building and projecting portions of the wings, may be carried up a few feet higher, but the wards generally should not be. In the highest part of the structure, as in a dome on the centre building, the water tanks should be provided for.

In the centre building should be the kitchens, sculleries, main store rooms, a reception room for patients, a general business office, superintendent's office, medical office and

library, visiting rooms for friends of patients, a public parlor and managers' room, a lecture room or chapel, and apartments for the superintending physician's family,—in case that officer resides in the building,—and for the other officers of the institution.

The wings should be so arranged as to have at least eight distinct classes of patients on each side; each class should occupy a separate ward, and each ward should have in it a parlor, or possibly an alcove as a substitute, a dining room with a dumb waiter connected with it, and a speaking tube or telephone leading to the kitchen or some other central part of the basement story, a corridor, single lodging rooms for patients, an associated dormitory for not less than four beds, communicating with an attendant's chamber, one or two rooms of sufficient size for a patient with a special attendant, a clothes room, a bath room, a wash and sink room, and two or more water closets. There should also be provided for each sex in its appropriate wing, at least one ward for patients who are too ill to remain in their own chambers, a railroad for the distribution of food, etc., two work rooms, a museum and reading room, a school room, a series of drying closets, at least one on each story, or, better, one for each ward, and various other fixtures, the general character, position, and arrangement of which will be more particularly referred to, when describing the accompanying plans, in which they will all be found provided for. The parlors may be dispensed with in the wards for the most excited patients, but not elsewhere, unless the plan of having alcoves of good size, as already referred to, in the middle of each ward, may be accepted as a substitute, and all the other conveniences suggested will be as necessary for the excited as for any other class.

CHAPTER XXIV.

HEIGHT OF HOSPITALS.

THE best, and at the same time, the most economical height for a hospital, is a basement and two principal stories above. All these should be fairly above ground, and in the wings have a uniform height of ceiling of twelve feet. There is no objection to a two story building, but it will readily be seen that for a definite number of patients it is more costly, and necessarily extends over a greater surface, than one of three stories. Whether the building is of one, two, or three stories, the cellar and roof are required as much for one as the other. When the second story is finished, it costs little to carry up the walls, stairs, and flues another story, and there are always in a hospital for the insane, enough patients to occupy this upper story, who do not object at all to this additional flight of stairs, especially if properly constructed with frequent landings, and a moderate height in the risers. In my experience the third story has been preferred to either of the others by a majority of the patients, as being more airy, having greater privacy, and more extended views of the neighboring country.

One story buildings have advantages only for a limited number of patients. The feeble, when accommodated in them, can more readily have access to the open air, and the same is true in reference to the excited, where private yards are immediately adjoining their wards.

It requires little observation to see that a series of three or more one-story hospital buildings, running in parallel lines with each other, even if a hundred feet apart, necessarily expose their inmates to more or less annoyance from each other, shut off to a greater or less extent, the natural ventilation,

and obstruct the views of the surrounding scenery, more than a hospital with the same number of wards in one building, of three stories. The stairs being entirely disconnected with the wards and always made fireproof, there is no communication between the different stories, and if it is a hospital for the ordinary sick, a properly constructed elevator permits the patients to be taken to and from the different wards, without risk or exposure.

CHAPTER XXV.

TEMPORARY OR WOODEN STRUCTURES.

ONLY in time of war or during the prevalence of epidemics is it justifiable to provide temporary or wooden hospitals, either for the sick or the insane. For the latter they are especially objectionable. The risk of fire in them, alone, should settle the question, even if there were no other objections. Although styled temporary, it is not common for them to be abandoned as long as any use can be found for them, and sooner or later, their condition becomes discreditable and most unfavorable to the health of those who occupy them.

For these and other reasons, all hospitals, whether for the sick or insane, should be built in the most substantial manner. If after a certain period of use, it is thought desirable that they should be thoroughly renovated, this can be readily done, and at a moderate cost, by taking off all the old plastering and replacing it with new, by taking up all the old flooring and other wood work that has become impaired by use, and substituting the best hard wood that can be obtained, while the walls, roofs, all the heating and ventilating arrangements, and the numerous other costly fixtures, may remain undis-

turbed. This mode of renovating or renewing such a building has been tested thoroughly and successfully in the Pennsylvania Hospital at Philadelphia, and no one who has carefully observed the result, can well hesitate to give it a decided preference over any temporary structures that are supposed to be built to be abandoned at stated intervals, and to be replaced by others of the same description.

CHAPTER XXVI.

NUMBER OF PATIENTS IN A WARD.

As the total number of patients designed to be accommodated is two hundred and fifty, the average in each of the sixteen wards would be a little over fifteen, but the number may be varied somewhat by the character of the cases. Of the quiet, or supposed incurable demented, as many as twenty could be taken care of in one ward, with quite as much, or even more facility than less than half that number that are highly excited. Patients that are excitable rarely do well in large wards, and better discipline is almost invariably preserved in those that have a small number of inmates. Where seclusion is to be carefully avoided, it becomes particularly important that means should be provided, by which even the most highly excited or violent patient, may at proper times be out of his room, without being surrounded by a crowd of persons affected like himself. Every one familiar with institutions for the insane, will recall numerous instances of almost daily occurrence, where a single excitable patient introduced into a comparatively quiet ward, has in an hour almost entirely changed its character. A proper classification prevents all this.

CHAPTER XXVII.

NATURAL VENTILATION.

ALTHOUGH a forced ventilation is deemed indispensable in every hospital for the insane, still a natural ventilation should never be neglected. In most parts of the United States, during one-half the year, there is a comfort in the fresh, cool breezes which may often be made to pass through the wards, that can not be too highly estimated, and every precaution should be taken to derive full advantage from them. The darkest, most cheerless, and worst ventilated parts of such establishments, will generally be found to be where a wing joins the centre building, or where one wing comes directly in contact with another running at right angles to it. The first of these defects, however, is easily and effectually remedied, by leaving on each side an open space of ten or twelve feet, with movable glazed sash extending from near the floor to the ceiling, and which may either be accessible to the patients, or be protected by ornamental open wire work on a line with the corridor; this arrangement gives nearly every advantage of light, air, and scenery. Behind such a screen, even in the most excited wards, may be placed with entire security, the most beautiful evergreen and flowering plants, singing birds, jets of water, and various other objects, the contemplation of which can not fail to have a pleasant and soothing effect upon every class of patients. To remedy the other difficulty alluded to, instead of allowing a second wing to come directly in contact with the first, it should be placed on a parallel line, but made to recede just so far as will allow its corridor to be open at both extremities, or as much more as may be deemed desirable, and these ends should also be furnished with movable glazed sashes,

terminating in a bay window, accessible to the patients, or protected and ornamented as already suggested, according to the class by which it is to be occupied, and other circumstances. If the second range of wings is placed at right angles to the first, the same arrangement is required, as that suggested where the first wing joins the centre building. I deem this mode of finish of great importance, and one of the most valuable features of the plans under notice. These open arrangements, where one ward joins another, give all possible advantages of light and air, and are infinitely preferable to structures entirely detached, which, besides being more expensive, without having compensating advantages, have many inconveniences, that must be obvious to those who are practically familiar with the management of hospitals.

The character of the ground must often decide whether the building shall be in one extended line, or whether the second or third range shall be at right angles to the first or second, as the case may be. If the building is but for one sex there can be no objection to either of these, and of both plans, outlines are given.

CHAPTER XXVIII.

CELLARS.

THE basement or first story of the building should be raised three steps, or about twenty-four inches above the surface of the ground around it. There should be a pavement three or four feet wide around the whole building, and the cellar should always be excavated under the entire building. The cost is small and the advantages are great in many respects, but espe-

cially, in reference to a proper arrangement of the heating apparatus and of the air reservoirs connected with it. Its depth should give seven and a half feet in the clear under the joist of the first floor, which at the height suggested, would give ample light and space for all purposes. The floor of the cellar throughout should be covered with cement or good common mortar. Cellar walls made of hard bricks, with smooth joints, make an admirable finish, being dry and easily kept clean, and only a little more costly than the material commonly used.

The importance of keeping cellars dry and clean, and of having pure air in them, is not generally appreciated in regard either to private or public buildings. Whatever there is offensive or deleterious to health in the cellar, is sure, sooner or later, and to a greater or less extent, to penetrate to the upper parts of the structure. Ventilating flues should always lead from the cellar to the main ventilating stack, or to something equivalent in character, or they should at least pass directly upwards through the roof of the building. In all sanitary inspections, the cellars and water arrangements are the parts to be specially looked after. These being all right, the parlors and bed rooms are not likely to be dangerously wrong.

Although less important, it is very desirable that the attics of a building should not be allowed to become filled with lumber or refuse materials, and, as a consequence, a harbor for vermin.

CHAPTER XXIX.

MATERIALS OF WALLS.

A HOSPITAL should be constructed of stone or brick, as may be found most convenient and economical. If of stone, the walls may be pointed or stuccoed, according to the character of the material and the taste of those interested. If of good brick, they require nothing, but they may be painted to give them an agreeable shade of color. Advantage will be found from using hydraulic cement in laying the foundations, and as already said, the floor of the whole cellar, if at all disposed to dampness, should be covered with the same material, while lime and sand will answer in other localities.

On account of the great number of flues that are required, the inner or corridor walls should be not less than eighteen inches thick and constructed of brick. All the flues for heat and ventilation should be carried up in them, and about the whole space will be required for these purposes. The construction of the outer wall with an air space between the courses of brick, where that material is used, is an admirable arrangement for giving a perfectly dry house, and one little affected by sudden changes of temperature. If stone is adopted as the material for the hospital, an inner lining of brick, with a space for air, in addition to giving this dryness to the building, will secure warmth in winter, and render the building cool in summer, and the small additional cost thus incurred, is everywhere justifiable. If this is not done, those parts especially exposed to dampness should be battened.

CHAPTER XXX.

PLASTERING.

THE plastering throughout should be what is styled a hard finish, and calculated for being scrubbed, whether kept white or painted of some more agreeable shade of color. When rooms are likely to be much abused by patients, the plastering may be very advantageously done with hydraulic cement and sand,—at least as high as can be reached,—and rubbed down so as to be perfectly smooth, and the surface can afterwards be painted of any shade that is deemed most desirable. Paper is not suitable for the walls of a hospital. Paint is very preferable, as it can be scrubbed as often as may be thought necessary.

CHAPTER XXXI.

SECURITY FROM FIRE IN CONSTRUCTION.

IN constructing a hospital, every precaution should be taken to provide against accidents from fire, and the building should be made as nearly fireproof as circumstances will permit. Iron girders and brick arching between the different stories would be desirable everywhere, but the first cost will probably mostly lead to counter ceiling and other substitutes; or better, the kitchens and bake rooms, in which rooms alone it will be necessary to have fires of any size, should be arched above and below, and the flues leading from them should be constructed with great care. Instead of making the entire structure fire-

proof, it will answer to have the parts just alluded to and the passages between the different ranges of wings made positively fireproof. These last also should be arched, their side walls should run up from the cellar to the roof, and they should have stone floors, and iron doors on one side, that can be closed whenever desired. By this arrangement, a fire commencing in one section of the wings, could easily be prevented from spreading to any other, and it might lead to the preservation of all parts of the structure, except the range in which the fire originated.

The buildings should be heated by steam, and the fires for generating the steam should always be in a fireproof detached structure, from fifty to one hundred feet from the hospital. This mode of heating and this locality for the large fires, will remove the greatest source of accidents from this cause in institutions for the insane.

CHAPTER XXXII.

ROOFS.

THE roof should be of tin or slate, according to circumstances, and the cornice should project boldly over the walls for their protection, as well as for the sake of a good appearance, and to give a free passage for the water falling on the building. It is best that this cornice should be made fireproof, as this adds greatly to the safety of the building on the occurrence of a fire. The roof should have a good pitch, with as little obstruction as possible to the flow of water from it.

For a flat roof, good tin thoroughly painted, will probably be found most desirable, although with a good pitch and properly put on, slate will generally give satisfaction, and this material has the advantage over tin of not requiring paint as the latter does, at least every three years.

CHAPTER XXXIII.

SIZE OF ROOMS AND HEIGHT OF CEILINGS.

THE ceilings in every part regularly occupied by patients, should be twelve feet high, and in the centre building above the basement, should be as much as sixteen feet, to give a proper architectural effect. The main corridors of the wings should not be less than twelve feet wide, nor those of the centre building less than sixteen. The parlors and other large rooms should occupy a space equal to about twenty feet square. The single chambers for patients should be made as large as can be well brought about, provided their dimensions are not so great as to lead to two patients being placed in the same room, which ought not to be allowed. Nine feet front by eleven deep will probably be adopted as the best size, although eight by ten is admissible, and has the advantage that when not larger than this, two patients are not likely to be put into one room. If the rooms are larger, this is almost certain to be done whenever a hospital becomes crowded, and it is really never either proper or safe, to have two insane patients sleep in the same room without an attendant in it, or in an adjoining one. Great convenience will be found in having in each ward at least one chamber of the size of two single rooms, for the use of a patient with a special attendant, or in cases of severe illness.

CHAPTER XXXIV.

FLOORS.

THE floors of all patients' rooms, without any exception, should be made of well-seasoned wood, and unless arched below, should be counter-ceiled to prevent the transmission of sound. The boards used, should not be more than three inches wide, and should be put down by secret nailing. When it is expected they will require frequent washing, they may incline very slightly towards the door. Instead of the ordinary wash-board, which after a certain time is apt to become a harbor for vermin, cement painted may be used in some situations.

The oiling of floors is often resorted to, as tending to preserve the wood, and no doubt, as commonly used, it has this effect; but there are some objections to it, and it will be found that the right kind of scrubbing and at suitable intervals, with only a proper amount of water, which should be allowed to lie but for the shortest possible time on the floor, does away with the necessity of any of these so-called preservative applications. Too frequent scrubbing, and especially the use of too much water, tend to injure the floor, and to impair the healthfulness of the air of the wards. And yet it is found very difficult to make those who perform this kind of work, understand that water should only be put upon a very small space at one time, and then wiped up as soon as possible, so as not to permit anything like saturation of the wood, or permanent dampness in the ward.

CHAPTER XXXV.

DOORS.

THE door of a patient's room should be about six feet eight inches by two feet eight inches, and the frame should be well built in, and thoroughly secured to the wall. Over each door in the principal frame may be an open space, not exceeding five inches in width, which can be closed from the outside when desired, by a movable board or covered frame, or in all but the wards for excited patients, a wooden or iron sash, sixteen inches high, unglazed, but covered with wire of proper size on the inside, makes a good finish. Without the wire, the unglazed sash offers a most dangerous opportunity for suicide.

Although not absolutely necessary except in a small portion of the rooms, it will be found very convenient, to have a neat wicket, secured by a spring lock, in many, if not all of the doors of every ward, to enable the night watch to ascertain the condition of a patient with facility, without disturbing his rest, and also to give food or water, or indeed at any time to see what a patient is doing, when it might not be prudent for a single individual to enter the room. What is called a bead and butt door, well made of thoroughly seasoned timber, will probably be found one of the best kinds; and if greater security is desired for a very violent patient, a casing of boiler iron, firmly secured on the inside and neatly painted to resemble wood, will make it entirely safe; or a door, made by having the outside strips perpendicular, and those on the inside horizontal, is both cheap and very strong.

The doors may be made to open either into the rooms or into the corridors as may be thought most desirable. As the patients' chambers, however, are small, and as great annoyance and no

little danger frequently result from patients barricading their doors from the inside, so as to render it almost impossible to get access to them, the plan of making the doors to open into the corridor is generally to be preferred. The only advantage resulting from the doors opening into the rooms, is that they are less likely to be forced by the efforts of patients from the inside. A good lock and two suitable bolts on the outside, however, will be found sufficient to prevent risk from this cause, except in very extraordinary cases; and in nearly all, no bolts are required. Wherever used, they should be made to move smoothly and without noise, and should not be in any way conspicuous. A plain and cheap, but very good finish on the sides of both doors and window frames is made by using bricks rounded to the proper shape, with hard plastering; and a moulding where the plaster joins the door frame effectually prevents its being knocked off.

CHAPTER XXXVI.

LOCKS.

THE locks in a hospital for the insane, are subjected to such constant use, that they should be made with great care, and the parts most likely to wear should be case-hardened. This will add but little to the expense and save much trouble afterwards. The keys for the male and female wards should be so entirely different, that it will be impossible by any slight alteration to make those for one side open the locks for the other.

CHAPTER XXXVII.

WINDOWS AND WINDOW GUARDS.

WHEN in order to give a proper architectural effect to the building, the rooms in its centre must have lofty windows, the lower sash may be guarded as hereafter described, while the upper may be left as in an ordinary building. This is sufficient for rooms not regularly used by patients; but if constantly occupied, more attention must be paid to security. Inside shutters, with the upper half permanently closed, and the lower sash properly guarded, sometimes make a very neat arrangement in such rooms, and this, or something equivalent, is necessary for adequate safety.

More care, however, must be observed in reference to patients' chambers and ordinary ward windows. A window about six feet six inches by three feet, will be found of a convenient size, and this will give two sashes, each containing ten lights $5\frac{1}{2}$ by 18 inches. The window seats may be like those in common dwellings, and the window should be placed low enough to make it pleasant to a person sitting in the room. The upper sash should be of cast or malleable iron, and well fastened into the frame, while the lower sash, of the same size and pattern, may be of wood, and hung so as to rise and fall throughout its whole extent. The cord may be entirely concealed. The space opposite the lower sash should be protected by a wrought iron window guard, which, if properly made, and painted of a white color, will not prove unsightly. This kind of guard is always to be very strongly secured to the window frame, and in such a manner that the screws may not be accessible to the patients. It should reach to within five inches of the upper sash, and to within the same distance of

the frame below and at the sides. When of a tasteful pattern and neatly made, it will be found very preferable in appearance and quite equal in security, to the unglazed cast iron sash occasionally used, and which after all, when the sash is raised, has to one in the room very much the appearance of two sets of iron bars, placed at right angles, while the wrought iron screen is no more than what is every day seen in certain front windows of some of the best houses in our large cities.

Those who recommend unguarded windows, would seem to have little appreciation of the risks, which are sure to occur, or of the fatal results, that sooner or later will scarcely fail to happen. Within a very brief period, without this protection, three casualties would have taken place in a single institution, each of which must have ended in most serious, if not fatal results. Such windows may be safe for certain patients, but the great difficulty in taking care of the insane, is to know who are to be trusted and who are not, so many of their actions come from sudden impulse. The kind of patients for whom ordinary windows are safe, might really be treated elsewhere than in hospitals. So of doors left unfastened and unguarded; every superintendent can judge for himself of the safety and propriety of such a course, and the amount of responsibility he is willing to assume.

Although there are various other forms of windows in use, which look well and have some advantages, upon the whole I regard that which has been suggested, as being the best and most economical for a State institution. If desired, the upper or iron sash may be balanced, so as to drop five inches, but this adds materially to the expense, and where proper attention is paid to a forced ventilation, can hardly be necessary. By having the glazing done from the inside of the patients' rooms, particularly in the upper stories, a great amount of trouble will be saved in the facility with which broken glass, so common

an incident in hospitals for the insane, can be repaired, especially at night or during storms. This is practically a matter of great importance, and should never be overlooked.

Where the chamber windows are exposed to a strong sun, Venetian blind shutters on the outside, will be pleasant and useful, or a painted or simply a stout veranda awning over each window, will be found to add much to the comfort of the patients in summer, especially in a southern climate.

The iron verandas along the whole front, which have been suggested for the South, would prove very costly and could not be used with safety by the patients, unless made so as almost to resemble extensive cages. Good thick walls, with the air-space in them, with other less expensive arrangements, will be found more effectual in promoting the comfort of the patients.

CHAPTER XXXVIII.

INSIDE WINDOW SCREENS.

FOR various purposes, it becomes necessary to screen the inside of the windows of a portion of the patients' rooms. This is not only to prevent the breaking of glass when their inmates are excited, and to secure the windows from being opened at improper times, but it is also a protection in some very determinedly suicidal cases. For nearly all purposes, a neat wire screen well secured on a hinged frame, and having a spring lock, will be found sufficient, while it admits the air and light, and does not obstruct the view of the scenery beyond. Two or three such guards will be found desirable in every ward, while in those for the most excited, something stronger will be

required in a few rooms, such as a close wooden shutter, but with perforations for the admission of light, which ought not to be entirely excluded under any circumstances of excitement. The plan of hinging these window screens is the simplest and cheapest, but in putting up a new building it may easily be arranged to have them slide into the wall, or fall down, and be raised up by weights, as may be preferred. For a very few rooms in the most excited wards, it may be proper to have only a small window, too narrow to permit the escape of a patient, and too high to be easily accessible. The forced ventilation—never to be dispensed with—will make the air in these rooms as pure as in the others.

CHAPTER XXXIX.

STAIRS.

ALL the stairs used by patients should be made of iron or other fire-proof materials, firmly secured to the walls; they should be ample in number, convenient of access, and easy of ascent and descent. Slate will be found the best material for this purpose, as it neither becomes slippery like iron, nor wears to an appreciable extent, as is the case with much of the marble that is used. They should be so arranged as not to be exposed in any ward. The stairs for the centre building will generally be best placed in the transverse corridors. These are the only ones that it is justifiable to have made of wood. Neither in the wards nor elsewhere should the treads or risers be made with open work, on account of dust or water falling through, when they are being cleansed. The wells around which they

are placed, may be made fine ventilating shafts, or they may be used as hat closets, etc. The most convenient form of stairs, as tested by my experience, and which is believed to have all the characteristics just referred to as desirable, will be shown in the illustrations.

CHAPTER XL.

ASSOCIATED DORMITORIES.

IN State or other hospitals receiving all classes of patients, a certain number may, without disadvantage, be lodged in dormitories containing from four to six beds, and communicating by means of a partially glazed door with the room of an attendant. As far as this can be done with safety, it is unquestionably the cheapest mode of providing for patients, but it is very easy to carry it to an extent, that will prove most injurious. Two patients, however, as already said, ought never to be placed together in one room; this is dangerous and often demoralizing. A large dormitory with special supervision, is vastly preferable. About one-fourth of all the patients in a State hospital may probably be thus lodged without material disadvantage, and perhaps a twelfth of the whole number of such cases, may really do better in associated dormitories than in single rooms. These last are principally among the timid, who dread being alone at night, and some of the suicidal, who will remain quietly in bed if another person is in the room, but who cannot be trusted without company; although for the latter class, nothing but constant and intelligent watching can be deemed a safe reliance. The great majority

of patients would strenuously object to such an arrangement as the associated dormitory, just as much in a hospital as they would in a hotel or boarding house, and most of them regard with especial feeling the privilege of enjoying at times the privacy and quiet of their own rooms; and this feeling should, if possible, be gratified.

It is also convenient to have one or two large rooms, of about the size referred to, in each ward, which if not required or used for this special purpose, will be found particularly convenient in some cases of severe sickness, when it is not expedient to remove a patient from the ward, or when the friends of an individual desire a more spacious apartment than usual, or where a patient has a special attendant lodging in the same room.

CHAPTER XLI.

INFIRMARY WARDS.

IN case of any serious sickness in a hospital for the insane, especially if of a contagious nature, it will be desirable to have on each side of the building, at least three rooms of large size, airy, well ventilated, and separated from the ordinary wards, where patients can receive more special attention and enjoy greater quiet than in their own chambers. Patients who are very ill, thus situated, may be visited by their friends with great facility, without annoyance to other patients, or any interference with the ordinary operations of the house.

In some cases of protracted illness, especially if likely to terminate fatally, it is a great comfort to the friends of patients,

—even if their presence is not appreciated by the patients—to be able to be with them at times, and to render some of those attentions which the character of their disease prevented their receiving at home, and thus much will be done to remove objections to having such cases in a hospital.

CHAPTER XLII.

BATH ROOMS.

THE bath rooms in each ward should be of about the size of one of the ordinary chambers, and should contain a cast-iron bath tub of proper size and shape, with the improved arrangements for admitting hot and cold water through a common opening, just at the lower part of the tub, and for discharging it from a separate one in the bottom. There should also be an overflow pipe of ample size, to prevent flooding the room from carelessness; and an attendant should always be present, when protracted baths are used, especially by patients who might be injured by them.

By drawing a small amount of cold water before the hot is admitted, there is never any vapor in the room. The arrangement suggested above, also offers great facilities for keeping up any desired temperature, when long continued hot baths are given, without exciting the patients' fears that they are to be injured, or leading them to suppose that the water is much hotter than it really is, as often happens when the continued flow of warm water into the tub is directly under the patient's observation. The fixtures for admitting and discharging the water not being over the tub, but entirely beyond it, prevents, in a great

measure, the bath tub being used for any but its legitimate purposes. To make this still more certain, a cover may be placed over the tub, when not in use, which is convenient for other purposes. The admission and discharge of the water through different openings, varying very slightly in their level, is preferable to any arrangement which allows one opening to answer both purposes: for in the latter case, without special care, the deposits which take place in the pipe, are pretty sure to be returned into the tub when the next bath is drawn.

There should also be two or three marble, porcelain, or enamelled cast iron wash basins in one section of the bath room—or preferably, in another room, to be used specially for washing,—and furnished with hot and cold water pipes. In the wards for excited or suicidal patients, the hot water should be under the control of the attendants, to prevent accidents. An arrangement for shower and the various other baths, and for the douche, similar to what is used in private families, may also be introduced over or near the bath tub, but there is little necessity for the formidable fixtures often provided. Unless a patient can be persuaded to take the shower-bath or the douche voluntarily, its use is very problematical. Provision should be made for hip, foot, and hand baths; and a few towels properly secured,—but never, the ordinary roller towel, from which fatal results have often occurred,—with various other contrivances, should be a part of the furniture of each bath room.

The floors of bath rooms that are much used, may be of smooth German flag-stone, slate, or other material, that will not absorb moisture, and no wood should be used for wash-boards. Ordinarily, however, the common floor, well painted or oiled and varnished, answers every purpose. Special provision for warming all bath rooms, wash rooms, and water-closets, should be made, so that full advantage can be had of

hot baths, and the taking of cold be prevented. Direct radiation is often admissible for this purpose. A strip of carpet laid in front of the tub when in use, will obviate the objection to any coldness of the floor, especially as all bath rooms should be kept well warmed.

CHAPTER XLIII.

WATER CLOSETS.

No part of the arrangements of our hospitals, even a few years since, was more imperfect than their water closets. A constant source of complaint, and a great nuisance in every part of the building where they were found, they gave so much annoyance that some practical men gravely proposed dispensing with them altogether, inside of the hospital. Our present knowledge of the subject, however, is such, that they may be placed wherever they are required, and without their presence being known in the adjoining part of the ward. To effect this, it is necessary to occupy for the purpose, a small room having an external window opening directly into it, to have the floor and other parts made so as not to absorb moisture, to use only iron or chinaware in the construction of the apparatus, to have no basins or complicated fixtures liable to get out of order, and above all,—most important everywhere,—to secure at all times, a steady and strong downward ventilation. This last may readily be obtained by a connection with a specially heated flue, or the main hospital chimney. All this can be done, and no reasonable expense should be spared to effect it. A special flue for each range of water closets, and an abundance

of heat to secure an uninterrupted downward current of air through the receiver and discharge pipe, will well repay all they may cost; for with this effect produced, unpleasant odors in the wards from this cause are scarcely possible.

Where the water closets are near a flue of sufficient size, which is always heated, that will answer, and in private houses rarely fails to be successful; but if the slightest doubt of its working satisfactorily is entertained, it is much better to provide a flue with a fire in it, for the special purpose.

Various modes of letting on the water have been suggested, which do well, but at present I am disposed to prefer that which gives a full supply to wash out the whole surface of the receiver, every time the door is opened.

It is unquestionable, that as a general rule, not one-half enough water closets are provided. There should be at least one for every ten persons in a ward. To prevent all offensive odors from water closets and urinals, it is indispensable that it should be some one's special business to keep every thing about them clean, and in order, at all times.

Near the water closet, should be a *sink*, for washing various articles that it is not desirable to take into the bath room, and for obtaining water for the necessary cleansing of the ward.

The *urinals* should also be made of cast-iron, well enamelled, or of glazed pottery or chinaware, with a downward current of air through them, and they should have a steady stream of water passing over their whole surface, without both of which they are more likely to be a source of offensive odors than the water closets themselves. There should also be a hopper into which slops, etc., can be emptied, independent of the other arrangements.

A number of designs have been tried for permanent close-stools in the rooms of the most excited and careless patients, but none of them which communicate with a common discharge

pipe, seem admissible unless a full supply of water, and a most thorough downward ventilation are secured through it. With these they answer admirably.

It is especially important about bath rooms, water closets, and sink rooms, that nothing should be boxed up. Every thing should be left open and exposed to view, there should be no harbor for vermin of any kind, no confined spot for foul air, or the deposit of filth, and all wood and every other material that will absorb moisture, should as far as possible be discarded from the floors and from every other part, except for the seats of water closets, where the best mahogany or other hard wood will be desirable.

CHAPTER XLIV.

WARD DRYING ROOMS.

ANOTHER source of annoyance and unpleasant odor in our hospitals for the insane, is that rather peculiar one, exhaled from the wet cloths and brushes so constantly required to be used, and which must necessarily be kept in the wards. This is what is frequently called "hospital smell," and it is often wrongfully attributed to personal exhalations, instead of the real cause. To remedy this prevalent difficulty, which must be familiar to all who spend much time in the wards of many hospitals, it is proposed to have a series of rooms—one connected with each ward, or serving for two contiguous wards—thoroughly heated by steam pipe and with a good current of air from the fan always passing through them, in which all articles of the kind alluded to should be placed immediately

after being used, and where they should be kept till dry. The same room may also be used for drying various wet articles of bedding or clothing which it may not be deemed necessary to send to the wash-house. This arrangement is of great importance in preserving the purity of the air of the wards. These rooms communicate directly with the main foul air ducts.

CHAPTER XLV.

WATER PIPES.

THE great number of water pipes used in a hospital for the insane, their liability after a few years' service to become defective, and the injury and disfigurement which fine buildings often receive from this cause, make it very desirable that those that belong in the same neighborhood should, as far as possible, be gathered together and pass from the cellar to the attic in an open space sufficiently large to give free access to them on all sides, for inspection and repairs; and so that in case of leaks, there will be no injury done to the ceilings or other parts of the structure.

It will be found expedient in most situations to use iron pipes for nearly every purpose connected with the water fixtures. Their durability will generally be found a sufficient recommendation, but as some water acts on these pipes in a remarkable manner, it will be well always to have them made of good size and of rather more than the ordinary thickness, especially when passing horizontally for any great distance. Block tin makes an admirable pipe for water, but is more expensive. Lead pipe and reservoirs lined with that metal.

for either drinking water or cooking purposes, should be entirely discarded. Serious injury is thus often done when least suspected, and all risk from this source should be avoided. Galvanized iron pipe is now believed to have special advantages. In many situations, terra cotta may be used. Whatever the kind used, it is important to have all pipes, whether for steam, water, or drainage, of ample size. Almost universally, they are too small.

CHAPTER XLVI.

DUST FLUES AND SOILED CLOTHES HOPPERS.

A LARGE tin flue, through which the dust, sweepings of the halls, etc., may pass, should reach from each ward, or from a point contiguous to two adjacent wards, directly to the basement or cellar, from which its contents can be removed when most convenient.

At least one hopper should be provided for every two contiguous halls, and through which all the soiled clothes, bedding, etc., should be conveyed to the basement, preparatory to their being taken charge of, by those whose duty it is to convey them to the wash-house. Both these must be fire-proof.

CHAPTER XLVII.

KITCHENS AND SCULLERIES.

WITH the exception, perhaps, of a small kitchen for the use of the superintendent's family, or for making dishes for the sick, one main kitchen in the basement of the centre building is all that is required for the purposes of an institution of the size and character of that under notice. This position is certainly the most convenient for this important room, especially in regard to facility of supervision, and there can be little question, but that the proposed arrangement will be found most economical in reference to supplies, fuel, and the force employed to do the cooking. The kitchen and bakery, which last may be preferably placed in connection with the laundry buildings, are the only rooms in the whole establishment in which there will be large fires, and they should be arched for additional security, and to prevent the steam and odors from them passing through the floors into the rooms above. A large ventilating shaft should be built expressly for the kitchen, and a strong and steady upward draft in this shaft secured, by carrying up in its centre a cast iron flue of good size, through which the gas from the fires is to pass. There should also be two doors, at the foot of the stairs, leading to the story above, so that but one shall be open at a time.

Arranged as proposed, this location for the kitchen can scarcely prove objectionable in any climate; for the heat, steam, and odors will be promptly carried off, without interfering in any way with the comfort of the inmates of any part of the building. The very common annoyance from basement kitchens, has generally resulted from no provision being made

for their ventilation, or if any has been attempted, it has been of the most imperfect kind.

Besides a cooking range, a broiler and a rotary roaster, the main kitchen should have in it a complete steam apparatus for cooking vegetables, making soups, etc., constructed entirely of iron and tin, and with so good a ventilation that no vapor will escape into the room. An apparatus for making coffee and tea, and boiling milk, by steam, is also necessary. A steam table for keeping up the heat of the cooked food and of the dishes, is desirable. The steam for the use of the kitchen may be derived from one of the boilers in the detached building hereafter to be referred to. The best floor for the kitchen is the smooth, brown German flagstone or slate. The window seats and their sides near them should be of slate. Cement should be used for the washboard and lowest part of the plastering, and wood should be avoided as much as possible.

CHAPTER XLVIII.

DUMB WAITERS AND DISTRIBUTION OF FOOD.

A DUMB waiter should be provided for each series of dining rooms that are immediately over each other, so that the food and other articles required in the wards, may be passed directly from the basement story into the dining rooms, or to points immediately contiguous to them. The food is to be conveyed from the kitchen to the foot of the various dumb waiters by the railroad referred to in the next chapter.

It is of the utmost importance that all dumb waiters, like

the dust flues, and soiled clothes hoppers, should be made fireproof. Unless they are so, they become most dangerous means of spreading a fire, that may happen to occur in the lower part of a building.

CHAPTER XLIX.

RAILROAD.

A RAILROAD should extend through the cellar or basement, from a point directly under one side of the kitchen, and pass to each extremity of the hospital. It should also go to the building in the rear of the centre or other selected locality, and in which are the laundry, bakery, etc. The car or cars on this road should be so constructed as to carry all kinds of food, to run smoothly, and to turn short curves without jarring.

The food, after being prepared in the kitchen, and put while hot in tightly closed bright tin vessels or boxes, should be placed on a railroad car, which must be of sufficient size to carry what is required for one side of the house, and which is brought to a point adjoining the kitchen. When filled, this car runs upon the railroad below, which extends along one side of the cellar or basement from under the kitchen to the extreme wings on either side, and which passes in its course the bottom of each of the dumb waiters. By these means the food is delivered promptly and hot to every part of the house, and is kept so during meals, by the steam tables which are a part of the fixtures of every dining room. In this way, the food for one side of the hospital can be delivered in all the dining rooms in ten minutes, or twenty minutes for the whole house.

The refuse from the different dining rooms is in like manner to be sent down in closed tin vessels, and carried away by the railroad. Each ward should have a bell and a speaking tube or telephone, connected with the kitchen or other suitable part of the basement, by means of which whatever articles are required, may be called for without the attendants ever leaving the ward for any thing from the kitchen, into which they should not be admitted.

In the dining room of each ward should be a small gas stove, by which articles can be warmed, or preparations for the sick made at all hours.

This railroad is also used to convey clothing, etc., to and from the laundry, and to carry all other articles which it is desired to move from one side of the building to the other.

CHAPTER L.

HEATING AND VENTILATION.

THERE seems to be little diversity of opinion among those who have the charge of American hospitals for the insane, in reference to the proper mode of warming and ventilating these institutions; the "Association of Medical Superintendents" having as long ago as 1851 unanimously resolved that "all hospitals should be warmed by passing an abundance of pure fresh air from the external atmosphere, over pipes or plates containing steam under low pressure, or hot water, the temperature of which at the boiler does not exceed 212° F., and placed in the basement or cellar of the building to be heated," and that "the boilers for generating steam should be in a de-

tached structure:" while they also agreed with equal unanimity, that "a complete system of forced ventilation in connection with the heating, is indispensable to give purity to the air of a hospital for the insane, and that no expense that is required to effect this object thoroughly, can be deemed either misplaced or injudicious." These propositions were adopted in 1851, and no change has ever been suggested in them. After twenty-nine years' very extended experience, by highly intelligent men, in various climates, it is quite safe to say that these declarations are unquestionably true.

In the improved linear plan recommended in the present essay, it is proposed to place the detached structure alluded to, at a distance of not less than one hundred feet in the rear of the centre building. The precise position of this building, however, will vary according to the character of the ground, and other circumstances connected with the different uses to which it will be applied, it often being most desirable to have these arrangements placed at one end of the hospital, as has been done in that shown in the frontispiece. If at the rear of the centre building, it may be at the distance of five hundred feet without inconvenience or disadvantage, if the pipe conveying the steam is under ground and surrounded by some non-conducting substance. The boilers, of which it will be necessary to have three or four, according to their size and form, unless they are very large, are to be placed under a shed with a slate roof and good skylights, adjoining the basement of the detached building, and, if possible, sunk so deep that the condensed steam may return to them by simple gravity. If this cannot be effected, the boilers must be kept supplied with water by a force-pump driven by the engine, or preferably by a direct acting steam pump. This whole building should be thoroughly fire-proof. These boilers may be either tubular, having the advantage of being easily put in place, requiring little space and

generating steam very rapidly, or plain cylinder boilers, which are rather less costly, quite as safe, and not so likely to need repairs. Safety is a specially important matter in adopting a style of boiler for hospitals, and on this account, in coming to a decision on this point, this feature should be carefully investigated, as there are some that have within a few years been thoroughly tested in this respect, and seem to be absolutely safe from destructive explosions. It is always, too, of great importance to have an abundance of boiler room and to use the steam under comparatively low pressure. The vaults for coal should be immediately adjoining the boiler room, and so arranged that the coal may be dropped into them directly from the carts or cars, while the ashes can be raised by a crane and windlass, or better, when the ground admits of it, they should be hauled nearly every day directly from the fire room.

The steam is to be conveyed from the boilers through an eight-inch iron pipe, till it reaches the air chambers under or near the centre building, and from this point a smaller pipe diverges to each extremity of the hospital. If the boilers are placed at one end of the hospital building this arrangement must be changed. The radiating surfaces may be either made of large cast iron or of small wrought iron pipes. Of the two, the latter are to be preferred on account of the greater facility with which they can be taken down or put up, turned at corners, and repaired in every way, while their cost is no greater. Several different forms of cast-iron radiators are now in use, which are believed to have many advantages, especially as regards durability.

The radiating pipes should be prepared in two or three distinct sets, one or all of which, can be used at pleasure. In the cool mornings and evenings which occasionally occur even in the summer months, and during the mild weather of spring and autumn, one series of pipes will be sufficient. With the

ordinary winter weather, two will be required, and when the temperature is very low, especially if accompanied by much wind, the whole of the three ranges, if so many are used, must be put in operation. This arrangement will be found very economical, and do away with all the difficulties sometimes experienced in the proper distribution of heat from a steam apparatus. So easy is it to control steam as a heating agent in the mode proposed, that there is no reason why heat should not be purchased in large cities or for long ranges of buildings, as light and water now are. Such a suggestion was made by the writer more than thirty years since, and an entirely responsible firm was subsequently prepared to contract for the warming of the whole block of buildings on Girard Square, owned by the city of Philadelphia, from one central apparatus entirely under ground. With such an arrangement, the occupant of a dwelling could have just as much heat admitted as desired, or as much ventilation, by simply turning the stopcock which controlled the admission of steam into the radiating pipes in his cellar, and the fresh air into the dwelling. The neatness, comfort, and efficiency of such a plan, if once properly tried, would soon lead to its being extensively adopted. What has recently been suggested for some of our large towns is only an application of the same principle.

For supplying steam to the hospital kitchens and drying rooms, for forcing ventilation, pumping water, driving washing machinery, and heating water for all purposes, the different boilers may be used alternately in summer, and the pipe conveying the steam for the purposes indicated, should be protected by appropriate wrapping, so that no heat can be lost or be given out in the air chambers, to the annoyance of those in the rooms above. The steam arrangements used in summer should always be distinct from those used for heating in winter. Boilers and radiating pipe suffer much more from want

of use in summer than when the fires and steam are kept up in winter.

It is recommended that the space under the corridors of the wings, should be made the fresh air reservoirs from the fans. The fresh air should be taken to the fans from a sufficient elevation to make it entirely clear of all unpleasant or noxious surface exhalations, and the amount to be admitted, will depend somewhat on the severity of the weather, the prevalence or absence of strong winds and their direction, as well as upon the general efficiency of the apparatus. On these accounts, controlling windows or fixtures are necessary. A full supply of fresh air, however, is indispensable to the proper working of any apparatus, and this should not be left to the discretion of any subordinate. The air chambers may extend the whole length of a wing, or be divided into shorter sections; but very short air chambers; and especially radiators with a good descent, are always most desirable.

In this work, as originally written, reference was made to an arrangement where a fan is not used, but at this day it can hardly be deemed possible that any hospital will be constructed without provision for the constant use of a fan, which removes all the ordinary difficulties in the distribution of air and heat, and secures a perfect ventilation.

In arranging the radiating pipes, it must not be forgotten that a large amount of ventilation is required in every hospital, and that all ventilation in winter is loss of heat. A building not ventilated, may be thoroughly warmed by one-half the fuel required for one that is, but nothing can be more destructive to health than a residence in the former, or be further from a true economy.

A common cause of failure in the experiments for heating in the manner recommended, has resulted from an attempt to effect the desired object with too little radiating surface, and

with less fuel than is absolutely indispensable. There can be only a certain amount of heat obtained from a ton of coal or a cord of wood, and the use of the fuel for the generation of steam, cannot alter the principle.

CHAPTER LI.

AXIOMS ON HEATING AND VENTILATION.

If what has been said is as correct as it is believed to be, the following may safely be set down as well-settled axioms in regard to heating and ventilation:—

1. No hospital of any description or for any class of patients, should be built, without a thoroughly efficient system of heating and of forced ventilation being decided on before the commencement of the building.

2. Steam is the most efficient, safest, and best agent for warming a hospital, being available, at short notice, on sudden changes of temperature, and in varying conditions of the atmosphere, when it may so often be required for the health and comfort of the patients at almost every season of the year, and capable, without a fire in the building, of being carried to an almost indefinite extent.

3. No ventilation can be deemed worthy of the name that is not forced.

4. Of all the means for forcing ventilation, the fan is the most economical, most efficient, and most reliable.

5. Forced ventilation is required, at all seasons, and at all hours. A fan should, therefore, be kept in motion equally at night as in the daytime; in summer as in winter.

6. While the exhaustive system of forced ventilation may be made a useful adjunct to that of one forced by a fan, it can never be made an efficient substitute for it.

7. Direct radiation is admissible only to a limited extent where rooms are used but for short periods, or as an adjunct in very exposed situations, and in very cold weather.

8. No lodging room can be properly warmed and ventilated for regular use by air introduced only through a transom sash, over the door, opening into the corridor. To do the former, in very cold weather, would require that the door should be kept wide open; and to ventilate a room by the vitiated air of a corridor regularly occupied by patients, whatever may be its temperature, could hardly be recommended as desirable under any circumstances.

9. No plea of expediency or economy can justify a neglect to provide the most essential agents for securing the proper degree of warmth and abundance of pure air throughout any hospital buildings.

CHAPTER LII.

HOT AIR AND VENTILATING FLUES.

It is to be remembered, that fresh air heated by steam or hot water on the plan suggested, can never attain a very high temperature, and of course it must be introduced in much larger quantities than if from common hot air furnaces, and as a consequence, the flues must be large and pass as directly upwards as possible from the air chambers. All lateral or sloping flues should, if possible, be avoided. The flues fre-

quently put into public buildings are not one-fourth as large as is desirable. They should always be made perfectly smooth on the inside, and the amount of air passing through them should be controlled by appropriate registers. The first should be effected either by very careful plastering, smooth brick with struck joints, or by terra cotta or by tin boxes built in the walls. All the main steam pipes should be very carefully protected by some of the various preparations now in use, to prevent loss of heat.

Although the heat from a hot water apparatus is entirely unexceptionable, and for private dwellings or small establishments, perhaps even preferable to steam, unless it is under very low pressure, still for a large institution like that under notice, steam is on many accounts more desirable. With high steam, less radiating surface is required, because the temperature of the inside of the pipes throughout is nearly uniform, and never below 212° F.; smaller pipes may be used; the heat is distributed and controlled with much greater facility and rapidity, and besides the steam is required for various other purposes about the institution. The steam, too, may be generated at almost whatever point may be considered most desirable, even at a distance of several hundred feet from the building, and yet by proper arrangements, be conveyed to it promptly and with little loss of heat. Such a location for the boilers as proposed, allows a proper site to be selected for the wash-house, gas works, pumps, etc., which should always be together, so that they may be superintended by the same engineer. It also protects the institution from one of the most common and dangerous sources of fire, and at the same time saves the inmates from all danger from explosions, and from the annoyance of the dust, dirt, and gas connected with the fuel and ashes, and which, if in the building, are pretty sure some time or other, to escape into the rooms above. If hot water is used, it will

be much more difficult to keep large fires, with all the inconveniences incident to them, at a distance from the building, and large fires in a hospital are always dangerous. By using steam as proposed, the only fires really necessary in the whole establishment, are those in the kitchens.

It is best that all these flues for the admission of hot air and for ventilation should be direct, and carried up in the interior or corridor walls, which being eighteen inches thick, will allow each flue to be about nine by twelve inches in the clear. In most of the wards it is proposed to introduce the heated air near the floor, and to have one of the ventilator registers open near the ceiling, and the other near the floor. One or both these openings can be used at pleasure, and when it is desired to economize heat, as may be expedient in very cold weather, or when there is a deficient supply of heat, those near the ceiling are to be closed, but at all other times both may be open. In some of the wards for the most careless and uncleanly patients, it will be well to reverse this arrangement, admitting the warm air near the ceiling and having the openings for impure air near the floor. When the warm air is admitted near the floor, especially when the patients are likely to interfere with the openings, a contrivance should be put up which will allow the air to escape freely, and yet prevent anything being thrown into the air chambers below.

The ventilating flues should terminate in the attic, in gradually ascending trunks of a size more than equal to the aggregate of the flues entering them, and leading to the different main shafts which rise above the roof of the building. The upward current in these shafts, if a fan is not used, is to be increased by means of coils of steam-pipe placed in them, or by the heated iron pipe carrying off the gas from the kitchen or other fires that may be used; but with a fan, nothing more is required, if it is used as it should be, night and day, summer

and winter. The practice adopted in some buildings makes it necessary to say, that fans are of no value unless they are used, and unless regularly and steadily used, their value is not likely to be appreciated or understood. Steam jets, fires in the attic, or gas burners in the flues, have some objections in a hospital for the insane, and as steam is required for so many other purposes, its use, as suggested, will be found most desirable.

In addition to the several openings for both purposes, in the corridors, which should be numerous enough to secure the free diffusion of the air, there should be at least one for heat and another for ventilation in every room in the building.

Whenever a steady driving power can be obtained, fans are of all means the most reliable and effective for forcing ventilation. With a fan, there can be no question as to the forcible displacement of air from every corner of an apartment, and a steam engine should be brought into use for this most important purpose. Even fans driven by hand are often very useful in some of the wards in securing a rapid change of air, and for drying any rooms that have been soiled or scrubbed.

The great amount of ventilation required in hospitals for the ordinary sick or insane, renders it important that there should be a considerable excess, rather than any deficiency of radiating surface. About one superficial foot of radiating surface, the temperature of which is 212° F., will be required for every hundred cubic feet of space to be warmed, in the latitude of Philadelphia. In some of the colder sections of the United States, it will require one foot of radiating surface to every seventy-five or even fifty feet of space to be heated, while in the South the ratio will be proportionably diminished.

The radiating pipe or the cast-iron radiators, as may be preferred, should be placed directly under the openings to the flues, and near them, so that all air passing upwards must come in contact with them.

To secure to each story and to every class of patients their due proportion of heat, it has been proposed to have a distinct arrangement for each story, and this cannot fail to effect the desired object; or the point in the air chamber, at which the flue commences, will also regulate the supply of air to the apartment to which it leads. Without attention to these points, it is quite possible for the upper story to be over-heated, while the patients in the lower one may be suffering from cold.

Although it is entirely inadmissible to warm a hospital by direct radiation from steam pipes, still, rooms that are not regularly used or only for short periods, as, for example, dining rooms, work rooms, halls or apartments that are particularly exposed to the admission of cold air, may have some steam pipe distributed in them to keep up the proper temperature, while the fresh warm air that is also admitted from the flues is relied on for ventilation. So, in exceptionally cold situations, a certain amount of direct radiation is a great comfort in extremely severe and windy weather. As already said, bath rooms should always have radiating pipes in them, to secure a high temperature, when hot baths are given. Great care, however, must be taken that this mode of heating is not so much extended, as to interfere with the general ventilation of the house. In crowded wards, or in any part particularly exposed to impurity of the air, it should be entirely avoided.

Where the heated air is admitted near the ceiling and the foul-air flues open near the floor, it is particularly important that the windows should be tight and kept closed, to secure a regular circulation. There should also be registers in the foul-air flues, near the ceiling, for use in summer weather or when the rooms have become accidentally over-heated. This mode of admitting warm air has peculiar advantages for the class of patients for whom it is recommended, for it not only prevents their congregating around the hot-air openings and using the

flues as spittoons, but effectually secures the wards from all the offensive odors with which they are frequently filled from articles thrown through the registers. At the same time it must be acknowledged, that for those who are not addicted to these careless habits, there is great comfort, when coming in cold and chilly, in being able to approach the heated air, and in regulating their distance from it afterwards, at will.

There is really nothing so pleasant or probably so healthful in the way of heating, as the warm air derived from an open wood or coal fire, with which there is never any deficiency of ventilation. If beside this, a reasonable amount of pure and slightly heated air is admitted into the halls of a private dwelling to moderate the general temperature, and to prevent currents of cold air when the room doors are opened, we have the most comfortable of all modes of heating. Open fires would not be less pleasant in the parlors of a hospital for the insane, but the risks attending them, at times, even in the least excited wards, are so numerous as to render it prudent to dispense with them in every part of the building regularly occupied by patients.

CHAPTER LIII.

LIGHTING.

EVERY hospital should be lighted with gas, and the necessary pipes for its distribution should be put in during the progress of the erection of the building. If gas cannot be conveniently obtained from a company's works, it may be made on the premises without difficulty, by persons who are necessarily

employed for other purposes, and at a cost that will render it cheaper than any other kind of illumination. In addition to the economy of its use, the thorough lighting of a hospital for the insane has really a remedial effect, and gas is certainly the safest, neatest, and in all respects, most convenient mode of effecting it. The retorts for manufacturing the gas can be conveniently placed in the basement of the detached building, hereafter to be more particularly referred to, or preferably in an entirely separate one for this special purpose, and it can be thoroughly ventilated through the main shaft in its immediate vicinity. The gas-holder should be of sufficient size to contain the quantity required for several days' consumption, although it may be best to keep the works from becoming entirely cold by making some gas every day.

CHAPTER LIV.

PATIENTS' WORK ROOMS.

IN addition to the general carpenter shop, in which many male patients may be advantageously employed with the regular hospital mechanic, it is also desirable to have work rooms in the hospital building, or near it, readily accessible, in which a great variety of occupations and many kinds of handiwork may be carried on, in charge of competent attendants. This applies to the female as well as to the male patients. It has been shown very conclusively that females become as much interested in mechanical employment as men, and there is nothing that seems so thoroughly to wean one's attention

from delusions, especially when it requires close attention in its performance. The variety of occupation for women is only limited by the facilities provided for the purpose, and among these may be prominently mentioned turning and printing, and all sorts of fancy work in wood and pasteboard. To these may be added a full provision for cooking by gas, and the making of dishes for the sick and dainty preparations, in which so many of the female patients will be found interested. The latter arrangement is also very useful as one branch of instruction for the attendants, making them, under careful supervision, accomplished in the preparation of everything required by the sick or convalescent in the way of diet—a kind of knowledge which is especially important for those expecting to engage in private nursing. All hospitals for the insane are, indeed, most important schools for the education of private nurses; without making any special pretensions, they are constantly doing their work with all employed among the patients, and that this is appreciated by the community, is shown by the constant demand made for their services in families.

CHAPTER LV.

GENERAL COLLECTION ROOM.

A ROOM of this character is indispensable in every hospital for the insane. It should be of a size capable of accommodating at least two hundred persons, or four-fifths of the entire ward population, and should be bright and attractive, fitted up with everything desirable for the purposes to which it will be

devoted. These objects will include religious services, lectures, readings, concerts, exhibitions of various kinds, gymnastic exercises, social parties, etc. These uses vary so much in their character, that it will be found convenient to have two such rooms, connected with a hospital. Such a room cannot be dispensed with anywhere without much loss. This is especially so, where it is intended to give the patients all the advantages resulting from a regular system of evening entertainments and amusements.

If only one room of the kind is provided, it will be styled either chapel, or lecture, assembly or collection-room.

One or two other rooms, capable of accommodating from fifteen to twenty patients, may also be profitably fitted up as school-rooms, and under the care of intelligent instructors will be found extremely useful.

CHAPTER LVI.

WASHING, DRYING, IRONING, AND BAKING.

As a general rule, all these operations should be conducted in a building entirely detached from the main structure, and at least one hundred feet from it. Under some peculiar circumstances, the baking and ironing may be carried on in the hospital building, but ordinarily it will be desirable that they should be provided for in the position first suggested. The washing and drying of clothes should never be done in the hospital.

This detached building should be not less than forty feet by fifty feet, and two stories high. On one side of it should be a

shed, covered with slate, and well lighted from the roof, under which the boilers for warming the building, etc., should be placed.

The steam engine and the workshop of the engineer, should be in the basement of the building, and behind these, with all necessary fixtures, entirely detached, the room in which the gas is to be manufactured, so that the engineer can readily superintend this and other processes. The main chimney will be at the rear of this building, or at some other desirable point, and it must be carried up to a height that will secure a good current of air to all the fires for which it is to be used, and that will also supply the power for the downward ventilation of all the water closets, sinks, and urinals in the building.

The coal vaults should be in immediate proximity to the boilers. Into these vaults, the fuel should be dropped directly from the carts or cars, so as to avoid all unnecessary handling.

On the first floor of this building in front, may be placed the bake-house, baker's store-room, and a stairway leading to the chambers of the baker, engineer, and firemen in the second story. In the rear of the first story should be the wash-room, containing the most perfect mechanical contrivances for washing, and a centrifugal wringer, both driven by the steam engine, besides some permanent wash-tubs, and a drying closet heated by air passing over steam-pipe, and driven through it with sufficient velocity by means of a fan worked by the engine. In the second story over the wash-room, with which it communicates by a stairway and a dumb waiter, is the ironing-room, in which besides the iron heater and steam mangle, should be another drying closet, made thoroughly effective by the means already suggested.

CHAPTER LVII.

FARM BUILDINGS.

THE character of the out-buildings required, will depend very much upon the amount and the kind of land owned by the institution, and the mode in which it is cultivated. Under any circumstances where farming is carried on, it will be necessary to have a barn of sufficient size to stable six or eight horses and twenty cows, and to contain the hay and grain raised on the premises; a carriage house to accommodate the vehicles used about the hospital and the farm wagons; and a piggery for about forty hogs,—this number being sufficient, as a matter of economy, to consume the offal of the establishment. Of the cows, there should always be enough to give an abundant supply of pure milk the entire year to all the patients. A carpenter or workshop for the mechanics regularly employed, and an ice-house, will also be required. All these buildings should be inside the general inclosure, although separated from the patients' pleasure grounds, and care should be taken that the barn and piggery are not so near the hospital as to be an annoyance to its inmates.

The vegetable garden should be of large size and kept in a high state of cultivation. It will not only be of great importance in furnishing an abundant supply of fresh vegetables for the use of the institution, but it will be found the very best dependence for outdoor labor for the patients.

A seed and tool house will also be required, and a small greenhouse will be found useful in connection with the garden, and also as a place of resort for the patients.

CHAPTER LVIII.

COST OF HOSPITALS FOR THE INSANE.

THE cost of a hospital like either of those described, will vary in different sections of country, according to the price of materials and labor, and the facilities for manufacturing the various fixtures that may be required for the different purposes of the institution. For these reasons, instead of giving in detail what should be the cost of such an institution, as was done in the first edition, it is preferred simply to state the actual expenditures made for a few hospitals that have been built, the period at which they were completed, and the conclusions to which, after careful observations, practical men have recently been led, as to the proximate sum that may, in these times, be expected to be required for the proper construction of such institutions. From these data, the price per patient, where from two hundred to six hundred are to be accommodated, will be found to be somewhere between one thousand and fifteen hundred dollars. The latter sum will probably be required where the smaller number mentioned is to be provided for, while for the larger number, where materials are readily procured, and great care is observed in keeping close to the estimates—and not otherwise—something like the first named sum may prove sufficient. Even now the expenditure of less than this sum is pretty sure to leave much work to be done after the opening of the building, or to involve an inferior kind of construction in the building itself. It is scarcely necessary to say that additions may be made to an existing hospital for a much smaller average per patient, than for putting up the original structure; the administration building, and a

great number of expensive arrangements being already provided.

In making estimates of the cost of hospitals for the insane, the author has felt no disposition to underrate the expense. Believing, as before remarked, that every State is bound by the double claim of interest and duty, to provide such establishments for the benefit of its citizens; and that the best constructed, best arranged, and most liberally managed hospitals are always cheapest in the end; he has rather been anxious that the public generally should understand that such institutions, from their character and objects, must necessarily be costly as compared with cheap boarding-houses or almshouses; and that the cost of simply supporting life and preventing absolute suffering in the latter, can never be made the standard, for the rate of expense of a proper custodial and curative treatment in the former.

It must not be forgotten either, as already observed, that these State hospitals are for all classes, and it has been well said, that various comforts and arrangements which are necessary to prevent some portions of the community from feeling positive privation, are equally valuable as proving curative to their less fortunate fellow-beings.

It may also be fitly repeated here, that while all extravagance and needless ornamentation are to be avoided, there are many reasons why these buildings should to some extent sustain the dignity of the State to which they belong, and at least be readily distinguishable from a factory or workshop, and the cost of effecting this, is too small to be worthy of controversy.

In all discussions in regard to the cost of providing accommodations for the insane, it is to be remembered, that whatever the cost of a hospital may be, it is not to be divided among the number who first fill its wards, but among all, the thousands, who in the future—all the future, while it lasts—are to

avail themselves of the accommodations it offers. The necessity for these institutions not being likely to diminish in the slightest degree, it can be understood that the excellence of workmanship and materials, which alone secures permanence, is nowhere more justifiable or desirable, and is nowhere more truly economical.

The difference in cost between a hospital that is well built and one that is badly constructed; between one that is complete in all its arrangements and one that is imperfect; between one liberally and one meanly managed, is really so small, that if the citizens of any State would make the simple calculation, how much of this extra expense would fall upon each one of them, it can scarcely be credited that a single individual, could anywhere be found, willing to admit that he would not cheerfully bear his proportion of it, even if it had never occurred to him, that at some period or other, he might himself be compelled personally to test the character of the provision for the insane made by his State. Practically, the people on whom ultimately the cost of such institutions devolves, as far as I know, have never hesitated in contributing their share of what was necessary to effect the object thoroughly. They have only asked that what was done, should be fully up to the knowledge of the times, and calculated to give the afflicted every possible benefit that could be derived from the expenditure, and that all waste and useless ornamentation should be avoided. All that has been expended, in those States where there are the largest number of hospitals and of the costliest character in the country, when divided among the taxpayers, has been shown to give so extremely small a sum to each, that scarcely any one would object to contribute his quota of what would be required to complete the great work of providing equally well, for all the insane still without proper hospital accommodations.

In giving the foregoing estimate of the cost of State hospitals for the insane, it is not intended to imply that a larger expenditure might not be made to give accommodations of a higher order, with arrangements more thoroughly complete in their character, or that it is, not often, really right, to expend more, on such institutions. It is rather wished to show that a less sum than that mentioned, unless under peculiarly favorable circumstances, can hardly be expected to supply what is indispensable, and a provision less than this, ought not to satisfy any community.

There is great doubt of the propriety of requiring a building commission, inexperienced in the work on hand as it is apt to be, to complete a hospital in the best manner and at a specified smallest possible cost; this estimated cost being probably fixed by parties with as little practical knowledge of the subject, as the members of the commission themselves. It is particularly unfortunate, if without any reference to the completeness of the arrangements, the law, with its other provisions, should couple the declaration that the hospital shall be finished and made ready for occupation by patients, for a specified sum for each, especially if the amount named, is less than is justified by the general experience of what is absolutely necessary,—for an unduly small expenditure per patient, may be anything but a wise economy.

During the last half century the variations in cost of nearly every article of living, and in the amount paid for wages, building materials and furniture, have been so great and frequent as to show, that estimates can only be reliably applicable to the times for which they are prepared. In the period alluded to in this volume, many of these variations have been as much as fifty per cent., and the prices paid in the various sections of the country have been so different, that while it would be quite easy just now to say what such State

hospitals for the insane as have been referred to, should cost in the neighborhood of Philadelphia, at the date when this paragraph is written, it would hardly be possible to indicate what might be the cost of their construction, or of their management, even a few years in the future.

A striking illustration of the correctness of what has just been said on the subject of the cost of institutions for the insane, is shown in the erection of one of the last hospitals provided for by the State of Pennsylvania. In the law authorizing the work, it was required of the Commissioners to put up a building for a definite number of patients, at a cost not exceeding a specific sum for each, and when finished and handed over to the Board of Trustees it was, for this expenditure, to be complete in all its arrangements and fixtures, for the best and most economical treatment of its inmates. To give every opportunity to do this, the whole amount supposed to be required was appropriated in one sum, and the building was commenced under what seemed to be most favorable auspices. Long, however, before its completion, it became obvious to those engaged in the work, that what was needed, could not be finished properly with the appropriation in hand. An application was made to the Legislature for as large a sum as \$170,000, to make up this deficiency; and this not being granted, the Commissioners felt themselves obliged to make changes in their designs, which although lessening the completeness of the hospital, would bring its cost somewhat nearer the amount of money which was placed at their disposal. These changes were, many of them, very unfortunate. One of the buildings for excited patients was given up entirely, some other buildings were diminished in size, all arrangements for forced fan ventilation were abandoned, the railroad for the distribution of food and supplies was not put down, the passage

ways between the different buildings,—which were at some distance from each other,—were left uncovered and unprotected, the grounds remained in an exceedingly rough and unimproved condition, without any patients' exercising yards, and without any permanent enclosure for the buildings and premises, and the disposition of the drainage was not provided for; so that on the transfer of the hospital buildings and grounds by the Building Commissioners to the Board of Trustees, the latter exhibited a very natural reluctance to accept the same, without a clear understanding of their imperfect condition, and an acknowledgment that a large amount of money would be absolutely indispensable to complete them, according to the intention of the Legislature.

If completed as planned, the cost would have been not less than \$800,000, giving accommodations for about seven hundred patients, at an expenditure of \$1142 for each patient, or if finished as now built, the cost cannot be much, if any, less than \$700,000, with accommodations for six hundred patients, or \$1166 per patient. The cost originally proposed was \$800 per patient.

Before all these improvements are satisfactorily finished, it is quite safe to say, that the expenditures will have exceeded the sum mentioned on a previous page, as the minimum of a proper estimate for a State provision for the insane, and this attempt to put up a good hospital for much less than the usually recognized cost, will be shown to be a failure.

In this connection it may be observed that another Pennsylvania State Hospital, which is an entirely *fireproof* building, is now being erected in the most thorough manner, omitting nothing that is deemed desirable for the best provision for the insane. And although this work has been carried on under the very great disadvantage of limited appropriations, so as to

retard or to stop all building operations when work could have been done on the most favorable terms, I am assured, it will still be completed at a cost of \$850,000, providing for six hundred patients, or \$1416 per patient.

The statement of these facts raises a question for the grave consideration of legislators, of political economists, and of enlightened taxpayers too, whether having the unfortunate inmates of such an institution secured from the dangers and horrors of a conflagration, would not more than compensate for the difference in first cost,—even if greater than it is,—between the two institutions last referred to.

The Department for Males of the Pennsylvania Hospital for the Insane at Philadelphia, as shown in the frontispiece, was built between 1856 and 1859. The land on which it was placed was already owned by the corporation,—originally costing but \$15,000,—and the funds for the erection of the building and its completion in every part for the accommodation of patients and all employed, with steam heating, fan ventilation, and complete waterworks, and for a wall surrounding fifty acres of pleasure-grounds and gardens, with gate-house, engine-house, laundry, stables, etc., were derived entirely from the voluntary contributions of benevolent citizens, mainly of Philadelphia and Pennsylvania: this institution being a benevolent corporation, devoted to the relief of the afflicted, and never receiving any aid from city, county, or State. The plan, as carried out in all its details, was prepared by the writer, after more than twenty years' experience and not a little reflection on the subject, and the building was intended to embrace everything desirable in a hospital of this description, for the best accommodation of two hundred and fifty patients and all concerned in their care. While it was determined that the work of every kind should be done in the most thorough manner, it was also

resolved that no extravagance or useless ornamentation should be permitted. That this was done and with all possible economy, the writer knows from personal observation and a direct supervision of the work in all its stages. The cost for all that has been mentioned, including sufficient new furniture to commence the operations of the hospital, was \$355,000, or \$1420 per patient.

While speaking of the cost of these buildings, it may be interesting to state that of some of the additions, made to the Department for Females of the same hospital. The Infirmary Ward, Plates XI, XII, and XIII,—which may be separated into six subdivisions,—was put up for the accommodation of twenty patients and all persons required in their care. With steam heating apparatus and fan ventilation, furniture and fixtures of every kind, it was completed for the sum of \$24,850, or \$1242.50 per patient. This ward was finished in 1868.

A Supplementary Ward, as a part of the same hospital, Plates XIV and XV, was also built and furnished, thoroughly provided with steam heating apparatus and fan ventilation,—including a large boiler, used for additional work,—giving superior accommodations for thirty patients and those engaged in their care, at a cost of \$43,289.12, or \$1442.97 per patient. This building was completed in 1873.

A new ward now in process of completion—similar to the last in all its arrangements, except that it requires no boiler for generating steam for heating and ventilation, which is secured from those already in use,—it is believed, will be finished for about thirty per cent. less than the amount last named, owing mainly to the diminution in the price of labor and materials.

The first two buildings mentioned on this page, were erected

and furnished from funds specially given for the purpose, and are known as the South and North Fisher Wards—the first being regarded as a good form for an infirmary ward, and the last showing a convenient mode of making extensions to an existing hospital.

The Alabama Hospital for the Insane, the plan for which was detailed in the first edition of this work, Plates III, IV, V, VI, VII, and of which an elevation, ground plans, and description are given in the present volume, was completed in 1860, the entire cost being rather less than \$300,000. It was originally intended for two hundred and fifty patients and all employed in their care, but without crowding, it could be readily made to accommodate three hundred patients; so that the cost per patient, was little if any more than the lowest sum named as absolutely necessary to provide a hospital, that can properly be regarded as up to the requirements of our present knowledge of the subject, the minimum sum to be expended for that object being set down as \$1000 per patient, with a limit between that amount and \$1500.

The modified linear plan, as shown in Plates VIII, IX, and X, for two hundred and fifty patients, it is estimated by Mr. Sloan, can now be built in the best manner, at or near Philadelphia, for \$350,000, or \$1400 per patient, while if the last wing is raised another story, the accommodations will be for three hundred patients, and the cost for each reduced to \$1250. The additional cost of this improved linear plan, is deemed to be fully justified by its advantages.

The cost of other hospitals erected by Mr. Sloan, has not exceeded \$1250 per patient. Various hospitals on nearly the same plans, already built or in process of erection, have not cost more, or will not be chargeable with a greater sum for

their completion. Where the cost has been less, the cheapness of materials and other obvious reasons have accounted for the difference.

CHAPTER LIX.

DESCRIPTION OF THE PLATES.

To render some of the proposed arrangements more clearly understood, and to give a better idea of the styles of building which have been recommended, the accompanying plans are introduced. As has been already stated, they were drawn for hospitals intended to give ample accommodations for the officers of the institutions, for all persons employed about them in any capacity, and for the custody and best treatment of not less than two hundred and fifty patients in each. These buildings, as will be observed, consist mainly of a basement and two principal stories in every part, except the centre and the projecting portions of the wings, which rise a few feet higher. On the centre building is a dome, in which are placed the water tanks made of boiler iron, and which should be of sufficient size to contain 20,000 gallons. In one of the plans are some one-story buildings, specially for excited patients.

The ventilating shafts terminate on the projecting portions of the wings and in the central domes.

The centre buildings separate the two sexes—if both are provided for in the same structure,—and on either side of them are three ranges of wings. The first range is separated from the centre building by a fireproof space about ten feet wide, with movable glazed sash, on each side of the passage, and the other ranges either fall back just far enough to leave the corridors

open at both extremities, or they may be placed at any further distance, not exceeding twenty feet, that may be preferred; or else, the second range may pass off at right angles to the first, as shown in the frontispiece. These fireproof spaces give great facilities for securing light and air, and all the advantages of a natural ventilation, and also for preventing the spread of a fire.

This arrangement as will be seen, makes eight distinct wards or classes on each side of the centre, exclusive of some additional provision for very noisy or violent patients, at the extreme ends of each range, which last gives great facilities for the removal of patients who become noisy or violent in the other wards.

The illustrations in this volume show elevations and ground plans for three distinct forms of hospital buildings, besides those for insane criminals, detailed in Part Second.

The first plate, or frontispiece, represents the Department for Males of the Pennsylvania Hospital for the Insane at Philadelphia, which was opened for the reception of patients in 1859. The next Plate, II, opposite the frontispiece, shows the ground plan of the same building.

Plates III, IV, V, VI, and VII, show the same elevation and ground plan, with the same detailed description of the linear form, as those which were originally given in the first edition of this book, and which were carried out in all their details in the Alabama Hospital for the Insane, and less thoroughly, although retaining most of their essential features, in many other hospitals in various parts of the United States.

Plates VIII, IX, and X, show the elevation, cellar, and plan of the principal story of a modification of the last; the changes that have been made, involve little additional cost, and they are believed to have some important advantages, which will be referred to when giving a description of it.

CHAPTER LX.

DESCRIPTION OF THE FRONTISPIECE AND ITS GROUND PLAN.

THE frontispiece, Plate I, represents the elevation of a hospital for two hundred and fifty patients, being the plan adopted in 1856, for the Department for Males, of the Pennsylvania Hospital for the Insane at Philadelphia, when it was decided to increase its accommodations by the erection of a new hospital, and to provide for the separation of the sexes. This building gives ample accommodations for the specified number of patients, for the officers of the institution, and for all persons employed about the establishment. Such a building is calculated for one or both sexes, but this was planned specially for a single sex, as there was a hospital of similar size and general character, and for the same number of patients of the other sex already on the premises; and the plan was regarded as equally well calculated for a State or corporate institution. This particular form of building was adopted, mainly because the tract of land on which it was to be placed, did not admit of the extent of structure required for the linear plan, originally proposed in the first edition of this book.

The building consists of a basement and two principal stories in every part, except the extreme portions, intended for the more excited class of patients, which are of only one story. The ventilating shafts terminate on the projecting portions of the wings and in the central dome. The first range of wings on either side of the centre building, is separated from it by a fireproof space ten feet wide, with movable glazed sashes on each side of the passage way, and the same arrangement is made where the next range comes in contact with the first. This gives all the space that is required for light and the free

circulation of air between the different wards, and yet keeps up the proper proximity and all desirable facilities for passing from one part of the hospital to another, without exposure or loss of time, or unnecessary labor. This arrangement, as already said, will be seen to give eight distinct wards for each sex, exclusive of some additional provision for very noisy or violent patients at the extreme end of each one-story building, or for sixteen classes if only one sex is treated in the building.

Plate II is the ground plan of the building shown in the frontispiece, and is opposite to it. It will be seen that the second section of the wings passes off at right angles from the first, and that the more excited class of patients are accommodated in one-story structures with rooms only on one side of the corridors, and that these are connected with spacious yards, open in front, from which there is a fine view of the adjacent grounds. Between these yards, are the dining-room and workshop. This one-story building on each side is intended to accommodate four distinct classes of the more excited patients, exclusive of the six rooms on the small cross halls, making two more classes for those who are specially violent, noisy, and destructive. This arrangement permits what is so very important in all wards containing excited patients—their division into very small companies—the mingling of large numbers of this class being very subversive of good order, and often detrimental to individual patients, especially when the cases are recent.

The first stone of this hospital was laid on the 7th of July, 1856, and it was opened for the reception of patients on the 27th of October, 1859. It is situated on the western side, and in full view of the building previously in use, at a distance in a right line of 648 yards, and in the midst of fifty acres of pleasure-grounds and gardens, the whole of which are sur-

rounded by a substantial stone wall, of an average height of ten and a half feet, the top of which is covered with flagging. The gate of entrance is on an avenue 100 feet wide.

The hospital faces the west, and consists of a centre building, with wings running north and south, making a front of 512 feet; of other wings, connected with each of those just referred to, running east a distance of 167 feet, all three stories high, and these last having at their extreme ends communications with extensive one-storied buildings. All the exterior walls are of stone, stuccoed, and those of the interior are of brick.

This arrangement gives provision for the accommodation of sixteen distinct classes of male patients in this building, as the same number of classes of females are provided for in that previously in use. Each one of these sixteen wards has, besides the corridors for promenading and the chambers of the patients and attendants, a parlor, a dining-room, a bath-room, a water-closet, a sink-room, a wash-room, a drying-closet, a storeroom for brushes and buckets, a clothes-room, a dumb-waiter, a dust-flue, and a stairway by which persons can pass out of doors or to the centre building, as may be desired, without communication with the other wards; and each room in the building, almost without an exception, has a flue, communicating with the fresh-air duct from the fan, for warm or cool air, according to the season, and with the main ventilating trunks which terminate in the various ventilators on the roof of the building.

The centre building is 115 by 73 feet. It has a handsome Doric portico of granite, in front, and is surmounted by a dome of good proportions, in which are placed the iron tanks from which the whole building is supplied with water. The lantern on the dome is 119 feet from the pavement, and from it there is a beautiful panoramic view of the fertile and highly improved

surrounding country, the Delaware and Schuylkill rivers, and the city of Philadelphia, with its many prominent objects of interest. In the basement or first story of the centre building is the main kitchen, 42 by 24 feet, in which are improved arrangements for cooking: a scullery, 24 by 11; two storerooms, each about 20 by 22 feet; a trunk-room, 24 by 12 feet; a general clothes-room, a bread room, a dining-room for the officers, another for the domestics, a lodging-room for the seamstress, another for the supervisor of the basement, a stairway to the main story, a dumb-waiter leading from the kitchen to the cellar, and another to the upper rooms of the centre building. The cellars under the centre building, besides containing the hot air-chambers for that division of the house, have three distinct rooms for storage, which are ventilated by means of flues leading out through the roof of the house. In front of the basement story, and under the steps and adjoining roadway, are the vaults for coal for the kitchen and bake-room, and the ice-house, the latter being ventilated, like the cellars, and carts are unloaded into both, through openings in the blue stone flagging, which forms the roadway upon the arches below it. Adjoining the ice-house is a small apartment, with stone shelves for keeping food cool in summer; and alongside of the coal-vault is a space for the offal from the kitchen. There is also a small kitchen near the scullery, intended for the superintendent's family, or for making dishes for the sick, whenever it is required for either of these purposes. In one of the storerooms is a dark apartment, and in another the tanks for the oxygen and hydrogen gases for the dissolving apparatus used at the evening entertainments.

On the second or principal story is the lecture-room, 42 by 24 feet, in the lecturer's table of which, water, steam, and gas, for experimental purposes, have been introduced. It also contains commodious cases for apparatus, a black board running

on a track behind the cases, and a smooth surface, 24 by 18 feet, at its eastern end, on which the dissolving views are shown. On the opposite side of the main corridor is a reception room for visitors, and a room for visits to patients by their friends, each being 24 by 23 feet. There are also on this floor two small rooms for more private visits, the medical office and library, which is also the assistant physician's office, 24 by 14 feet, with a small storeroom, containing a sink, etc., adjoining; the lodging-room for the assistant physician having charge of the medical office, with which it communicates; a general business office, which is also that of the steward, 24 by 20 feet; a manager's room, 24 by 19 feet, which is also the principal physician's private office; a parlor, 24 by 19 feet, for the use of the officers of the house; and a fireproof room, 11 by 9 feet, in connection with the general business office. In the third story front are four fine rooms, each 24 by 21 feet; a corridor, 42 by 16 feet, shut off from the adjoining portion by a ground-glass partition, a bath-room, water-closet, and clothes-closets, for the use of the family of the superintending physician. There are also on this floor, chambers for the steward and matron, for the senior assistant physician, three others that may be used as deemed expedient, and a room, 24 by 11 feet, lighted from the roof, and intended for a general storeroom for the bedding and other dry goods not actually in use.

The main corridors of the centre building, running east and west, are sixteen feet wide; those running north and south, in which are the stairways, lighted from the roof, are twelve feet wide.

The height of the ceiling of the basement story in the centre building and of all parts of the wings and one-storied buildings, except the upper story of the wings, which is one foot more, is twelve feet. The ceilings in the second or principal, and in the third story of the centre, are eighteen feet high.

The wings on each side of the centre building are almost exactly alike, except that on the south side in front, in the basement immediately adjoining the centre, is the ironing-room, 28 by 11 feet, with a drying-closet attached, 11 by 11 feet, and in the rear, the small kitchen already referred to, and the lodging-rooms of the female domestics, giving them the great comfort and advantage of having their apartments near their work; while on the north side, in corresponding positions, are the bake-room, the baker's store and lodging-rooms, and the lodging-rooms of the hired men not employed in the wards. On this floor, on each side of the centre, is also a museum and reading-room, 42 by 14 feet, and accessible either from the grounds or from the inside of the building, two work-rooms for the patients, two lodging-rooms for persons employed in the work-rooms, a bath-room for the officers and another for the domestics, two water-closets, &c. The portion of the wing just described is shut off from the adjoining part (which constitutes the fifth or infirmary ward) by a thick ground glass partition; this ward having in it a large room, 29 by 24 feet, with a bath-tub and water-closet in a recess, another 24 by 14 feet, a third 23 by 11 feet, and five rooms 11 by 9 feet, a bath-room, drying-closet, and all the other conveniences already mentioned as forming a part of each ward. These apartments and arrangements, making the infirmary wards, are intended for patients who are particularly ill, and who require special quiet and seclusion, where they may be visited, if deemed expedient, by their friends, without annoyance to others, or interference with the discipline of the house.

Besides the fifth ward, just described, and which is on the first floor, there are on each side of the centre two other stories, each of which constitutes a ward, and with all the conveniences already referred to. The rooms are arranged on both sides of the corridors, which are twelve feet wide, and

have their extreme ends mostly filled with glass; while wherever one wing joins another, or a wing joins the centre building, there is entirely across it an open space for light and air, eight feet wide, glazed with small sash from near the floor to the ceiling; and in the middle of each ward, on one side, is a similar open space. These spaces may be decorated with flowering plants, birds, small jets of water or other objects of interest, which, in excited wards, may be guarded by ornamental wire-work, or they may be used as sitting-rooms for the patients. Each story of the return wings makes a ward similar to those just described.

Passing from the return wings into the supervisor's office, the one-storied buildings are reached. Each of these has provision for twenty-six patients and six attendants, and every arrangement for their comfort. The rooms are here on one side of a corridor ten feet wide, and at the end of each of those running towards the east is a cross hall, in which are three rooms intended particularly for patients who from any cause may require special seclusion. One of the main halls may be used for dining, and the other as a sitting-room. Between the dining-halls of these two wards (the seventh and eighth), and made private by sliding doors, are four rooms intended for excited patients, who have special attendants. Opposite these last is a room 110 by 14 feet, with an arched ceiling 15 feet high, with skylights and windows out of reach, intended to be used in one part as a dining-room, and in the other as a kind of gymnasium or work-room, and accessible either from the adjacent garden and yards, or directly from the wards; and in the story below this—mainly under ground—is a room of the same size, in which are two fine bowling-alleys, with reading-tables, etc. Both these rooms may be well lighted with gas, and warmed by steam-pipes, so that they can be comfortably used in the evening as well as by day, and in all kinds of weather.

The arrangement of these one-storied buildings makes for each two very pleasant yards, in size 110 by 54 feet, surrounded by broad flagstone pavements, and having grass in the centre, with an open iron palisade in front, giving a distinct, though sufficiently distant view of two of the most travelled roads in the vicinity. This permits for each one-story building five classes of excited patients, exclusive of the three rooms at the extreme ends already referred to. There is also a yard, 343 by 72 feet, adjoining each sixth ward, fitted up as the others, and planted with shade-trees. Brick pavements also surround the entire building, making, with those just referred to and those in front, a continuous dry walk of 6152 feet, exclusive of more than a mile of board walks, on the grounds.

The height of the ceilings throughout the building, and the size of the parlors and of all the rooms in the centre building, have been already given. The ordinary size of the patients' lodging-rooms is 9 by 11 feet, while there are others in each ward of a much larger size, some of which have communicating doors, and are intended for patients who desire a parlor as well as a chamber, or for those having special attendants. The parlors in the first and third wards are 33 by 24 feet, and in the second, fourth, and sixth they are 23 by 30 feet. The dining-rooms are generally 23 by 17 feet. The bath-rooms are mostly 9 by 11 feet. Sixteen rooms in each one-storied building have water-closets in them, firmly secured to the floor, and with a strong downward draught. The sides of doors and windows in patients' rooms are generally rounded, by being built of brick made expressly for the purpose, and smoothly plastered.

As already stated, the entrance to the hospital is from an avenue 100 feet wide. The gatekeeper's lodge has two com

fortable rooms on the north, while on the opposite side of the gateway is a pathological room, and another for tools used about the grounds. Brick paths on either side of the main roadway lead to the centre building, and the space in front, planted with evergreen and ornamental trees, and having a fountain in the central grass-plot, is 325 by 175 feet. From the front platform eight steps lead up to the vestibule, and seven steps inside of the building to the level of the principal floor. Visitors passing into the centre building may go out upon a pleasant balcony on its eastern side, and overlook the improvements in that direction, but they cannot pass through the grounds.

Ten steps descend from the roadway to the pavement around the basement, which, except immediately at the front of the centre, where it is surrounded by a wide area, with sodded banks, is everywhere above ground.

There is also a gate on Market Street, near the engine-house, used for bringing in coal or other heavy articles, and another on the eastern side of the grounds, for the use of the officers of the hospital only.

The engine-house, 71 feet from the nearest point of the hospital building, is a substantial stone structure, 70 by 64 feet, and two stories in height. The character of the ground is such that carts are driven into the second story to discharge the coal directly into the vaults below, and the level of the railroad in the cellar of the hospital brings it upon the second floor of the engine house.

The first story, on the level of the ground on its southern and eastern sides, has vaults capable of containing near 500 tons of coal. Adjoining these vaults is the boiler-room, 30 by 17 feet, opening into the engineer's work-room, in which are placed lathes, grindstones, pipe-cutting machines, etc., driven by the engines in the engine-room, which is 23

by 19 feet in size, and separated from the last by a glass partition; while further west, also separated by glazed windows and doors, is the fan-room and the tower for supplying fresh air to the main duct, which leads from it, through the entire building. The height of ceiling in this story is 17 feet, and it is arched over the engine-room and the engineer's work-room, so as to give a proper support to the stone floor of the room above. In the second story of this building, into which the railroad passes, is the wash-room, 27 by 24 feet; the room for assorting and folding clothes, 24 by 14 feet; the mangle-room, 43 by $8\frac{1}{2}$ feet; the drying-closet, occupying a space 26 by 13 feet; a water-closet; and a large room over the coal-vaults and boilers, surrounded by movable blinds, and intended for drying clothes without the use of artificial heat, for making soap, etc.

The carpenter shop, 36 by 50 feet, is of frame, two stories high, and 45 feet from the engine-house, from which steam may be taken for warming it in winter. It has two rooms below, and a single large one above.

The carriage-house and stables make a neat stone structure, 57 by 36 feet, and two stories high. It has accommodations for six horses and as many cows, and for the carriages required for the different purposes of the institution. The lower floor is of cement, brick, or blue stone. The piggery is in the yard in the rear of the stables, and there is a carriage-yard in front, both being surrounded by a stone wall, and supplied with hydrants and other conveniences.

The other arrangements correspond so nearly with what have been detailed as essentials in the preceding pages, that it does not seem necessary to give a description of most of them.

There is no fire used in any part of the hospital for heating, although provision for open fires has been made in all the parlors and in many of the other large rooms, should such an arrangement ever be deemed desirable. The only fires kept up in the building are those in the kitchens, bake and ironing-rooms.

In the boiler-room at the engine-house there are three large tubular boilers. Each of these has a furnace 5 feet 3 inches wide by 5 feet 3 inches long, and 7 feet 4 inches high. The shell is 17 feet 8 inches long by 4 feet 6 inches in diameter, the combustion chamber is 4 feet long, and there are 98 tubes $2\frac{1}{2}$ inches in diameter and 11 feet long. The total heating surface for each boiler is 744 square feet. The grate surface is 20 $\frac{3}{4}$ square feet. The escaping gases enter a common flue, and the draft can be regulated by a damper at the back end of each boiler, or the supply of air graduated by a register in the ash-pit door.

These boilers furnish steam for warming the entire hospital, for driving all the machinery, for pumping water, and for ventilation, washing, cooking, etc. They are so arranged that one or all may be used at pleasure, either for heating or driving the machinery. The steam is carried from them in a five-inch welded iron pipe, and after reaching the hospital building, it is distributed in eighty-three air-chambers, placed in its cellar, with direct flues leading from them to the apartments above. The gases from the boiler fires pass through an under-ground flue, four feet wide and six feet high, ascending 31 feet in its course, till it comes at a distance of 557 feet, to the foot of the main chimney, which rises 78 feet above the surface of the ground. The chimney is built double, the interior being round, formed of hard brick, without pargeting, six feet in diameter in the clear from bottom to top, the latter being formed of cast-iron, while the foundation is of pointed stone-work to a height

of eleven feet, and the remainder of pressed brick. The underground flue alluded to, contains the main steampipe until it reaches the nearest point of the building, and also that portion of the branch steampipe which is carried to the north section of the hospital. This flue is immediately over the main culvert.

This chimney is made the ventilating power for securing a strong downward draught of air through all the water-closets, urinals, sinks, and bath-tubs in the entire establishment, and for this reason it is placed in a central position on the eastern side of the building.

The coils for heating are composed of welded iron pipes, three-quarters or one inch in diameter, and are in two sections in all the air-chambers, so that one or both may be used, according to the severity of the weather.

In the engine-room are two horizontal high-pressure steam-engines, of fine finish. They are exactly alike, each having a cylinder 10 inches in diameter, and a stroke of 24 inches. They are so arranged that either may be substituted for the other, and one may be made to do the work of both in case of emergency. Ordinarily one drives the fan, and is therefore a part of the ventilating apparatus, while the second drives all the other machinery. The fan, of the Washington pattern, is of cast-iron, its extreme diameter being 16 feet, and its greatest width 4 feet, receiving air on both sides, through openings 12 feet in diameter. It is driven directly from the shaft of the engine, and its revolutions vary from 30 to 60 per minute, according to the requirements of the house. The fresh air is received from a tower, 40 feet high, so that all surface exhalations are avoided, and is then forced through a duct, which at its commencement is $8\frac{1}{2}$ by $10\frac{1}{2}$ feet, into the extreme parts of the building. From the cold air-duct, openings lead into the different warm air-chambers, which in the one-storied buildings are covered with slate, but in all other parts of the hos-

pital these chambers and air-ducts are arched with brick, laid with smooth joints. The warm air in nearly all cases is admitted near the floor, and the ventilators open near the ceiling, always in the interior walls. The only exception to this arrangement is in the one-storied buildings, where, in the patients' rooms, the warm air is admitted above, and the ventilators are taken off near the floor. All the ventilating flues terminate in the attic in close ducts, either of brick or wood, smoothly plastered, increasing in size about thirty per cent. more rapidly than the capacity of the flues entering them, and by which, through the different belvederes on the roof, they communicate with the external atmosphere. In the centre building the ventilation is through the main dome.

All the cooking is done in the central kitchen, which has in it a large range, with three fires and three ovens, a broiler, a rotary roaster, a double iron steamer capable of containing ninety gallons; a smaller one, iron outside and copper-tinned on the inside, that will hold forty-five gallons, and six tin steamers for vegetables, besides the vessels for making tea and coffee. The food prepared in this room is put into closed tin boxes, which are lowered by a dumb-waiter to the car standing on the track of the railroad, under the kitchen, and which passes thence to each end of the building and to the engine-house, and it is thus conveyed to the bottom of the various dumb-waiters, which lead directly to the different dining-rooms above, of which, as before remarked, there is one for each ward. Each dining-room has a steam-table, with carving dishes on it, and abundant provision for keeping meats and vegetables warm as long as may be desired. The dumb-waiters are all controlled by the person having charge of the railroad; they are moved by a crank and wheel, and wire-rope is substituted for that commonly used.

The railroad is an indispensable part of the arrangements for distributing food. By its use a meal may be delivered in all the ward dining-rooms (eight in number) on one side—the extreme ones being 580 feet distant—in ten minutes after leaving the kitchen, or with one car, in all the sixteen, in twenty-five minutes. It also forms a very convenient mode of transporting articles from one section of the building to another, of carrying clothing to and from the laundry, and the space occupied by it also gives a protected passage-way from the centre building to the engine-house, barn, and workshop, which persons visiting their friends in the room set apart for the purpose between the sixth and seventh wards, can pass through without interference with the patients or their apartments above.

Originally furnished with very complete pumping apparatus, the hospital now receives its supply of water from the city reservoir on George's Hill, and of gas for lighting the building from the city gas works.

The importance of providing for the extinguishment of accidental fires, makes it proper to state, that, as already mentioned, no fires are required in the building for warming it, and that gas is used for lighting. Wherever one wing comes in contact with another, or with the centre building, all the openings in the walls, which extend up through the slate roof, have iron doors in addition to the ordinary wooden ones, and which may be closed at pleasure. The floors of the kitchen and bake-room, in which alone fire is used, are of German flagstone laid on brick arches, and all the stairways in the wings are fireproof. It is intended that there should always be about 20,000 gallons of water in the tanks in the dome of the centre building, and 15,000 gallons per hour may be placed there by the pumping-engines, which are still kept

ready for use. A standpipe connected with this reservoir passes into every story and into every ward, in all of which it is intended to have a piece of hose constantly attached, so that by simply turning a stopcock, water may be put on a fire almost as soon as discovered. A steam-pipe also passes up into the attic of each wing, and as one of the large boilers is constantly fired up, steam may at any moment be let into the building by simply turning a valve in the cellar. Hose is also kept near the steam-pumps, so that it may be promptly attached, and water thrown on the barn, carpenter shop, engine-house, and contiguous parts of the hospital. A watchman is constantly passing through the house at night, and by means of two watch-clocks, there is no difficulty in ascertaining, not only how often the wards are visited, but almost the moment of each visit, and of course the time taken in passing from one ward to another.

The clothing, bedding, etc., collected in the different wards, after being sent to the cellar, are conveyed from that point by the railroad to the room for assorting clothes in the engine-house, and thence into the large wash-room, where, besides the usual washing, rinsing, and blue tubs and the soap vat, are various washing-machines, in which six different kinds of clothes can be washed at the same time, and a centrifugal wringer, all of which are driven by one of the steam-engines. From the wringer the washed articles are taken to the drying-closet, in which, by means of the heat derived from the exhaust steam from the engines, passing through a large amount of cast-iron pipe, and of fresh air from the fan, they are in a very few minutes made ready for the mangle (also driven by steam power), or folded and taken by the railroad to the ironing-room near the centre building, to which they are raised by the dumb-waiter already referred to, or are sent directly to the principal

clothes-room, from which they are distributed by the same route, as they may be required in the wards. All the divisions of the washing-machines, and of the rinsing and washing tubs, have hot and cold water and steam introduced directly into them, and the water from them all is carried off under the stone floor of the room to one of the iron columns below, through which it passes into the culvert on the outside of the building.

The amount of money paid on account of this building and its varied fixtures and arrangements, was \$355,000. Of this total sum, \$20,276.28 were for the boundary wall and gate-house, \$2241.46 for the carriage-house and stabling, \$800 for the carpenter-shop, \$4456.03 for machinery of different kinds, \$23,612.37 for heating and ventilating apparatus, \$15,201.47 for grading for the building, planting, and improving the grounds, and \$10,441.73 for furniture, the latter being in addition to what was taken from the other building.

Before closing this notice of the Pennsylvania Hospital for the Insane, it may not be uninteresting to state that the completion of this new building allows the institution to carry out, under very favorable circumstances, what has for many years past been gradually gaining favor with some of the most experienced medical officers of American hospitals for the insane—a provision for the treatment of male and female patients in entirely separate buildings.

It is scarcely necessary to say that this arrangement in no way interferes with the humanizing influence for men, of suitable associations between the sexes; but intimacies of this kind between patients ought always to be guarded against. It certainly will be agreeable and profitable to all, that these influences should be exercised by those who are of sound mind and discreet demeanor, rather than by those whose

impaired intelligence or want of self-control has compelled them to claim the benefits resulting from a residence in the hospital. So far as I am aware, there is not a single advantage in having the two sexes when insane, in the same building, and it requires little observation to know that there are many and often not trifling disadvantages; while their separation will not only render the classification more complete, but permit for both the removal of many restrictions that could not otherwise be dispensed with.

So satisfactory has this building proved, that now, after twenty years' use, this plan would be repeated in all its details, with only a few slight modifications, these being simply raising the building one more step from the ground, using cement in all the cellar walls, putting in an additional water-closet for each ward, securing a more absolute subdivision of the excited patients, in the one-storied buildings, so as to have at least four classes on each side unavoidably, instead of as now, possibly, and putting bay windows throughout the building at the ends and in the middle of the different halls.

CHAPTER LXI.

DESCRIPTION OF A LINEAR PLAN OF HOSPITAL FOR THE INSANE.

PLATE III gives a perspective view of the entire structure, as built in Alabama. It will be observed that the usual portico, with high flights of steps, has been dispensed with as being costly, destroying the usefulness of the upper portion of the building, and if too lofty, sometimes not particularly appropriate for a structure of this character. The double veranda,

which has been substituted, is made of iron, and being six feet wide, makes a good protection to persons getting into or out of carriages in wet weather, and forms a not unsightly appendage to the building. The style of dome for the centre building, and the varied forms of termination of the several ventilating shafts, are left as drawn by the architect, with the single remark, that if deemed expedient, they may be replaced by less costly arrangements. The finish on the front, and that of the projections on the roof, are so much matters of taste, having only a very incidental relation to the welfare of the patients, that their details are not considered of special importance in this connection.

Plate IV represents the cellar of the same building, excavated throughout its whole extent to the depth of seven and a half feet below the floor of the first story. The central passage (*a*) is the fresh-air chamber, extending through the entire building, and in which the radiating steam-pipes, or cast-iron radiators, are placed. The space on one side of this chamber is for a cold-air reservoir, into which, if no fan is used, the external atmosphere is admitted through a portion of the windows marked on the outside of the building. On the other side is a railroad (R. R.) for conveying food from the kitchen to the different dumb-waiters between it and the extreme wings.

Plate V shows the basement or first story, which is raised three steps above the ground. This height is abundant, and gives ample light for putting in or repairing heating fixtures. In the centre is the principal entrance, with a broad flight of easy steps leading to the main story above. On one side of this entrance in front, is a reception room for patients (*a*), and back of it is the steward's chamber (*b*), on the opposite side is a parlor and dining room for the steward and matron (*c*), and back of this, the matron's chamber (*d*). These rooms are shut off from those in the rear by a glazed partition. In the rear,

on one side, is the main kitchen (*e*), and a store-room (*f*); on the other side, a small kitchen (*g*), a store-room (*h*), and a dining-room (*i*) for the female domestics and the hired men employed on the farm and in the garden. There are also two water-closets in this story of the centre building, and one on either side of the centre.

In the first range of wings next the centre on one side, are two work-rooms for the female patients (*k*), two store-rooms for materials used and for articles manufactured in them (*n*), two chambers for the superintendents of the work-rooms (*m*), two ordinary store-rooms (*n*), a bath-room and two water-closets, and the remaining small rooms are the chambers of the female domestics employed on the premises. It is of great importance to the hired work people—to the female domestics especially—that their lodging-rooms should be easily accessible, and that they should be saved the unnecessary labor of going up to the attics or to some distant part of the building for change of clothing. The large room (*q*) is intended for one of the infirmaries for sick women, especially for those who are likely to be much visited by their friends or others, making easy access particularly desirable.

Precisely the same arrangement will be found on the side occupied by the males; so that throughout, a description of one suffices for both.

The second range of wings on this story constitutes the seventh ward for patients, and the third range the eighth ward. In both these, (*r*) is the parlor, (*s*) the dining-room, (*t*) the associated dormitory or large room for a single patient and attendant, (*u*) is an attendant's chamber, and (*o*) a bath and wash-room. The water-closets, sink-rooms, clothes-rooms, drying-rooms, dumb-waiters, dust-flues, soiled clothes hoppers, flues for ventilation of water-closets, rooms for the water-pipes, and all the other conveniences suggested in the foregoing pages,

have been provided for in the larger plan, but its reduction to the size of a single page, has prevented their being distinct enough to have a separate reference. They are nearly all arranged for the accommodation of every ward, and those for two contiguous wards are grouped together as far as practicable.

At the extreme end of the eighth ward, and of those immediately above it, the third and sixth, will be found on each side of the main corridor, three single rooms,—being six for each adjoining ward,—which open on a private passage-way, and are intended for the most violent and noisy on the corresponding floor or for those whom, for any reason, it is desirable to have particularly secluded. In these rooms are close stools, strongly secured to the floor and wall, with a strong downward ventilation, through which the water is allowed to pass only as controlled by the attendants.

Plate VI represents the second or main story throughout. In the centre in front, on one side is a parlor (*a*), behind it, a room for visitors to female patients (*b*), on the other side, a managers' room (*c*), and behind it, a room for visitors to male patients (*d*). Both the rooms for visitors to patients, communicate directly with the adjoining wards. In the rear, on one side, is the general business office (*e*), back of which is the superintending physician's private office (*f*): on the opposite side, is the apothecary shop and general library (*g*), and adjoining it, the chamber of the assistant physician and apothecary (*h*). A small window forms a means of communication between the apothecary shop and general business office, and the wards of their respective sides, through the dining-rooms (*s*), so that those employed among the patients may always communicate with the officers in the centre without leaving the wards. The fireproof safe is on this story.

Adjoining the centre building in this story is the fourth ward: beyond it, in the next range, is the fifth, and in the ex-

treme range is the sixth ward. The general arrangements of all these are the same, as have been already described for the seventh and eighth wards.

This plate also represents the story above in the wings throughout, as it is exactly like those below, making the first, second, and third wards. The dining-rooms (*s*) of the first and fourth wards, are in the adjoining parts of the centre building. The arrangements of the third story of the centre building will be shown in the next plate. The stairways for the wards next the centre have been omitted in this plate, but they correspond with those shown in Plate V.

Plate VII shows the third story of the centre building, and the fourth story of the projecting portions of the wings. All the rooms in the front of the centre building, including bath-room, water-closet, etc., are appropriated to the family of the superintending physician, and are strictly private, one of the stairways from the second story being for their use exclusively. The other stairway is for visitors and others passing up to the dome. In the rear of this story is the lecture-room (*g*), which may also be used as a chapel, extending up through the fourth story, and having a direct communication with the wings of either side through the first ward dining-rooms (*s*). Between this passage and the dining-room is a screen for privacy.

In the front of the first projection of the wings, is the museum and reading-room (*m*), and in the same part of the second projection is the school-room (*n*). Both of these rooms have arched ceilings and skylights. Behind them, are the chambers of the night-watch, and of the teachers (*c*). The large rooms in the rear, on this floor, may be used for the sick, especially during the prevalence of a contagious disorder. The tanks containing hot water for the supply of the wards below are also in this story, or preferably in the cellar under the different wards.

The height of the ceiling in the whole basement of the building, and in every part of the wings, is 12 feet, in the second story of the centre 16 feet, in the third story of the centre 14 feet, and in its fourth story 12 feet. The ceiling of the lecture-room is 24 feet high.

The main corridor of the centre building is 16 feet wide, the ward corridors 12 feet, and the small passages at the extreme ends of the wings are 9 feet wide. All these are sufficiently large for any hospital. While no more space is required anywhere, less is not deemed admissible for any kind of hospital for the insane, nor for any ward nor any kind of patients.

The main kitchen is 32 by 22 feet, the small kitchen 22 by 14, main store-rooms 22 by 18, rooms in the centre building generally 22 by 18; the lecture-room is 64 by 34, patients' dining-rooms 20 by 24; patients' parlors, 20 by 24; large rooms for patients with special attendants, 18 feet 9 inches by 11 feet; associated dormitories 18 feet 9 inches by 11; patients' single rooms 11 by 9; work-rooms 18 feet 9 inches by 11; bath-rooms 11 by 9; drying-rooms 11 by 5 feet 6 inches; fire-proof passage-ways between wards 11 by 8; water-closet rooms 11 by 5; museums and reading-rooms 34 by 24; school rooms 24 by 20; and infirmaries 24 by 20 feet.

CHAPTER LXII.

IMPROVED LINEAR FORM OF HOSPITAL.

THIS plate (VIII) represents an elevation for a State hospital for the insane, on the linear plan, as given in the first edition of this work, and reproduced in this volume, with some modifications however, which are believed to be improvements. That originally given was then, as this modified form is now, believed to be the cheapest form at all admissible, for a State hospital. The changes suggested add somewhat, but not very materially, to the cost, and this is more than counterbalanced by the advantages that are secured.

By examining the ground plans, Plates IX and X of this improved linear plan, it will be observed, that while the linear principle is still maintained, the adjoining wards are placed a few feet more distant from each other, giving room for a fire-proof stairway, and securing a greater amount of separation between the wards. Bay windows have been added at the ends of the corridors, and also at the centre of several of the wards, where they are connected with alcoves, and a covered passage way for carriages has been recommended at the entrance, which, in practice, has been found so useful, as to be worthy of being made the prominent and not costly feature at the front of the buildings.

It will be observed that in this plan, the building for the boilers and fans, for the laundry, bakery, etc., is placed directly in the rear of the centre building. The position of all these, however, may be varied according to circumstances. It is quite admissible to have these arrangements at a suitable distance from either extremity of the hospital, as has been done,

very satisfactorily, in that shown in the frontispiece, and as may often be unavoidable. It will be remembered, as heretofore stated, that steam can be carried in properly protected pipes, fully a thousand feet without appreciable loss of heat, and this is one of the best arguments for its use for warming all large buildings: while, it is obvious, all the dirt, dust, and gas, unavoidable to a greater or less extent with fires in the building, are thus excluded. Besides all these advantages, it is to be remembered that the use of steam for heating diminishes to a minimum the risks from fire. In the hospitals under the writer's supervision, the boilers, etc., have been located near one end of the hospital, without any inconvenience or apparent loss. In case of a duplication, to some extent, of heating fixtures, so as to provide for possible contingencies, the supplemental arrangements should be placed at the opposite extremity of the building. Many of the prominent features of this plan are found in various hospitals for the insane throughout the United States.

CHAPTER LXIII.

REMARKS ON THE LINEAR PLANS.

THE general features of the first linear plan which has been described, were originally prepared by the writer at the request of the Commissioners for putting up a State Hospital for the Insane in New Jersey, and the designs for that building were made from the sketches at that time furnished to its architect. Convenient, as most of the arrangements of that institution have been found to be, it is to be regretted that

various modifications were made in the details of the original plan, which although diminishing its cost, impaired its completeness and made it in many particulars much less perfect than it otherwise would have been. The additions since made, however, have more than compensated for what was omitted or changed.

Many points of resemblance to the original New Jersey plan, will also be found in various State institutions in different parts of this country, carried out, however, with very varying degrees of excellence. It was, however, put up in all its details, in the State Hospital for the Insane of Alabama at Tuscaloosa, and after twenty years' occupation, it has received the special approbation of its able Superintendent, for moderate first cost, general convenience, and economical arrangements, and for having given, in every way, entire satisfaction.

No proper estimate of the value of any plan for a hospital for the insane, can be formed, unless it is judged of as a whole. In reference to that under notice, it is regarded as in every way important, that the building should be put up at once, and of the full size recommended; and there is no reason to believe that such an institution will be found too large for any State, which has no other provision for its insane, with perhaps the single exception of Delaware.

If there were any doubt of the propriety of putting up the whole building at once, I should have no hesitation in saying that rather than leave off the extreme wings, it would be advisable that the work should be commenced at both extremities and made gradually to approach the centre, as has been done here and elsewhere; for the centre building could be dispensed with for a time with about as little inconvenience as those most important wards. It is quite probable, too, that appropriations to fill up such a vacancy between the wings, might be more readily procured, than for adding new wings to the building.

The first patients sent to a State hospital, are very apt to be of the most noisy, violent, or careless description,—those, indeed, who could no longer, without great inconvenience, be kept either at home or in the county jails or almshouses. For these patients, the extreme ranges of the wings are particularly desirable; and without them the classification must necessarily be very imperfect. Such patients occupying wards near the centre building, are in the worst possible position, and render these wards of the institution, to a greater or less extent, unfit, for those who are expected ultimately to be received in them.

My own experience has satisfied me that either of the forms of building shown in the plans, carried out essentially as suggested in the foregoing remarks, has advantages over most others. There is more certainty of the free circulation of light and air, better prospects are secured from all the patients' rooms and parlors, there is but little opportunity for patients on opposite sides seeing, or calling to, each other, and less probability of the quiet patients being disturbed by those who are noisy. This is specially important where both sexes are in the same building.

In every long corridor, there should be, near the middle of its length, on one side at least—better on both—an alcove or vacant space from ten to fourteen feet wide, and terminating in a projecting bay window, with the glass coming nearly to the floor. If only one is made, this, if possible, should be placed on the side on which it will have the most advantage of the sun's rays. Such an alcove adds wonderfully to the lightness and cheerfulness of the ward, and is always found a specially favorable place for the gathering together of patients. In many wards these spaces may be made to serve as substitutes for parlors. They will always prove a very pleasant addition to them.

As parlors are desirable in all the wards except those for

the most excited classes of patients, and as the corridors are to have glazed and movable sash at both extremities, there does not appear to be any objection to rooms on both sides of them. If there were to be no parlors in a hospital, and the corridors were to have their ends obstructed in any way, or were to be used throughout as sitting-rooms, then patients' chambers would be admissible only on one side. Generally, however, a ward having its corridor of the regular width of twelve feet, and not extended to an unreasonable length, open at both extremities, with an alcove in its centre, and with rooms on each side, with their doors and windows opposite, will be found quite as pleasant, airy, and cheerful, and at least as easily ventilated, especially in summer, as one with a corridor closed at its ends, and with rooms only on one side, and such wards make a less costly and less extended building. A corridor thus arranged, with a double wall as it were on each side, can hardly fail to prove more comfortable in summer, even in a warm climate, than one which has its whole extent exposed to the direct rays of the sun; while the free currents of air passing through its entire length, and the transverse ones through each range of doors and windows, would seem, even where a natural ventilation is relied on, to be really all that could be desired. The plan of having rooms only on one side of a corridor is necessarily more expensive, and throws the extreme portions of the building at a much greater distance from the centre of the hospital, for even if it is a rectangular structure, the distance is to be measured, as it would be passed over by a person going through the house, and not by an air-line from one point to another. The experiment of having rooms only on one side of a corridor, originally adopted in this country in 1817, has not been so satisfactory as to cause its repetition in more than two or three out of the large number of institutions, which have since been built

in the United States. There are advantages, however, in having rooms only on one side of a corridor, where patients are noisy or excited, or where they are very ill and require special quiet.

The proposed arrangements obviate the necessity of any mingling of the patients, unless perhaps to some extent in passing to the lecture-room from the two extreme wings of the upper stories, when the patients must go through the wards nearer the centre, but as the patients from these last, will have already preceded the others to the room in which all must mingle to some extent, no great disadvantage can result. In going out of doors, the patients never pass through any ward but their own. A classification that admits of no greater intercourse of different classes of patients than this, is quite rigid enough for all practical purposes.

The arrangements for the most noisy class of patients are probably about as good as can be adopted, especially if the one-storied structures, already described, are added to them. The extreme ends of the wings in each story being thus occupied, as stated, patients who become unexpectedly excited can be promptly removed, without having to pass up or down stairs, or under any circumstances, without disturbing more than one quiet ward on their passage from room to room. Even in the most excited wards, it will generally be found that one or two individuals make nearly all the noise, and directly or indirectly cause most of the excitement among the patients. The rooms, divided by the main corridor, at the extreme end of each story of the linear plan, are so arranged that these patients can be comfortably provided for, and their noise or violence prove but little annoyance to any other part of the house. It is especially important to have means of classifying and subdividing, at least for short periods, the excited and the noisy, and also those who have an uncontrollable irritability and a

disposition to worry all who are near them. In no other positions can these be better provided for, than in those suggested in the plans, where they may be subject to a close inspection, as it is especially important they should be, and yet not seriously annoy the other inmates of the institution.

Any one of the plans given in this volume will be found, it is believed, to give at as small a cost as can effect the object thoroughly, what was originally proposed as desirable in a hospital for the insane;—ample provision for the accommodation of the officers and all employed; everything, so far as buildings are concerned, requisite for the custody, comfort, and enlightened treatment of the patients; and arrangements throughout that will allow the supervision to be thorough and effective, and the management to be liberal and at the same time strictly economical.

CHAPTER LXIV.

AN INFIRMARY WARD.

PLATE XI shows the ground plan of the cellar of an infirm-ary ward: Plate XII, that of the principal story; and Plate XIII is a lineal section of the same ward, which is so located as not to be accessible to those passing through or to other wards. It is two stories high. Each story may be divided into three distinct sections, each section having three rooms in it, some being of double the ordinary size. The rooms are only on one side of the corridor. Each story has a bath-room and water closet, and there is a dining-room for the ward. The heating is by steam, with forced ventilation by a special

steam-engine and fan, the principle being the same as has been already described.

Plate XI shows the plan of the cellar. A, hot-air chambers, containing coils of steam-pipe, directly beneath the openings of flues. B represents the cold-air duct beneath the floor. C, steam-engine. D, fan. E, passage to boiler-house. F, vertical fresh-air duct, supplying fan. G, cellar. H, cold-air chamber.

Plate XII shows the plan of the principal story of the same ward. A, corridor. B, one of patients' rooms, with arrangement of flues. The arrows indicate the course of the air. C, dining hall. D, wicket door. E, closet. F, water-closet. G, sink. H, wash-basin. I, cold-air shaft. K, steam table. LL, closets. M, connection with eighth ward.

Plate XIII shows a longitudinal section of an infirmary ward. A, one of the hot-air chambers in cellar. B, vertical shaft supplying cold air to fan. Hot-air flues are indicated by arrows, pointing outwards; ventilating flues are the reverse. Warm-air flues that supply the second story, commence eight inches lower in the air chamber, than those that warm the first story. The flues marked 1, are warm-air flues for the corridor on the first floor; 2, are ventilating flues for the same. Those marked 3, show warm-air flues to corridor of second story. 4, are the ventilating flues to the same. C, C, foul-air shafts in the loft, into which all the ventilating flues discharge. D is the outlet through a cupola, in the centre.

In the hospital shown in the frontispiece, the fifth wards on the first story, at the ends of the front extension on either side, were planned for infirmary wards, and they have every advantage for facility of access to friends, privacy, ventilation, and complete separation from the other wards. The comfort and convenience of such arrangements, and the satisfaction they give to patients and their friends, especially where quiet and seclusion are important, can hardly be over-estimated.

CHAPTER LXV.

A SUPPLEMENTARY WARD.

PLATE XIV shows the plan of the cellar or basement of a supplementary ward; A is the boiler room, B is the coal vault, C is the ash pit, D is the steam-engine, E is the fan, F, engineer's work and tool room, G, G, are patients' work-rooms, H, radiators, I, dumb-waiter, J, hot-water boiler, K, a passageway through the basement to the centre, L, entrance to work-room. Plate XV shows the principal story of this supplementary ward, which is intended for the accommodation of thirty patients and their attendants in a two-story building. Each story is calculated to accommodate fifteen patients, with provision for making a closer classification,—by means of sliding doors,—and there are dining-rooms with steam tables, gas cooking apparatus, bath tubs, water-closets, and all other conveniences in each. The building is warmed by indirect steam radiation in the cellar, by air driven by a small Washington fan five feet in diameter, and a steam-engine. The building has alcoves and bay windows in each story, and at the ends of the corridors; and in the basement are pleasant mechanical work-rooms specially for the use of the patients. One of these work-rooms has been in operation at the Department for Females, during the past three years; and the whole ward has proved so entirely satisfactory in all its arrangements, that another, exactly similar, is now under roof, and will be finished in a few months. These buildings may be made three stories high if desired. To each story there is a fireproof slate stairway of the pattern recommended in this volume. These supplementary wards make a desirable mode of adding extensions to existing hospitals.

Plate XV represents the ground plan of the second story of this ward. A is an alcove, B is one of the patients' rooms, C is a dining-room, D, apparatus for gas cooking, E is a steam table, and H is the bath-room.

CHAPTER LXVI.

CONNECTION BETWEEN CENTRE BUILDING AND WINGS.

PLATE XVI shows the mode of connection between a centre building and the adjoining wings, or between two wards running at right angles to each other. It consists of a fireproof passage-way—arched in each story—with walls running from the cellar, out through the roof, and passing from one side of the wing to the other, with a set of iron doors between them. On each side it is filled up, with glazed sash, of such size and with such guards, as to give entire security, and extending from near the floor to within a few inches of the ceiling. It is about ten feet wide, or may be made larger if desired. One-half, therefore, of the whole space can be thrown open for the admission of air, the lower part being, as just said, protected by a suitable wire guard, thus effectually remedying the dark and badly ventilated character which these portions of hospitals formerly had. This arrangement gives all desirable security against the spread of fire, provides ample opportunity for transverse currents of air, and furnishes a light and attractive space either as a resort for patients, or for ornamental objects, such as plants, birds, fountains, etc. At the same time it renders the different parts of a hospital in convenient proximity to each other, thus giving numerous advantages, while it also

saves all the expense of long covered ways, and relieves those engaged in the management of the hospital, from useless labor and waste of time in passing between buildings, that are quite detached and at a considerable distance from each other. More important than all these, it brings all parts of the building under easy observation and supervision by those to whom the care and responsibility of the hospital and patients rightfully belong. Nothing is more unfortunate than any arrangement which adds to the difficulty of doing this, and increases unnecessarily the labors and consumes the time of the officers of such an establishment, unless it be a plan which gives to mere non-professional subordinates duties that belong to the chief officials.

CHAPTER LXVII.

FIREPROOF STAIRWAYS.

PLATE XVII represents a ground plan and section of a fireproof stairway, composed entirely of iron and slate, with very easy risers and frequent platforms. These are built into the walls and around a well, five feet square, which can be used as hat closets and for other purposes. This has been found in practice to be a very easy, safe, and convenient form of stairway, in connection with the wards of a hospital for the insane. In this place it may be stated that twenty years' experience with different kinds of fireproof stairways shows slate to be very preferable to iron, marble, or any other material in ordinary use. Most marble wears quite rapidly, iron becomes smooth and slippery, while slate shows almost no

change from constant use. Long flights of steps are dangerous, especially when removing patients who offer resistance. The short flights above suggested, effectually prevent anything serious happening under such circumstances.

A is the plan on the ground, B is the vertical section, C is a door of entrance to the stairs.

CHAPTER LXVIII.

WINDOWS, WINDOW GUARDS, AND DOORS.

PLATE XVIII shows the form of window and window guard which, after a trial of many kinds, I now recommend as preferable and more satisfactory, especially to patients, than any other. The upper sash is of cast iron, corresponding in style exactly with the lower one, which is of wood, and can be raised its whole extent. The upper sash is securely fastened to the window frame. With forced ventilation there is no necessity for this upper sash being hung, although if desired, it may be allowed to rise and fall not more than five inches. Two forms of window guards are given. They are made of wrought iron, well riveted together, and fastened to the frames, so that the patients cannot have access to the screws from the inside of the rooms. They may come to within five inches of the upper sash, within the same distance of the window sill, and of either side, so that the obstruction to the sight is very little. They are least conspicuous when painted of a light color. A thoroughly efficient system of forced ventilation does not require that any dependence should be placed on the opening and shutting of windows, but this is so much a custom with everybody.

and is often so pleasant, that almost all patients prefer having this privilege to that of dispensing with all guards, by balancing the two sashes. This last arrangement has been suggested and it has been adopted in some portions of our buildings.

G is a plan of a window; H is an elevation of the same window, with a form of window guard; J is the same window, with a different form of window guard; I is a vertical section.

On the same page is the plan of a door, one of the small panels of which is hinged and used as a wicket for inspection, giving food, etc.

D is a vertical section of a door; E is an elevation; F is a plan of the same.

CHAPTER LXIX.

KITCHEN.

PLATE XIX represents a section of the kitchen over the broiler, cooking-range, large steam kettles, etc., showing the flues, marked O, for carrying off the vapor from the broiler, the range, and the steam-kettles; and other flues, marked P, which secure a good upward draught from the kitchen and from over the range. N is the hot-water tank for supplying the kitchen, scullery, and the first ward bath-room.

Plate XX represents the ground plan of a kitchen, sufficient for a hospital of the size proposed in this volume. It is 22 by 36 feet, the ceiling is 12 feet in the clear, and it is arched below, so as to have a floor of smooth slate or German flagstone. The walls are cemented as high as the window-sills, which should be of stone, as well as their sides to a height of ten inches over the sinks, as wood soon becomes saturated

with moisture. This kitchen contains a broiler (C), with a direct flue passing up the chimney, and a range (B), with three fires and as many ovens, and a hot surface, not less than four feet deep, with plate warmers, etc. There are also two jacketed kettles (A) of large size, for soups and other purposes; five or six vegetable steamers (L) with water-joint lids, and tin pipes behind to carry off superfluous steam; a rotary roaster (M); a milk boiler (I); tea and coffee fixtures, the centre one for boiling water by steam (H); large iron sink (F); steam and other tables (E, G, J, K); and closets (D, D). All the steam, gases, etc., from cooking, are carried off behind the screen of brick-work, which comes out nearly to the front of the range, and thence by direct flues through the main chimney. The food is kept hot on the steam tables, is then shut up in polished tin boxes which are lowered to the car standing on the railroad, and by it conveyed to the foot of all the dumb-waiters, which open into the various dining-rooms, excepting those adjoining the centre, which are supplied directly from the kitchen. The steam tables, which are in every dining-room, are amply sufficient to keep everything hot during meals, no matter how much protracted.

CHAPTER LXX.

WATER ARRANGEMENTS.

PLATE XXI shows a convenient mode of grouping together many of the water arrangements. They are directly above each other in the different wards. The floors are of slate on brick arches. The different water-pipes are in full view and

readily accessible, so that leaks are at once detected and easily repaired. Entering the room from the corridor, on one side is the drying-closet, for all purposes, especially for drying the cloths, brushes, etc., used about the wards, and which, put away in their usual damp condition, are the source of a large part of what is commonly called "hospital odor," but for which these buildings or their inmates are in no way responsible, except as just suggested. As soon as thoroughly dried, these articles are placed in the room on the opposite side of the entrance,—both it and the drying-closet having sliding doors, so as not to interfere with the passage-way,—and each room is connected by suitable flues with the fan ventilation, which keeps a constant current of pure air passing through them, (A) shows the marble or porcelain wash-basins; (E) the sink for washing articles used in the wards, and for drawing water; (G, G) are water-closets (the supply of water controlled by opening and shutting the door); (F) is the urinal; (M) is the main soil-pipe. There is an unmarked sink for emptying slops. All these have a downward draft through them, as described in the next section. Thus arranged, the combination is convenient, compact, readily kept under observation, and the walls being cemented as high as the window-sills, and the floors of slate, there is no chance for the absorption of moisture. The bathing arrangements are in the next room, and the waste-pipe empties into the same main exit-pipe, and the outlet is connected with the same system of downward ventilation. (C) is the drying closet; (B) is the room for dried brushes, etc.; (D) is a closet.

All the discharges from wash-basins, sinks, urinals, water-closets, etc., pass into the main pipe (I), which is of iron and of large size, with a trap (J) near its commencement, which is readily accessible. The water from the bath-tubs in an adjoining room passes through L, into the common pipe (K). The

ventilating pipe (H) connecting with the main pipe between J and K, passes off to the main chimney-stack, producing a thorough downward draught through all the fixtures named, there being, of course, no traps connected directly with any of them. Like the other water arrangements, they have the same relative position to the different wards. The receivers are of cast iron, enamelled, or of porcelain; there are no traps, only a pocket to receive valuable articles that may accidentally be dropped into them, and the draught of air is strongly downward into the main chimney at all times, so that when working properly, there is not only nothing offensive to be noticed, but like all the other water fixtures, they help to form a steadily acting system of ventilation for the room in which they are placed.

CHAPTER LXXI.

CONCLUDING REMARKS ON CONSTRUCTION.

As may be inferred from the general tenor of what has been already said, with my present experience of hospital construction and in the care of the insane, if entrusted with the duty of providing accommodations for six hundred patients in one section of a State, my mode of proceeding would be something like the following. After selecting not less than two hundred acres of good land with the various characteristics already insisted on, and especially with unquestionable facilities for an abundant water supply and for thorough drainage, I should have plans prepared for a hospital for one-half the number proposed to be ultimately accommodated, and these plans should be based on the principles that have been already fully

detailed. This done, I should locate one building, with special reference, however, to the future erection of a second of the same size and on the same plan, and with such division of the grounds as will be deemed best, when both are in operation. In case of sufficient appropriation, the work on both hospitals should be started at the same time, and at the extremities of each, and made gradually to approach the centre buildings. One of these buildings should be occupied by male patients exclusively, the other by females. With a limited appropriation, the work should be confined at first to one building. This should be finished as soon as possible and put in use for patients of both sexes. As soon as obvious that this will, at an early day, become crowded, the second hospital should be put under contract, and completed in the shortest possible time. This done, the female patients should be removed to the structure last put up, and each hospital be placed under the care of its own Physician-in-Chief, who should be Superintendent of all its departments, although both the hospitals should have the supervision of the same Board of Managers, and have the advantage of their regular visitations.

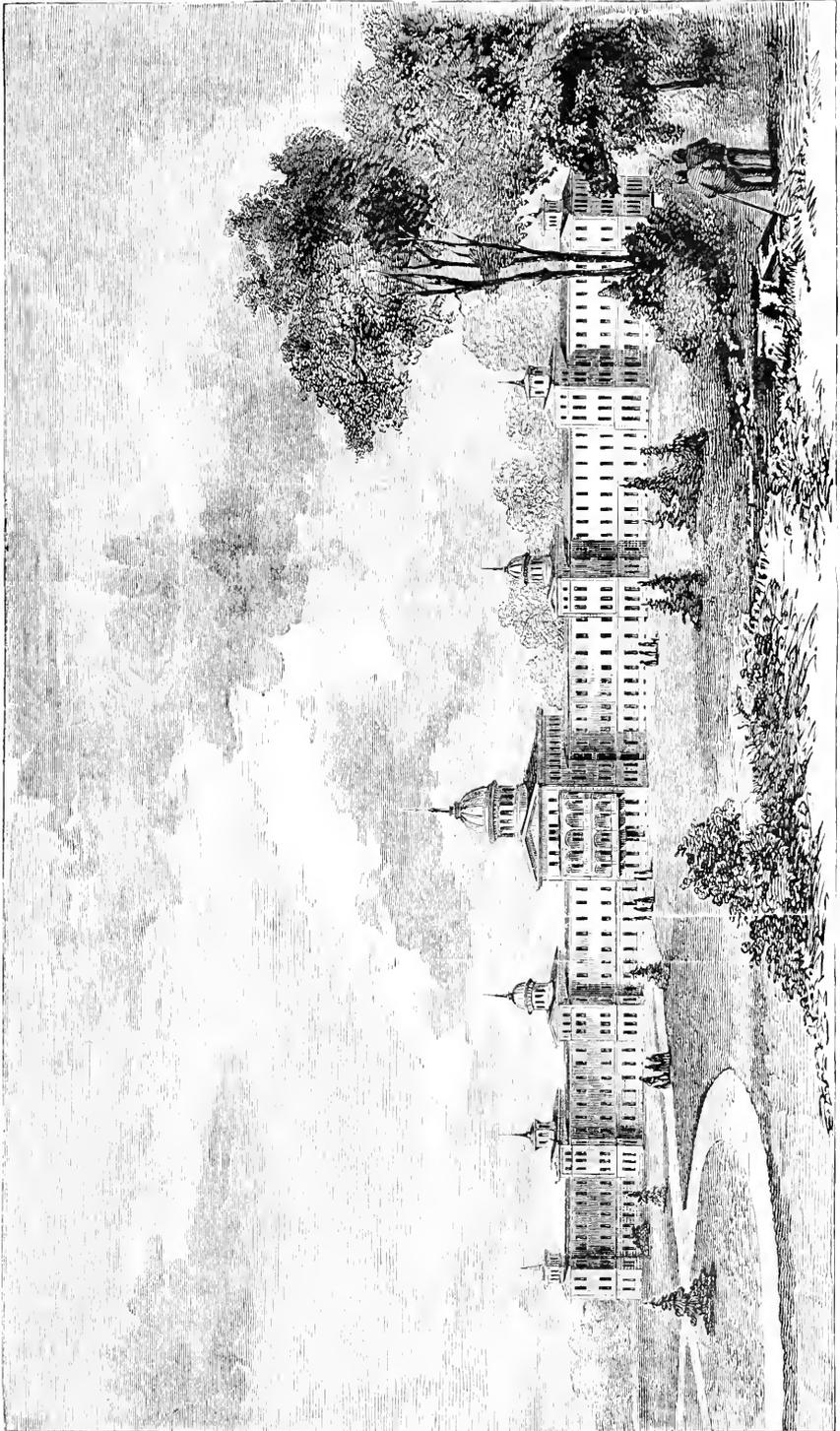
Into these two hospitals, it is supposed that chronic as well as recent and acute cases, in the proportion usually offering, will be received.

This removal of one sex to the building last put up, would secure for both, a classification twice as complete as was before had, there being sixteen instead of eight distinct classes for each. The value of this minute classification cannot be too highly estimated, and it renders the care of the different kinds of patients in the same building not only unobjectionable, but most convenient and most economical.

The removal of one sex to the new wards also gives an opportunity;—never again to be so well attained,—of thoroughly

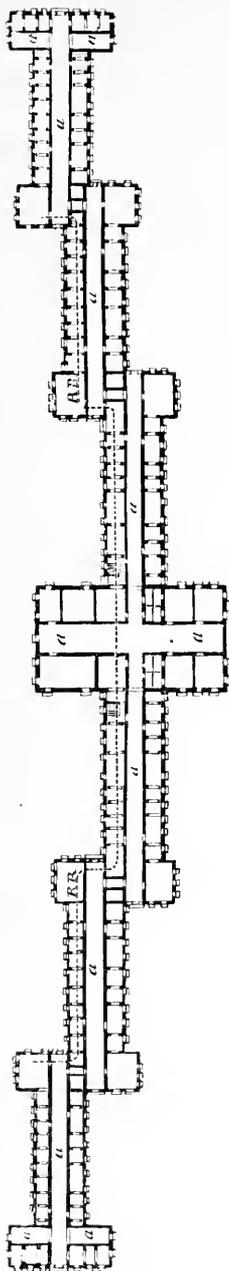
repairing and renovating the original building, and making any improvements that experience may have rendered desirable. Almost exactly all this has been done under the writer's personal supervision and direction; and after twenty years of critical trial of the completed plan, he has no hesitation in pronouncing it, beyond all comparison, the very best mode of providing for five or six hundred patients in one vicinity. He is equally confident, that no one who gives this plan of providing for the insane an unprejudiced trial, will ever be willing to have it changed for any other. Its advantages have been shown to be numerous and important, and not a single objection to it has been realized.

I cannot close these remarks on the construction of buildings for the insane, without acknowledging my obligations to Samuel Sloan, Esq., the distinguished hospital architect,—examples of whose taste and ability are to be seen in so many sections of the country,—for his suggestions and assistance in the long period during which I have often had occasion to avail myself of his professional services. No one of his profession in this country or elsewhere, has had equal opportunities for a practical knowledge of every detail of hospital architecture, or has done more to elevate its style and to promote the convenient arrangement of these buildings.



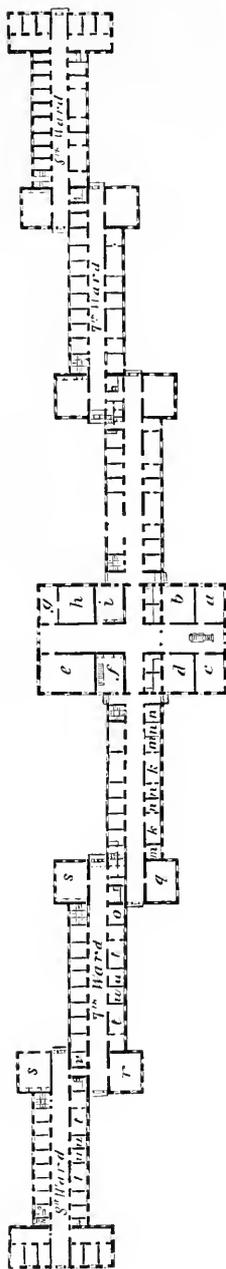
ELEVATION OF A HOSPITAL ON THE LINEAR PLAN.

PLATE IV.



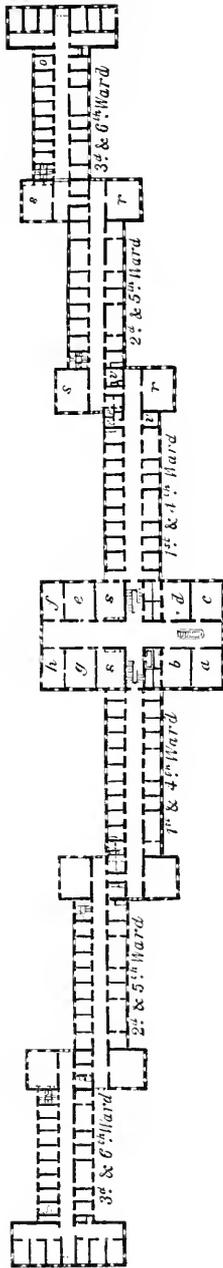
PLAN OF CELLAR.

PLATE V.



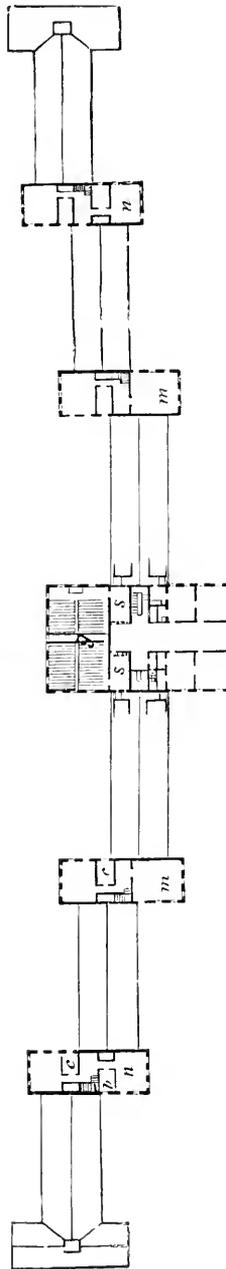
PLAN OF BASEMENT OR FIRST STORY.

PLATE VI.



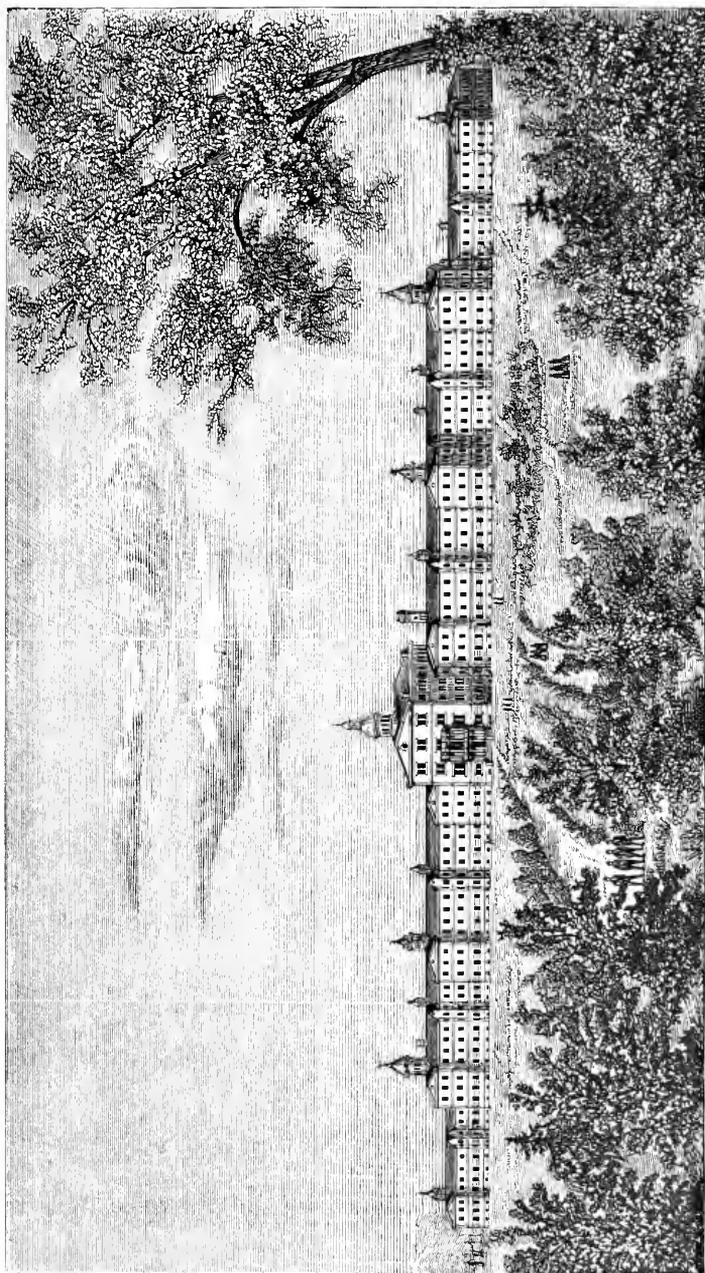
PLAN OF SECOND AND THIRD STORIES OF WINGS, AND SECOND STORY OF CENTRE BUILDING.

PLATE VII.



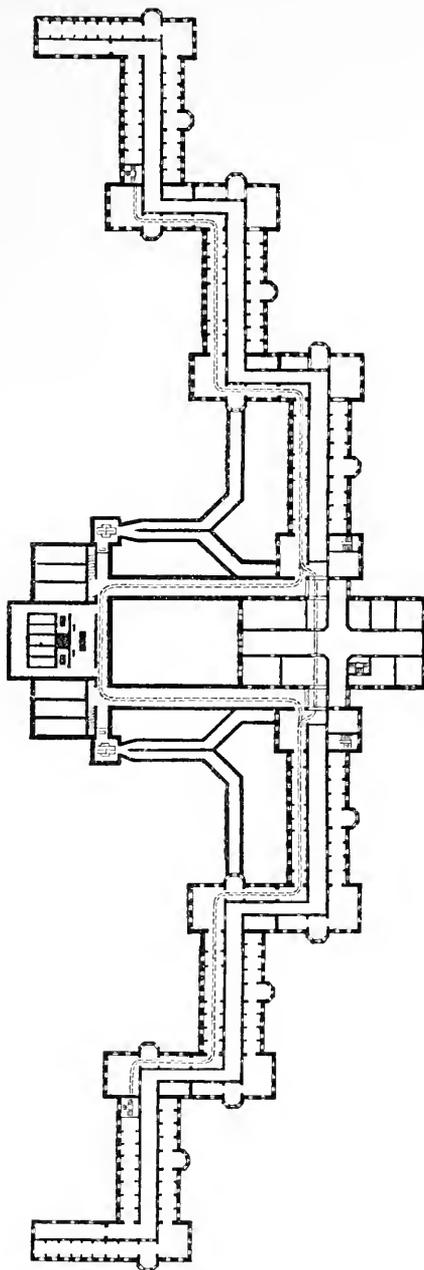
PLAN OF THIRD STORY OF CENTRE BUILDING AND PROJECTIONS OF WINGS.

PLATE VIII.



ELEVATION OF A HOSPITAL ON THE IMPROVED LINEAR PLAN.

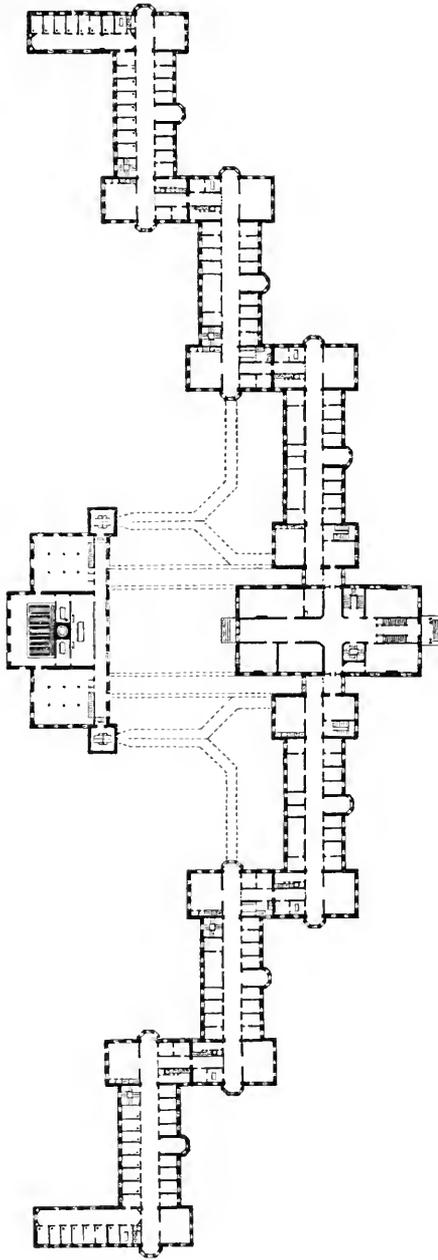
PLATE IX.



PLAN OF CELLAR OF IMPROVED LINEAR FORM OF HOSPITAL.



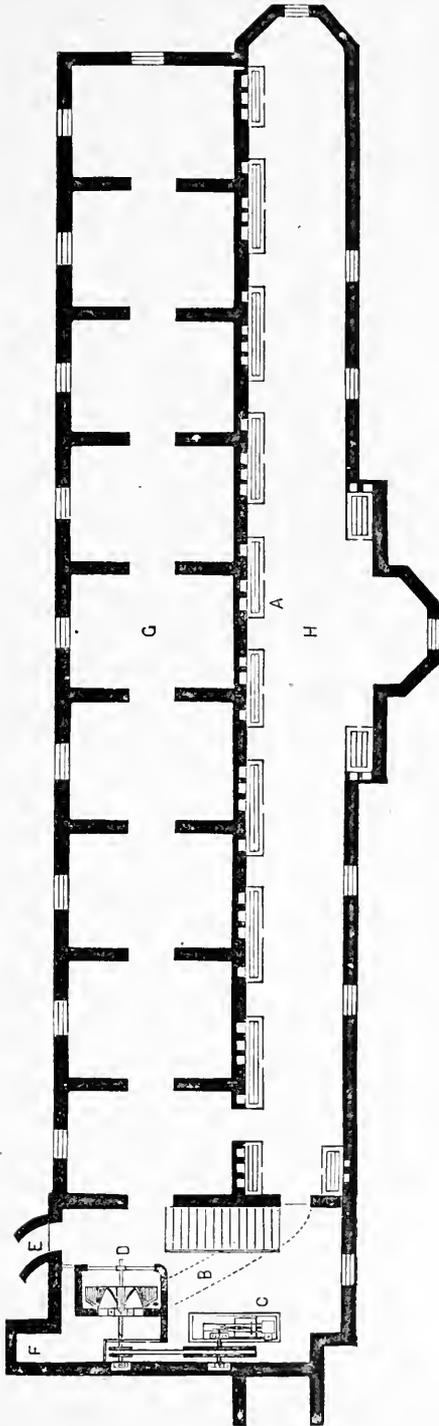
PLATE X.



PLAN OF PRINCIPAL STORY OF IMPROVED LINEAR FORM OF HOSPITAL.

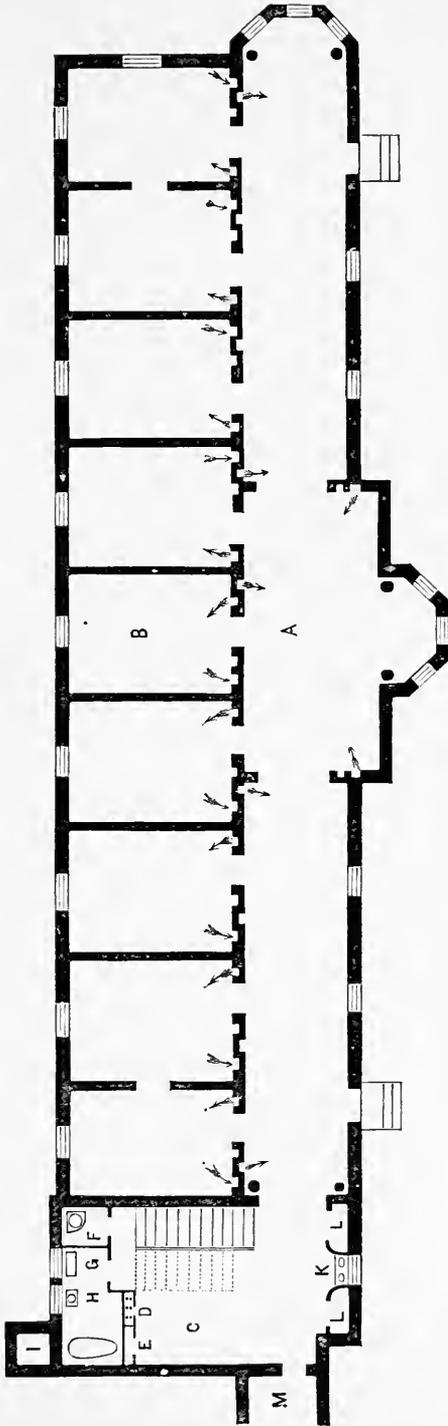


PLATE XI.



PLAN OF CELLAR OF AN INFIRMARY WARD.

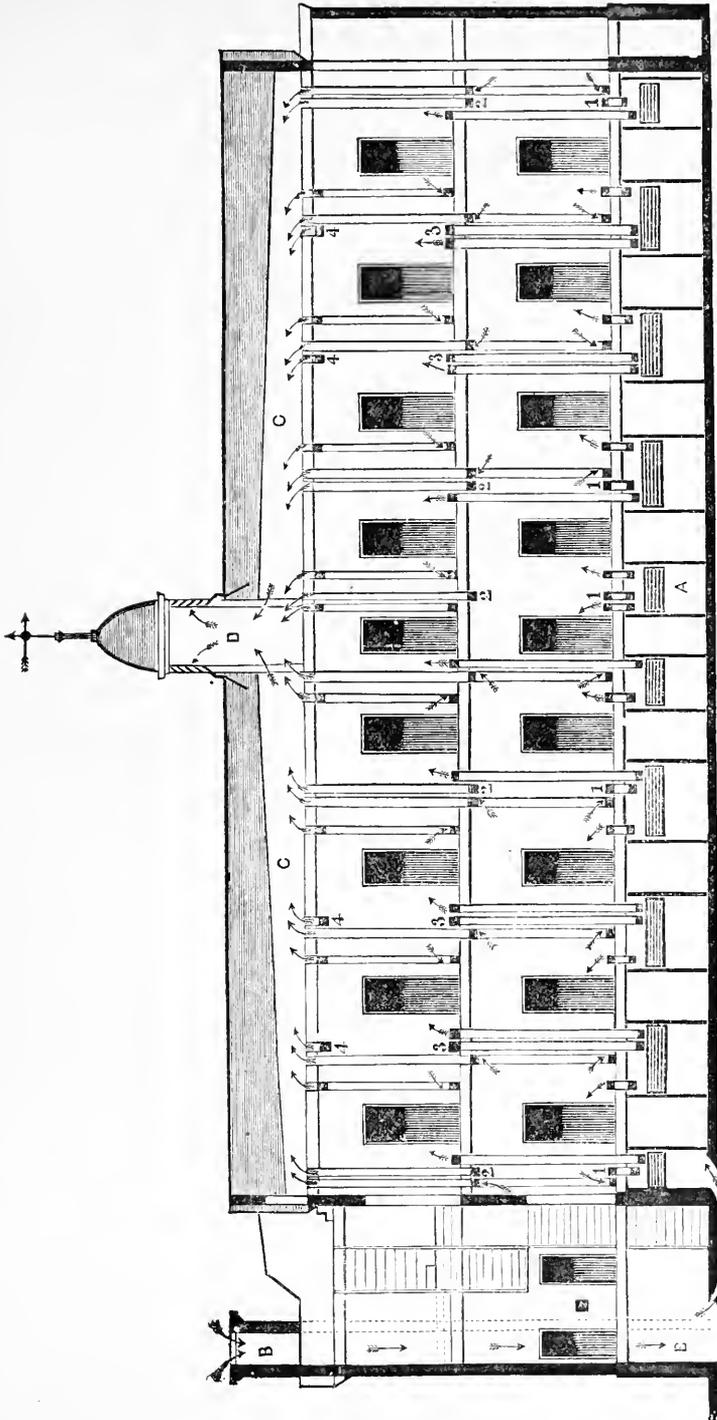
PLATE XII.



PLAN OF MAIN STORY OF AN INFIRMARY WARD.



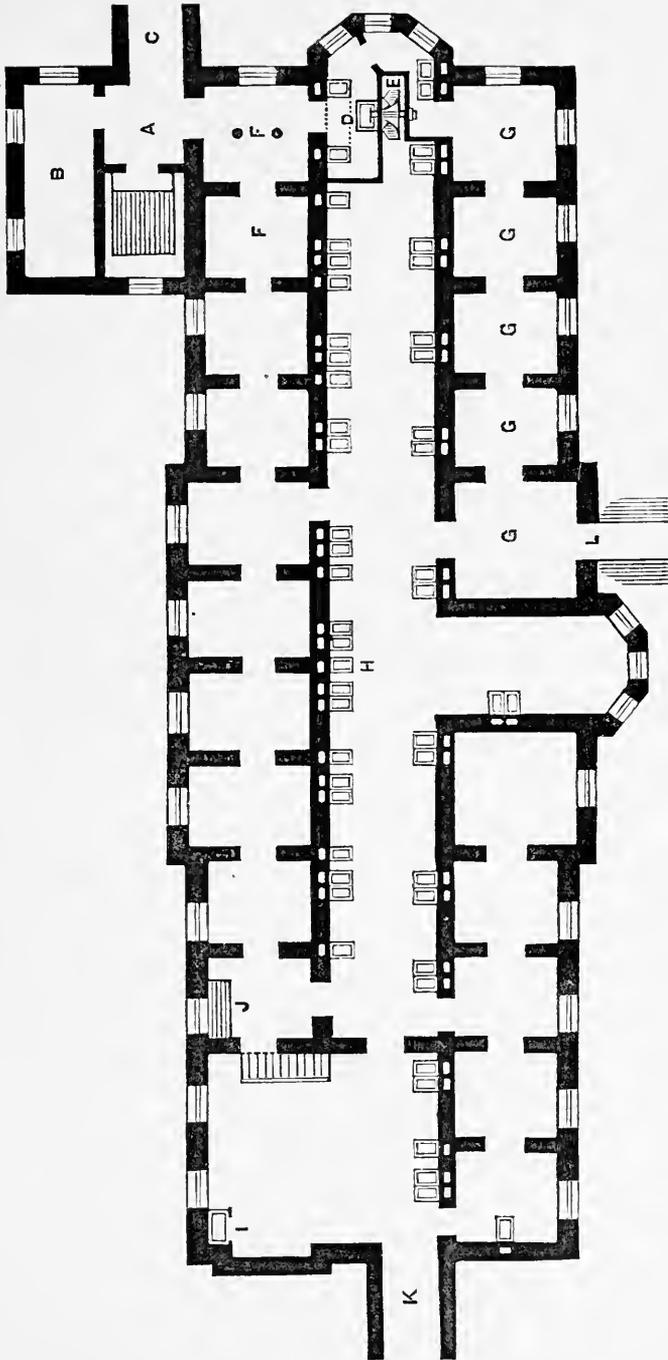
PLATE XIII.



LONGITUDINAL SECTION OF AN INFIRMARY WARD.



PLATE XIV.



PLAN OF CELLAR OF A SUPPLEMENTARY WARD.

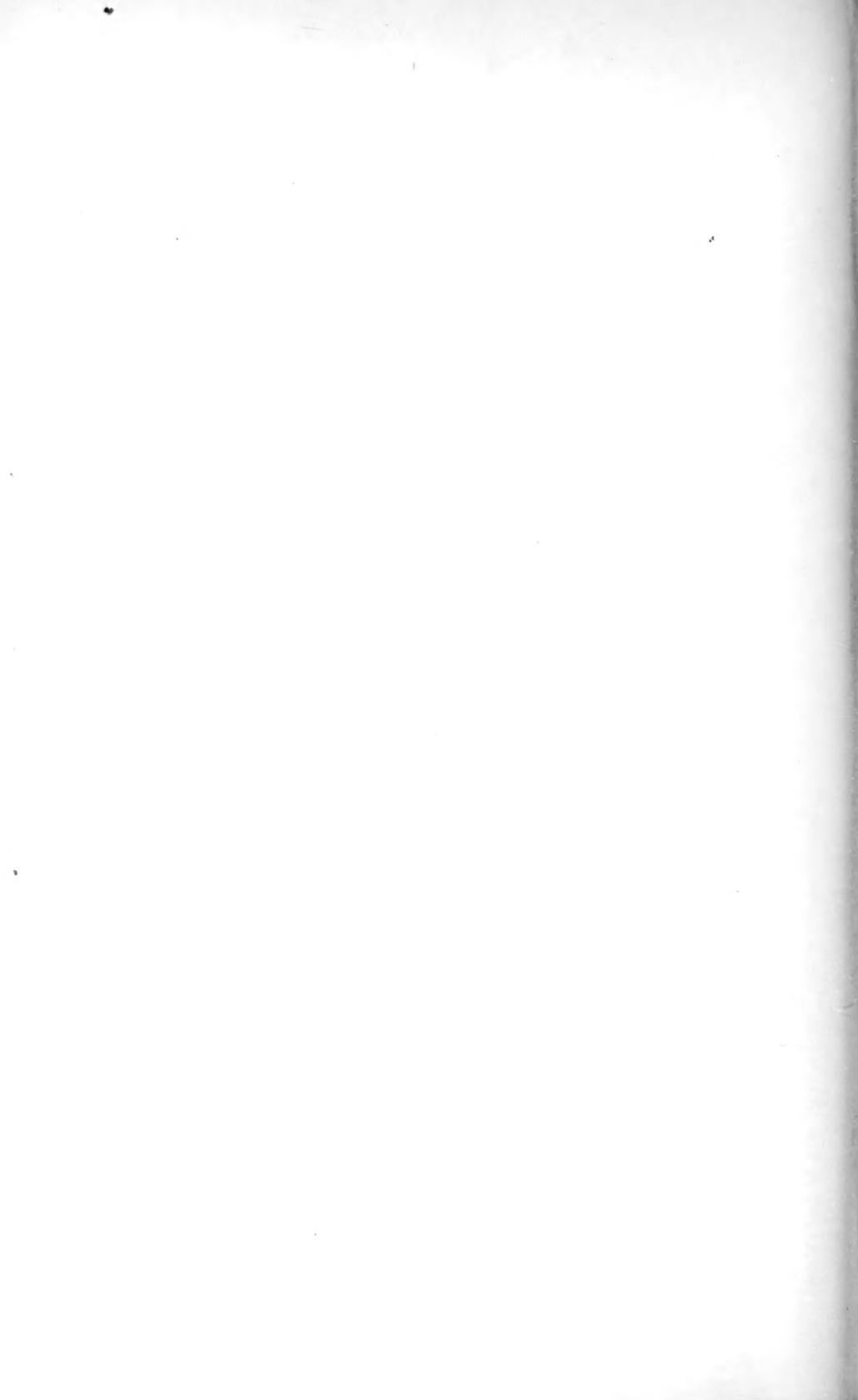
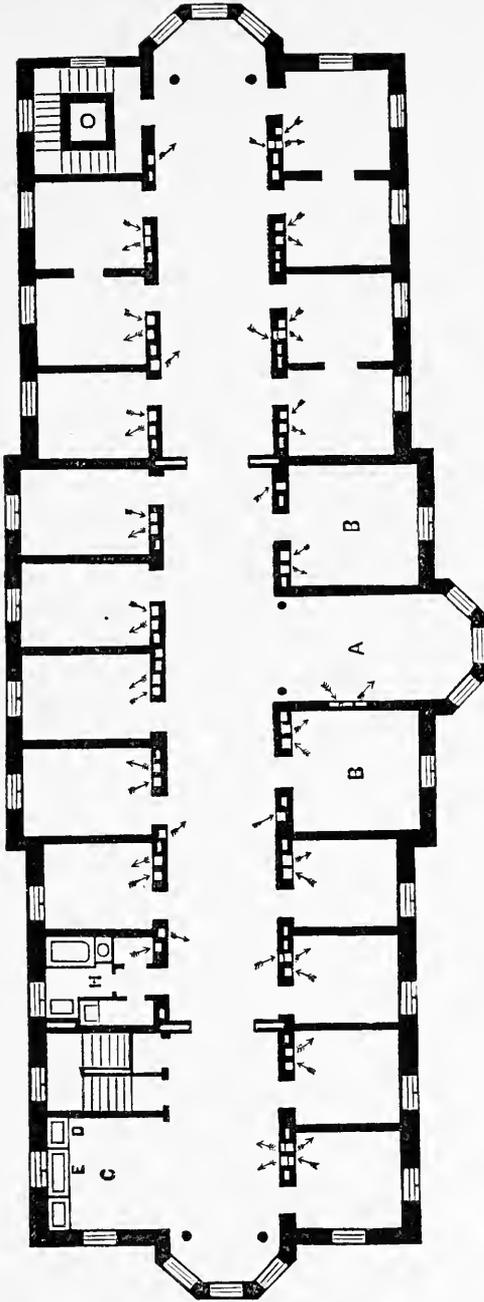


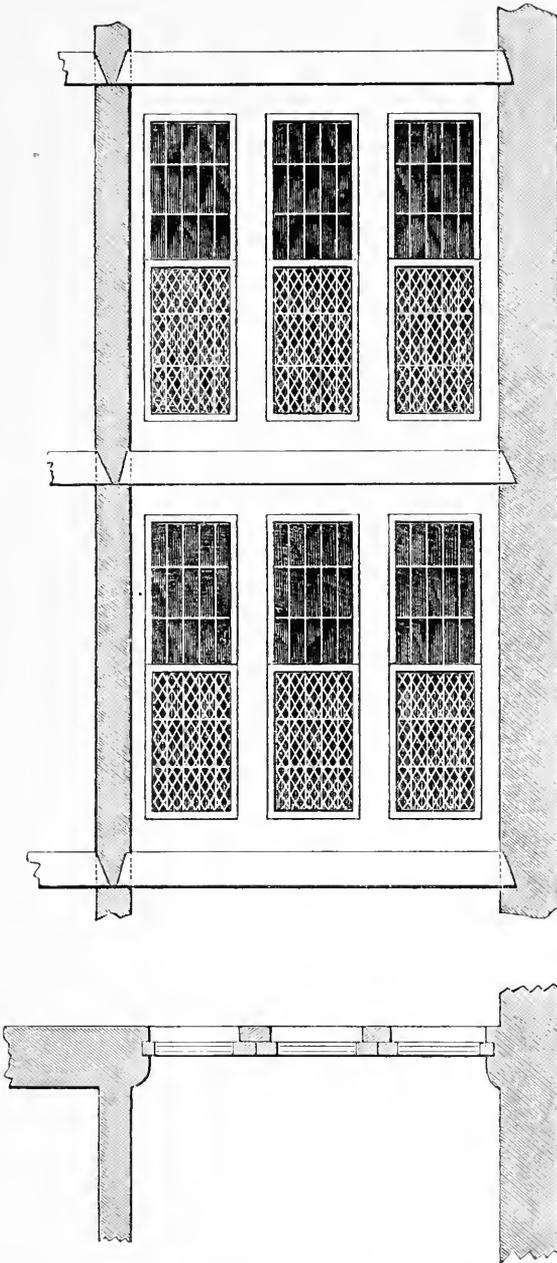
PLATE XV.



PLAN OF PRINCIPAL STORY OF SUPPLEMENTARY WARD.



PLATE XVI.



CONNECTION BETWEEN A WING AND CENTRE-BUILDING.

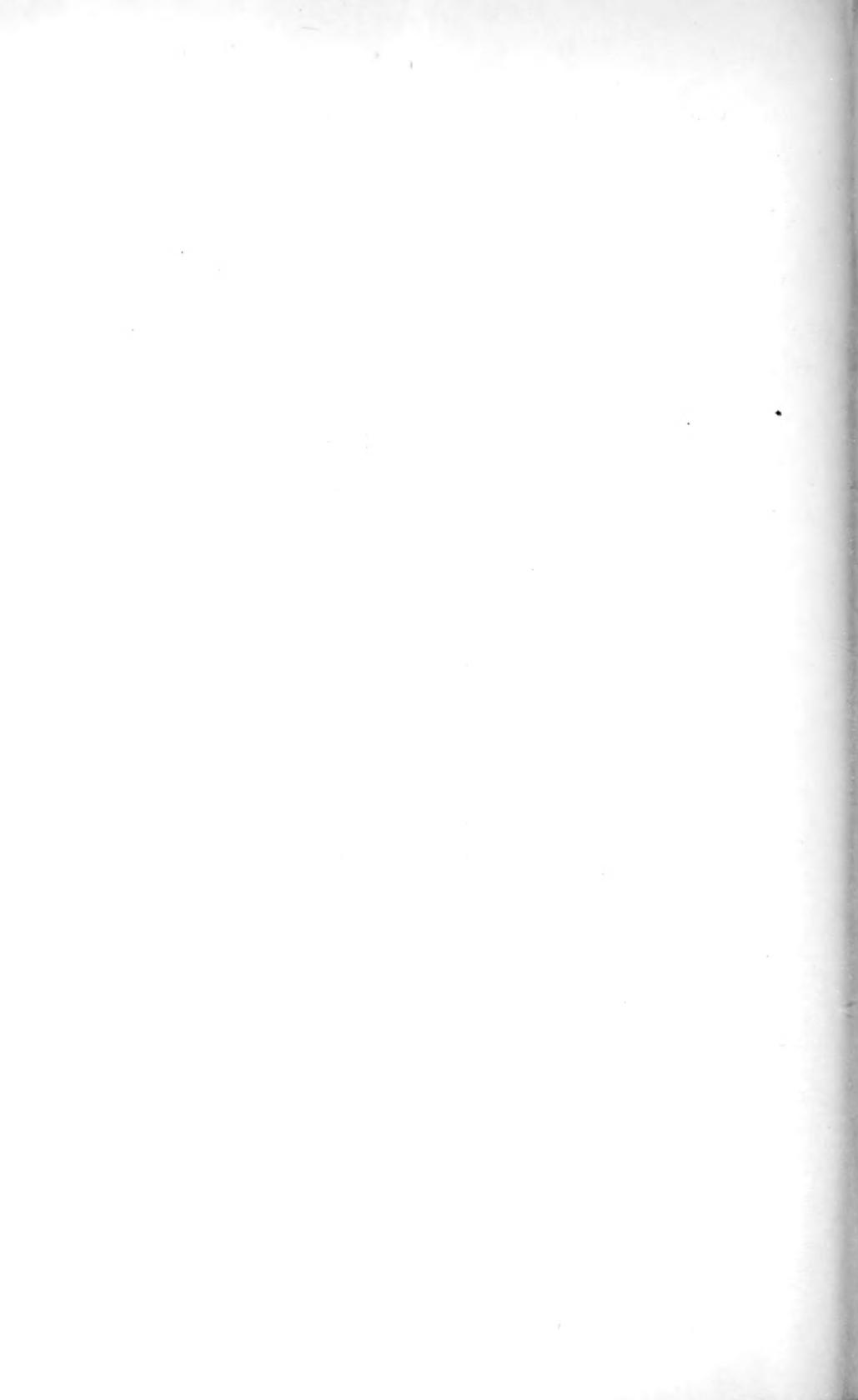
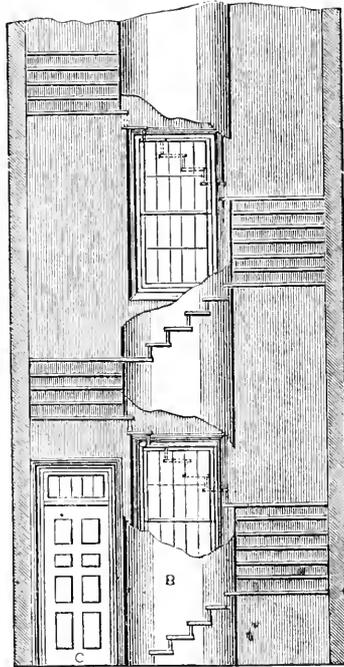
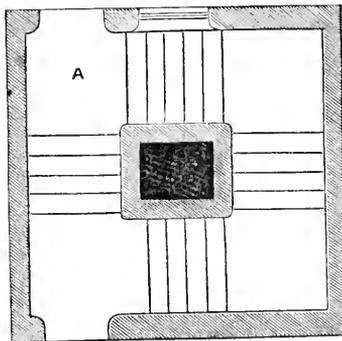


PLATE XVII.



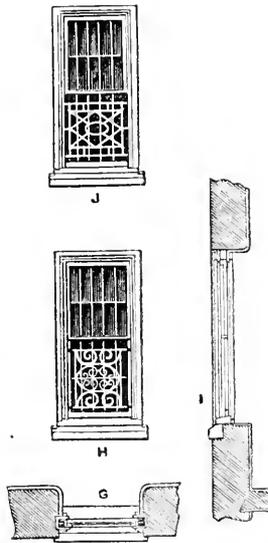
VERTICAL SECTION OF FIREPROOF STAIRWAY.



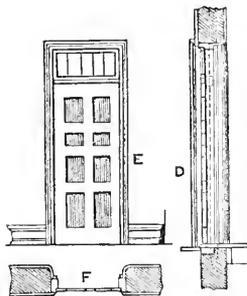
PLAN OF FIREPROOF STAIRWAY.



PLATE XVIII.



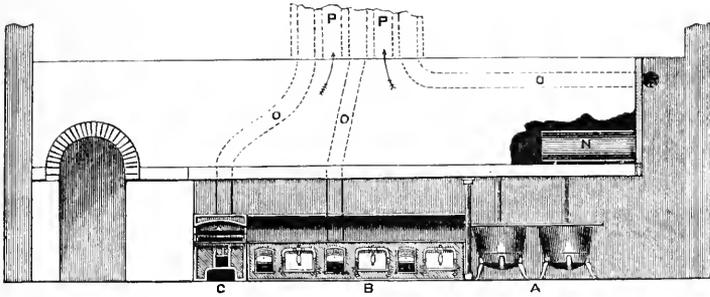
WINDOWS AND WINDOW-GUARDS.



PLAN OF DOORS.

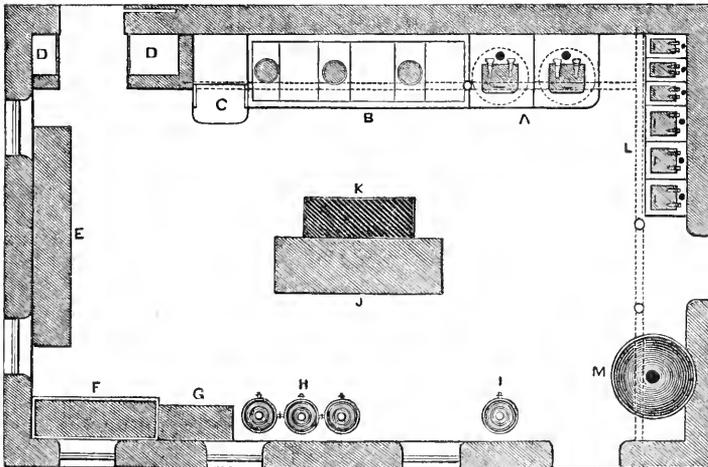


PLATE XIX.



ELEVATION OF A KITCHEN.

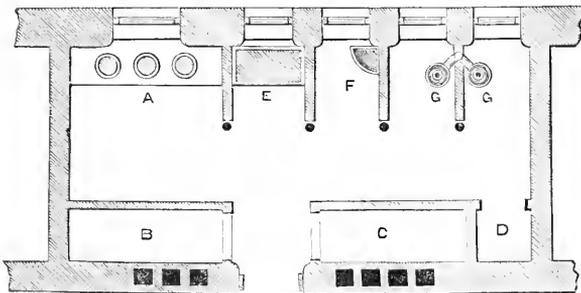
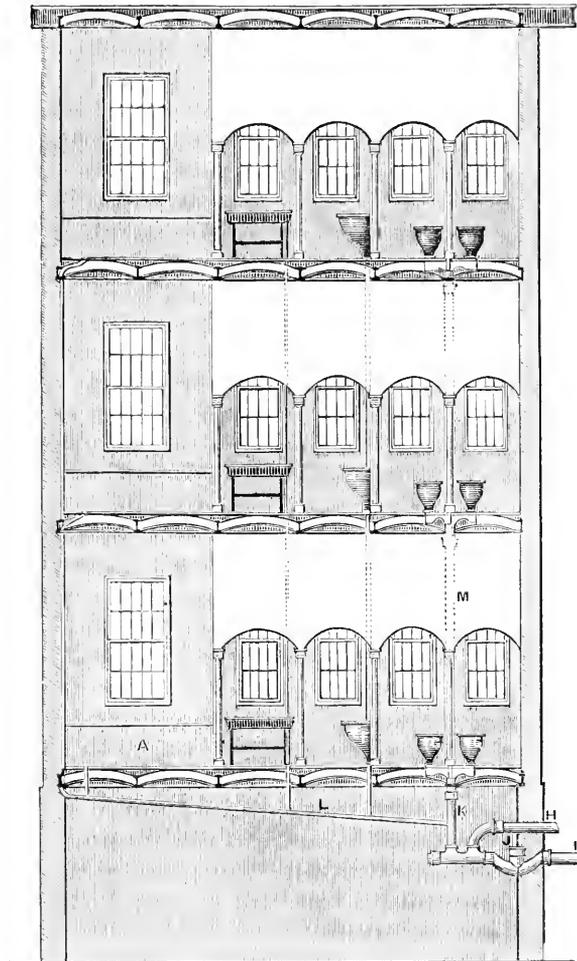
PLATE XX.



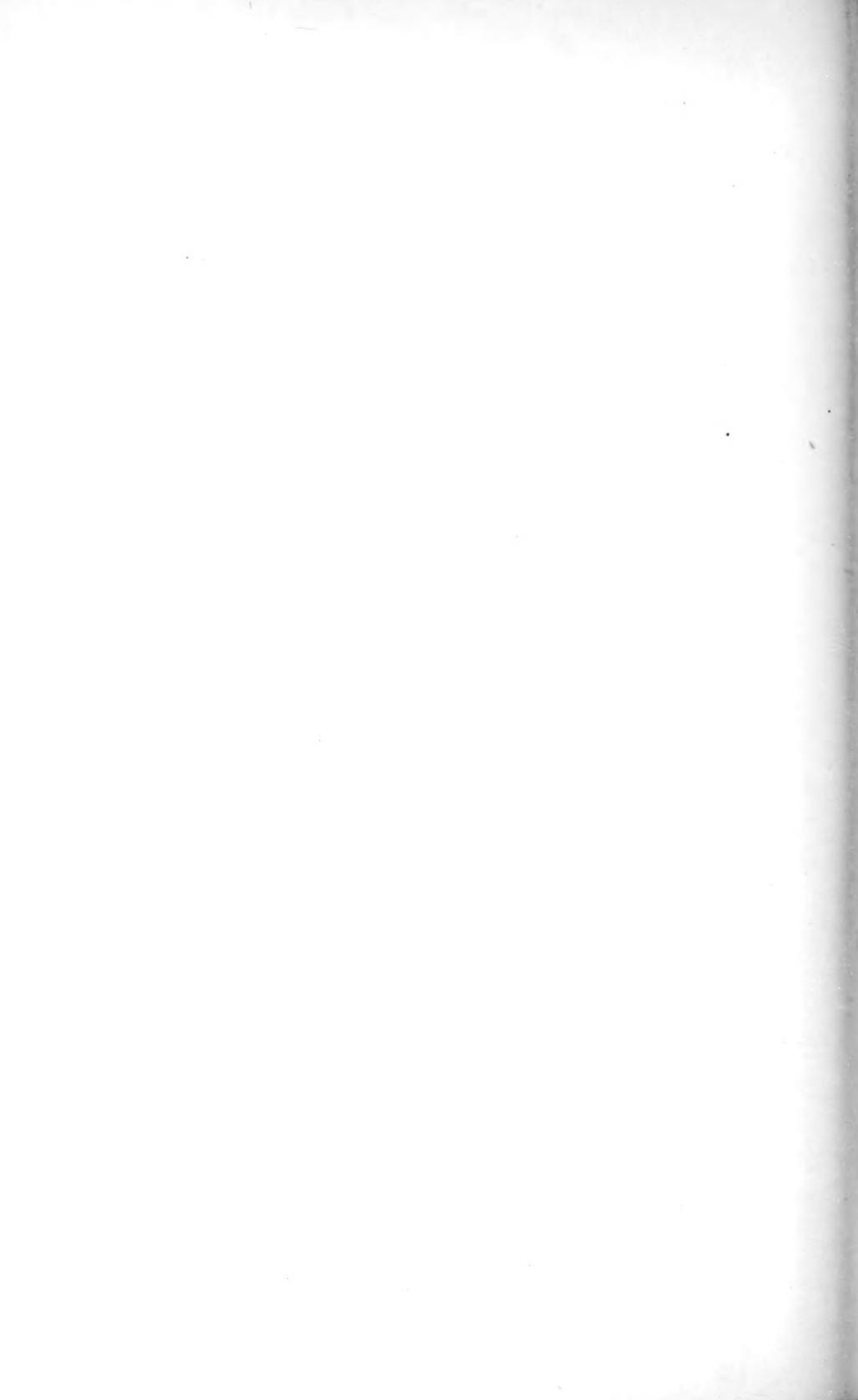
PLAN OF A KITCHEN.



PLATE XXI.

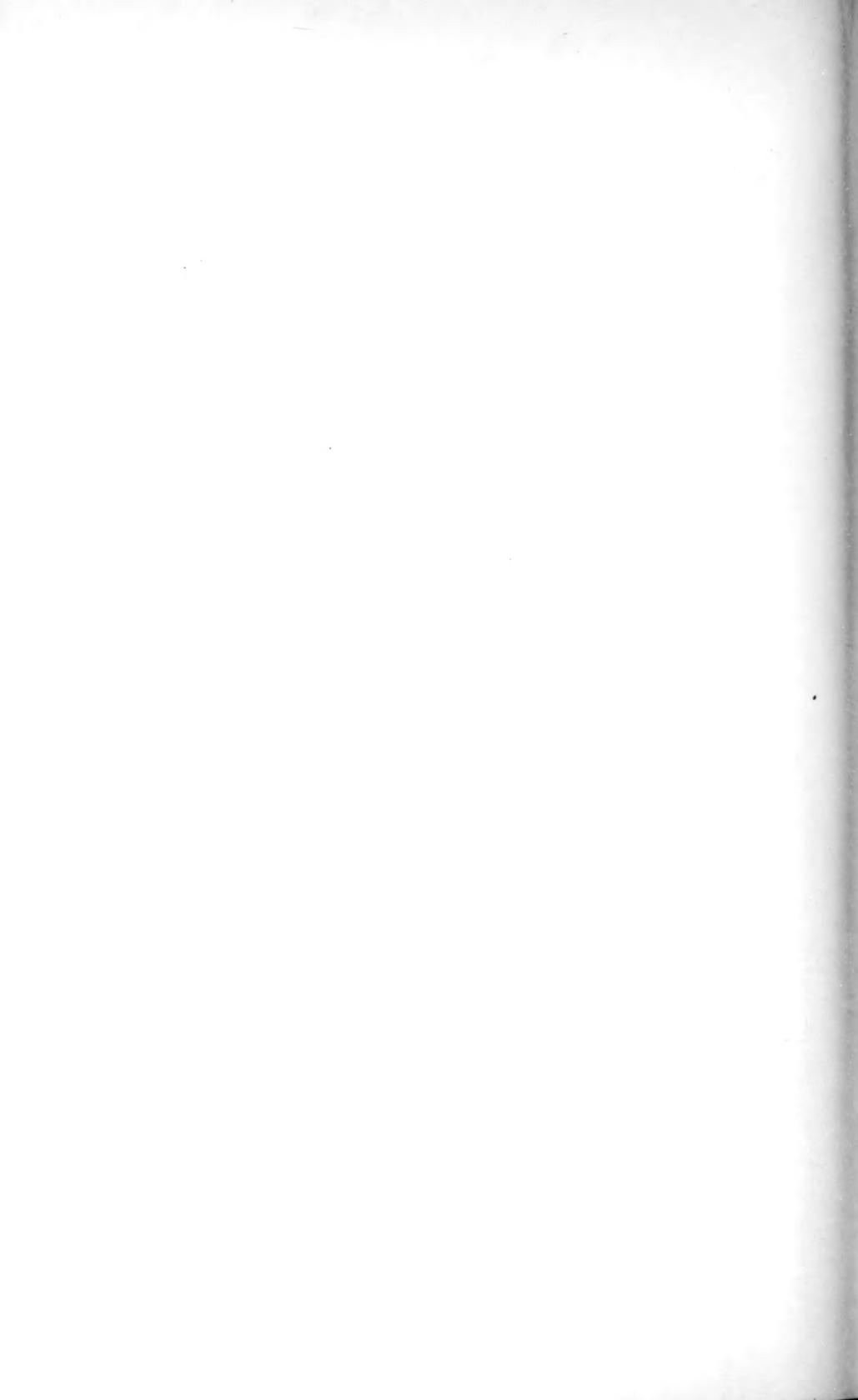


PLAN AND VERTICAL SECTION OF WATER ARRANGEMENTS, AND THEIR VENTILATION.



PART II.

ON THE
ORGANIZATION AND GENERAL ARRANGEMENTS
OF
HOSPITALS FOR THE INSANE.



THE
ORGANIZATION AND GENERAL ARRANGEMENTS
OF
HOSPITALS FOR THE INSANE.

CHAPTER I.

PRELIMINARY REMARKS.

IMPORTANT as it is in every point of view that the buildings intended for the custody and treatment of the insane should be constructed in the best manner, and furnished with every convenience calculated to promote the comfort of the patients and to facilitate their management,—still all this will result in comparatively small benefit to the afflicted, unless the system of internal organization and the general arrangements are based on correct principles and carried out with judicious liberality.

Upon most of the prominent points connected with this subject, there is believed to be nearly entire unanimity of sentiment, among those who have charge of the hospitals for the insane in the United States, so that in expressing my own opinions on many of them, I have little more to do than to record the convictions, which have been forced upon a majority of those, who have had opportunities of testing practically the actual requirements of this class of institutions.

During a somewhat protracted connection with hospitals of this description, it has been my good fortune to be associated with Boards of Managers, and with assistant officers, whose views have so generally harmonized with my own, that our intercourse has always been of the most agreeable kind, and my suggestions have ever received that prompt and liberal consideration, which leaves me no cause for complaints. For these reasons, as well as from a feeling that my period of service in the cause, has been about as extended as can reasonably be required of one individual, and not knowing of any favors I am likely to have to ask for myself in the future, and being quite sure I have no past wrongs to redress, I shall deem myself at liberty to speak with entire freedom on this subject, without being chargeable with the slightest indelicacy, or with being influenced by personal considerations,—as much so, as though I neither had, nor expected to have any connection with such an institution. My only motive is to be useful to the insane and the community, to save Boards of Trustees or Managers the trouble and disappointment of resorting to experiments, which have been tried over and over again, and always with bad results, and to enable those who take charge of new hospitals, to begin under circumstances that will allow them, from the start, to devote themselves to the welfare of their patients, and thus to show the public how much good these institutions are capable of effecting, and how indispensable they are, when properly constructed and organized, to the best interests of the insane.

Those who are hereafter to organize new institutions for the insane, can scarcely be expected, in the commencement of their career, to be able to recommend what is most desirable, unless they have the means of comparing the candid sentiments and the results of the experience of those who have gone before them.

CHAPTER II.

OFFICERS OF HOSPITALS FOR THE INSANE.

THE officers of a hospital for the insane should consist of a Board of Trustees or Managers, and a Treasurer, of a Physician-in-Chief, who is also Superintendent, of one or two Assistant Physicians, according to the number and kind of patients under treatment, and of a Steward and Matron. The Trustees and Treasurer are non-resident. The others reside on the premises.

CHAPTER III.

TRUSTEES.

THE general controlling power over such a hospital, should be vested in the Board of Trustees, whose mode of appointment will necessarily be varied, according to the character of the institution with which they are connected. In private charitable corporations they will be chosen according to the prescribed forms, by those duly qualified to vote,—while in State institutions, their appointment will generally be either by nomination made by the Governor, and confirmed by the Senate, or which is, perhaps, still better, they will be selected directly by the Judges of the Supreme or other Superior State Court. The precise mode of election, however, is not of so much importance as the kind of men who are chosen, and the existence of a determination to prevent everything like personal or political influences controlling their appointment.

The members of this Board should never exceed twelve,

while a smaller number will generally be preferable. Their tenure of office should be so arranged, that if changes are deemed desirable, the terms of only a portion will expire in any one year. Every one nominated for such a post, should possess the public confidence in a high degree, should be distinguished for liberality, intelligence, and active benevolence, be a man of business habits, able and willing faithfully to attend to the duties of the station, and above all political or personal influence.

The Trustees or Managers, will have the general supervision of the institution and of its affairs, and they should at frequent stated intervals, either as a Board, or by Committees, make visits through every part of the Hospital, and exercise so thorough an oversight of its expenditures and of its operations generally, as will tend to secure the confidence of the whole community, and especially of those whose friends are committed to its charge; and they should always give a genuine and liberal support to the chief executive officer, whose duties, at the best, are sufficiently irksome and laborious.

One of the most important duties connected with the trust of these officers, will be the appointment of the Physician-in-Chief and Superintendent of the institution, and on his nomination, and not otherwise, of suitable persons to act as Assistant Physicians, Steward, and Matron.

The members of a Board of Trustees, performing their duties properly, are always able to exercise a most important influence on the prosperity of any institution, and on the welfare of its inmates; and they may also by injudicious measures, or a want of interest in its affairs, produce effects of an entirely different character. While giving the strictest attention to their own appropriate functions, they should most carefully refrain from any interference with what is delegated to others, and meddling with the direction of details for which others are

responsible. Especially should they avoid any personal interest in subordinates, that might lead them to a course which would weaken the authority of the principal of the institution. It would, indeed, be a safe principle to adopt, that there should be no ties of a personal, pecuniary, or political character, between a member of the Board of Trustees, and those who are employed in any of the departments of an institution, which could at any time prevent an unbiassed judgment in a case of difficulty. Under no circumstances, should a Trustee so far forget the proprieties of his station, as to resort to subordinates for information that should come from the Superintendent,—or to circulate unfavorable reports in regard to an institution, without having first informed this officer of their existence and tendency, and learning from him their truth or falsehood, as well as the reasons which may have induced acts, which although correct in themselves, might, without proper explanation, be readily so misunderstood as to do great injustice to innocent parties.

Boards of Trustees, while exercising the strictest honorable scrutiny of their officers, should be prepared, on every proper occasion, to give them a steadfast support in the performance of their arduous and responsible duties, and thus to add most essentially to their power of doing good. It is a great encouragement to all who are engaged in this vocation, to find their efforts properly appreciated by those, to whom they are directly responsible, and who ought to be most familiar with their modes of management and the beneficial results of their labors.

It is scarcely necessary to say that it is quite inadmissible for Trustees to have an interest, directly or indirectly, in any contract or in any purchase with which a Hospital is concerned. Such a course may at least lead to suspicions, the existence of which, however groundless, is always to be deprecated, and

may under some circumstances prevent a trustee from acting honorably and impartially.

Boards of Trustees should perform their duties without compensation, but the expenses actually incurred should be returned to them.

The duties of the Commissioners who are to have charge of the erection of a State hospital for the insane, and those of the Trustees who are to supervise it after its completion, are so dissimilar, that these functions will probably be confided to different individuals. This need not necessarily be so, for the proper performance of the duties of the former will naturally give them a familiarity with the hospital and a degree of interest in its successful management, not likely to be possessed by persons who have not been paying some special attention to the subject. It has often resulted advantageously when the legislature, in the bill providing for the establishment of a hospital, has named the Commissioners for its erection and also confided to the same body the election of its Superintendent and a supervision of the work of organization. More commonly, however, on the completion of the building, the Commissioners transfer their charge to the Trustees, who have been subsequently appointed.

CHAPTER IV.

TREASURER.

THE Treasurer of a State hospital should be a salaried officer, elected by the Trustees, and giving ample security for the faithful performance of his duties. He must reside in the vicinity of the hospital, but not in it; he should collect all money due the institution, and should receive, hold, and disburse all the funds that may come under the control of the Trustees.

He should pay the orders of the Steward, but only when accompanied by bills of particulars, specifying the objects of the payment, and when certified by the Superintending Physician as being correct, and approved by him.

CHAPTER V.

PHYSICIAN-IN-CHIEF.

“THE Physician-in-Chief should be the Superintendent and executive officer of the establishment. Besides being a well educated physician, and of irreproachable moral character, he should possess the mental, physical, and social qualities to fit him for the post. He should serve during good behaviour, reside on the premises, and his compensation should be so liberal, as to enable him to devote his whole time and energies to the welfare of the hospital. He should nominate to the Board suitable persons to act as Assistant Physicians, Stewards, and Matrons. He should have entire control of the

medical, moral, and dietetic treatment of the patients, the unrestricted power of appointment and discharge of all persons engaged in their care, and should exercise a general supervision and direction of every department of the institution."

It will readily be seen how important is the task of selecting an individual to fill this place, and to perform the duties detailed in the foregoing paragraph, which is in the exact words of the proposition, adopted by "the Association of Medical Superintendents of American Institutions for the Insane," as long ago as 1844, and the soundness of which has been thoroughly tested by men of the highest capacity and in every section of the country. When once chosen, however, there would seem to be no doubt but that his tenure of office and his compensation, should both be such, that a man of proper character would be willing to lay aside all other engagements, in order to devote himself to the performance of his duties. Without good reason to expect the situation to be permanent and the compensation liberal, no man possessing the requisite qualifications and talents, can be expected to give up his prospects of advancement in other branches of the profession, and so completely to cut himself off from the lucrative results of a successful general practice.

Where it is possible to find a physician, who has already acquired a practical knowledge of the details of hospital management and treatment, by personal observation and a residence in some good institution, in addition to the other desirable qualifications, there is no question but that such an individual is preferable to any other. If the physician chosen, however, has not had these advantages, he should be one that is "apt to learn" and willing to embrace every possible opportunity to make up his deficiencies, especially by a temporary residence in some such institution, before venturing to take charge of his own. A few weeks thus passed in hospitals of the best

kind, and devoted to a careful study of their varied arrangements, and of their modes of managing the insane, will save a Superintendent a great amount of subsequent labor and anxiety, and result most advantageously to the institution and to his first patients.

If the person chosen to occupy the post of Physician-in-Chief, is practically familiar with hospitals for the insane, and has a taste for the details of building and mechanical arrangements, very great advantage will result from his appointment being made before the commencement of the buildings, and in thus securing to the institution the benefit of his experience in arranging the different parts of the structure.

So varied are the qualifications desirable in the chief officer of a hospital for the insane, that it can readily be understood that much more is required, than is necessary for the ordinary practice of medicine. The prescription of medicine is a small part of what is essential in the treatment of insanity.

It would seem to need but little argument to show that a hospital for the insane should have but one official head,—in reality, as well as in name,—to whom every one employed about it must be strictly subordinate. It would be just as reasonable to suppose that a proper discipline, or that good order, would prevail in a ship with two or more captains, or in an army with two generals-in-chief, or in a college or school with several principals, as to expect to find them in a hospital of the kind referred to, where two or more individuals are acting independently of all others, or in which there are certain officers over whom the Physician-in-Chief has no control. If such an arrangement ever worked well anywhere, it must have been owing to some very rare or exceptional mental organization in those acting under it, and not because the principle is not radically wrong. Every such trial,—and there have been many within my own observation,—so far as I

know, has been a complete failure in the past, and in my opinion, is sure to be so, in the future.

The very peculiar character of a majority of the patients received into such institutions, the numerous body of assistants required in their care, the large number of persons employed in the various departments, the necessity for active and unceasing vigilance, joined with gentleness and firmness in all intercourse with the mentally afflicted, and for prompt decisions in cases of difficulty, render it indispensable,—if we wish the best results,—that a large amount of authority should be vested in the chief officer.

It must always be borne in mind that every department of a hospital for the insane, its farm, and garden, its pleasure grounds, and its means of occupation and amusement, no less than its varied internal arrangements, its furniture, its table service and the preparation and serving of the food, the mode in which its domestic concerns are carried on, its heating and ventilation—everything connected with it, indeed—are parts of one great whole, and in order to secure harmony, economy, and successful results, every one of them, must be under the same general control. It is not to be supposed that the Chief Physician of the institution should personally superintend all or a majority of these matters, or fritter away his time in a constant attention to their details, or even that he should be proficient in every one of them; but he should be expected to be so constituted, mentally and physically, as to be able and willing to make himself familiar with all of them, so far at least, as to know when everything is in good order, and when all services are properly performed. He should especially have that kind of tact and judgment, which will enable him to fulfil efficiently one of the most important functions of his office, that of selecting individuals for every department, fully qualified to discharge their appropriate duties, and who will

be held by him to a strict accountability for their proper performance.

It is a great error to suppose that there is any detail about the management of a hospital for the insane, beneath the dignity, or unworthy the attention of its Chief Medical Officer. Everything that has any relation to the patients,—and everything has some direct or indirect connection with them,—may have an influence not readily appreciated by a careless observer, and to preserve unity of purpose, nothing should be arranged or changed without consultation with the head of the establishment.

The Physician-in-Chief, who voluntarily confines his attention to the mere medical direction of the patients, must have a very imperfect appreciation of his true position, or of the important trust confided to him. He becomes in reality, a very secondary kind of officer, and his functions will be pretty sure to be considered by many around him, as quite subordinate in importance to those of some others concerned in the management of the establishment, which under such an arrangement can hardly keep permanently, a high character.

It is unfortunate for hospitals for the insane, that so many physicians show their ability, only in prescribing medicines and conducting pathological investigations, for important as these unquestionably are everywhere, they are only a part of what is essential in the chief of a hospital for the insane. It is quite safe to say that the most expert diagnostician, the most accomplished microscopist, the most brilliant lecturer or writer,—desirable as all these accomplishments are,—may still be utterly unfit to be placed at the head of such an institution.

No one will deny that the arrangement recommended,—which is the only one that can be relied on to work satisfactorily,—places much power in the hands of the Chief Physician, but it must be remembered too, that on him the responsi-

bility also mainly rests. A man to whom this amount of control cannot be safely intrusted, certainly is not the proper person to be placed at the head of an institution containing 250 insane patients. Dividing this power between two, three, or more would only tend to produce discord, destroy all proper discipline, and prevent prompt and wise action.

The simple possession of adequate authority by the chief executive officer of such an institution, often obviates the necessity of its being exercised. It may be unseen and unfelt, and yet a knowledge of its existence, will alone often prevent wrangling and difficulties in the household, and secure regularity, good order, economy, and an efficient discipline about the whole establishment.

The long-continued and uninterrupted performance of the duties of a Hospital Superintendent among his patients is a tax upon the mental energies, and ultimately upon the physical powers of an individual, not easily appreciated by those who have not had some experience of the kind; and one of the best modes of counteracting these effects, is for that officer to devote a portion of his time to the supervision of out-door affairs. By this means, without leaving home, he will not only have the invaluable advantages of active muscular exercise in the open air, but also a form of occupation for the mind, that will, more effectually than any other, divert it from the train of thought induced by a protracted visit through the wards. Change of occupation,—both mental and physical,—is the relaxation of a Superintendent of a Hospital for the Insane, and is indispensable, if he expects for any long period to preserve his health and usefulness. So many noble men in our own country have already broken down while engaged in the zealous performance of these duties, that hardly a better contribution could be made to the cause, or one that would more subserve the interests of the afflicted, than that

which would aid in preserving the mental and physical health of the right kind of Hospital Physicians, and in securing a proper supply of them.

The nomination of the Assistant Physicians, Steward and Matron, by the Superintending Physician, will probably secure harmonious action between these officers, in the operations of the house. This point is one of great importance, and without it, there can be neither satisfaction nor the best results in the management of any institution. No Board of Trustees having at heart the prosperity of a Hospital for the Insane, could be willing to select or retain in office, any of these named, who do not cordially aid in promoting the views and carrying out the plans of the chief executive officer. No subordinate officer not entirely loyal to the chief executive officer should be permitted to remain in any institution.

In reference to all other persons employed about the patients, the power of appointment and discharge, as before observed, should be clearly and unconditionally with the Physician in Chief. A single interference with this power, could hardly fail to lead to acts of insubordination, and a disregard of the proper authority, and to prove, to a greater or less extent, destructive of all good discipline, and the thoroughly efficient working of any institution.

CHAPTER VI.

ASSISTANT PHYSICIANS.

THE Assistant Physicians, besides being graduates of medicine, should be men of such character and general qualifications, as will render them respected by the patients and their friends, and able to represent creditably, and to perform efficiently, the more ordinary duties of the chief Physician, in his absence. As considerable responsibility will frequently rest on these officers, much more than simple medical attainments should be regarded in making a selection. It would be to the ultimate interest of the afflicted, and of the whole community, if the post could generally be conferred on those who are likely to devote themselves to this branch of the profession, and who seem to possess the kind of character, which in due time, will probably make them desirable Chief Officers of Hospitals for the Insane. They should especially be men of the highest moral character, well educated, of a cheerful, sympathizing disposition, but clear of frivolity of behaviour, in good health, and above all, they should be likely to be prudent in their intercourse with the patients. Although it must be acknowledged that some men make admirable Assistants, who are not so well calculated for Superintendents, still it does not often, if ever, occur that a poor Assistant makes a good Chief Medical Officer.

Where there are over 200 patients, especially if there is a large proportion of recent cases, two Assistant Physicians will be required, one of whom may perform the duties of Apothecary. In some institutions, one Assistant Physician and an Apothecary will be sufficient. If the full time of two Assistant Physicians, however, is taken up by their other duties

among the patients, an Apothecary may still be usefully employed in addition; and to him, other occupation among the male patients may with propriety be assigned. A careful arrangement of the duties of the Assistant Physician and of the Apothecary, often makes the latter a very desirable officer. It secures better care and more promptness in putting up prescriptions and in making many preparations for the use of the hospital, while giving the Assistant Physicians more time to attend to the reporting of cases, pathological investigations, and professional intercourse with the patients. The details of the regular duties of all these officers should be fully stated in the by-laws of the institution. It is, nevertheless, of great importance to the proper discipline of a Hospital for the Insane, that no supernumeraries should be allowed in any department.

The visits of the Physician-in-Chief through the wards should be made as nearly every day and at such hours as his other engagements will permit,—either alone or in company with his Assistants,—and this, as has been already suggested, is one of the advantages which institutions of moderate size possess over those that are very large, in giving to the inmates the full benefit of the knowledge and experience of this officer, which are at least supposed to be greater than those of his Assistants.

The Assistant Physicians, however, will always make a morning and an evening visit throughout the entire hospital and see as nearly as possible every patient. This applies especially to the morning visit, when in addition to examining the condition of the patients, every room should be carefully inspected.

CHAPTER VII.

STEWARD.

THE duties of the Steward, and the importance of the office, vary materially in the different American institutions. In some, he not only performs the ordinary functions of this officer, but is also really the Treasurer of the hospital, and receives and disburses large sums of money. The present essay, however, referring more particularly to State institutions, or those similarly constituted, the duties last named will be understood to be performed by the Treasurer, who is an officer of the Board of Trustees, as has already been mentioned.

The details of the duties of both Steward and Matron, with the sanction of the Board of Trustees, should be arranged by the Physician-in-Chief, to which officer they should be directly responsible.

Under the direction of the Physician-in-Chief, the Steward should make all purchases for the institution, keep the accounts, make engagements with, pay and discharge all subordinates employed about the establishment, and besides having a care of the farm, garden and grounds, should be able to perform many other important duties of supervision and police, that may with propriety be assigned him. He should give adequate security for the faithful performance of his trust; he should promptly pay into the hands of the Treasurer all money received by him on account of the institution, and should settle all demands,—except trifling incidental ones, for which he should regularly account,—by orders on the Treasurer, with bills of particulars, duly approved by the Superintending Physician. He should visit the different dining rooms, at meal times, on the men's side of the hospital.

CHAPTER VIII.

MATRON.

THE Matron, while having a general supervision of the domestics and of the domestic arrangements of the house, will also be able, under the direction of the Physicians, to contribute essentially to the comfort of the patients, and of all others about the establishment. Although the Matron will have considerable intercourse with the patients, her principal and most important duties, enough to occupy most of her time, will be more connected with the housekeeping, while the general supervision of the patients, their instruction, amusement and immediate care will be directly and mainly confided to others, to be hereafter referred to. She should visit the dining rooms for female patients at meal times, and be especially careful that everything is well cooked and neatly and properly served.

Some able hospital physicians have proposed having no Steward or Matron, but this suggestion, I presume, has come from the difficulties which in some sections of the country have so frequently occurred with these officers, and which have, no doubt, originated from improper persons having been selected for these stations, from their precise duties not having been accurately defined, or their subordination to the principal not being well understood, and it must also be added, occasionally from the very injudicious interference of Trustees, where misunderstandings have arisen between them and the Superintending Physician. Whether a Steward and Matron are among the officers of such an institution or not, the duties commonly assigned to them have to be performed by some individuals, whether acting under these or different titles. The

terms used above are familiar to every body, and although those filling these offices occasionally may not have correctly appreciated their true positions, still I should scarcely deem it necessary, on that account, to reject these titles altogether. My own experience with Stewards and Matrons has been so fortunate, as to cause me to remember only their valuable services, and a pleasant official intercourse with them. There is no objection to the title of Housekeeper, being substituted for that of Matron, as more expressive of the most important duties of this officer, and a Chief Clerk may perform those of a Steward, both being employed by the Superintendent; but this is a mere change of name, rather than of duties.

CHAPTER IX.

OTHER OFFICIALS.

THE individuals thus far named, under some title, are officers that cannot be dispensed with, and are either to be appointed by the Board of Trustees, on the nomination of the Physician-in-Chief, or directly by him. No reference, however, has been made to a Chaplain or to Consulting Physicians, all of whom are occasionally thought to be desirable, but who are not absolutely essential. If these last are considered important, they, like the others, are to be appointed by the Board of Trustees, and only on the nomination of the Superintending Physician.

CHAPTER X.

CHAPLAIN.

IN regard to having Chaplains at all, as well as to the propriety of making them permanent officers, considerable diversity of opinion still exists among hospital physicians, the varied circumstances of different institutions leading their Superintendents to contrary conclusions on the subject.

The value of such an officer must depend almost entirely on the character of the individual selected, and the sound judgment and discretion with which he performs his duties. Under all circumstances, I have no doubt it will be found best that he should not be a resident of the institution. In addition to this, it may be sufficient to quote the language adopted by "the Association of Medical Superintendents of American Institutions for the Insane," viz: "If a Chaplain is deemed desirable as a permanent officer, he should be selected by the Superintendent, and, like all others engaged in the care of the patients, should be entirely under his direction." In many institutions, some of the resident officers are in the habit of conducting the religious services, and this has proved very satisfactory to all concerned.

CHAPTER XI.

CONSULTING PHYSICIANS.

It has occasionally been proposed that a permanent Board of Consulting Physicians should be connected with Hospitals for the Insane, but this arrangement obviously could be made of little service to the patients, and if it is intended that these

officers should make regular visits, would on many accounts be quite objectionable. It is not possible for any one who sees insane patients only at long intervals, to prescribe properly for their ever-varying condition, or to judge from short interviews, of the real characters of their cases; and medicines form so small a part of the remedies for the insane, that the wisest administration of them is but little of what should be expected from a physician to such an institution.

Whenever from any cause, it is deemed expedient to have Consulting Physicians permanently connected with a Hospital for the Insane, it should be with the distinct understanding, that their visits to the patients should be only in company with the Superintending Physician, and at his request, or if desired by others, at least, with his approbation.

Whenever patients are suffering from other diseases than insanity, or in any case of obscurity, the chief medical officer should always have full authority to call in consultation, the very best expert talent that can be obtained, either of his own selection, or after consultation with the friends of the patient, as is now constantly being done in most institutions. In every such case, Superintendents can hardly fail to be glad to have the aid and counsel of their professional brethren. If preferred, a Board of Consultation may be appointed by the Managers, after conferring with the Chief Physician and with his approbation, and from which a selection can be made whenever counsel is desired.

With the selection or retention of any of the individuals hereafter to be referred to, the Board of Trustees can with propriety have nothing to do, all being employed in the immediate care of the patients, or in positions connected with the domestic departments, or in the management of the farm, garden and grounds.

CHAPTER XII.

PERSONS EMPLOYED IN THE WARDS.

THE persons whose duties are almost entirely confined to the wards, or to the companionship of the patients while at work or when driving, walking, or at the evening entertainments, are the supervisors, companions or teachers, attendants, general and special, the night watchers, and those engaged in the special work departments. The duties performed by all these, are most important to the comfort and happiness of the patients, and their faithful performance always deserves a just recognition.

Rules for the government of all employed in the care of the patients, should be carefully prepared by the Superintending Physician with the sanction of the Board of Managers, and placed in the hands of those in these positions; and the regular By-laws in regard to all the officers and their duties, should be prepared in the same way and with equal care.

CHAPTER XIII.

SUPERVISORS.

THERE should be at least one Supervisor for each sex,—as many as one for every hundred patients is desirable,—and each of these should exercise a general oversight of all the patients and their attendants on one side of the house, and thus form a medium of communication between them and the officers of the institution. These supervisors being exempted from the ordinary work of the wards, and their duties being

extended through all the apartments and grounds occupied or used by their own sex, will have great facilities for ascertaining the mode in which prescriptions and directions are carried out, and in which the patients' comfort and general condition are attended to. They should be persons who are thoroughly reliable, capable of being strictly impartial, and who possess in a high degree, tact, intelligence, activity, and above all, true benevolence of character and a feeling of sympathy and kindness for all the afflicted. They should be able to appreciate the views and wishes of the physicians, and in their intercourse with the insane, or those employed in their care, should act with such coolness and prudence under all circumstances, as to command their respect, and to impress upon them by word and deed, the great importance of a kind and enlightened course of treatment. They should accompany the physicians, in their regular visits through the wards.

CHAPTER XIV.

COMPANIONS, OR TEACHERS.

THERE should be for each sex, at least one person of a kind, cheerful, and affectionate disposition, with considerable mental cultivation, and of refined manners, also without any ward duties, or more than an indirect supervision of the attendants, and these persons should be able, under the instructions of the physicians, to devote their whole time to the promotion of the comfort and happiness of the patients. This may be done by instructing them in some useful branch of learning or ornamental handicraft, by reading aloud or conversation, by

vocal or instrumental music, by joining them in their walks, drives, or work, by suggesting to them, or assisting them in the different means of amusement and occupation, and in various other modes that will readily suggest themselves to one with the proper qualifications.

These individuals are intended really to be companions to the patients, especially to those who are just admitted or those who are convalescing; and they have been called teachers because it is hoped they will not only give instruction to the patients, but will also teach the afflicted with whom they associate,—at least, to some extent,—the true character of the institution in which they are living, the value of their accommodations, the motives of those who have placed them there, and of those who surround them, and as far as practicable, guide in the way to health and happiness.

The number of companions who may be advantageously employed, depends upon the class of patients received, but as many as one for every hundred, or even fifty, may be profitably engaged.

Supervisors and companions should visit every ward and see every patient under their special care, as nearly as possible, several times daily, and written reports of their observations should be laid on the table of the Superintendent every morning.

The proper performance of the regular duties of all the officers, and of every attendant, occupies so much time, that it is not possible in most hospitals as now organized, for any one of them to devote any considerable period of the day to a single patient, however desirable it may be to do so. An individual of the proper qualifications, who can at the right moment spend an hour or two with a timid patient, just arrived from home, to whom all are strangers, and who is distressed by the novelty of a new situation, may prevent days of sorrow, and

perhaps thus aid most essentially, in the first steps towards a recovery. Judicious conversation at the proper time, a brisk walk in the open air, or simply directing a patient's attention to a new object, may tend most effectually to prevent a paroxysm of grief, or an outbreak of violence. The appearance of a new face, of one in whom all feel confidence, when the attendants in a ward are almost worn out by the long-continued excitement of the patients, will often prove as great a relief to them, as to those of whom they have charge, and it is just at these periods that the presence of the companions will often be found most valuable.

These companions, too, like the supervisors, give great advantages to the physicians for learning not only how attendants perform their duties, but also in securing for them a just appreciation of their services in difficult cases, where the patients' reports are often so unreliable as to be constant sources of uneasiness to the officers.

One companion of each sex has been mentioned as desirable in every hospital, but in those in which a large number of cases are under treatment, especially where many patients of cultivated minds are received, a larger number can be advantageously employed.

CHAPTER XV.

ATTENDANTS.

THERE should always be at least two attendants in each ward without regard to size, unless, as sometimes happens, two contiguous wards are so small and so arranged, that three persons can perform the duties of both. It should also be an unvarying rule, that, unless by special instructions from one

of the physicians, one attendant should always be in the presence of the patients in every ward of a hospital for the insane. Where there is but a single attendant to a ward, the patients must have an insufficient amount of out-door exercise and employment, or those left in the house must often be alone, and the supervision must be altogether much less strict than is desirable. A certain amount of labor, out-door exercise and recreation, is as desirable for the attendants as for the patients. Work in the open air, at least with the male patients, should be a part of the duty of each attendant. Without it, those accustomed to active pursuits, are liable from the great change in their habits, to have their health impaired, their tempers rendered irritable, and to be ultimately incapacitated for the satisfactory performance of their duties.

The number of efficient attendants, in an excited ward especially, is one of the most necessary factors for securing the disuse of restraining apparatus and of seclusion.

The proper selection of attendants is one of the many important duties to be performed by the Chief Physician, and it should be the earnest desire of every governing Board, to sanction all regulations that tend to secure to an institution a class of persons whose services are particularly desirable, and who seem from their natural character and their education, to be specially qualified for such a position. With all the supervision that can be given, the comfort of the patients in every hospital for the insane, is, in a great degree, dependent on their attendants.

The work of attendants, when faithfully performed, is often harassing, and in many of the wards, among excited patients, is peculiarly so. On this account pains should always be taken to give them a reasonable amount of relaxation, to prevent their duties being too long continued without some change, and their rest at night being unnecessarily dis-

turbed, as tending to impair their efficiency; and their position should, in every respect, be made as comfortable as possible.

The number of attendants proposed above, is deemed essential to keep up the proper supervision, and to carry out thoroughly the best system of treatment. The average is about one attendant to every eight patients, while the minimum that is regarded by the Association of Medical Superintendents, as at all admissible, anywhere, is one to every ten patients. In some institutions, the proportion of attendants may very advantageously be much higher. Many hospitals commence with a smaller proportion of attendants than has been suggested, from a belief on the part of the Physicians, that a larger number would be objected to by the Board of Trustees. I am disposed, however, to believe that this is commonly an error, and that if the matter were properly explained to any intelligent body of men, and its importance to the happiness and recovery of the patients, and to the character of the institution, fairly insisted on, no intelligent Board would refuse their assent to the wishes of their chief medical officer. Under any circumstances, there can be no doubt as to the course proper to be pursued by this officer. He should ask for, and earnestly urge upon the Board of Trustees, whatever he deems right, and leave the responsibility and loss of having anything less, with those to whose authority he is bound to yield, however much he may differ from them in opinion.

A mere summary of the traits that are desirable in Attendants, will show how important they are in an institution, how difficult and trying their duties often are, and although it may not always be easy to obtain every qualification that is sought for, this must not prevent constant efforts to approach this standard as nearly as possible. It may be enough here briefly to say that for a perfect attendant, there would be desirable a pleasant expression of face, gentleness of tone, a fair amount

of mental cultivation, imperturbable good temper, patience under the most trying provocation, coolness and courage in times of danger, cheerfulness without frivolity, industry, activity, and fertility of resources in unexpected emergencies. To these must be added a real interest in the work, a sympathy that cannot be questioned, sound moral character, good health, and that indefinable something, that can only be called *tact*, now and then seen very conspicuously, but the absence of which is a serious disqualification, even to those of more than ordinary mental cultivation, of high religious professions, and having a real desire to be useful among the afflicted. It must be remembered, too, that the patience and good temper referred to, must not be of that kind that do admirably during a casual visit, or for an hour, or even a single day, but they must go on day after day, often all day continuously and not unfrequently far into the night,—among a certain class of patients, indeed, almost an attendant's whole time may be spent in the midst of what would be most trying to any one not truly self-sacrificing and really devoted to the work.

Such a standard of qualifications is a very high one, certainly, but it is what should constantly be aimed at, even if not frequently obtained. The approach to it should be as near as the means and materials at command will permit. I am well aware that liberal wages alone, will not secure the qualifications that are desirable for attendants upon the insane, but when these are once found, no want of a reasonable amount of compensation should ever be permitted to allow those who have clearly manifested all the conscientiousness, fidelity, tact, and real ability that are desired, to leave this for any more profitable calling, as such persons might naturally be expected to do, for the traits which go to make up the perfect attendant, are just those which are specially valuable in most other positions of life.

It must not be forgotten either, that attendants, in common with all others engaged in the care of the insane, must expect, now and then, to have all they do misunderstood, unappreciated, and misrepresented. They must anticipate the kindest treatment being often regarded as cruelty; they must bear calumny and abuse, where they had expected praise and gratitude; they will have to listen to charges utterly without foundation, or, if there is any basis for them, so stated as to give impressions exactly contrary to the truth. All this, and more, will occasionally come from some who have received from them the kindest and most self-sacrificing attention: but they must never forget that trying as all this is, it comes mostly from those whose reason has not been fully restored, that it is really, in such, an effect of actual disease, and that very often, those who thus act are not responsible persons. There is another small class who having, to casual observers, quite recovered, seem still to retain the impressions they received during the worst periods of their illness, and who spend their time, with a pertinacity that in a good cause would be most commendable, in abusing and calumniating those to whom often they are really indebted for substantial benefits, and in slandering all who were in any way instrumental in placing them under treatment, or in caring for them while under restraint. Although many of these persons seem well, there is good reason to believe that much of what they do, is to be attributed to a still existing morbid state of the brain, and especially so, if such proceedings are contrary to their natural characters. Everything that is dependent on disease, however obscure it may be, must be excused, and the sufferers deserve, and should receive a sincere sympathy. Unfortunately, however, the representations of such people not unfrequently influence others, who have no bad intentions, to do acts of great injustice, and on such statements coming from those who are

still deluded or malicious, without examination or inquiry, to found charges that do the greatest wrong to individuals and institutions, and incidentally a great injury to whole communities.

Unpleasant as it may be for those who devote themselves to the care of the insane to bear all this in silence, as a proper degree of self-respect generally requires that they should do, still they may depend upon having abundant compensation, not only in the consciousness of having done their whole duty, but also in the approval of their labors by the wise and good, by all who take the trouble to examine the subject, and still more in the gratitude and thanks they are sure to receive from a very large proportion of those who come under their charge. In my experience, there are few among the insane who recover perfectly, but have the most kindly feelings towards these institutions and those who have been engaged in their care. Their constantly recurring visits, alone or with children and friends whom they desire to see the place where they have been restored to health, their oft-repeated requests, that in case of a return of the disease they should be promptly placed under the same care, with countless other evidences of a full appreciation of all the kind and patient attention they have received, of the value of what they have gained, and of a perfect realization of what they have been saved from, are surely a reward more than sufficient to compensate for all the injustice and obloquy to which those engaged in hospital duties may be exposed from any and every quarter.

CHAPTER XVI.

NIGHT WATCHING AND NURSING.

AN efficient night watch should always be maintained, wherever many insane patients are collected, and in hospitals receiving both sexes, should consist, if possible, of a man and his wife, to whom should be confided the charge of the male and female wards respectively. There should always be an outside watchman in addition. Where only women are received, there should also be this outside watchman, beside the watchwomen for the wards, whose duties are restricted to them. It is not simply to prevent accidents from fire, that a night watch is considered indispensable, although this alone is a sufficient reason for such a provision. When we recollect that the patients are in their rooms at least one-third of the whole twenty-four hours, it seems surprising that while so much care is very properly shown in having them under constant supervision during one portion of the day, it should ever be thought justifiable to leave the same individuals, as is often done, so totally unprotected and unguarded as it were, during so long a continuous period as eight hours. There should be one night watcher at least, for every 100 or 125 patients. It is to be remembered, too, that during this period, the patients are commonly locked in their rooms, that they have no means of assisting themselves, no mode of securing prompt aid in case of unexpected sickness, except by noise, which disturbs others and does not always attract the proper attention, and that many of them are particularly subject to sudden and alarming attacks, for which assistance should be summoned at the earliest possible moment. The regular night watch, too, may render important services in guarding against suicidal at-

tempts, in administering remedies that are ordered for patients who do not require a special nurse, in supplying drink or food, which for hours will often effectually quiet a restless patient, in soothing by a kind word those who have become suddenly alarmed; or by simply making up a patient's bed or allowing him to wash his face, they may give sleep to one, who, without these little attentions, might have been uneasy, disturbing all around him during an entire night.

The night-watchers should also be employed, in order to secure to the attendants, as far as can be, sound and undisturbed rest at night. Under any circumstances, the sleep of attendants will occasionally be disturbed by night services; but if they perform their duties faithfully during the day, the character of their occupation is such, that without general good rest at night, their tempers are apt to become irritable, and they lose that kind of interest in their business, without which they are of little value in the care of the insane. Besides all this, the night-watchers are often valuable assistants in the police of the establishment, and are able to discover and report various irregularities among the sane part of the residents, which without such officers might never become known to the Superintendent.

It seems quite certain that great advantage would often result from having more than one individual of each sex on duty at night—night attendants, as well as those for day service. So large a proportion of the insane sleep indifferently, there are so many who would receive consolation from a kind word, or the occasional presence of a cheerful, sympathizing face during their long, dreary, wakeful hours, so many that ought really to have attention every night for their safety as well as comfort, that we may well inquire whether, with our best arrangements for the care of the insane, we have not often been somewhat neglectful of them by night. There should be, at

the very least, one night watcher for every hundred patients— independent of nurses proper.

The objection to night-watchers, sometimes urged, that they disturb the quiet of the wards by the noise they make, simply shows that incompetent persons have undertaken to perform the duty. Those who are passing about after all others have retired, should accustom themselves to open doors, and to do whatever else may be required, in the most noiseless manner, always to converse in a low tone, to discriminate between those whom conversation will calm and those whom it will excite. They should always wear woollen shoes when passing through the wards, and loud talking should never be indulged in by them, or permitted in others.

CHAPTER XVII.

WATCH CLOCKS.

THIS heading is placed in proximity to the chapter on night-watching, because watch clocks are directly connected with it, and are essentially an important element for securing a reliable knowledge of what is done and what is left undone, during that long period in which patients are confined to their rooms, and their attendants, still more than themselves, supposed to be asleep.

Every hospital should be supplied with watch clocks, for the double purpose of proving the fidelity of those employed to look after the welfare of the patients and for the safety of the buildings, and also as a check on the statements often made by inmates, that no one had passed through the wards during

a period of several hours. A properly managed watch clock is of such a character, that it is absolutely beyond the control of any one but the officers, only registering the wards visited and the exact time of the visit. The place where the pull is made, by which the visit is recorded on the clock dial, should always be at the extreme end of every ward, so that unless the night-watcher passes through its whole extent, no record can be made. In place of requiring the night-watcher to be at a certain spot at a specified hour,—which is liable to cause careful watching of these particular places instead of the patients and the wards,—all that is required of him is a correct record of the time of every visit. The course taken by the night-watcher can thus be as accurately traced as if one accompanied him, and when there is anything irregular in the report, he will of course have an opportunity of explaining it. This may arise from the unexpected illness of a patient, or from some occurrence requiring his special and prolonged attention. Without these clocks, no one can feel entirely comfortable in regard to the performance of the night service, and they should be regarded as indispensable in every hospital for the insane.

CHAPTER XVIII.

OUTSIDE ASSISTANTS.

AMONG the females, one or more seamstresses will always be required in connection with the wards, or in the clothing department, to aid in giving employment to the patients and to assist in making and mending clothes, and as many outside of the wards in the department for men.

In addition to the individuals named, who are brought directly in contact with the patients, there will be required, outside of the wards, one farmer with two assistants, one gardener and three assistants, one carriage-driver, one jobber, one carpenter, one engineer with two firemen, and a baker and assistant, besides the females employed in the ordinary domestic departments of the house.

A State hospital will almost always have in its household many patients who can, profitably to themselves if properly directed, assist in the performance of much of the work in the wards and about the premises, and who will thus aid to a very limited extent in lessening the expenses of the institution; but great care is always to be observed, that no one is urged to do more work than is really safe and advantageous for him. The amount of profit to be made from the labor of the insane has been greatly exaggerated. At the best, it must be very small, and labor in a hospital for the insane should always be regarded much more in reference to the amount of benefit conferred on the patients, than as being pecuniarily valuable to an institution. It must be remembered that all these persons are invalids, laboring under a disease of one of the most delicate organs of the body, and as a consequence, often quite incompetent to judge whether they are receiving good or harm from their exertions. Great discretion is requisite to regulate this important department properly and safely.

CHAPTER XIX.

REMARKS ON THE NUMBER EMPLOYED AND THEIR
COMPENSATION.

THE circumstances of different institutions and the classes of patients received will, to some extent, influence the number of persons required in their various departments. So in regard to compensation: the salaries and wages must be regulated, in a great measure, by the cost of living, the demand for the particular sort of labor required, the rates that are paid for other kinds of service in the vicinity, and they must of course vary in different localities.

In the first edition of this work, a statement of the lowest compensation admissible, at the time it was written, and in this section of country, for those employed in hospitals, was given. There are so many circumstances, however, to modify these rates of remuneration, as there are to affect the cost of building, in the varying conditions of different institutions, that nothing is now said in regard to this branch of the subject. A little inquiry will satisfy the governing authorities of an institution, what is right and proper, and also what is necessary to secure and retain the ability needed for the efficient working of a hospital.

It is believed that all the persons named in the list given in a subsequent chapter are required in the thorough organization of a State hospital for the insane, with two hundred and fifty patients, and that none of them can be dispensed with, without, to a greater or less extent, affecting the welfare and comfort of the inmates, and the best interests of the institution.

The salaries paid for the services of those engaged in the different departments of an institution should always be liberal, and reasonable inducements should be offered to secure continued service, by those who manifest special qualifications for the duties they are performing. Undoubtedly, as a general rule, the rate of compensation given for these services is too low for the best interests of institutions and their patients. More than is generally paid ought undoubtedly to be given, and will often be required, to secure the proper kind of officers and assistants, especially attendants, and to induce them to remain for any considerable period in the service of the institution.

Many of the positions about a hospital for the insane, from the highest almost to the lowest, require persons of peculiar qualifications, and when such are found, it will be to the interest of their employers to secure and retain their services, even if a considerable increase of compensation is necessary to effect this object. A thoroughly good and efficient officer or assistant in any capacity may be more desirable to an institution, at a large salary, than a bad or negative kind of one, working gratuitously. While good officers and assistants are desirable in every department, not only on account of the direct performance of their duties, but also because their example never fails to exercise a favorable influence on others of a less decided character, so idle, vicious, or faithless ones may be worse than none, simply from all their associations and habits producing unfavorable results.

The services required about the insane, when faithfully performed, are peculiarly trying to the mental and physical powers of any individual, and ought to be liberally paid for. With the great demand for talent and labor that constantly exists in this country, it is not surprising that considerable difficulty is often experienced in finding proper persons to

take charge of the insane, when less arduous and less responsible duties are frequently so much better compensated.

When suitable persons are engaged to act as the regular attendants of the patients, it will often be found desirable to secure their continuance for a certain period by a yearly increase in their compensation; although it must also be acknowledged, that occasionally, even the best of this important class, after a long residence in a hospital, seem to lose their interest in their duties, and would do better to engage for a time in other pursuits, being likely to return to their old positions after a period of rest.

The services of certain of the officers, after a continued residence in an institution, often become much enhanced in value, and it is to them a source of great encouragement to know that strict fidelity and industry are likely to be recognized by an occasional increase in their income. No Superintendent would hesitate to say that the services of his assistants, after two or three years' experience, are often worth almost double what they were during the first months of their residence in the institution. It is quite safe to assert that no person showing special qualifications for his position should be allowed to give up his place, on account of not receiving adequate remuneration for his services.

CHAPTER XX.

SUPERVISION OF HOSPITALS FOR THE INSANE.

THE best public supervision for a hospital for the insane—that which will tend most effectually to prevent abuses of any kind, to secure good management, an economical administration of its affairs, and the humane and enlightened treatment of all its patients—will be found to be the regular visitations, at short intervals, of a committee from a well-constituted Board of Trustees or Managers. Such individuals, being men of benevolence, high character, and intelligence, serving without compensation, and having no motive in giving their time and attention to the work but a desire to promote the best interests of the afflicted, form the surest guarantee to the public, that no just complaint will pass without investigation, and no actual wrong go unredressed; while the frequent examination of the expenditures and the finances generally will be the most effectual mode of securing a strictly wise and liberal economy in every department.

The fact that no weekly visit by a committee of the Board of Managers has ever been omitted in the Pennsylvania Hospital for the Insane at Philadelphia, in a period of nearly forty years, shows that this plan of regular visitation can be perfectly carried out.

A permanently constituted Board of Trustees, or one not changed as a body, soon acquires a knowledge of the details of such an establishment, that cannot be possessed by a new set of men, and for this reason the visits of an intelligent board are much more likely to be thorough and useful than those made by persons who are comparatively strangers.

The only other kind of inspection of hospitals for the insane, that is likely to be at all valuable, is that made by a

commission composed in part, at least, of men practically familiar with the whole subject, and whose members should have characters so well established as to command the public confidence in their statements and recommendations. Where many private institutions exist, such a commission would seem to be especially desirable, and their visits can hardly prove unacceptable anywhere, if matters are properly managed.

It has become customary, of late, for most States to have Boards of State Charities. The value of these depends entirely on the character of the men appointed, and their practical familiarity with the great trusts confided to them. They may effect great good to institutions and strengthen the hands of their officers, but visits of an hour or two, at long intervals, such as are often made, can hardly be of any real service. Any commission starting out with the impression that it has to deal with dishonesty and infidelity to important duties, is likely to do injustice to officials, and to accomplish little good to the afflicted. The fact of its members being salaried officers will not add to their efficiency. There is a fear that this may lead to a competition for the places, not favorable to the best interests of the insane. The same remarks apply to a single commissioner, appointed for the special purpose of keeping the government fully advised on the condition of the institutions maintained by it. The services of all these commissions are valuable exactly in proportion to the integrity of their members, and the wisdom with which they perform their duties. When rightly selected, their visits will always be welcome and useful.

The visits of large bodies, like grand juries, as commonly composed, without any practical or professional knowledge of the subject, although they may gratify a certain kind of curiosity, can hardly be productive of any good result, either to the public or to institutions, for their interests are entirely

identical. The want of familiarity with the details of such establishments, with the peculiarities of mental disease or the best methods of treating it, will prevent such a body from making valuable suggestions; while the presence of so large a number of strangers in the wards at one time may prove detrimental, and will certainly be objected to by many patients and their friends.

CHAPTER XXI.

ADMISSION OF PATIENTS.

WHILE the Legislature of a State is engaged in framing the laws under which the organization and government of its hospitals are to be established, it is exceedingly desirable that there should be a specific, but simple mode prescribed for the admission of insane persons into institutions, and for their retention and discharge.

The law should be so clear as not to admit of misconstruction, and should aim to have such provisions as will effectually secure to every individual his personal rights, and yet enable him freely and easily to avail himself of the advantages of an institution, and it should at the same time completely protect those who have the insane in charge from vexatious prosecutions for the performance of their onerous and responsible duties. It is undoubtedly for the best interests of the entire community, and especially for the welfare of the afflicted, that all these ends should be equally and effectually attained.

Without wishing to enter elaborately into a discussion of this subject, which in many of its bearings is a most important

one, and deserving of a more extended consideration than can be given to it in the present essay, it may be sufficient here to remark, that a certificate of insanity from competent medical authority, after a careful personal examination, with a written request for admission from some near relative, friend or legal guardian, should be deemed indispensable preliminaries to the entrance of any private patient into an institution. The proceedings in regard to the patients sent by counties, or committed by the courts, will vary in their character, but they should be such as will enable a benevolent citizen to compel those having charge of the insane poor, or any others, to transfer them promptly to hospitals, from any place in which they are neglected, or suffering from the want of proper treatment.

It has occasionally been proposed, that no patient should be admitted without the sanction of a regular commission of lunacy; but such a suggestion shows a want of familiarity with the circumstances of a large majority of all the cases received, and the plan, if carried out, would be most oppressive, cruel, and unfortunate in its results.

Those who have proposed this tedious and costly plan of proceeding can scarcely be aware, that by it they would prevent a large number of most deserving and interesting cases from receiving the benefits of an institution,—would cause others to be kept at home till the best period for treatment had passed, from the unwillingness of friends to give such publicity to their domestic sorrows,—while upon others, little able to bear it, it would bring an amount of expense often greater than the whole cost of restoring a patient to health.

The desire to have such preparatory legal proceedings has probably originated from a belief that the friends of the insane are disposed to confine them unnecessarily, or from sinister motives. A very extended experience has satisfied me that this is not the case, the prevalent tendency being decidedly

to postpone the period for this action as long as possible, without sufficient regard to the best interests of the patient; and I have yet to learn of any deliberate attempt to confine a sane man or woman in any of our hospitals, as insane, or to place an insane one there from bad motives. The possibility of this being done is unquestionable, but that any such designs are often, if ever, entertained in the United States is very doubtful, and, if attempted, they could hardly escape detection; for the officers of these institutions, regarding themselves as the special friends and protectors of the insane, would be the first to discover and expose such an outrage, and to brand those guilty of such a proceeding with deserved opprobrium. It occasionally happens that habitual drunkards, who are dangerous to their families, and are bringing ruin on all dependent on them, but about whose insanity there is room for doubt, for the want of any other provision are sent to hospitals for the insane, and these and cases of delirium from fever are the only individuals of doubtful insanity whom I have found any one desirous of confining in our hospitals. In regard to the former, although the motive is good, the propriety of their admission is quite questionable, for, as our laws now are, they can rarely be retained long enough to be permanently benefited, and generally their influence on other patients is not at all desirable, nor is their society deemed in any way complimentary to the insane.

The fact that the officers of our public institutions for the insane can have no personal motive or pecuniary interest in retaining any patient for an improper period, is now well understood, and has very properly relieved them, with all sensible people, of every such imputation. Dependent in no way for their compensation on the number of their patients, deriving little credit for skill or successful treatment but from those they send away, and constantly importuned by conva-

lescent patients for a discharge, they are much more likely to err by yielding too soon to the wishes of ill-advised friends, than by keeping patients for too long a period.

When commissions in regard to the insanity of an individual are really necessary for the protection of his property—and this should be most sacredly guarded during his sickness—it would be a benevolent act, which would entitle its author to high honor, to render this proceeding less expensive than it now is; for, as at present managed, it frequently requires no inconsiderable part of the estate of a person of moderate means to enable any one to collect a debt, or make a legal settlement of any business in which the individual may have been interested.

In the present day, many patients come willingly to hospitals for the insane,—some travel long distances alone and make their own arrangements for admission,—not a few, who were not originally willing to leave home, soon become sensible of the benefit they are receiving, and stay voluntarily,—and many are restored in so short a time, that their absence from their places of business is hardly longer than is required for a tolerable journey, or than would result from a severe attack of ordinary sickness, and may scarcely excite remark even from those who are in the habit of meeting them.

Of all the cases admitted into our hospitals for the insane, there are not really more than about one or at most two per cent., if so many, in which there can be the slightest advantage in having a commission of lunacy previous to their entrance; and these are cases with such a peculiar moral temperament, and so likely to give trouble in various ways, that all connected with them, as well as the officers of institutions, are interested in having them confined by special legal process. But to subject the remaining 98 or 99 per cent. to the trouble, exposure, delay, annoyance, and expense of a regular commis-

sion before they can be placed under proper treatment for their disease, certainly would not be adopting a rule of action that is to give the greatest good to the largest number.

In connection with this chapter on "the admission of patients" it may be interesting and suggestive to give a brief history of the forms in use for this purpose, in Pennsylvania, from the establishment of the first American Hospital for the Insane—the Pennsylvania Hospital at Philadelphia in 1751—and of the steps taken to obtain a law more definite in its character, which would probably meet the requirements of all cases; and while giving to every patient all his rights, at the same time, would enable the benevolent to secure for the neglected and afflicted, the advantages to be anticipated from prompt and enlightened treatment. The law now in force in Pennsylvania was passed in the year 1869, and originated from the long-continued consideration of the subject by the Association of Hospital Superintendents, and its final recommendation of a Project for a law regarding the Insane, from the pen of Dr. I. Ray, the distinguished writer on the Insane, and the Jurisprudence of Insanity. The original project of the Law will be found in the propositions of the Association, published in 1876. It may be added that, although originating from the discussions of a body of medical men, the project asked for had the sanction of the highest judicial authorities.

Until the passage of this act, during a period of one hundred and seventeen years, the form of proceeding in use in this State was substantially that originally adopted by the Managers of the Pennsylvania Hospital, and subsequently followed by other institutions as they were established, which consisted in simply having a certificate of insanity signed by one physician, and the request for admission made by a near relative, friend, or guardian; but there was no specific law

on the subject. Custom seemed to have made this mode of giving the insane the benefits of hospital treatment, the common law, and the necessities of the case caused nearly every one to consider it, as did the distinguished Chief Justice Shaw, based on "the great law of humanity." In Pennsylvania it certainly was so regarded until within a few years of the passage of the law above mentioned, not only by the courts, but by the legislatures of that long period, and by two conventions for revising the constitution of the State, as well as by the public generally. They believed it to be all that was required to secure the best interests of the insane and of the community. Often, for a long series of years, nothing occurred to cause dissatisfaction with this humane practice in any quarter. In the entire period already referred to, probably about one case in a hundred, of all the patients admitted, presented peculiarities which would have rendered a preliminary legal investigation desirable to all parties; but the extreme rarity of these disputed cases caused the law-making power to hesitate about subjecting all others to additional trouble on their account, and to refrain from doing anything that might in any way interfere with the very proper desire to secure that early and enlightened treatment which all experience had shown to be essential for the cure of insanity.

This system, so long in use and so generally with satisfaction, undoubtedly had its advantages, but it must also be acknowledged that it was not without disadvantages; and, several years since, those who were specially interested in the care of the insane decided, with great unanimity, that it was desirable that there should be, everywhere, some positive legal enactments in regard to the admission into, and detention of patients in, hospitals for the insane. Acting under this conviction, as already said, "the Association of Medical Super-

intendents of American Institutions for the Insane" had the subject formally under consideration, and in the hands of a committee for several years previous to 1868. At the meeting in Boston in that year, the project of a law, as before mentioned, was adopted with great unanimity, and recommended to the consideration of the legislatures of all the States that had not already made some positive statutory provision on the subject. The Medical Society of the State of Pennsylvania, appreciating the force of the reasons assigned for this action, at its meeting in Harrisburg in the same year, appointed a highly intelligent committee on the subject, and directed them to prepare a memorial to the Legislature, and to present it, with a bill that it was believed would meet all the requirements of the case, and which, although less full than that adopted by the Association of Hospital Superintendents, was in all its most important provisions substantially based upon it. This action of the State Medical Society, and the able report of its committee, led to early action on the part of the Legislature. The memorial and the proposed law were referred to the Judiciary Committee of the Senate, which, after carefully examining the subject, and hearing the views of those who were specially familiar with the wants of the insane, and of others who felt an interest in the matter, reported an act, which, after certain amendments, passed both houses, and received the approval of the Governor, in the form in which it now stands.

The first section of this law provides "that insane persons may be placed in a hospital for the insane by their legal guardians, or by their relatives or friends in case they have no guardians, but never without the certificate of two or more reputable physicians, after a personal examination, made within one week of the date thereof, and this certificate to be duly acknowledged and sworn or affirmed to before some

magistrate or judicial officer, who shall certify to the genuineness of the signatures and to the respectability of the signers."

There is provision made in the sixth section as follows, viz.: "Insane persons may be placed in a hospital by order of any court or law judge, after the following course of proceedings, namely: on statement in writing of any respectable person that a certain person is insane, and that the welfare of himself and others requires his restraint, it shall be the duty of the judge to appoint immediately a commission, who shall inquire into and report the facts of the case; this commission shall be composed of three persons, one of whom, at least, shall be a physician, and another a lawyer; in their inquisition they shall hear such evidence as may be offered, touching the merits of the case, as well as the statements of the party complained of, or of his counsel; if in his opinion it is a suitable case for confinement, the judge shall issue his warrant for such disposition of the insane person as will secure the object of the measure."

Section ninth provides that "if it shall be made to appear to any law judge that a certain insane person is manifestly suffering from want of proper care or treatment, he shall order such person to be placed in some hospital for the insane, at the expense of those who are legally bound to maintain such insane person; but no such order shall be made without due notice of the application therefor shall have been served upon the persons to be affected thereby, and hearing had thereon."

Those who will take the trouble to examine the law passed by the Legislature of Pennsylvania at the session referred to, and compare it with the "project of a law regarding the insane," adopted by the Association of Hospital Superintendents, in June, 1868, and the sketch of a law prepared by the Committee of the Pennsylvania State Medical Society, and which with their memorial was presented to the Legislature at the commencement of its session of 1869, will see in how many

important particulars the Legislature adopted the recommendations of these two bodies: sections 1st, 4th, 5th, 6th, 7th, 8th, 9th, and 10th being almost entirely in the words used and recommended by them. Section 2d, in regard to communications with counsel, section 3d, changing somewhat the mode of proceeding in regard to the writ of habeas corpus (which of course could always be resorted to, and which even the Legislature could not interfere with), and section 11th, reciting that nothing in the act should be so construed as to deprive either the insane or "habitual drunkards from the benefit of any remedy guaranteed to them by existing laws," being the only ones that were adopted on the suggestion of other parties.

It is gratifying that in this first legislation in regard to the admission of patients into our hospitals for the insane, by the State of Pennsylvania, there should have been so much uniformity of sentiment in regard to the most important provisions of the law, between the Association of Hospital Superintendents, the State Medical Society, and the Legislature,—for the interests of all are the same—to secure the care and cure of the patients and the best welfare of society.

The recommendation of a public jury trial, before any one suffering from insanity could obtain the benefits of treatment in a hospital, was too preposterous a proposition to receive serious attention from the Legislature, and it is to be hoped that no other State will ever follow the single one, which has allowed systematic misrepresentation, passion, and prejudice to induce it by positive law, to compel all classes of cases to be taken into open court, even delicate females, just from beds of sickness, and in a condition that of all others appeals most forcibly to the sympathies of every man of ordinary sensibility, to be held there by force, while all the tedious forms of law are gone through with, and cases decided, about which a child of ten years could hardly have a doubt. It is to be hoped, too,

that this single State, while acting under the specious plea of guarding personal liberty, will ever be allowed to stand alone in legalizing such refined cruelty, worthy of the darkest period of the last century and a reproach to the age in which we live. Such legislation anywhere must lead, as it has there, to insanity being spoken of as though it were a crime, to these legal proceedings being regarded as a trial for crime would be, and to patients being referred to, as adjudged to be guilty or not guilty, convicted or acquitted, just as they would be if accused of a felony.

It is fearful to contemplate how much suffering must have been borne in silence by families before they could submit to such wanton exposure of their loved ones, and how many minds must have passed into that state from which there is little hope for restoration, while the friends of the sick were trying, by all kinds of expedients, to save themselves from what the authority of law had made imperative, before they could do what they really thought to be best for the afflicted members of their households.

CHAPTER XXII.

CLASSIFICATION.

THE term ward for each class of patients, is preferable to any other, because it is used in all other hospitals for the sick, and it is important to do everything that tends, even in ever so small a way, to keep up the idea that insanity is in the same category as other diseases. Although, in the description of the linear plan of building proposed for a State hospital for the insane, the different wards are numbered,

still little has been said of the various classes intended to occupy them. The only point insisted on was, that there should be at least eight distinct classes for each sex. Where the sexes are in different buildings, there are sixteen instead of eight classes of each, and the classification thus becomes twice as complete as it would otherwise be, and just to this extent improved. It will be found desirable, in practice, that the least excited—what is commonly called the best class of patients—should occupy the upper stories and be nearest the centre building, while the noisy should be at a distance, and the feeble in the lower stories; but it is impossible to give any general rule, that will be satisfactory in all respects to a novice in the management of the insane. The best arrangement, after all, will be to associate in the same ward those who are least likely to injure, and most likely to benefit each other, no matter what may be the character or form of their disease, or whether they are supposed to be curable or incurable. No one, of course, would think of placing the violent and the calm, the noisy and the quiet, or the neat and the filthy, together; but there are many grades between these, and there are individuals of extremely different character, who, nevertheless, do well together. Variety is as pleasant to a hospital patient as to any one else, and even if it were practicable, it is not probable, that it would be found satisfactory to have all our associates exactly like ourselves. Patients are often much interested in the delusions of their neighbors, and by their efforts to relieve the afflictions of others frequently do much towards getting rid of their own.

The curiosity felt by many patients in regard to the delusions, history, and habits of those around them is often very remarkable, and for the time being seems to render them oblivious of their own troubles, and demonstrates that these asso-

ciations, in this mode alone, are not only not injurious, but actually beneficial.

Every one who has been long with the insane knows that some whose cases are chronic and considered incurable, are among the most pleasant and agreeable patients to be found in an institution; they are much beloved by all about them, are noted for their refined courtesy and attention to strangers, and for their devotion to the afflicted, which makes them regarded as treasures in the wards to which they belong. At the same time, of all in the house, many recent and supposed curable cases are often for long periods among the most violent, careless, or unpleasant patients, and in all respects the least desirable as associates.

CHAPTER XXIII.

SCHEDULE OF A COMPLETE ORGANIZATION.

THE following is a schedule of a complete organization for the proper and efficient working of a State hospital for two hundred and fifty or three hundred patients, receiving both sexes. None of those named can be dispensed with, without loss, while more might often be profitably employed, viz.:—

A Board of Trustees.

A Treasurer.

One Physician-in-Chief and Superintendent.

Two Assistant Physicians.

One Steward or Chief Clerk.

One Matron or Housekeeper.

Two Supervisors, one male and one female.

Two Companions or Teachers, one male and one female.

Thirty-two regular Attendants, sixteen males, sixteen females.

Two special Attendants for extra service, one male, one female.

Two ward Night-watchers, one male, one female.

Two Seamstresses, in charge of clothing.

One outside Night-Watchman.

One Farmer and three farm hands.

One Gardener and three Assistants.

One Jobber.

One Carpenter.

One Engineer and Machinist.

Two Firemen.

One Baker and one Assistant Baker.

One Carriage Driver.

One Gatekeeper.

One Cook and three Assistant Cooks.

Four Female Domestics.

Two Dairy Maids.

Three Washerwomen.

Four Ironers.

Exclusive of the Board of Trustees and the Treasurer, who are non-residents, this list will be found to embrace forty-two males and forty females, or a total of eighty-two persons, all of whom reside within, or in the immediate vicinity of the institution, devote their whole time to its service, and are engaged in the immediate care of the patients, in the domestic or mechanical departments, in the cultivation of the farm and garden, in the care of the grounds, or in keeping the various buildings and fixtures in good order. The whole of this force can be fully and profitably employed, and if composed of the right kind of persons, under good discipline, and with well-arranged hospital buildings, they ought to be able to give the patients a high

degree of comfort and all the advantages to be expected from a liberal course of treatment. It is not to be denied that two hundred and fifty patients, with a farm and large garden, can be taken care of with a less number of persons than has been recommended,—for unfortunately it is done every day,—but the more extended my own experience, and the fuller my reflections on the subject, the more thoroughly am I satisfied, that there is loss to the afflicted and the whole community, in every such attempt to manage an institution with an inadequate force, much too great to be compensated by the paltry annual saving of a few hundred dollars, which may be effected by such an arrangement. What the State seems to save from its treasury is more than lost by its afflicted citizens.

A very moderate degree of attention to this subject ought to satisfy any political economist or legislator, that, if a cost of four or five dollars per week is necessary to give every patient in a State hospital for the insane that kind of treatment which is most likely to secure his prompt recovery, a scheme of management which limits all his expenses to three dollars per week must deprive him of many important advantages, and in its ultimate results must prove much more costly to a State than a more liberal expenditure. It is well known that in certain classes of institutions, more than twice the highest sum named can be used most advantageously, and is truly economical in the end.

It is well for all to remember, that a low rate of weekly expense per patient is not necessarily in itself any proof of a wise and judicious economy, although it may occasionally be an attendant upon it. If the rate is so low as to prevent the patients realizing the full benefits that are reasonably to be expected from such institutions, although it may be by some regarded as economy, it is unquestionably of a kind against which every sincere friend of this unfortunate class should enter

a firm and earnest protest. True economy in a hospital for the insane consists in having everything thoroughly done, in securing the best ability, and in encouraging an enthusiastic performance of duty.

CHAPTER XXIV.

RESIDENCE OF THE PHYSICIAN-IN-CHIEF.

THE direct superintendence of every department of a hospital for the insane being vested in the Physician-in-Chief, it becomes necessary that he should be exempt from ordinary private practice, and should reside on the premises, either in the hospital, or in a detached building contiguous to it. His whole time being devoted to the institution, great additional labor must be imposed on him, if his residence is more than two or three hundred yards distant, and what is of still greater importance, he will not be able, without great inconvenience, to perform his duties efficiently or satisfactorily.

If the Physician's family reside in the hospital buildings, their apartments should be made in every way comfortable, they should be entirely private, and not exposed to visitors or those employed about the house, while a distinct kitchen should be provided for their use.

For various reasons, which I deem quite sound, but which it is not necessary to discuss in detail in the present volume, it is very doubtful whether it is always desirable that the Physician's family should be accommodated in the hospital building, or their table be supplied at the hospital's cost, although it is indispensable that they should live in its imme-

diate vicinity. This is a question often to be settled by the particular circumstances of an institution, and of the person who is to have charge of it. Where this officer has a family of children, it is clearly best, in my estimation, that the Physician should not reside in the institution. Fond as patients generally are of children, and safe as they commonly are in the wards, still it is not desirable that they should be permanent residents of a hospital, either for their own sake or for the comfort, quiet, and discipline of the institution. Any arrangement for a separate residence and table is always much less profitable to the Physician, but it has some important advantages, and effectually silences the ill-natured criticisms that are frequently made.

It is practicable to have a house specially provided for the Physician's family, not more than a couple of hundred yards from the hospital building, where they can be entirely private, see their own friends, and provide their own table, without interfering in any way with the institution, or causing any difficulty in the thorough performance of this officer's duties. With efficient and trustworthy Assistant Physicians, Stewards, Matrons, Supervisors, and Patients' Companions,—to whom may now be joined the use of the telegraph and telephone,—it has been my experience that no disadvantage results from this arrangement. The time of the Physician will, of course, be mostly spent in or about the hospital, and his own residence will be so near, that his presence can, at any time, be secured almost as quickly as if in a distant section of the institution. The Pennsylvania Hospital for the Insane, at Philadelphia, the Bloomingdale Asylum at New York, the Retreat at Hartford, Conn., the old Maryland Hospital at Baltimore, the Western Asylum of Virginia at Staunton, the South Carolina Asylum at Columbia, and the Friends' Asylum at Frankford, Pa., have had this arrangement for many years, and, so far as I know,

it has worked satisfactorily to all concerned. The salary of this officer, of course, should be much larger, if he supplies his family, than under the common arrangement.

It must be obvious, that the families of physicians may often be so circumstanced, that the most competent men might feel compelled, from private reasons, to resign their posts, at the very time when their services were most desirable, if they were forced to live in the hospital buildings, and this arrangement might also frequently prevent admirably qualified persons from engaging in this branch of the profession.

As already remarked, the greater part of the Physician's time will be, as it ought to be, spent in or about the hospital, but it is still important that he should have a spot outside of it, to which he can occasionally retire—rare as the opportunity may be—for rest and quiet. An institution will profit nothing by having its chief officer so situated that he can have no moments of leisure, none for study and reflection, no hour in which he can occasionally get out of the sight of his charge, and no time to devote to his own family, whose natural claims on him ought not to be entirely absolved by any public duties. The character of his pursuits, if zealously and faithfully performed, makes some kind of change of scene and occupation more necessary than in almost any other vocation. Variety of thought and labor is rest to him, refreshing his mind, and enabling him to return to his post with increased energy and renewed strength. Trustees sometimes make the lamentable error of supposing that the more closely their Superintendent is confined to his post, the more arduous his duties, and the less assistance he receives from others, the more the institution obtains for what it pays him. Hospital physicians are no more able to resist natural laws than other men; when long over-worked, their ability becomes lessened, and when compelled to spend their time in taking charge of unimportant

details that could as readily be carried out by others, matters of vital interest to the sick and the institution must often be neglected, or only superficially attended to. It will be found, I believe, that every well-qualified Superintendent of a hospital for the insane is sufficiently disposed to devote his whole energies to the performance of his duties, and to give the institution the full benefit of all that he can in any way perform, with quite little enough reference to himself or those immediately dependent on him.

One very important effect that has resulted from the establishment of "The Association of Medical Superintendents of American Institutions for the Insane," and which has not been sufficiently referred to, is that these officers are thus compelled at least once a year to leave, if only for a week or two, their regular routine of duty, to visit new scenes, and meet new associates. As its name implies, this is strictly an "Association of Medical Superintendents," and without changing its original title, and its character, it cannot be advantageously extended so as to embrace other classes of institutions. Welcoming to its meetings all who feel an interest in its proceedings, there has already been abundant indication, that no union with other bodies will either increase its usefulness or tend to promote that harmonious action, which has always been so complete, and rendered its meetings so pleasant and profitable. No Superintendent, I presume, who has ever attended these meetings will hesitate to acknowledge, that he has derived great benefit from this short relaxation, and that he has returned to his post with renovated powers and renewed zeal in the cause, to which his life is devoted. Without any special reference to the obvious good effects which must result from a yearly reunion of men engaged in the same pursuits, and the abundant opportunities thus afforded for profiting by the experience of the whole country, it may not be amiss to express the belief

that is now becoming universal, that no Board of Trustees or Managers should ever allow their institution to be without a representative at these annual assemblages, except for reasons of the most urgent character; and they should not fail to see that all their officer's reasonable expenses are paid by the institution which he represents, as is now generally done. Much as their Superintendent may be personally benefited by being present, the institution over which he presides cannot fail to be doubly so, and no expenditure made by a hospital is more certain to be returned to it, in its increased facilities for the best treatment and comfort of its patients, than that incurred for this object.

CHAPTER XXV.

SEPARATION OF THE SEXES.

IN every hospital the arrangements should be such, that there will be little intercourse between the male and female patients, or the male and female attendants employed in their care. No particular disadvantage will result from their attending religious services or lectures in the same room, but on other occasions it will be best that they should be kept entirely separate. The advantages of frequent social parties, in which the two sexes meet on familiar terms, are very problematical, and balls for the males and females together have in my experience appeared to be decidedly objectionable. Most of our hospitals receive patients from all classes of society, and where there is this indiscriminate mingling of both sexes and of persons in all stations in life, undesirable intimacies and acquaint-

ances, in certain mental conditions, will often be formed, that may at least prove somewhat mortifying to a sensitive mind after a complete recovery. Patients, especially females, should always be protected from everything of this kind during their residence in a hospital. For these and other reasons, lectures and entertainments of various descriptions in the lecture room, where there is no communication between the sexes, or parties for one sex alone, will be found much more desirable than the gatherings previously referred to. If all the patients in a hospital occupy about the same social position, the frequent meeting of the two sexes may be less objectionable, but even then I should not consider it very desirable.

Where only one hospital is built in a State, it will, of course, be prepared, as shown in the plan, for patients of both sexes; and even where there are two hospitals, in entirely different sections of a State, it will still be best that both males and females should be accommodated in the same building, because the conveyance of patients from great distances to an institution involves much labor and expense, is often injurious to the sick, and is really in itself an evil of much magnitude which ought not to be unnecessarily increased. Where a community, however, is sufficiently populous to require two hospitals of the same general character in one vicinity, there can be little question but that many decided advantages, and no disadvantages, will result from having one of the institutions appropriated to males, and the other to females exclusively.

To those who realize properly the refining influence of female society, and the great importance of good nursing by women, during sickness, it may be said, that this separation of the sexes, so far as the insane are concerned, in no way interferes with the employment of women of high character and suitable age, education, and qualification, as nurses or companions in the wards appropriated to the men. This, indeed,

has always been a part of the design of the writer in suggesting the plan under notice. It has, too, an especial advantage in enabling institutions to secure for the wards of the male departments the services of married men and women, having special qualifications, and who could not otherwise be thus employed. In many of these positions, these women, in addition to their good social influence on the patients, would be valuable in securing the highest grade of ward housekeeping, although the author must frankly acknowledge, that in his experience the perfect cleanliness and excellent order of the wards, and the neatness and good taste shown in parlors, dining-rooms, and chambers, taken care of exclusively by men properly trained, cannot be surpassed. As a general rule, but not invariably, the females employed in the male wards should be the wives of men who hold positions of some kind in connection with the same portions of the hospital.

It is scarcely necessary to say that the presence of male attendants is never to be permitted in the wards occupied by women, nor that of women—with the exceptions stated above—in the wards occupied by men, unless for special duties, by direction of the officers of the house.

The Pennsylvania Hospital for the Insane at Philadelphia has now had an experience of twenty years with patients of both sexes in one building, and an equal period of experience with the sexes in separate structures. The results of the latter have been so clearly favorable there, manifesting only advantages, that I know of no official connected with the institution who would be disposed, under any circumstances, to abandon the system, or to return to one having the men and women in the same hospital. The plan has been adopted more or less completely in several other institutions in the United States, while it has received favorable consideration from prominent superintendents, who, owing to influences

beyond their control, have been prevented from carrying out what they regard as a great advance in the management of the insane.

CHAPTER XXVI.

SHOULD THE RECENT AND CHRONIC BE SEPARATED?

THE remarks already made, in a previous part of this essay, might perhaps be deemed sufficient to indicate my views in reference to the propriety or expediency of providing separate institutions for those who are supposed to be curable, and for those who are regarded as not likely to be much benefited by treatment. As propositions of this kind, however, are frequently made, I desire to enter my special and earnest protest against any such arrangement. The first grand objection to such a separation is, that no one can say with entire certainty who is incurable; and to condemn any one to an institution for this particular class is like dooming him to utter hopelessness. In any other disease than insanity, it will hardly be contended that its probable incurability is any reason for a neglect of treatment, where there is the slightest reason to expect even temporary benefit from its employment. As already said, while chronic cases are so often agreeable ones and recent cases so frequently not a little repulsive, it can hardly be said with propriety that the influence of the former on the latter is so generally injurious as to require their being placed in a separate building. To do so would often be cruelty of the rankest kind. A proper classification will remove every difficulty in providing for these classes in

the same hospital. It is somewhat presumptuous for us to say that a recovery is impossible in any case. When patients cannot be cured, they should still be considered under treatment, as long as life lasts; if not with the hope of restoring them to health, to do what is next in importance, to promote their comfort and happiness, and to keep them from sinking still lower in the scale of humanity. Fortunately, almost precisely the same class of means is generally required for the best management and treatment of the curable and incurable, and almost as much skill may be shown in caring judiciously for the latter as for the former. When the chronic are in the same institution as the recent cases, there is little danger of their being neglected; but when once consigned to receptacles specially provided for them, all experience leads us to believe that but little time will elapse before they will be found gradually sinking, mentally and physically, their care entrusted to persons actuated only by selfish motives—the grand object being to ascertain at how little cost per week soul and body can be kept together—and, sooner or later, cruelty, neglect, and suffering are pretty sure to be the results of every such experiment.

It cannot be too often repeated, that what is best for the recent, is best for the chronic. The only chance for the chronic to obtain what is best, is to have them in institutions where proper provision is made for recent and supposed curable cases. The difference in first cost between a good hospital suitable for all classes, and a receptacle specially for the chronic, is too small, being only provided once, to be worthy of note by any humane community. It is, indeed, very difficult to see why a building to accommodate the chronic, should be made to cost much less than one for the recent insane. Both will be wanted just as long in the future, and the one should be as substantially constructed as the other.

So, no one will deny that the one class will need just as many of the essentials and comforts of life as the other. Each will require the same amount of good and nutritious food, the same amount of heat in winter, the same protection of clothing, and the same degree of fresh air at all times. Those who supervise the recent will look after the chronic, and the costly treatment of the first, may be for the benefit of the latter without additional expense.

If these propositions are conceded, it may well be asked, in what this great saving in providing separately for the chronic is to consist. At the best it must be small, and be more than compensated by the positive losses incident to it.

When speaking of County Hospitals, I expressed my belief, that the chronic insane can nowhere be properly taken care of at a less cost than in State hospitals, which should be sufficiently numerous to accommodate all classes of persons laboring under this form of disease.

CHAPTER XXVII.

IS THERE DANGER OF THE SANE BEING ADMITTED AS INSANE?

IN many sections of this country, of late years, a studied effort has been made by a limited number of writers, to create a belief, that sane persons are often confined in hospitals, as insane, by their relations or others, from motives other than to secure their treatment, and restoration to health, and their personal protection. The frequent repetition of this statement, although unaccompanied and unsupported by any facts, gives it in the estimation of many, an importance wholly undeserved,

and has unquestionably done harm, by often inducing the friends of patients to defer subjecting them to treatment for so long a period, as greatly to diminish the chances of their recovery. The injury done by such reports, thus comes almost entirely upon the unfortunate and their families, who by the delay alluded to, are exposed to dangerous risks; and cases that might at an early period have been restored, become incurable by this neglect. The author therefore considers the subject of sufficient importance to be treated somewhat in detail, while incurring the risk of repeating in part what has been said in the chapter on the admission of patients.

The public or corporate institutions in the United States, almost without an exception, cannot have any interest, beyond that of increasing their usefulness, in securing a large number of patients; the officers have no interest in the income of their institutions, the whole of which is expended for the benefit of the patients; their salaries are in no way regulated by the number under their care, and the fewer they have to look after, the less work they have to perform, and the lighter are their responsibilities. Besides this, if it were anywhere attempted to subject sane persons to restraint, as being of unsound mind, these institutions would, of all places, be the very best in which to secure the prompt detection of the attempted wrong, and by its exposure, the release of any one on whom it was inflicted.

It is to be anticipated, that lawyers and physicians may differ in the settlement of medical questions, precisely as the same parties may have different views as to a proper decision in a legal question. So far as hospital officers are concerned, they are always glad when a court is willing to assume the responsibility of discharging a patient, whom they deem unprepared for such a step, and it may be added, that in the writer's extended experience, the ultimate result, in a large

proportion of these doubtful cases, has shown that a careful observation of them in a hospital, is pretty sure to lead to the most reliable conclusions as to their real character, and the best disposition that can be made of them.

No one will deny the possibility of unprincipled persons placing, or attempting to place, an individual improperly, in an institution for the insane. Such events, however, in this country, if ever occurring, must be of the greatest infrequency, and for the reasons already given, are sure to be promptly detected and exposed. That this is so, there is abundant and most reliable evidence. The author of the *Jurisprudence of Insanity* (Ray), as he has declared in his publications, in more than 3500 cases under his own observation, has never met with one of the kind, and he utterly repudiates the idea of such being of even very rare occurrence anywhere in this country; while the well-known Superintendents of the State institutions in Pennsylvania, in which many thousands of patients have been treated, give equally emphatic testimony. In my own experience the result has been precisely the same, not having met with one such well-authenticated case, in more than 8000 patients, and I have no reason to doubt that this is as true of other parts of the United States, as of Pennsylvania. Conceding then, the possibility of such occurrences, their extreme rarity must be admitted to be unquestionable, and they certainly are not frequent enough, to justify any attempts to subject to vexatious and useless legal annoyances, the great body of those who are so unfortunate as to be mentally afflicted,—and no one has a right to ask that testimony like that which is here offered, shall be ignored, or its importance not recognized in any investigations of the subject. The only cases received into hospitals for the insane, as already said, about whose mental condition there is a doubt, are those where the delirium of some form of fever is mistaken for mania, and some of the

cases of inebriety in which there can be a reasonable difference of opinion, whether they are to be classified as instances of mental unsoundness, or simply as examples of a confirmed vice. In all these, however, there is only an error of judgment, and no disposition to wrong any one. In most of the latter, it will be found best that they should be admitted and retained only under the order of a court. Although many such cases enter a hospital without compulsion, there is almost universally the objection to this course, that after the direct effects of their habits have been relieved, they become anxious to be discharged, and thus before being permanently benefited, they go home only to resume a course of life, that is sure to cause their return to some institution.

The officers of a Hospital can have no other motive to wish the detention of any patient, than a desire to promote his welfare, the relief of his family, and the protection of the community. And they cannot but regard all proceedings that seem to make them any other kind of parties to a case, as placing them in a false position before the public. At the same time, they would be recreant to the high trust confided to them, if they did not frankly express their convictions, no matter whether they are satisfactory or unsatisfactory to others, or receive approbation or condemnation. Judging by the past, they will only have to wait patiently for the development of facts in these so-called doubtful cases, for the correction of wrong. If they do this, they will rarely fail, sooner or later, to secure a righteous judgment, and to have fully established the entire soundness of their views regarding them.

The author repeats now, what he said eleven years since, and which it is desirable should be placed on permanent record, that it is a subject for sincere congratulation that of all the cases from the Hospital with which he is connected, in which judicial proceedings have been instituted, and decisions ren-

dered in favor of the discharge of the patients, when the officers of the Hospital considered such action premature and unwise, there has never been one, in regard to which any court decided that the admission was improper, or the patient not insane when admitted. Nor has there ever been one, in regard to which all experts have not agreed, not only in reference to the insanity of the patient, but also as to the propriety of hospital treatment: and in nearly every one of these cases, the correctness of these original opinions has been abundantly confirmed by subsequent observations of the cases, by the decisions of regular commissions of lunacy, or by the patients being again sent to the Hospital by special orders from the courts.

So far as institutions for the insane and their officers are concerned, they are clearly placed in a much better position by the law of 1869 than they were previously, inasmuch as they now have a positive legal enactment in the place of what, absolutely necessary though it was deemed in every humane and Christian community, was nevertheless done only by the acquiescence of the public and the wise concurrence of the courts. The officers of hospitals may, like the judges of the courts, it is true, be somewhat annoyed, and their time taken from more important duties, by proceedings instituted from improper motives, and by irresponsible or malicious individuals, but no more than this is likely to result to them, whatever may be the effect of such action upon the insane who are under treatment, by keeping them in an unsettled and excited condition of mind, at the very period of their disease when rest and quiet are particularly important.

Under the new forms, some additional trouble and expense are unavoidably entailed on patients and their friends in securing admission, and these in perfectly plain cases, or where the parties are in very humble circumstances, are often complained

of; but with the exceptions already named, my impression is that in most respects, the operation of the law has been thus far generally satisfactory. Even although the law does not give, as some may suppose, more security to the insane or better protection to the public, it has still done what is really of no small importance, it has satisfied many who had been led, —no matter by what means, nor whether justly or unjustly, —to believe that incidents were constantly occurring, which proved that there was a real necessity for additional and special legislation in regard to the insane.

CHAPTER XXVIII.

RESTRAINT AND SECLUSION.

THE use of mechanical means of restraint, and the protracted seclusion of patients in their rooms—although the former may be, and I believe, is occasionally desirable, but not absolutely necessary, in the management of our hospitals for the insane—ought both always to be regarded as evils of no trifling magnitude, and to abate which, as far as possible, no effort should be left untried. They both tend to produce a relaxation of vigilance, and it cannot be too often repeated, that whatever tends to make vigilance unnecessary, is undesirable about a hospital for the insane. Besides leading patients into bad habits, the frequent use in a ward of the means referred to, induces attendants and others to look upon them as a common resource in cases of difficulty or danger, to regard them as their grand reliance in every emergency, and to forget the great power of other measures that are entirely unobjectionable—the value of tact, and kindness and sympathy in

controlling the violence and the dangerous propensities of the insane. And yet, without a proper force of attendants and an efficient classification, the use of mechanical means of restraint, and the protracted seclusion of certain classes of patients, are almost unavoidable.

Objectionable as I deem the use of restraining apparatus in a hospital for the insane, it cannot be too earnestly insisted on, that it is no advance to give up mechanical means of restraint, and to substitute the frequent and long-continued seclusion of the patients. Occasionally an individual may really be more comfortable and much better off in the open air, with some mild kind of restraining apparatus on his person, than he would be confined to his room without it; for long-continued seclusion is pretty sure, sooner or later, to lead to habits revolting in themselves, and most unfortunate for the future prospects of the patient.

The subject is introduced here as furnishing a reason, why no false notions of economy should be permitted to influence any Board of Trustees, to ask the Superintendent of an institution to attempt its management with a force so inadequate, as to compel him, against his better judgment, to resort to means so objectionable, and which are so destructive to the comfort and proper treatment of his patients.

Much has been said by writers, most generally by those not practically familiar with the treatment of the insane, in regard to a "non restraint" system of management, and the treatment of all patients without restraint. This, it need hardly be suggested, is simply impossible. As soon as any person has lost the use of his reason, and has become irresponsible for his actions, just so soon is it manifestly necessary that he should be under the care of some one, and this care and control are of themselves restraint. What is commonly meant, is not that there is no restraint, but that no restraining appa-

ratus—no mechanical means of restraint—are used. For most patients none of these are really required, but they are essential to the best interests of a very limited number of cases, and are more humane than having them controlled by the hands of attendants, whose perfect command of their own feelings and actions, is not always to be trusted. The medical attendant of such a case, with a full knowledge of all its peculiarities, is the only proper judge of the propriety or impropriety of the application of these means of control,—certainly a much better judge than any one who decides the question only from preconceived ideas and theoretical notions.

Physicians may differ widely in regard to the particular forms of mechanical restraint that may be most desirable, but it is safe to say that they are few in number, simple in form, and little repulsive in appearance. In my own experience, strong wristbands, soft leather mittens, connected linen sleeves, and the apparatus for confining a patient in bed, are all that are required, the last named, in certain conditions of a patient, being of the utmost value, and often unquestionably a means of saving life. I have never used, in the last forty years, nor had in possession in the institution, by my direction, a strait-jacket, tranquillizing chair, muff, or any other form of apparatus, beside those first mentioned. My experience would indicate that on an average, not more than one or two per cent. of all the patients, require any mechanical means of restraint,—that often a period of several months may pass without their being needed, and that any Superintendent may conduct an institution without applying them, in case he is anxious to avoid the criticism of pseudo-experts, and willing to let his patients lose the advantages that may result from their occasional use. At the same time, I am equally positive that a practical familiarity with all forms of insanity and its treatment, will prevent any declarations like the positive *dieta* often heard in regard to

this subject in many quarters. The number who now adopt these ultra views in reference to mechanical means of restraint in any case of insanity, is obviously diminishing, and it is to be hoped that before a long period, the belief will be universal, that while rarely necessary, yet in some cases, they ought to be used, and that not to use them, when thus required, is neither professional, nor does justice to the afflicted.

It need scarcely be said that restraining apparatus should never be applied nor should protracted seclusion be permitted, except when specially ordered by the chief medical officer, or one of his assistants acting by his authority.

As a general rule, the restraining apparatus should not be kept in the wards, but only in the care of the medical officers, and when employed it is to be regarded, not as a relief to attendants, but really as a remedy, and for the benefit of the patients, and, like other important remedies, it should be used only when directed by one of the physicians.

Here and there a case occurs,—but very seldom,—in which some form of mechanical restraint is required, at least temporarily, for the safety of the patient and of all coming in contact with him. Not to apply it in these rare, but specially dangerous cases, is pretty sure to bring about injury to the patient, and all near him.

CHAPTER XXIX.

FURNITURE.

THE furniture in the wards of a hospital for the insane, should be varied according to the class of patients by whom it is to be used. Its general style, however, should be made to correspond as nearly as possible to what is used in private dwellings of a moderate character. Neatness, plainness, and strength should be its prominent features; and for a considerable part of the building, what might be used in a plain boarding-house, would not be inappropriate. It is well, however, in making a selection, to avoid projections and sharp corners as much as possible; and any arrangement that offers special facilities for self-injury should be omitted. Where patients are much excited, there should be little movable furniture, either in the rooms or in the halls, especially of a kind that could be used as weapons. Very massive chairs, or two or three such connected together, or settees or sofas of the same sort, are very desirable. A portion of the bedsteads should be prepared to be permanently secured to the floor, so as to prevent their being moved, by which means many patients can use them, who would otherwise be compelled to have their beds directly on the floor. It will also be desirable to have a few very low bedsteads for those who are liable to fall out of bed, and who can be protected by having a good soft mattress on the floor by the bedside. For very violent patients, it is often best to have the mattress and bedding on the floor, and to remove all other furniture from the room. With these arrangements, padded rooms are hardly necessary. They are very costly, if well made; are readily injured by violent patients; become exceedingly offensive when used by

those of filthy habits; and can be dispensed with by extra personal attention, in the few cases in which they might be specially valuable. They look better when unused, than when given to practical purposes, and will be found more valuable theoretically than in actual practice.

The parlors should be comfortably furnished, and the room of every well-conducted patient should have in it, at least, a neat bedstead, table, and chair, and to these a strip of carpet and a small mirror may be appropriately added. Every patient who is not filthy or destructive in his habits should have a good bed, a hair mattress on a palliasse,—or one of the woven wire mattresses recently introduced, which renders the latter unnecessary,—as one of the means of inducing sleep, and it is very important that many patients should be allowed to lie down every day for a reasonable period.

The bedsteads should be made in the most approved manner, and may be either of iron or wood. If made of cast iron, they should be heavier than those commonly used, on account of the facility with which they may be broken. For violent patients wrought iron is much more desirable. It is a mistake, however, to suppose that iron bedsteads are in themselves a security against vermin. Unless every hole and crevice are filled with white lead and putty, or something answering the same purpose, before they are used, they may become quite as troublesome as those that are made of wood.

Provision should be made in every ward for vessels to contain cool drinking water, easily accessible to the patients, so that no one shall suffer from thirst in warm weather, by day or night.

Pictures, which need not be at all costly, should be placed on the walls of every ward, on account of the favorable effect they have on the patients, and the great improvement they make in the internal appearance of the building. There

should be a reasonable provision of books, periodicals, and newspapers, and also of games of various kinds, for use in the wards, or out of doors, all of which, on account of their beneficial influence, are everywhere a legitimate object for a moderate annual expenditure.

The table furniture of the dining-rooms should be neat and strong; white ware will commonly be found most desirable,—from the facility with which it can be replaced,—and this, with the ordinary round-ended caseknife and fork, can be used by nearly all the patients. For a few, who habitually break whatever is sent to them, tin vessels may be substituted, and there is occasionally an individual to whom it will be safest to give a spoon instead of a knife and fork; but where there is a proper classification, where pains are taken to bring patients to the general table, and where there is plenty of good food and an efficient supervision, the number of this class will generally be very small.

CHAPTER XXX.

PROVISION FOR INSANE CRIMINALS.

STEADILY increasing as this class unquestionably is, and important as every one must acknowledge it to be, that such provision for treatment as humanity and justice require, should be made in every community, the subject is well worthy the attention of those about erecting State institutions for the insane, as well as of the Government.

Insane individuals are found in all our prisons, and, as might reasonably be expected, in a much greater ratio than among

the innocent portion of the community. The relative number in different prisons, will be found really to vary much less than is generally supposed, from the circumstance that some States, having no other provision for their dangerous insane, are in the habit of using their prisons as places of safe keeping for most of this class. There is often an apparent variation in the proportion in different prisons where none really exists, owing to the rigid scrutiny which is made in regard to the mental condition of every convict, in some; while in others, if a man is quiet and able to work, no trouble is taken in regard to his mental soundness.

There is a certain class of old offenders and notorious prison-breakers, as well as dangerous homicides, who, whether sane or insane, should never be allowed to have a greater degree of liberty, than can be found within the walls of a well-constructed prison. Harshly as this opinion may seem to bear on a few individuals, who have already taken or attempted to take life, or who have deeply outraged the laws and the peace of society, still this is as nothing in comparison to the cruelty and injustice that would be done to a whole community, which had never committed an offence, by exposing it to the risks which must always attend the enlargement of such dangerous men, even during an apparently lucid interval. Most of this class can never be safely at large, nor yet be kept securely in any hospital properly arranged for the treatment of the insane, without converting a part of it into a prison, or exposing the other patients to risks, which no plea of that kind of morbid benevolence, which seems to regard with much greater sympathy the fate of a condemned felon, than the sufferings of his innocent victims and their families, can ever justify. There are cases, however, that occasionally get to prison wrongfully, persons who are not especially dangerous in their propensities, but who, while in a state of irresponsi-

bility, have committed acts contrary to the laws, and who ought originally to have been sent to a hospital for treatment, instead of to a prison for punishment. Certain cases of insanity, too, that originate in prison may safely be transferred to a hospital for treatment, provided it is deemed expedient, to remove convicts at all who become insane after entering a prison, and thus in a measure relieve them from the penalties of their sentence. If many of this class are received into any ordinary hospital for the insane, it can hardly be questioned that popular sentiment will be strongly aroused against the measure, especially as escapes will be of such frequent occurrence as to keep the neighborhood in a state of alarm, unless apartments entirely distinct from those of the other patients, and of a different character are provided.

A writer of large experience in prisons and prison discipline has urged with great force, that it is very doubtful whether under any circumstances, an individual who has been justly sent to prison for the commission of crime, should be removed from it till the complete expiration of his sentence. The certainty of every punishment decreed by a court, is unquestionably one of the most important means of deterring bad men from the commission of crime. The deliberate sentence of a judge fairly implies that the offender is to take as a part of the penalty for his guilt,—with his deprivation of liberty and loss of character,—all the risk of suffering from ill health, that may arise while he is in prison. The community, of course, is bound to see that no avoidable cause for the production of disease is allowed to exist in a prison, as well as to provide every proper means for its treatment when it occurs. All this can be done within the prison walls, whether the disease be insanity, or fever, or any of the ordinary maladies found in such institutions. Although to do all this properly, may require a small hospital inside of the prison walls, still

there is surely no greater objection to this, than to converting a portion of a State hospital into a prison. One of the two alternatives must be adopted. It is very certain that many insane convicts may safely be allowed a greater degree of liberty in a prison yard than in a hospital for the insane, and it seems quite possible to fulfil every claim of justice and humanity by treating all insane criminals within a prison hospital. If it be deemed preferable, however, to send them to a State hospital, there can be no question as to the necessity of providing a distinct building for their accommodation. Even here classification would be important, but the individuals of this kind from a single State, are not generally enough in number to justify a distinct hospital, as has been provided for this class in some parts of Great Britain and in New York. The experience of our State hospitals generally, is decidedly averse to mingling insane convicts with the other patients, who, as well as their friends, have the strongest objections to any such arrangement; and the escapes of such cases from nearly every institution from which I have received any information, have been very numerous, while their restoration to the hospital has been extremely rare.

In the year 1874, the Legislature of Pennsylvania passed a "Joint Resolution, providing for a commission to inquire into the condition of the criminal insane of the Commonwealth, and to make report to the next Legislature" what legislation was necessary to secure proper provision for the insane, and if in favor of a separate institution for the care of the criminal insane, to report a proper location and the probable cost of such a building. This commission, as named in the joint resolution of the Legislature, consisted of three members of the Board of State Charities, three Superintendents of hospitals for the insane, and one private citizen.

After a careful examination of the whole subject, the com-

mission unanimously agreed that no class of the insane should be kept in prisons, jails, or almshouses, and for the particular class referred to in the resolution—the criminal insane,—they recommended that they should be received and treated in a new institution, to be specially built for the purpose, located in a central portion of the State, easily accessible by railroads from all parts of the Commonwealth, and into which the following classes of persons should be received, viz. :—

1. Dangerous insane persons, who have committed or shall attempt to commit murder, arson, rape, robbery, or other high crimes or misdemeanors.

2. Those charged with committing either of the crimes before mentioned, who are believed to feign insanity, or of whose sanity there may be so great doubt as to require the investigation of experts.

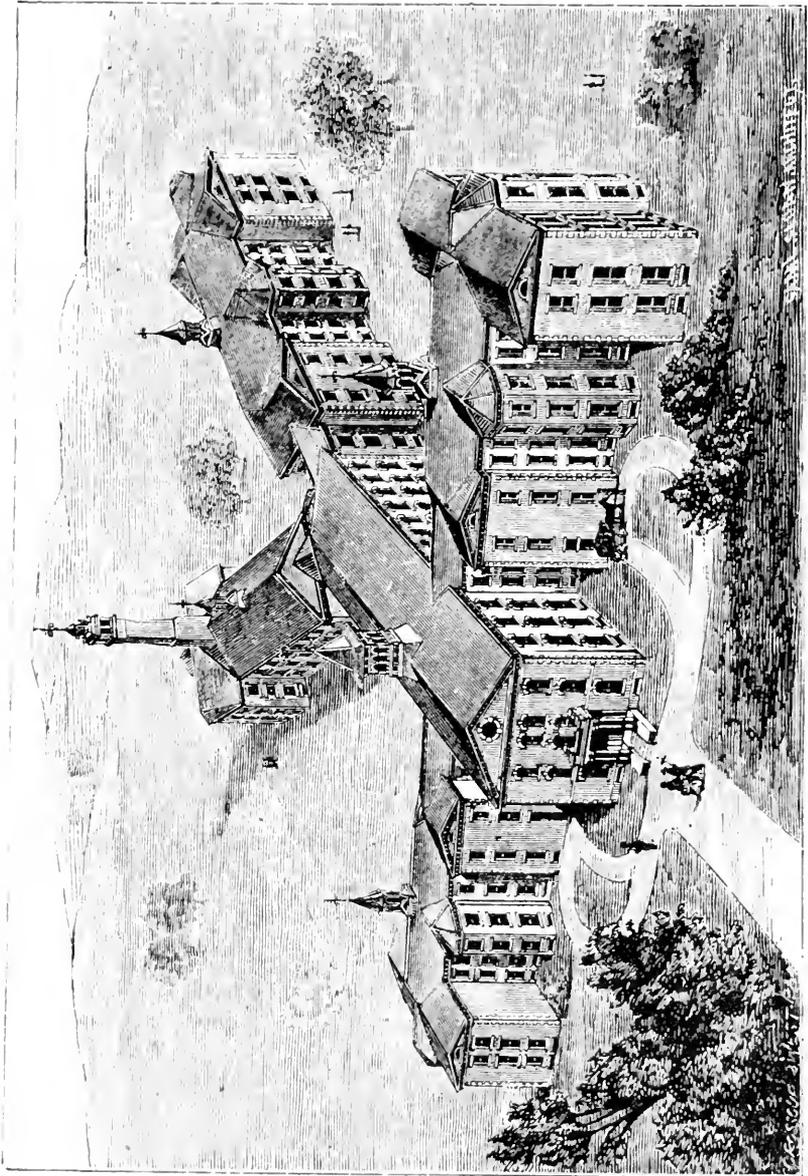
3. Those acquitted of such crimes on the ground of insanity, who shall be adjudged by the Court trying the offence as persons dangerous to be at large.

4. Those charged with the commission of either of such crimes while sane, and becoming insane before trial or sentence.

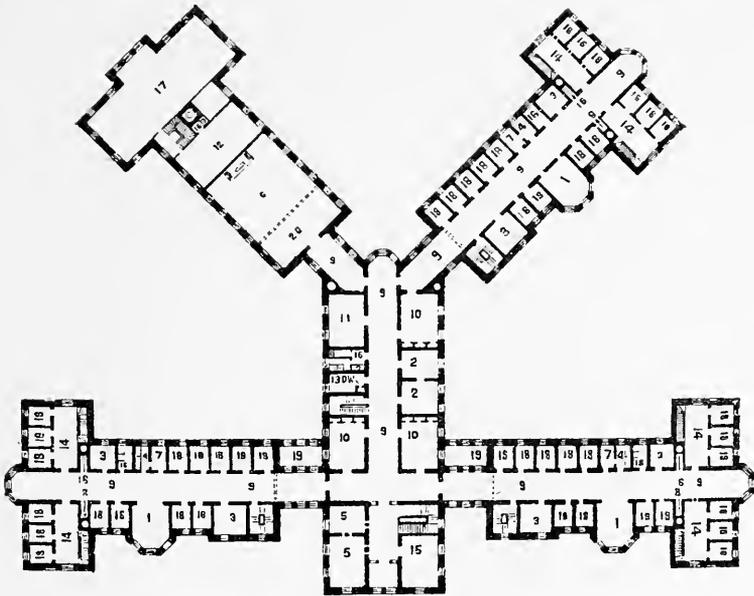
5. Those becoming insane while in prison after conviction of any crime, and continuing insane through the term of sentence, who shall not have friends or relatives to whom such insane persons may be delivered at the expiration of sentence with safety to the community.

6. Insane convicts generally, whose insanity shall have been ascertained, and who may be transferred in accordance with the laws of this Commonwealth.

The commission further recommended that the proposed institution should be styled "The Central Hospital for the Insane," and should be of a capacity to accommodate one hundred patients, with plans for extensions to meet the future wants of the State. A plan of this proposed hospital was also



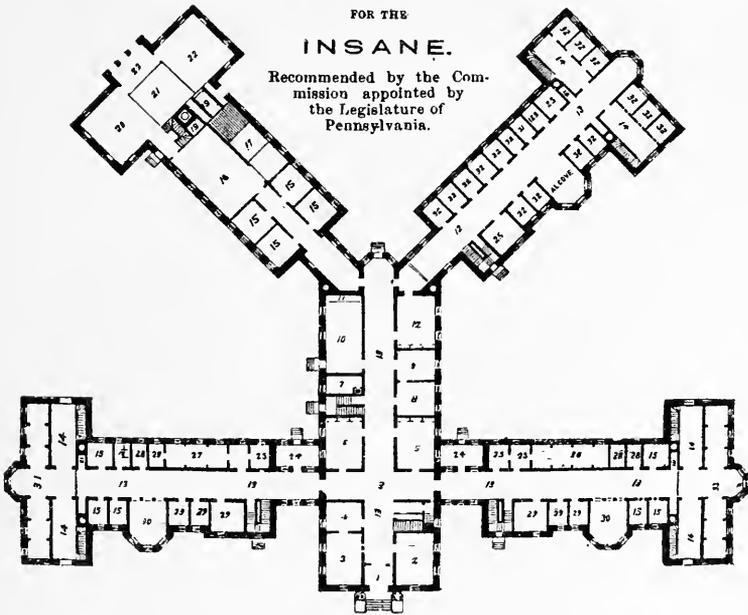
ISOMETRICAL VIEW OF CENTRAL HOSPITAL, FOR THE INSANE, PENNA.



PLAN OF THE
CENTRAL HOSPITAL

FOR THE
INSANE.

Recommended by the Commission appointed by the Legislature of Pennsylvania.



prepared and made a part of the report of the commission, which believed that although fireproof, and with special provision for security, the building might, in a very favorable location and with strict economy, be put up at that time for one hundred and fifty thousand dollars.

This report was duly received by the Legislature, but no appropriation has been made for the purchase of a site or the commencement of the hospital,—so that the condition of this portion of the insane of the Commonwealth remains very much as it was previous to the appointment of the commission.

The accompanying plate (XXII) shows an isometrical view of the proposed building, and Plate XXIII, the plan of each of the two stories, to all of which reference is specially made in the next paragraph.

FIRST FLOOR.—1. Vestibule. 2. Public Reception Room. 3. Superintendent's Parlor. 4. Superintendent's Office. 5. Officers' Dining Room. 6. Servants' Dining Room. 7. Pantry, with Dumb-waiter. 8. Steward's Office. 9. Steward's Bed-room. 10. Kitchen. 11. Range. 12. Dining Room. 13. Corridors. 14. Private Corridors. 15. Store-rooms. 16. Laundry. 17. Drying Room. 18. Water-closet. 19. Fan Room. 20. Workshop. 21. Boilers. 22. Engine Room. 23. Fire-man's Room. 24. Passages to Dining Rooms. 25. Attendants' Rooms. 26. Infirmary for Men. 27. Infirmary for Women. 28. Bath Rooms. 29. Servants' Sleeping Rooms. 30. Servants' Sitting Room. 31. Work-room for Women. 32. Dormitories. 33. Work-room for Men.

SECOND FLOOR.—1. Alcoves. 2. Apothecaries' Rooms. 3. Attendants' Rooms. 4. Bath Rooms. 5. Superintendents' Bed-room. 6. Chapel. 7. Clothes Room. 8. Closets. 9. Corridors. 10. Dining Rooms. 11. Library. 12. Paint Shop. 13. Pantry, with Dumb-waiter. 14. Private Corridors. 15.

Superintendent's Rooms. 16. Water-closets. 17. Workshop. 18. Dormitories. 19. Passages to Dining Rooms.

Those sections of the law of 1869, which refer to acquittals on the ground of insanity in criminal suits, are very important, and must certainly be regarded as a great advance in the right direction. They can hardly fail to prevent entirely those exhibitions of individuals being seen at full liberty, who had but a little time before committed the most dreadful acts; and it is well known that the frequent occurrence of such cases had very nearly brought all acquittals on the ground of insanity, and the plea of insanity itself, into universal disrepute.

The present law provides that under any circumstances, every one acquitted in a criminal suit on the ground of insanity must be sent, for at least three months, to some suitable place for safe-keeping and treatment, before the judge will investigate his claims for a discharge; and if it be a case of homicide or attempted homicide, no one can "be discharged unless in the unanimous opinion of the superintendent and managers of the hospital and the court before which he or she was tried, he or she has recovered and is safe to be at large."

CHAPTER XXXI.

MEANS OF EXTINGUISHING FIRE.

IN a previous part of this essay, much stress was laid upon the importance, when putting up a hospital for the insane, of attending to every means likely to prevent the occurrence of a fire, or its spreading, in case it should break out in any part of the building. These objects are to be effected by making the structure, in exposed parts, as nearly fireproof as circum-

stances will permit, by having the building heated by steam, and by keeping all the large fires at a distance from it. In spite, however, of all these precautions, a fire may occur from causes that could not be foreseen, and on this account, it becomes a grave duty, for every body of men entrusted with the erection or management of such an institution, to see that adequate provision is made for all desirable means to extinguish promptly any fire that may be discovered on the premises; for no accident can be more terrible to contemplate, than a fire raging at night in a building containing more than two hundred insane patients, confined in their rooms, and utterly unable to escape without aid from others. Nearly all these accidents take place from the intense heat of large hot-air furnaces, from defective flues, or from wood being brought too near them; so that if, as proposed, steam is used for heating, and an effective night-watch is kept up, it would seem that every fire should be promptly detected, and that means might be readily provided to extinguish it easily, almost without injury to any one. To do this, the large iron tanks placed in the attic of the building should always be filled towards night; two large rain-water cisterns should be provided near the building, and kept full of water at all times; there should be a fire engine and at least six hundred feet of hose belonging to the institution, and the hose should be so distributed, that, on the occurrence of an alarm, it can be attached to the proper water pipes at the shortest notice, and a large stream of water immediately directed on any point either on the inside or outside of the building. In addition, an iron pipe three inches in diameter, should be laid at a proper depth around the whole building, or at least on one side of it, and at a moderate distance from it; and, at proper intervals along this line, fireplugs should be placed, to which the hose can be attached whenever required. This outside water-pipe being connected with that

through which the water is forced into the tanks in the dome of the building, all the water in them can be drawn through the fireplugs, and used while the steam engine is being started, and this, by closing a stopcock, can then be made to force the water directly through the hose, upon whatever point is on fire. By proper provision for a quick fire under the boilers being kept on hand, the engine and pumps can always be ready for working, in a few minutes from the time of an alarm being given.

To secure prompt and efficient action in case of an accident of this kind, it is important that those about every such establishment, should be regularly drilled at stated periods to the skilful use of the different apparatus. The early discovery of a fire and its prompt extinction are nowhere of more importance than in a hospital for the insane, for its inmates are as likely to suffer from the smoke as from the heat, and on this account it is desirable that some provision should be made, by which the smoke may be, to some extent, kept from passing through the flues from the lower to the upper stories.

The plan of making the passage-ways between the different wings fireproof, from top to bottom, as proposed in another part of this volume, will do much to prevent a general conflagration, and to secure the safety of at least a large proportion of all the inmates, under almost any circumstances. The more thoroughly a building is made fireproof the better, and the great reduction in the cost of materials has made this a less serious undertaking than formerly.

A standpipe of iron, extending up from the cellar into every story, should be provided for each wing, and to this should be attached enough hose to reach to either extremity of the ward.

A pipe should also be provided in connection with the summer steam-pipe, and leading into the attic, in each wing. Into

this, steam is to be admitted in the cellar, so that the attic, generally one of the most combustible parts of a hospital, can be promptly filled with steam, which is one of the most effective means of extinguishing a fire.

CHAPTER XXXII.

LABOR, OUT-DOOR EXERCISE, AND AMUSEMENTS.

HAVING referred to the unfavorable results of an habitual use of restraint and seclusion in a hospital for the insane, it is proper to indicate in more detail, some of the means by which the necessity for their employment, may be dispensed with.

A properly constructed building, admitting of a liberal classification of the patients, and the employment of an adequate number of intelligent and kind assistants, have already been mentioned as indispensable for such an object. The design, in establishing every such institution, being the restoration and comfort of the afflicted, the relief of their families, and the protection of the community, there can be no question but that it is sound economy to provide everything, that will effect these objects promptly, and in the most thorough manner.

Without sufficient provision for out-door exercise and occupation for the patients, and an ample supply of means of amusement and employment, the excitement in the wards, and the violent and mischievous propensities of their inmates, will be apt to be such as to require modes of management that might otherwise be easily dispensed with. The first cost of some of these arrangements will necessarily be considerable, but the ultimate results can hardly fail to be so gratifying as to satisfy

the most rigid stickler for economy, that the only wise course is to provide liberally of everything likely to be beneficial to the patients.

The farm and garden offer admirable means of useful occupation to the insane men, at certain periods of the disease, for, valuable as they are to a large number, no greater indiscretion can be committed, than the attempt to set all insane men at work in every stage of their malady. To those accustomed to such pursuits, as well as to many who have been differently occupied, regular, moderate labor in the open fields or in the garden, in certain stages of their disease, contributes most essentially to their comfort, and tends to promote their recovery. Labor, then, judiciously used, is one of our best remedies; it is as useful in improving the health of the insane, as in maintaining that of the sane. It is one of the best anodynes for the nervous; it often,—but not always,—composes the restless and excited, promotes a good appetite and a comfortable digestion, and gives sound and refreshing sleep to many who would, without it, pass wakeful nights.

The provision of adequate and comfortable workshops, in a convenient position, and under the care of competent superintendents, as insisted on when speaking of construction, may be made a source of small pecuniary profit to an institution, and will furnish another means of labor of an interesting kind to a large number of the insane. Too much, however, in the way of profit, pecuniarily, must not be expected from any work done by the insane; under any circumstances it will be small. The value of their labor is to be estimated by the benefit it is to the patients, in promoting their comfort, health, and restoration.

The usual means of amusement which demand active muscular exercise, should not be neglected. A gymnasium, with the right kind of apparatus, suitable in its fitting up for insane

men, and a calisthenium, with somewhat similar arrangements for the women, will be found useful. The various games of ball, the use of a car on a circular railroad, ten-pins, billiards, bagatelle, etc., the care of domestic animals, and especially regular walks in the grounds or in the neighborhood, are also among the kinds of exercise that will be enjoyed by many patients; while means of carriage driving seem almost indispensable for others, who from physical and other causes cannot resort to the more active forms of exercise which have already been referred to. Driving outside of the grounds is very pleasant to many, while for others, this passive exercise is invaluable. Dry walks around the grounds are extremely useful and available for most patients. A proper amount of land in connection with a hospital for the insane, gives facilities for making from one to two miles of dry walks, either brick, artificial stone, or what are probably as good and certainly cheaper than either of the others, board walks, which, properly made and of good materials, may be depended on to last about seven years. In addition to these dry walks, the same extent of good roads can readily be made for carriage driving, within the hospital enclosures. There are few things that are of more real value to the patients, and all employed in connection with them. These walks give for a great majority the best mode of taking exercise in the open air; and driving on the roads within the hospital grounds, is permissible for many whose mental or physical condition would, without them, preclude their having any such enjoyment at all.

As soon as these walks and drives are laid out, the work of planting trees along them should be commenced, so as to secure for those who drive, as well as for those who walk, an abundance of shade in hot weather.

It is hardly necessary to say that good, smooth roads at all seasons, give much the greatest amount of pleasure in driving,

and that, although costing more at first, good ones are really cheapest in the end.

Within doors, the means of keeping a comfortable house, in addition to the medical treatment, is the constant presence among the patients of intelligent attendants, active supervisors and judicious teachers or companions, always ready to check the commencement of excitement, to separate quarrelsome individuals, and to change the train of thought of those who seem disposed to be troublesome. The means to effect the objects in view are very numerous, and the tact of an individual is shown in selecting those that are most applicable to a case.

The information and amusement afforded by regular courses of lectures, readings, interesting exhibitions of various kinds, and musical entertainments in the lecture-rooms of our Hospitals for the Insane, have done much to break up the monotony of hospital life, which has been so common a source of complaint among the insane.

Systematic courses of instruction in well furnished school-rooms, reading aloud by the teachers to the patients even in the more excited wards, the use of well selected libraries, of musical instruments, and of various games, the inspection of collections of curiosities, and of pictures not necessarily costly, on the walls, are all among the many means which an ingenious Superintendent will suggest for the benefit and amusement of his patients, and which ought to be provided in every institution for the insane. All these are as much a portion of the furnishing of a hospital for the insane, as anything else connected with it. They are a part of the remedial machinery, which ought nowhere to be dispensed with, and for which regular appropriations should be made.

CHAPTER XXXIII.

EVENING ENTERTAINMENTS.

THERE should be something going on every evening, in which a large proportion of all the patients can participate. This breaks up effectually the monotony that used to be so common at this time. Once thoroughly in operation, such a plan of entertainments can be continued as regularly as any other daily provision, and fairly tried, it is not likely to be abandoned. Under my own direction such a course has been carried out for years, without missing a single evening.

An extended experience in passing the time between tea and retiring for the night, with no special provision to divert the patients; with regular efforts to interest, instruct, or amuse them, on one, two, or three evenings in every week; and also with systematic entertainments for every evening during the greater part of the year, has given abundant opportunity to compare the results of the different methods, and leaves no room to question the importance and great superiority of the last. Its real value, not only for the patients, but also for the attendants and for all employed, gives abundant reason to make it one of the standing daily duties in every hospital, just as much as the provision of meals, and once fairly inaugurated, there will be no more difficulty in having the one carried out regularly than the other. After contrasting the first named mode of passing the evenings—long the dreariest and saddest hours of the whole twenty-four, when the wards so often presented a picture of gloom and desolation,—with that last named, which has rendered the same period the brightest and most cheerful of the day, there is no room for doubt as to its important effects upon the patients and the whole household.

It is not to be denied that to make these evening entertain-

ments thoroughly successful, requires,—as do so many other things about a hospital for the insane,—no small degree of enthusiasm in the matter, on the part of the hospital officers, but the results, in the changed character of the wards, during these evening hours, formerly so dreary, and in the gratification and benefit afforded to the patients and to those employed, cannot fail to be an ample compensation to any one on whom devolve the care and labor of their preparation.

An experience of eleven years during which at one department, not a single evening has been omitted—and nearly as much may be said of the other,—has abundantly satisfied the writer, of the very great advantages of the system, and he believes that no one, who will give the plan a fair and reasonably protracted trial, will ever be willing to abandon it. So fully satisfied are the authorities of the Pennsylvania Hospital for the Insane, of the soundness of these views and the advantages derived therefrom, that it is now a rule of the institution, by special resolution of the Board of Managers, that no evening for nine months of the year, shall be passed without some kind of amusement or occupation in which a large proportion of all the patients can participate. To those who suppose that an entertainment every evening for so long a period as nine consecutive months, will become monotonous, it may be sufficient to say, that no two in succession are alike, and that the offering of some amusement every night, is only what is done in all large communities, and in which a great proportion of all the people are found willing to participate.

These evening entertainments may well be continued for the period alluded to above (nine months), and for the remaining portion of the year, which includes the summer months, other kinds of amusement and recreation can be supplied, either within doors or on the grounds, as may be found convenient.

CHAPTER XXXIV.

A HOSPITAL DAY.

JUDGING from what is frequently seen in the public prints, or heard in private conversation, there must be a great misunderstanding of the mode in which patients spend their time in hospitals for the insane, as well as of the means resorted to for their amusement, recreation, and occupation, in order to divert from delusion, to calm excitement, or to prevent that condition of mental stagnation, so melancholy to witness in those suffering from insanity.

The following description of "a hospital day" in the institution in which the writer is specially interested, was prepared thirty years ago, for the information of many desirous of knowledge on the subject, and it is now reproduced, that no reader of this work may be ignorant of the matters referred to, nor fail to see that life in a hospital is not necessarily one of inaction or monotony. Many things besides those mentioned, may from time to time be profitably introduced, their propriety being the only limit, where there are sufficient means, and an enthusiastic interest in the welfare of the patients. Whatever promotes this, is to be carried out in its best form, and with a recollection that hospitals, and all the remedial machinery connected with them, are provided for the benefit of the inmates, and not for the gratification of those to whose care they are entrusted.

Every day in a hospital for the insane has its variations, but whatever these may be, system, active movements, and diversity of occupation are desirable. To many who enter such an institution, the simple change of habits is important, and does more towards effecting a cure than it commonly has credit

for. Hours that tend to break down the general health, and excite the nervous system, are replaced by those most likely to restore them; habits, that for a long time perhaps have been steadily, although it may be insidiously doing their work of mental and physical enervation, are now, as much as possible, to be given up, and a life of indolence or morbid restlessness is to be replaced by one of regulated and rational activity. When the mind has been worked with an apparent forgetfulness of its connection with, and dependence on, the physical organs, or when the latter have been used as though their possessor had no mind by which to learn the most ordinary prudence, an attempt is made to inaugurate a new kind of existence, which will at least be clear of the grave defects of the past.

When thoroughness and efficiency are desired, a hospital day must begin at an early hour. While hardly too high an estimate can be placed on the importance of an abundance of sleep, it is not to be doubted, that sleep at regular hours, including those of the early night, has a special value. It is natural to suppose, that it is intended we should obtain our sleep during the period of darkness, and that daylight is meant for other, although it may be, not more important purposes. Abundant experience justifies the opinion that regular and early hours for sleep, will do more than all other causes combined, to enable any one with no special constitutional advantages, to undergo for long periods, without serious injury, much physical and especially great mental labor, with all the depressing influences to which every life is exposed.

Early hours are always desirable in a hospital for the insane,—early hours for retiring at night, and early hours for rising in the morning. To many this is a radical change in their habits, and this change itself is often of very marked advantage.

Sound sleep in abundance is one of the most valuable remedies for disorders of the nervous system, and sleep in the early night, there is good reason to believe, is more beneficial than that obtained in late morning hours, especially when preceded by long vigils far into the night.

I have never known the change of habit alluded to, to be productive of any disadvantage. The remarks just made have reference only to the patients. But so far as the operations of institutions are concerned, it requires little observation to learn that early rising,—and this implies early retiring,—is an essential element in securing an active, energetic, and successful working of the many and varied departments of a hospital.

In this institution, the system of daily occupation adopted, was commenced after careful consideration of what had already been done, and a minute investigation of the advantages and defects of the arrangements of other hospitals. It is satisfactory now, after so long a trial, to find how few of the views originally adopted have had to be changed. Having no favorite theories to uphold, always ready and anxious to advance, we have been able to do so, by constant additions, rather than from a change of principles.

The hospital day begins at five o'clock in the morning, at which hour the attendants and those engaged in the domestic departments, are expected to rise and prepare for their morning duties. By six, it is intended the patients should be getting ready for breakfast, which meal, during the whole year, is taken at half past six o'clock, and previous to which, medicine is given to those for whom it may be deemed desirable in the different wards, by persons specially deputed for the purpose. Before this, too, the Supervisors are expected to ascertain the general condition of the patients, and the mode in which those employed are performing their duties. The officers

resident in the hospital take all their meals half an hour after the patients, so that those to whom the duty is specially delegated can have a personal supervision of the dining-rooms, and the general serving of food. Immediately after breakfast, the rooms and wards are put in order, preparatory to examination by the medical officers at their morning visit, which they begin a few minutes after eight o'clock, accompanied by the Supervisors, and during which the condition and wants of every patient are carefully ascertained, and every room is inspected. Previous to the commencement of this visit, the cards from the watch-clocks are examined, written reports are received from the night-watch of what has occurred during the night, and also from the supervisors and companions of the patients, detailing their observations of the previous day and evening, and verbal reports are made of the state of the patients in the early morning. Before this visit, or immediately after, arrangements are made for driving, walking, visiting interesting places, and for the special occupations and amusements of the patients during the day, as well as for whatever requires attention in the city. At eight o'clock in summer, and at nine in winter, the patients start out driving in the large carriages which go into Philadelphia and the adjacent country, and in the pony and donkey phaetons, the Germantown wagons, etc., all of which, but the first, are often driven by patients, being used only inside of the inclosures, the roads within which at each department are nearly two miles in extent. About the same time, the patients from all the wards, accompanied by a portion of their attendants, pass into the grounds to walk, and in good weather they are expected thus to spend at least a couple of hours every morning out of the house. Before returning, or afterwards, they have an opportunity to visit the museums and reading rooms, the greenhouse, gymnastic hall, various summer houses, the calisthenium or ten-pin alley,

amusement hall, etc., and to engage in the various games there provided, or in those more specially calculated for the open air. In addition, the male patients have the use of the carpenter and other workshops, and of the gardens and grounds, in working in which, many take much interest. The female patients also resort to their workrooms. Many too, of both sexes, walk outside of the inclosures, visiting objects of interest in the vicinity, and often extending their excursions to a considerable distance.

After the out-door exercise, the usual in-door resources are at command—reading, writing, conversation, games of nearly every kind, and whatever work is likely to be interesting to individual patients. During all this period, as well as in the afternoon and evening, the supervisors and companions to the patients pass among them in the different wards, the latter especially giving their attention wherever deemed most important, and taking care that there is no falling off in the amount of exercise, in the amusements, or occupations in which the inmates are engaged. At all these periods, the medical and other officers, too, give what time they are able to spare to professional visits at irregular hours, and to the exercise of such personal influence as they can bestow, which is often of great value in the cases under care.

At noon, medicine is again administered to those who are taking it regularly, and preparations are made for dinner, which is on the table at half past twelve. Early in the afternoon, the hour depending somewhat on the season, all are expected to be again in the open air, and securing, as much as possible, the advantages which result from it, sunshine, exercise, and whatever else can be combined with these valuable agents for preserving as well as restoring health. The same places of resort for occupation and amusement are open, as in the morning, and as many as can be accommodated are again out driving.

Tea is ready at six o'clock in winter, and at half past six in summer; after which, except in very warm weather, few go outside of the yards connected with the wards. Then begin the special arrangements for making the evenings pass pleasantly. Preparations are made for the lectures and other entertainments in the lecture rooms, or gymnastic halls, or for the officers' tea parties; one of these entertainments takes place regularly every evening of the week for nine months at each department, commencing at half past seven o'clock, and lasting about one hour,—the character of these exercises being greatly varied, as has been before detailed. After leaving the lecture rooms, the patients frequently assemble in the parlors, and have music, games, and other diversions, filling up the time to half past nine, between which and ten o'clock, all persons are expected to retire for the night. The only difference when there is no lecture-room entertainment, is, that much more is done in the wards by the companions of the patients, the attendants, and the patients themselves. There is more music, more reading aloud, and all the games that are popular, while small tea parties now and then make a pleasant variety. The evening visit of the physicians is made soon after tea, or immediately after lecture, when particular directions are given for the night.

At half past nine P. M., the regular night-watcher calls at the physician's office for instructions in regard to special duties. The night-watch consists of those regularly employed for the purpose of passing through the wards, to see to the safety of the buildings, the condition of the patients, and to attend to their wants, etc.; and of those who may be appointed to be with the very sick. Every ward is visited at stated periods, and when passed through, the night-watcher, by touching a pull connected with the watch-clocks, makes a mark on the revolving card, which shows that the duty has been performed, and also

the exact time at which it was done. This pull can be made only at one point in each ward, and the card itself is accessible only to the officer having it in charge. The night-watch remains on duty till the attendants are up, and have taken the custody of the wards in the morning, so that at no time, day or night, are the wards left without some one directly responsible for their care.

While there are, in addition, as many varieties and novelties as circumstances will permit, what has been described comprises the ordinary routine of every day, the only exception being the Sabbath, on which, of course, all unnecessary labor is avoided. The medical visits are made as on other days, the usual walks through the pleasure-grounds are taken in the early morning and in the latter part of the afternoon, while such patients as it is believed will be benefited by the privilege, are allowed to attend their accustomed places of worship, there being churches of nearly every denomination in the immediate vicinity of the hospital. Parts of the Scriptures and other suitable books are read in the wards, and all visitors being excluded, the quiet and comfort of the patients on this day of rest are generally very remarkable. In the afternoon the same course is pursued as in the morning; and in the evening, soon after tea, such of the patients and of those employed in the institution as wish to do so, assemble in the lecture-rooms, where portions of the Bible are read by one of the officers, and there is singing of hymns, mainly by residents of the hospital. The attendance is always large—quite as great as at the lectures—perfect propriety is observed, and no better interest in the service could be desired. The mode of observing the Sabbath above detailed—simple as it may appear to some—was adopted at the opening of the institution under the control of the author,—after a careful investigation of what had been done elsewhere, and a personal observation of other plans,—with a

clear conviction that it was the best that could be introduced, for this hospital, and for the patients that are here received, belonging as they do to nearly every denomination. Thirty-nine years' experience has shown that this decision was right, and the results have, in my estimation, proved entirely satisfactory.

While the course of life indicated, is applicable to a large proportion of all the patients, there are still quite a number for whom a less active mode of passing the time, at least for a limited period, is indispensable. For some, perfect rest may be the remedy, and for many others, the exercise, for a time should be of a passive character. As a general rule, these exceptional periods are not very protracted, and sooner or later, the varied and active system of exercise, especially in the open air, begins to be important, even in these latter cases.

CHAPTER XXXV.

VISITORS.

To secure the comfort of the patients and the good discipline of a hospital for the insane, it is highly important that judicious regulations in regard to visitors should be made and enforced. The propriety of the friends of patients visiting them while under treatment, will of course, in a great measure, be left to the discretion of the physicians. What is quite proper at one period of a case may be totally inadmissible at another. While at one time such interviews may be productive of much benefit, at another they may be decidedly injurious. When the first experimental visit has shown unpleasant results, it is

hardly to be supposed that any real friends of a patient, after the matter has been properly explained, will wish again to incur the risk of injuring one in whose welfare they, more than any other persons, ought to be interested. There are but few individuals who should be allowed, even if willing, to incur this responsibility against the advice of the physicians. Under ordinary circumstances, a parent could hardly be refused an interview with a child, a husband with a wife, a wife with a husband, a child with a parent, or a legal guardian with a ward. With those thus connected, after the physician has performed his duty by a plain statement of the case, the whole responsibility of any injury that may be done to the patient should be made to rest. But in reference to all others, unless very peculiarly related, the chief officer of an institution would hardly be justified, if, for their mere gratification, he permitted visits that he thought likely to prove detrimental. The interviews with friends should not be allowed in a ward, among the other patients, except in cases of severe illness.

As to the large class of visitors who resort to hospitals for the insane merely from an idle curiosity, the rules for their regulation should be made under the sanction of the Board of Trustees at the opening of the institution, and rigidly enforced.

Anything like a public exhibition of the patients and their infirmities, as has been sometimes done, has well been styled "an outrage upon common humanity and common decency," and ought not to be tolerated anywhere or under any circumstances.

In the vicinity of most public establishments of this nature, especially those provided by the States, there will always be found a large number of persons, who, with a kind of feeling of right, are anxious to have an opportunity of inspecting their arrangements. Carried to a reasonable extent, this sort of visiting is advantageous, as giving the community an oppor-

tunity of being disabused of old prejudices, and of knowing something of the science, liberality and benevolence which are now sought to be enlisted in the care of the insane. All this may be done, however, without keeping the wards in a constant state of excitement, or materially incommoding the patients by the presence of strangers. Two or three hours in an afternoon, for example, during which time alone these visits might be allowed, will be sufficient for every purpose, and suitable attendants could, at these periods, be prepared to wait promptly upon company.

Large parties should rarely enter a ward together, for at such times there is seldom much satisfaction for visitors, and a crowd always tends to excite certain classes of patients. No visits in the wards should be protracted.

There are certain wards into which ordinary visitors should never be taken, because few of them would be able to appreciate the mental condition of their occupants, and the probability of serious injury to the sick, would be too great to justify such an experiment for the mere gratification of curiosity.

No visitor should be allowed to enter a ward, or to pass through the private pleasure grounds of the patients, without the permission of one of the physicians, and after obtaining it, visitors should always be accompanied by an officer, or by some suitable person selected for this service.

The exceptions in regard to the parts of hospitals to be visited, as stated in a previous paragraph, apply to the Trustees or Managers, to official visitors of every kind, to the officers of similar institutions and persons specially interested in them, and to the members of the medical profession. The first named have the right, and it is their duty to examine thoroughly every part, and it ought to be, as it probably is, a pleasure to the physicians to exhibit to all who have been named every part of an establishment, and to communicate freely the cha-

racter of its arrangements and modes of treatment. There is nothing about a properly conducted hospital that needs concealment. All restrictions in reference to publicity and exposure are for the welfare of the patients.

Official visitors, when thus making a minute examination of the condition of a hospital and of its inmates, may with entire propriety have a more free and unreserved intercourse with all the patients, than can rightfully be accorded to any ordinary visitor. On this account, these official visits should not be connected with those of other persons. The former have a right, although its exercise is not always expedient, to see every patient, whether he is willing or not; but it is a right that cannot be transferred to any other persons.

It is not uncommon for visitors to make special requests to see certain patients, of whom they have heard, or with whom they may have had some acquaintance, and to exhibit disappointment, if they fail to be gratified. It is scarcely necessary to say, that no physician has the right, even if he have the inclination, to make this sort of exhibition of his patients. Patients, indeed, who do not wish to be seen, should always have the opportunity offered them, of retiring to their own rooms while visitors are passing through the wards. It would be about as proper for a stranger to call at a citizen's dwelling, and from motives of curiosity, to ask to see a sick member of the family, especially if delirious, as for an ordinary visitor to a hospital for the insane, from similar motives, to demand a sight of some individual, of whose name or history only he may have some knowledge. Reasonable visitors, when told that the patients are not exhibited, that it is presumed they would not wish members of their own families, if unfortunately thus situated, unnecessarily exposed to the scrutiny of strangers, and that such a proceeding is personally offensive

to many, will at once see the force of the objections and courteously acquiesce in their correctness.

It would be well generally to impress on visitors through the wards, that those they see there, are always to be treated as ladies or gentlemen would wish to be in any other situation; that levity and rudeness of behavior are quite as objectionable, and that childish and unfeeling remarks, or impertinent curiosity, can be as acutely felt and as accurately appreciated there, as in a private dwelling.

There is no reason whatever, why an individual having no personal relations with a patient in an institution, nor any official connection with either the one or the other, should at any time insist on a knowledge of the character, or treatment of his case, or anything concerning it, any more than it would be regarded as proper or allowable, to permit a stranger to ask the same privilege at a private house, in which he may have learned that a member of the family is ill, that in a period of delirium he has lost his self-control, and that it has become necessary for his friends to exercise absolute direction over his movements and actions. It is a sacred duty on the part of all concerned, either the members of a family, or the officials of an institution, to leave nothing undone to protect such unfortunates from the wanton publicity, to which an unfeeling curiosity may be inclined to expose them.

The names and residences of patients should not be given to that class of inquisitive or thoughtless visitors, who after their return home, are apt to take especial pleasure in retailing the results of their observations of certain individuals, at places and in a manner, to render their remarks particularly painful and offensive, to the friends of those who have had the misfortune to come under their critical notice. It is really a breach of confidence, of which no rightly constituted person could willingly be guilty. When such curious inquiries are

frequently and pertinaciously urged, it will be quite allowable to have a hospital name for each patient, for the special accommodation of this class of visitors. Such a course can hardly be objected to, when it is remembered, that even in well-conducted penal institutions, no inmate's name is divulged to gratify an idle curiosity, and that a number is used in all ordinary reference to every individual.

CHAPTER XXXVI.

IMPORTANCE OF A CORRECT NOMENCLATURE.

THE erroneous views of insanity formerly entertained, and the unfortunate modes of treatment which resulted from them, led to the adoption of terms which are now without meaning, and the continued use of which has an unfavorable effect on the best interests of the insane.

It seems especially desirable that this malady, now so much better appreciated by the whole civilized world than formerly, and the importance of the proper treatment of which is so generally admitted, should have every advantage that can result from a correct nomenclature. It is seldom that a disease so well recognized, so important and so prevalent, has had the misfortune to be called by so many ill-selected names, which have themselves tended to produce errors, and to confirm wrong impressions in the community.

Without any inclination to be hypercritical, it is proposed briefly to allude to some of these misnomers, which custom alone seems to have retained.

It must seem singular to any one who reflects on the subject,

that the term "lunacy," as applied to this disease, should still be used as generally as it is by the community, by the medical profession, and even by some of the latter whose labors in this specialty, have done so much to promote the best interests of a large class of sufferers. "Lunacy" and "lunatic" are terms which have no meaning in relation to the diseases of the mind, and they originated from a popular belief in influences that have long since been shown to have no existence.

Both these terms are particularly objectionable from their very derivation, tending to give wrong impressions of the disease, and to perpetuate popular errors. Common as the idea may have been with our ancestors, that the insane were specially under the influence of the moon, it is hardly to be supposed, that a sentiment like this, is now seriously entertained by any considerable number, in or out of the medical profession. If such are to be found, they would scarcely claim so decided an effect from lunar influence, as to make it a ground for giving a name to one of the most important diseases to which man is subject. "Lunatic" is put down, in one of our best modern medical dictionaries, as "moonstruck," and this term applied to a sick man, or connected with an institution for the treatment of diseases of the brain, is certainly not in character with an age, which puts forward so many just claims to be called one of progress. The fact that these terms are still used in law writings, is no reason why they should be continued by the medical profession. If universally discarded by physicians, it is not unreasonable to suppose that the bar, with all its fondness for ancient terms, would ultimately reject names which, beyond their antiquity, have not a single claim for retention. As applied to individuals, they have become offensive from their old associations. The term "insanity," which I conceive is the only proper name to apply to the disease under notice, is a correct one; it simply means un-

soundness, is sufficiently common, and its import is generally understood.

With all its distinguishing features, insanity has nothing about it to prevent its being ranked with other diseases. As already said, it is a functional disorder of the brain, and belongs to the same category as diseases of other organs. Prevailing among persons of all ages, among all classes of men, without regard to talent, fortune, or profession, there would seem to be no sound reason, why the institutions specially provided for its treatment, should have names different from those that are intended for the relief of the sick who are suffering from other maladies. It is of great importance to a correct appreciation of insanity by the community, that it should be generally understood, that, treated properly from its commencement, it is commonly a curable disease, and that when patients are sent from home to an institution, it is only to give them advantages and chances for restoration nowhere else to be obtained. It should also be impressed upon all, that cases of insanity, however chronic they may be, or however discouraging their symptoms, should still be regarded as worthy of attention, and even if we can do no more, demanding treatment, to promote their comfort and happiness, and to keep active, as far and as long as we can, their mental and physical powers.

Institutions for the treatment of other diseases, although incurable, are called hospitals; no other term is so common or so well understood, and there is none so appropriate in every respect, for buildings devoted exclusively to the treatment and care of the insane, and in my estimation, they should be known by no other name.

The titles often applied to institutions for the insane, have no appropriateness, even if they do not have a mischievous tendency. The object of their original introduction would seem to have been to give an impression, that those who

entered them were not sick, or did not come for treatment, or, if ill, that they suffered from some malady which bore no relation to the other diseases which affect our race, but rather that they came as to a place of refuge or security, as though they had committed some crime, or had been banished from the sympathies as well as the presence of society. It is quite true, that appropriate as the name of hospital is, for the institutions provided for the treatment of the insane at the present day, it could hardly have been proper to have so called the receptacles into which they were often thrown, much less than a century ago, where those who had the strongest claims for the consideration and kindly attentions of their fellow men, were chained, and flogged, and treated with a cruelty far beyond the lot of most criminals.

The term "asylum," still so common amongst us, seems to me to be open to all the objections that have been referred to, and it ought to be abolished as having an undesirable influence, while its derivation and true meaning certainly do not offer any reason for its retention by any curative institution. It would be about as reasonable to have an asylum for smallpox, or fever, or dyspepsia, or any other disease, as for insanity. Ludicrous as it would appear to have an institution called a febrile asylum or a rheumatic asylum, it would really be as proper as to have what custom alone has familiarized us with—an insane asylum.

The arrangements of a hospital for the insane—which is a more euphonious, if not a more correct term than an insanity hospital—it is true, are different in many respects from those of ordinary hospitals; but that is no reason why the same name should not be applied to all. The details of a hospital for children, for fever, for contagious diseases, or diseases of the skin, may also vary in their character, without requiring a change in their principal title.

The term "Retreat," is not less exceptionable than that of asylum, and for the same reasons. They both originated from the best of motives, and have done good in their day, as helping to banish that senseless but awful name, "the mad house," which, of old, had so many real horrors connected with it, and the truthful pictures of which in England and on the Continent, have made such an enduring impression on the minds of men, that most of the popular prejudices existing in reference to modern hospitals for the insane, although they have no single feature of resemblance, will be found to have arisen from this source.

The names of "cells" and "keepers," as applied to the chambers of the insane, and to their attendants, were first used at a time when those who were suffering from insanity were often worse treated than convicted felons, and when those who had charge of them exhibited much less humanity than common jailors. Both terms belong to prisons, and no argument is needed to show that they ought never to be heard within the walls of buildings devoted to the relief of the afflicted, nor in reference to them.

If those connected with the various establishments provided for the treatment of sufferers from mental disease, would on all occasions discard not only the terms "cells" and "keepers," and "lunacy" and "lunatic," but also the words "asylums," "retreats," and whatever other titles fancy may have suggested, and would call their institutions what they really are, hospitals for the insane, and allow the disease treated in them to be spoken of only as insanity, or mental unsoundness, the public would soon see the propriety of abandoning the terms to which exception has been taken, and which are in so many respects objectionable, and insanity would soon be thought of, as dyspepsia, rheumatism, or any other serious disorder specially affecting one part of the physical organization.

So, it has become common to call hospital buildings to contain from twenty to one hundred or more patients, "cottages," but few of the insane are to be found, who are deceived by such titles given to these structures. They and their friends know that their inmates are sick, and that they have left home for treatment, and they understand that "hospital" is a proper term for the institution to which they are consigned.

Few, if any, of those who have the immediate charge of the institutions for the insane in America, whose titles are deemed inappropriate, have had any agency in originating their names, and they cannot, therefore, be held at all responsible for these unfortunate misnomers. Most of the new institutions commenced within the last few years in the United States are styled "hospitals for the insane," and it is well worthy of consideration by those interested, whether it would not be worth an effort, to induce those who have the power, to change the titles of those previously established, as has already been done in several instances, so as to secure accuracy and uniformity in this respect among American institutions.

There is a certain class of writers for a portion of the public press, who whenever they have anything to say about insanity, or hospitals, or the treatment of the insane, are profuse in their use of all these objectionable terms which ought to be obsolete. As a general rule, it will be found true that there is a lamentable degree of ignorance in regard to insanity, or of personal hostility, or of strong prejudice on the part of writers on these subjects, who show a special fondness for the retention of these discarded terms, who never lose an opportunity to speak of mad houses, and cells, and keepers, and Bastiles, and incarceration, and to use a number of other similar epithets, for which there is no more reason, than there would be to call one's chamber at a good hotel, his cell; his nurse or valet, his keeper; or to speak in ordinary conversation of the necessary restraint

imposed on a sick person in his own home, as the "incarceration" that his family were inflicting on him.

CHAPTER XXXVII.

CONCLUDING REMARKS.

THE improvements made in the care of the insane during the last half century have secured for them, as a class, a vast amelioration in their general condition, a greatly increased ratio of recoveries from treatment, and have preserved many of the uncured from that low demented condition, to which all not restored, formerly seemed almost certain to be consigned. In place of the barred and gloomy rooms, too often provided for their solitary accommodation in some secluded section of the family dwelling, or even in isolated buildings, where in their loneliness they could hardly be seen or heard, the insane now have comfortable rooms, with cheerful surroundings and every available comfort; and instead of the wretched receptacles to which those were consigned who were sent from home, there have arisen throughout the land a class of noble structures, provided with many conveniences, and with not a little that tends to lighten the burdens of a life of illness, and to brighten the sorrows that are liable to come to all. Every effort is made to substitute for the rude force of the illiterate keeper, the gentleness and sympathy of men and women of fair cultivation and genuine humane impulses, who have been found ready to take the places, upon the proper filling of which, must always depend, so much of the happiness and welfare of the insane. Modes of management of hospi-

tals, that had neither reason nor success to recommend them,—headless or many-headed monsters, institutions so managed might be termed,—have almost universally been abandoned, and replaced by a sensible system of government giving undivided authority, where great responsibility must necessarily exist; and the excellence of this course has been clearly shown by the abundant good fruits it has produced. Much as has been accomplished, however, much more still remains to be done, before it can be claimed that all has been effected that is possible, to lessen the weight of this sad affliction, and there are few in any position of life, who cannot in some way or other, aid in establishing sound views in regard to the disease, its treatment, and what every community owes to this portion of its suffering members.

There are so many evidences of misunderstanding on nearly every point connected with insanity and its needs still existing, that to have these errors thoroughly corrected and sound views generally substituted, would seem to require that the work should begin in early life. The young should therefore be taught in their schools sound physiological doctrines about the brain, as the organ of the mind, and its liability to disease like other portions of the body. They should also acquire some ideas as to the proper mode of using it, and the manner of life most likely to preserve its integrity, or to cause its temporary or permanent aberration, as well as something in relation to the detection of symptoms of incipient morbid action, and the proper course to pursue to prevent their full development; for the prejudices of youth derived from those in whom they have confidence, are every day seen to be of the most enduring kind, and specially difficult of removal.

There should be a general idea given too, why those suffering from insanity are so often required to leave their homes

for treatment, and why hospitals are established for the restoration of the patients, for the relief of their families, and for the safety and protection of all these, and of the entire community.

Some comprehension of what are now recognized as sound principles of management in all well-conducted hospitals, would tend to banish the unfounded prejudices, which it must be confessed still have a prevalence, quite inconsistent with an enlightened knowledge of the subject. A beginning like what has been suggested in schools and colleges, would at least secure for the next generation,—whatever it might do for this—an intelligent appreciation and understanding of the subjects referred to, which would prevent the people from being imposed upon by writers of fiction, by the statements of the ignorant and unprincipled, or by the assertions of those still suffering from delusions. Such an amount of knowledge would give to every one possessing it, the ability to discriminate to a fair extent, between the productions of the press that are intended to be simply sensational in character, apparently without special regard to truth, and those which, basing their reports only on facts carefully acquired, are written solely for the information and instruction of their readers. Certainly this kind of information and a moderate sense of justice, would be sufficient to cause a distinction between those who give a judgment in these matters without any real appreciation of a case, or at most before hearing more than one side of it, and the decisions formed only after patient investigation and the rejection of random assertions.

Before the young can be taught all this, however, their teachers must be prepared for the task of their proper instruction, and books must be written, which while inculcating sound principles, will be popular in their design, and anything but repulsive in their character. Whenever there is a public

demand for works of this description, there are those qualified by learning and large experience, and who have long since retired from active service, whose hours of leisure, after lives of labor, would be gladly devoted to such a task.

Thus much may be said in reference to the education of the great mass of the people, as a boon for the future. Such a course as suggested, would secure for the insane every advantage that is possible from a general understanding of sound principles, and of the value of prompt and enlightened treatment. Beyond all this, however, much more is even now desirable, and not so easily attainable, as might be supposed, in the selection of men, reasonably well posted on all the points that have been suggested, and having every other needed qualification, as the Trustees or Managers of institutions for the care of the insane,—of men purely unselfish in their motives, above all political influences, pursuing their duties in a fair, honest, and liberal spirit, and reliable as giving at all times a generous support to those on whom devolve the care of the sick, and the burdens and responsibilities of institutions for their relief.

All that has been said thus far has special application to the general public, but in addition and no less important in their results are a more thorough study of, and instruction in, everything connected with the brain and its maladies, and with the details and peculiarities of treatment, in the medical schools of every country, and as thorough an examination of the students on these, preparatory to graduation, as on any other branch of the profession. Much of this is to be done by an increased attention to didactic teaching in the schools, wherever it is practicable, and by establishing a thorough system of clinical instruction and pathological inquiry concerning this class of disorders.

Clinical instruction and pathological investigation—espe-

cially the former—can be thoroughly carried out in only a limited number of institutions, but there are enough of these, and of a kind, to furnish a wide field for study, to those who take a special interest in these important branches of the medical profession. In many hospitals it will be found desirable to have a permanent officer, to whom the latter duty shall be assigned.

In conducting courses of clinical instruction it can readily be understood, that there are some points to be carefully attended to, in order to render them most advantageous to a class of students, and not injurious to the patients. The classes should always be small, many of the comments upon cases should be given after retiring from the wards; special regard to delicacy of feeling and propriety of deportment should never be forgotten, and an avoidance of any unnecessary exposure of painful infirmities should always be rigorously insisted on. The exhibition of the insane to large or small bodies of unprofessional persons, as is sometimes done, is an outrage on humanity, and is revolting to the feelings of every properly constituted person. It is hardly better or more profitable to present the sufferers from mental infirmities, before a large number of students in a lecture-room, however zealous they may be in their desire to understand the subject.

Of equal importance in any community is a correct general knowledge of most of the subjects referred to, by members of the legal profession, giving to them the capacity to counsel wisely and well, those who appeal to them for advice in periods of doubt and perplexity—and often bestowing the power to prevent the movements of disordered intellects in a course resulting only in misfortune to themselves, in injustice to their benefactors, and in grief and heartless exposure to their families.

So with the ministers of religion is this kind of information

of great practical value, as enlarging their fields of usefulness, and enabling them to indicate enlightened courses of action to those who are so apt to invoke their advice and assistance, in these periods of deep sorrow and unwonted affliction. The ability to distinguish between the manifestations of disease and the developments of simple religious anxiety, and as a consequence the recognition of the proper course to be pursued in each, can come only from the sort of knowledge that has been indicated. There are few largely connected with the care of the insane, who have not often seen the value of the counsel given by those possessed of this information, and in contrast with it, the unfortunate results coming from a want of it, making one class the highest of benefactors, as the others may be, unintentionally, the most unfortunate of counsellors.

The inclination which has existed of late years to procure unsound legislation in regard to the insane, requires unceasing and active vigilance on the part of those who have at heart their best interests, and the most successful working of institutions for their custody and treatment, in order to prevent the accomplishment of designs which, whatever may have been the motives of their originators, in practice can only be productive of harm.

Although error now as always, maintains its character of spreading more rapidly than truth, and what are called new views, which are often only the old practices of a period long past, are every now and then pressed upon the attention of communities, still it will be conceded, that these errors do not come from those who have been devoted to the care of the insane, and who are practically familiar with their treatment, for they have always formed the bulwark that has steadily resisted all retrograde movement, even if dignified by a claim to advance. It will indeed be against all reason and common sense, when those whose novel views are the offspring of

theories engendered in the retirement of their closets, and who are without even the slightest practical knowledge of the subject, shall be selected as the guides to enlighten those whose lives have been spent in an active intercourse with the insane, and a special devotion to everything connected with insanity and its treatment.

One of the remarkable tendencies observed of late, is a disposition in certain quarters to go back to what was not uncommon half a century ago, and under the captivating titles of progress and reform, to ask for a new trial of what has been thoroughly tested, found full of defects, and abandoned. All this only shows, how difficult it is with many to learn from the practical experience and investigations of others, and how much like fashion in other things, are the views in regard to philanthropic subjects, revolving as it were in a circle. It is not fifty years ago, since the heads of many of our institutions for the insane—if they can really be said to have had any heads,—were non-professional men; the medical officers prescribed medicine and did little else; several physicians attended the patients in the course of the year; changes were frequent, and it was difficult to fix the responsibility of much that occurred. The more numerous these irresponsible officers, the worse the discipline and the less satisfactory the results, and the much dreaded “one man power” was as clear of blame, as any one could have desired. The indefinite number of captains to the one ship, worked as might have been anticipated, and as such a system did in the past, it is sure to do in the future. It was mainly due to the good sense of the medical profession, that this plan was abandoned, and another substituted, as elsewhere said, the advantages of which have been thoroughly tested, and they cannot fail to be acknowledged, except by those blinded by misunderstanding of the subject, prejudice, or personal feeling.

With a full appreciation of all the difficulties that are in the way of carrying out efficiently some of the suggestions made in this concluding chapter, it is still believed that none of them are insurmountable, and the importance of the subject is deemed to be such, as to render commendable every effort in the line of real progress, which can fairly be claimed as conducing to the highest welfare of the afflicted, to the elevation of the medical and other professions, and as subserving the best interests of the whole community, for in fact all these are simply identical.

The contents of this volume as they now stand, are a contribution, small as it may be, towards securing a more elevated sentiment, and a greater harmony of thought and action in regard to the insane, as well as a more just appreciation of the objects and the work of institutions for their care and treatment. These institutions can never be dispensed with,—no matter how persistently ignorance, prejudice, or sophistry may declare to the contrary—without retrograding to a greater or less extent to the conditions of a past period, with all the inhumanity and barbarity connected with it. To understand what would be the situation of a people without hospitals for their insane, it is only necessary to learn what their condition was when there were none. Civilization and Christianity have now too firm a foothold in our land, to allow any such backward movement. It is only by a constant remembrance of the principles of an enlightened religion, and by untiring efforts to elevate, in every rational mode, the character of all these institutions, and by leaving nothing undone to extend and improve their facilities for treatment, that we shall be found practically to adopt that golden maxim which should be seen, or if not seen, at least practised in hospitals for the insane everywhere,—“all things whatsoever ye would that men should do to you, do ye even so to them.”

APPENDIX.



APPENDIX.

AT a meeting of "THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE," held at Philadelphia, in May, 1851, the following series of propositions relative to the construction of hospitals for the insane, was unanimously adopted as the sentiments of that body on the subjects referred to; and, in like manner, at the meeting held in Baltimore, in 1853, the succeeding series of propositions in reference to the organization of these institutions was also adopted, and, with the former, directed to be published in the "American Journal of Insanity," and to be appended to the annual reports of the different institutions:—

PART I.

PROPOSITIONS RELATIVE TO THE CONSTRUCTION OF HOSPITALS FOR THE INSANE.

I.

Every hospital for the insane should be in the country, not within less than two miles of a large town, and easily accessible at all seasons.

II.

No hospital for the insane, however limited its capacity, should have less than fifty acres of land, devoted to gardens and pleasure-grounds for its patients. At least one hundred acres should be possessed by every State hospital, or other

institution for two hundred patients, to which number these propositions apply, unless otherwise mentioned.

III.

Means should be provided to raise ten thousand gallons of water, daily, to reservoirs that will supply the highest parts of the building.

IV.

No hospital for the insane should be built without the plan having been first submitted to some physician or physicians who have had charge of a similar establishment, or are practically acquainted with all the details of their arrangements, and received his or their full approbation.

V.

The highest number that can with propriety be treated in one building is two hundred and fifty, while two hundred is a preferable maximum.

VI.

All such buildings should be constructed of stone or brick, have slate or metallic roofs, and, as far as possible, be made secure from accidents by fire.

VII.

Every hospital, having provision for two hundred or more patients, should have in it at least eight distinct wards for each sex, making sixteen classes in the entire establishment.

VIII.

Each ward should have in it a parlor, a corridor, single lodging-rooms for patients, an associated dormitory, communicating with a chamber for two attendants; a clothes-room, a bath-room, a water-closet, a dining-room, a dumb-waiter, and

a speaking-tube leading to the kitchen or other central part of the building.

IX.

No apartments should ever be provided for the confinement of patients, or as their lodging-rooms, that are not entirely above ground.

X.

No class of rooms should ever be constructed without some kind of window in each communicating directly with the external atmosphere.

XI.

No chamber for the use of a single patient should ever be less than eight by ten feet, nor should the ceiling of any story occupied by patients be less than twelve feet in height.

XII.

The floors of patients' apartments should always be of wood.

XIII.

The stairways should always be of iron, stone, or other indestructible material, ample in size and number, and easy of ascent, to afford convenient egress in case of accident from fire.

XIV.

A large hospital should consist of a main central building with wings.

XV.

The main central building should contain the offices, receiving-rooms for company, and apartments, entirely private, for the superintending physician and his family, in case that officer resides in the hospital building.

XVI.

The wings should be so arranged that, if rooms are placed on both sides of a corridor, the corridors should be furnished at both ends with movable glazed sashes, for the free admission of both light and air.

XVII.

The lighting should be by gas, on account of its convenience, cleanliness, safety, and economy.

XVIII.

The apartments for washing clothing, etc., should be detached from the hospital building.

XIX.

The drainage should be under ground, and all the inlets to the sewers should be properly secured to prevent offensive emanations.

XX.

All hospitals should be warmed by passing an abundance of pure, fresh air from the external atmosphere, over pipes or plates, containing steam under low pressure, or hot water, the temperature of which at the boiler does not exceed 212° F., and placed in the basement or cellar of the building to be heated.

XXI.

A complete system of forced ventilation, in connection with the heating, is indispensable to give purity to the air of a hospital for the insane; and no expense that is required to effect this object thoroughly can be deemed either misplaced or injudicious.

XXII.

The boilers for generating steam for warming the building should be in a detached structure, connected with which may

be the engine for pumping water, driving the washing apparatus, and other machinery.

XXIII.

All water-closets should, as far as possible, be made of indestructible materials, be simple in their arrangements, and have a strong downward ventilation connected with them.

XXIV.

The floors of bath-rooms, water-closets, and basement stories, should, as far as possible, be made of materials that will not absorb moisture.

XXV.

The wards for the most excited class should be constructed with rooms on but one side of a corridor, not less than ten feet wide, the external windows of which should be large, and have pleasant views from them.

XXVI.

Wherever practicable, the pleasure-grounds of a hospital for the insane, should be surrounded by a substantial wall, so placed as not to be unpleasantly visible from the building.

PART II.

PROPOSITIONS RELATIVE TO THE ORGANIZATION OF HOSPITALS
FOR THE INSANE.

I.

The general controlling power should be vested in a Board of Trustees or Managers; if of a State institution, selected in such manner as will be likely most effectually to protect it from all influences connected with political measures or political changes; if of a private corporation, by those properly authorized to vote.

II.

The Board of Trustees should not exceed twelve in number, and be composed of individuals possessing the public confidence, distinguished for liberality, intelligence, and active benevolence, above all political influence, and able and willing faithfully to attend to the duties of their station. Their tenure of office should be so arranged that when changes are deemed desirable, the terms of not more than one-third of the whole number should expire in any one year.

III.

The Board of Trustees should appoint the Physician, and, on his nomination, and not otherwise, the Assistant Physician, Steward, and Matron. They should, as a board, or by committee, visit and examine every part of the institution at frequent stated intervals, not less than semi-monthly, and at such other times as they may deem expedient, and exercise so careful a supervision over the expenditures and general operations of the hospital, as to give to the community a proper degree of confidence in the correctness of its management.

IV.

The Physician should be the Superintendent and chief executive officer of the establishment. Besides being a well educated physician, he should possess the mental, physical, and social qualities to fit him for the post. He should serve during good behavior, reside on or very near the premises, and his compensation should be so liberal as to enable him to devote his whole time and energies to the welfare of the hospital. He should nominate to the board suitable persons to act as Assistant Physician, Steward, and Matron. He should have entire control of the medical, moral, and dietetic treatment of the patients, the unrestricted power of appointment and discharge of all persons engaged in their care, and should exercise a general supervision and direction of every department of the institution.

V.

The Assistant Physician, or Assistant Physicians, where more than one are required, should be graduates of medicine, of such character and qualifications as to be able to represent and to perform the ordinary duties of the Physician during his absence.

VI.

The Steward, under the direction of the Superintending Physician, and by his order, should make all purchases for the institution, keep the accounts, make engagements with, pay and discharge those employed about the establishment; have a supervision of the farm, garden, and grounds, and perform such other duties as may be assigned him.

VII.

The Matron, under the direction of the Superintendent, should have a general supervision of the domestic arrange-

ments of the house; and, under the same direction, do what she can to promote the comfort and restoration of the patients.

VIII.

In institutions containing more than two hundred patients, a Second Assistant Physician and an Apothecary should be employed; to the latter of whom other duties in the male wards may be conveniently assigned.

IX.

If a Chaplain is deemed desirable as a permanent officer, he should be selected by the Superintendent, and, like all others engaged in the care of the patients, should be entirely under his direction.

X.

In every hospital for the insane, there should be one supervisor for each sex, exercising a general oversight of all the attendants and patients, and forming a medium of communication between them and the officers.

XI.

In no institution should the number of persons in immediate attendance on the patients be in a lower ratio than one attendant for every ten patients; and a much larger proportion of attendants will commonly be desirable.

XII.

The fullest authority should be given to the Superintendent to take every precaution that can guard against fire or accident within an institution, and to secure this an efficient night-watch should always be provided.

XIII.

The situation and circumstances of different institutions may require a considerable number of persons to be employed in various other positions; but in every hospital, at least all those that have been referred to are deemed not only desirable, but absolutely necessary, to give all the advantages that may be hoped for from a liberal and enlightened treatment of the insane.

XIV.

All persons employed in the care of the insane should be active, vigilant, cheerful, and in good health. They should be of a kind and benevolent disposition; be educated, and in all respects trustworthy; and their compensation should be sufficiently liberal to secure the services of individuals of this description.

PART III.

Besides these two series of propositions in regard to the construction, organization, and general arrangements of hospitals for the insane, which are commonly known, and which have been so often referred to in this volume, a number of other declarations or resolutions by the same Association, will be found in its Proceedings, or in the collection published in 1876, and some of which may, in this connection, be very briefly referred to, viz:—

- 1844. Resolution respecting restraint.
- 1848. Repudiation of political appointments.
- 1848. On heating and ventilation.

- 1851. Provision to be made for all classes of the insane.
- 1866. Chronic as well as other insane to be provided for.
- 1868. On the legal relations of the insane.
- 1869. On religious services in hospitals.
- 1871. On didactic and clinical instruction.
- 1871. Reaffirmation of propositions and resolutions.
- 1871. Recommending economy in construction and management.
- 1872. Hospitals not to be overcrowded.
- 1873. On the care of insane criminals.
- 1874. Reaffirmation of propositions and resolutions.
- 1875. On the care of inebriates.
- 1875. On the management of hospitals for the insane.

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