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A Descriptive Notice of the Sussex Lunatic Asylum, Hayward's Heath (opened 25th July, 1859); by C. LOCKHART ROBERTSON, M.B., Cantab., Honorary Secretary to the Association of Medical Officers of Asylums and Hospitals for the Insane; Medical Superintendent of the Asylum.

In laying before the members of this Association a descriptive notice of the Sussex Lunatic Asylum, it is my grateful task to record the obligations I am under to several of its most distinguished members for the aid and counsel they so liberally lent to me while engaged in the task of fitting and furnishing this asylum, and bringing it into working order; an undertaking, I venture to add, more difficult than one, who has not personally tried it, would suppose.

A medical superintendent appointed to a new county asylum about to open has three distinct objects brought at once before him. He is taken over a large building full of workmen, and half-finished work, and he is called upon to make suggestions for the adapting of the plans to his own ideas of the working of an asylum. Next he has to complete, in detail, the arrangements for the fitting and furnishing of the wards and offices; and, thirdly, he has to organize the staff of officers and servants of the asylum, and visit, in the several private asylums in which they may happen to be lodged, the patients belonging to the county, with a view to their removal.

Were asylum architects familiar with the daily life of an asylum, the first requirements on the attention of the new superintendent would be, only the adaption to his own per-

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sonal views and plans of a scheme designed and fitted for its purpose. Such was eminently the case at the Cambridge County Asylum, built from the plans of an experienced superintendent and amateur architect, Mr. Hill. So also in the case of the Sussex Asylum, the architect, Mr. Kendall, had, by the experience gained by him in building the Essex Asylum, acquired a knowledge of the requirements of an asylum, and lessened this preliminary difficulty.

The most satisfactory arrangement was that adopted by the magistrates for the County of Lincoln, who called in the advice of the medical superintendent, to aid in the selection of the plans and architect previous to their commencing the building. It is much to be regretted that this plan was not generally adopted in the erection of the several county asylums. It is one which places the responsibility on an individual, and thus secures a more careful and intelligent study of the whole design and watchful superintendence of its erection than can result from the formal examination and approval of the Lunacy Commissioners; an approval which, for example, in the case of the Sussex Asylum, omitted the introduction of any systematic supply of artificial heat in the plans sanctioned.

The second question which comes before the medical superintendent is the fitting and furnishing of the house. The liberality which opens to our mutual inspection the different county asylums, and the entire absence of personal rivalry which pervades this one department of the medical profession, renders this task comparatively easy. Thus, in the case of the Sussex Asylum, I simply took the clerk of the works with me for a couple of days to Brentwood, and, with rule and measure, booked the size and kind of fittings in every store, office, and ward in the asylum; and, on our return home, we had only next day to go over our own offices and wards and draw up the specification for the work.

Again, as relates to the furnishing, (including clothing) the tradesmen who had furnished the Lincoln Asylum, Bethlehem, and the Essex were invited to tender samples of the articles, and thus again by the experience of my professional brethren my task of selection was materially aided. Still the endless requirements for the fitting and furnishing of a large establishment are quite alarming to one not previously conversant with such wants. The burthen of the requirements of our civilization falls heavy when individual wants have to be multiplied by four hundred.

The third task to which I have referred, as devolving on the

superintendent of a new asylum, is the organizing of the staff of the officers and servants (including the rules and regulations) of the establishment, previous to the removal of the patients to their new home. The arrangement of the duties of the staff requires that he should first view, in detail, his own duties and responsibilities; unless he himself realizes the extent, and strives to discharge the obligations of the vocation he has entered on, all the arrangements and plans of builders, upholsterers, and other artificers employed on the fabric will avail but little towards the great object of the foundation, the care and relief of human suffering in its most abject and distressing form. These duties and these responsibilities have been so ably stated by one whose pre-eminent success in the study and treatment of mental disease needs not my praise, that I make no apology in this place for quoting his opinions in full. "The medical superintendent," says Dr. Conolly, "himself should deserve the fullest confidence of the governing body, and should possess it. His authority cannot be impaired without detriment to the asylum, through every part of which his influence must be continually in operation. The task undertaken by him is one of considerable physical and mental labour. A daily visit to several hundred insane persons, each requiring to be accosted so as to do some good, and to do no harm, is itself singularly exhausting to any officer whose heart is really in his duty; and the multiplicity of claims on his attention throughout the day affords his mind scarcely any intervals of repose. Unavoidable excitements occur, and sometimes he is engaged in scenes of violent agitation suddenly arising, and where his interference is indispensable. Whatever therefore is needlessly done to harass or depress the mind of an officer engaged in such a duty disqualifies him to some extent for his important undertaking; for vigilantly superintending the whole working of the asylum, and for consoling, enlivening, animating, and by undisturbed kindness and calmness ever guiding, supporting, and controlling more or less directly the minds of all the rest of the establishment. It is to him that the whole house must at all times look for the principles by which every thing done in it is to be regulated. His supposed or his known wishes should be present to the mind of every officer and every attendant in every variety of accident, and his character of mind and heart ever in their view. Indifference on his part must lead to negligence on the part of those who execute his commands; severity exhibited by him must lead to brutality on the part of the attendants. His steady discouragement of negligence,

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his known abhorrence of cruelty, and his real and deep sympathy with his patients, may be reflected from every humane heart in the asylum. His duty comprehends the wide and careful survey of every thing that can favourably or unfavourably affect the health of mind or body. He has to regulate the habits, the character, the very life of his patients. The whole house, every great and every trifling arrangement, the disposition of every officer and servant should be in perpetual conformity to his views, so that one uniform idea may animate all to whom his orders are intrusted, and the result be one uniform plan. Nothing should be done without his sanction. The manners and language of all who are employed in the asylum should but reflect his, for every thing done and every thing said in an asylum is remedial or hurtful; and not an order should be given, or a word spoken, except in accordance with the spirit of the director of the whole establishment. *By such a system alone can it even be proved to what extent the cure or the improvement of the insane is practicable.*

“Resolved therefore to make his asylum a place where every thing is regulated with one humane view, and where humanity, if anywhere on earth shall reign supreme, the resident medical director must be prepared to make a sacrifice of some of the ordinary comforts and conventionalities of life. His duties are peculiar and apart from common occupations. His society even must chiefly consist of his patients; his ambition must solely rest in doing good to them; his happiness on promoting theirs. None but those who live among the insane can fully know the pleasures which arise from imparting trifling satisfactions to impaired minds; none else can appreciate the reward of seeing reason returning to a mind long deprived of it; none else can fully know the value of diffusing comfort and all the blessings of orderly life among those who would either perish without care, or each of whom would, if out of the asylum, be tormented or a tormentor. Constant intercourse and constant kindness can alone obtain their entire confidence, and this confidence is the very key-stone of all successful management.

“Thus living and thus occupied, the director will learn to love his people with all their infirmities, which are their afflictions. The asylum is his world, the patients are his friends, humble but not without even delicate consideration for others; wayward but not malignant, except when cruelty exasperates them; capricious but not ungrateful; distrustful but to be won by candour and truth; disturbed and piteously afflicted, but not dead to some of best and purest affections.

He will almost regard his patients as his children ; their cares and their joys will become his ; and humanly speaking his whole heart will be given to them."

The duties thus entrusted to the medical superintendent involve

1. The general superintendence and control over every department of the asylum, and every officer and servant in the same.

2. The hiring and discharge at his discretion, of all the attendants and servants of the asylum.

3. The regulation of all that concerns the moral and medical treatment of the patients, including the dietary, appertains to his office.

4. It is further his duty to observe the progress in science of all that relates to the treatment of the insane, and officially to direct the attention of the visitors, from time to time, to such improvements in the conduct of the house, as his increased knowledge and experience may suggest.

In arranging the relative duties of the officers of the asylum it is necessary as a basis for any sound government, that their several duties should be performed under the undisputed control and direction of the medical superintendent ; that while holding their office from the visitors, the power of suspending them from the discharge of their duties, should rest in his hands. It is also necessary that in their several duties they shall be required to take counsel with him, from time to time on the routine and details of the work.

The officers of the Sussex Asylum are

1. The Medical Superintendent.
2. The Chaplain.
3. The Assistant Medical Officer.
4. The Steward.
5. The Housekeeper
6. The Head Attendant, (male department.)
7. The Head Attendant, (female department.)

Their duties may be thus briefly stated.

Chaplain. The chaplain is non-resident. His duties beyond the Sunday and holiday services, are to read morning prayer daily in the chapel, and evening prayer also, if so required by the visitors ; to visit the wards once a week on each side of the house ; to visit and counsel such sick, as his attention may be directed to by the superintendent, and generally to exercise a spiritual charge over each member of the household.

Further the care of the library, and the conduct and organization of the school, is under the chaplain's personal charge.

A non-resident chaplain is in every way more desirable than a resident, if simply for this one reason, that it is found by experience that a higher class man can be found to devote himself to the duty when not required to sever his relations with the world outside, by residing in an asylum. Still the chaplain should be specially appointed to the asylum. In some counties the duty is let out to the rector of the parish, or to a neighbouring cathedral dignitary. I think this is unwise economy; the spiritual charge of an asylum, and of all connected with it, should be the first obligation of its chaplain. Any chance duty, as that of a union or lectureship may very properly be added to this, leaving the requirements of the asylum as the primary charge and claim on the chaplain's time.

I think that medical superintendents are apt to under rate the value of the chaplains ministrations in the house.

To many of the patients his presence among them is most soothing. None of the necessary discipline falling to his share, he can often enter into little grievances and wants which they might shrink from confiding to the medical authorities.

His instruction in the school I hold to be of the utmost value. I am about to discharge a patient whose elementary education has been much improved by the lessons which, during her convalescence, she received in the school, and cases are not unfrequent where the patient leaves the asylum with more knowledge than he brought or ever had before.

Again with the household his ministrations are of paramount importance. The mere outward recognition of a higher motive to action than the mere wages, which the offering of the daily prayer in the asylum chapel implies, is alone no small step towards raising the moral tone of the whole work undertaken in the asylum, and so bringing before each one employed in the same a sense of his vocation, and of his personal responsibility for the manner in which the duties of his calling are discharged.

I need hardly enlarge on so obvious a truth.

Assistant Medical Officer. The first resident officer to be selected is the medical superintendents' professional assistant. This officer, his frequent substitute in the performance of his duties, and one with whom he must often take counsel in the

daily government of the asylum, should be of his own selection, and the rules of the asylum should confer on the medical superintendent the right of nominating to the visitors his professional assistant.

The duties of the assistant medical officer entirely concern the charge of the patients (as distinguished from the management of the household) with whom he should cultivate the most intimate relationship and acquaintance by constant and repeated visits to the wards, beyond the daily professional inspection. The charge of the dispensary, and of the case books also devolve on the assistant medical officer; the arrangement of the amusements of the patients, of the weekly ball, of the cricket in summer, of the walks in the country, of visits to relations and friends, form part of the assistant medical officer's immediate charge.

I am of opinion that his duties might most wisely be shared with a resident clinical clerk; many students would gladly embrace such an opportunity of becoming familiar with the diagnosis and treatment of mental disease. From candidates for appointments in the India Medical Service, attendance for three months on the practice of an asylum is required, and yet our county asylums are closed against the student. Surely this is not right.

Steward and Clerk. The duties of steward and clerk, are usually conjoined, whether with advantage to the asylum, I rather doubt. In an asylum of 400 patients or more, I am sure that the time necessarily spent on book-keeping and returns, would be more profitably devoted to the stores, and economical supply of the provisions, while the salary of a resident clerk would not exceed £30, with board and lodging.

The steward of an asylum should have no control or concern with the management or direction of the patients, attendants, servants, or indeed with any of the every day work of the asylum, saving the tailors' and shoemakers' shop, whose work it is his duty to supply elsewhere, should it fail in the asylum. A steward who devotes his energies to the daily supply and issue of the provisions, clothing, fuel, &c., of a large establishment, and to the accounts and returns involved in these issues, has his time fully occupied. When, in addition, to the duties required by the Commissioners in Lunacy from the clerk of the asylum are imposed on him, the argument is conclusive that he can have no time to devote to other duties, and should not be held responsible for any control or direction of the household, attendants, or artizans.

The duties of the steward and clerk of the Sussex Asylum are :—

1. The charge of all the stores, books, and documents belonging to the establishment.
2. The personal superintendence of the delivery and issue of all stores, provisions, and clothing.
3. The keeping of the several accounts and other forms of the asylum, in conformity with the requirements of the Act of Parliament.

Housekeeper. In most asylums the duties of housekeeper and head female attendant are conjoined in the stately person of the matron, to whom, in one of the Middlesex asylums, the ridiculously extravagant salary of £200 a year, besides her rooms and rations are allowed. I have yet to make the acquaintance of the woman whose work I consider worth this salary.

What is required in an asylum is a discreet, sensible woman, to take the same control of the domestic arrangements of the household as the housekeeper does in any other large establishment, public or private. Any one pretending to the manners or requirements of a lady is entirely out of place.

The duties of the housekeeper in the Sussex Asylum are :—

1. The charge and superintendence of the kitchen, laundry, officers' and servants' rooms, and the control over the domestic servants of the asylum.
2. The charge of the cutting out of the work supplied to the female wards.
3. A general supervision of the cleanliness of the wards, bedding, and such like, on both sides of the house.

She has thus in the care of the kitchen, laundry, and work-room ample occupation.

She has no responsibility as regards the patients, nor control over their attendants.

The Head-Attendants. Sufficient importance is not, I think, given to these two officers in our county asylums. Indeed their appointment is only of recent date, and the result of recommendations from the Commissioners in Lunacy. In one of the over-grown metropolitan asylums (in which asylums illustrations of the arrangements that ought not to exist in an asylum can mostly be found) these recommendations have not yet been attended to.

The head-attendant's office appears to me of the utmost importance ; I would rather bear with second-rate inefficiency from any other officer of the asylum. The steward might, by negligence, allow the quality of the clothing, or of the provi-

sions, to deteriorate ; or the housekeeper might neglect the kitchen or the laundry, and, after all, no very serious results to the patients follow. But in the case of the head-attendants, their shortcomings involve the ultimate object of the whole asylum in the curative treatment of mental disease. If they neglect their duty, the patients themselves, in their persons, in their comfort, in all that relates to their well being, must suffer.

The position in the asylum of these two officers should not be inferior to that of the steward or housekeeper, nor should their salaries be much less. It is difficult to break through formed prejudices, and committees may be slow to recognize the importance of the trust committed to the head attendants. Still the medical superintendent in the exercise of his discretionary powers can do much to sustain their position and authority in the house.

The duties of the head attendants in the Sussex Asylum include the entire direction (under the medical officers) of the wards, and attendants, and of the patients, and of all that relates to the patients. In this are involved the instruction, and superintendence of the attendants in their duty, the enforcing of the hours and discipline of the house, the visiting of the wards and supervision at meal time of the distribution of the diet, the examination of the quantity and quality supplied, the reception of patients on admission, the regulation of the attendants' leave, the issue of repairs and clothing, and other ward necessaries to be procured from the asylum stores.

The occupation and employment of the patients, perhaps the most important curative agent, is mainly under their supervision.

Artizans and Attendants. The permanent artizans of an asylum are the engineer, the smith, the carpenter, the bricklayer, the painter and glazier, the tailor, the shoemaker, the baker, the brewer. I think it best that these several artizans should be simply employed as tradesmen, at weekly wages out of the house. All attempts to get the double work of attendant and artizan result in a second-rate artizan and third-rate attendant. I tried it in one instance with an artizan-attendant, who brought from a private pauper asylum the highest recommendations, and he nearly brought about, the first day I employed him, by his neglect of duty, the only approach to an accident I have had since the opening of the asylum.

In the same way I think if the laundry-maids are up to their work, and do it, that any attempt to make ward attendants of them will fail. This also I learnt by experience here.

A first-class laundry-maid will not undertake ward duty, an inferior laundry-maid is like all inferior servants, not worth house-room. Skilled labour, at fair wages, is, in the long run, a saving over unskilled labour, however cheaply (supposed) paid, and nowhere does this truth hold with more force than in an asylum.

The wages in all our county asylums are too low. In the Government prisons the value of skilled labour is better understood.

At first I had the idea that by low wages, I should ensure a consequent reduction of the weekly rate. I owe it to my friend Dr. Campbell, that I avoided this serious mistake, and early in our proceedings submitted to the visitors a scale of wages, high as compared with one or two of the neighbouring asylums. I know that the patients have gained by the step, and I also believe that the ultimate economy resulting from the uniform arrangements of a well ordered house, will leave the county no loser.

In the Government prisons, under the inspection of Sir Joshua Jebb, the following rate of wages is paid to the warders.

Assistant Warders	£52 a year,	rising £1 a year to	£62
Warders	£55	„ £1 5s. „	£67 10s.
Principal Warder	£65	„ £1 10s. „	£80

In addition, a daily ration of 1lb meat, 1lb potatoes, and 1lb bread is allowed to each warder; they do not sleep in the prison. Of course such wages command the market.

In the Sussex Asylum the wages of the male attendants* begin at £28, and rise £1 a year, to £30, those of the female attendants run from £15 to £20. With my present experience, I would decidedly place these wages higher, rather than lower, were I advising a change. The artisans average from 30s. to 21s. a week. It is my intention, from time to time, to advise that an increase on this scale should be granted, as the reward of long or skilful service.

“If I may rely on my own observations,” says Dr. Conolly, “no object connected with the management of the insane has received less adequate attention than the selection of proper attendants, their proper treatment, their just government, and their instruction in the various, and peculiar, and exhausting duties, which necessarily devolve upon them. The important and delicate task of regulating the conduct of persons of unsound mind, of controlling excite-

* See *List of the Establishment* at the end of this paper.

ment, restraining waywardness, or removing mental depression, is, unavoidably, confided to persons of limited education; but these are too frequently chosen with little regard to their disposition, temper or intelligence. They are permitted to commence their duties with as little preparation as if their office was merely that of a servant, and are governed either with severity or injustice, or without the consideration and indulgence requisite to support their patience, and to encourage them to be considerate and indulgent to those on whom they attend, and who are solely in their power.

Of all the physician's remedial agents, they are the most continually in action; all that cannot be done by his personal exertion depends upon them. The character of particular patients, and of all the patients of a ward, takes its colour from the character of the attendants placed in it. On their being proper or improper instruments, well or ill-trained, well or ill-disciplined, well or ill-cared for, *it depends whether many of his patients shall be cured or not cured; whether some shall live or die; whether frightful accidents, an increased mortality, incalculable uneasiness and suffering, and occasional suicides, shall take place or not.*"

In opening a new asylum it is desirable to procure the services of attendants accustomed to the insane. I have not found those trained in private asylums at all equal to those attendants whom I have engaged with recommendations from Hanwell, Worcester, and Brentwood.

When an asylum is once established I agree in the opinion expressed by Dr. Bucknill before the Parliamentary Commission of last year, that it is better to train attendants out of the material of the county. I have already six promising attendants who have learnt all their duties in the Sussex Asylum. For male attendants I think farm servants on the whole the best material. I have been disappointed in the military pensioners I have tried. They are all eye-servants, and require more looking after than the patients. For female attendants young house-maids under twenty are by far the best. Of this I have no doubt whatever.

As in private life, so also does it hold in a public asylum, that the tone and character of the servants depend more upon their master and the example set to them than upon any thing else. The sense of this responsibility adds to the anxiety of the medical superintendent's charge

While on this subject I would add one extract from Miss Nightingale's *Notes on Nursing*, referring to the necessity of

training nurses for their work. "The every day management of a large ward, is not this matter of sufficient importance and difficulty to require learning by experience and careful enquiry, just as much as any other art? They do not come by inspiration to the lady disappointed in love, nor to the poor workhouse drudge hard up for a livelihood. And terrible is the injury which has followed to the sick from such wild notions. In this respect (and why is it so?) in Roman Catholic countries both writers and workers are in theory, at least, far before us. They would never think of such a beginning for a good working Superior or Sister of Charity. And many a superior has refused to admit a *postulant* who appeared to have no better vocation or reasons for offering herself than these. It is true we make no vows. But is a vow necessary to convince us that the true spirit for learning any art, most especially an act of charity aright, is not a disgust to every thing, or something else? Do we really place the love of our kind (and of nursing as one branch of it) so low as this? What would the Mère Angélique of Port Royal,—what would our own Mrs. Fry have said to this."

Diet. The diet of our asylums vary. The new asylums are more liberally dieted than the old. The largest amount of animal food is given in the Essex Asylum. These dietaries all contain a daily allowance of beer, which in practice I have always found to be very poor stuff indeed. I have followed the practice of other asylums in issuing a daily half pint (at least) of weak beer, worth about 7d. a gallon, but except for the irritation which its withdrawal would cause to the patients, I think water would be a preferable drink. In the prisons water only is issued, and all the patients gain flesh on it. No one could wish to see more robust looking men than are to be found at Millbank. Besides I entirely doubt if this weak beer have the slightest nutritive value in the diet scale. I think it would be wiser to issue water to the healthy patients, and to give Reid's London Stout to those whose health would be benefitted by an alcoholic stimulant. Wine I consider superfluous in an asylum. A little good Scotch whiskey or gin answers every purpose of a strong stimulant-sedative, at a third of the cost.

For the attendants good home-brewed beer should be provided. Indeed, too much care cannot be put on the comforts (including diet) of the attendants of an asylum.

The following is the diet scale now in use in the Sussex Asylum :—

DIET SCALE.

Week Days	Breakfast at 8 0 a.m.				Dinner at 1 0 p.m.												Supper at 6 0 p.m.										
	Males		Fem.		Males.						Females						Males.		Females								
	Bread	Cocoa	Bread	Cocoa	Bread	Uncooked Meat	Dumpling	Pie	Suet Pudding	Mutton Broth	Vegetables	Bread	Beer	Uncooked Meat	Dumpling	Pie	Suet Pudding	Mutton Broth	Vegetables	Bread	Butter	Sweet Cake or Coffee	Bread	Butter	Sweet Cake or Coffee	Tea	
Sunday	6	1	5	1	6	4	4	12	1	1	1	5	4	4	4	8	8	1	1	6	1	6	1	5	4	1	1
Monday	6	1	5	1	6	4	4	12	1	1	1	5	4	4	4	8	8	1	1	6	1	6	1	5	4	1	1
Tuesday	6	1	5	1	6	4	4	12	1	1	1	5	4	4	4	8	8	1	1	6	1	6	1	5	4	1	1
Wednesday	6	1	5	1	6	4	4	12	1	1	1	5	4	4	4	8	8	1	1	6	1	6	1	5	4	1	1
Thursday	6	1	5	1	6	4	4	12	1	1	1	5	4	4	4	8	8	1	1	6	1	6	1	5	4	1	1
Friday	6	1	5	1	6	4	4	12	1	1	1	5	4	4	4	8	8	1	1	6	1	6	1	5	4	1	1
Saturday	6	1	5	1	6	4	4	12	1	1	1	5	4	4	4	8	8	1	1	6	1	6	1	5	4	1	1
Total	42	7	55	7	18	34	8	16	12	3	24	15	34	30	8	12	8	3	16	42	34	7	35	34	7	7	

Extra Diet for Sick. } Extra Meat Dinner Mutton Chop, Fish, Eggs, Mutton Broth, Beef Tea, Milk, Arrow-Root, Rice Pudding, Bather Pudding
 (At the discretion of the Medical Superintendent.) } Sago, Barley Water, Oranges, Biscuits, Calf's Foot Jelly, Porter, Fort Wine, Sherry, Brandy, Gin, Whiskey.

Extra Diet for Working Patients. { ½ Pint Beer, 2 oz. Cheese, at 11 A.M., and ½ Pint Beer at 4 P.M., the Laundry Patients ½ Pint Tea, and 4 oz. Cake.
 Attendants' and Servants' Diet. { Men, 1 lb. Uncooked Meat; Women, ½ lb. ditto; ½ lb. Vegetables, 1 lb. Bread, 1 Pint Coffee, 3 Pints Beer, daily. 2 oz. Tea, ½ lb. Sugar, ½ lb. Butter, 1 lb. Cheese, weakly. ½ lb. Meat may be exchanged for Pudding or Pie, at the discretion of the Housekeeper.

COCOA FOR ONE HUNDRED PATIENTS . . . ½ lb. Cocoa, 6½ lb. Treacle, 3 Gallons Milk, or more if the Dairy yield it.
 COFFEE . . . 1½ lb. Coffee, ½ lb. Chicory, 4 lb. Sugar, 13 Pints Milk.
 TEA . . . 1 lb. Tea, 4 lb. Sugar, and 2 Gallons Milk.
 MUTTON BROTH . . . { The Liquor of the Cooked Meat, Bones, &c., 25 lb. Meat, 3 lb. Scotch Barley, 4 lb. Rice, 25 lb. Turnips, Cabbage, Parsnip, Leek, Onion, or other Vegetables, Herbs, Salt and Pepper.
 MEAT PIE . . . Dripping Crust, 31 lb. Flour, 60 lb. Potatoes, 13 lb. Meat. Fruit Pie occasionally instead.

In this diet scale, cocoa and bread are given at breakfast in order to reduce the cost. It is a much cheaper, as well as more nutritive article than tea, and saves the expense of butter. If the dairy were in full operation, and it could be made entirely with milk, I should consider cocoa so prepared, the best article for breakfast to be found. A proportion of bread is made every day with the unsifted wheat, the home-made bran bread, and which many of the patients prefer. It is much more wholesome. Sweet cake, made with lard, sugar and carraway seed, is a fraction cheaper than bread and butter, and I find is better liked by the patients.

For the Sunday dinner, I gave in the first instance, treacle with the suet pudding, but have since substituted a quarter of a pound of pork or bacon. I made Sunday the *jour maigre*, in order to lessen the household work, and also because no work being done by the patients that day, they require, I think, less nourishment. On three days of the week, I have the fresh meat, generally mutton, cooked as Scotch broth. This, as will be seen by a reference to its composition, is a very different article from English hospital soup, made out of the liquor of the meat of the day before. The rice, barley, and vegetables, with the fresh meat, make a most savoury and nutritive mess, and it is quite a mistake to think that such diet predisposes to diarrhoea. Vegetable acids do not produce diarrhoea. Such opinions are the reflex of the views, which treated, or rather aggravated, dyspepsia, on a mutton chop, dry bread, and a glass of sherry. It was the Leamington plan of practice, but a very ignorant one, in my opinion. My mutton broth is so appreciated, that the officers of the house generally pay it the compliment of taking a bason of it for luncheon. On the two full meat dinners, I have the allowance of bread cooked in the shape of Norfolk dumplings, *i.e.*, merely dough steamed instead of baked. They are light and digestible, and make a pleasant variety. The meat is roasted one day and baked the other. We have thus very little dripping. All the nourishment of our meat is consumed in the broth, and we have to buy lard for the seed cake, having only enough dripping to make the vegetable pie once a week, on Thursdays. There is just enough meat added to give flavour and gravy to these pies.

If expense were not an object to be attended to in framing such a diet scale, I should have increased the weekly allowance of meat (uncooked) to 56 ounces, instead of the

34 ounces allowed, and I suppose most superintendents would express a similar opinion.

The extra diet for the sick is unlimited. In practice I hardly allow anything but beef tea thickened with sago and a few puddings. I entirely discountenance the daily dram drinking, which prevails to a large extent in one of the Middlesex asylums. The idea of quieting patients by such indulgences is a fallacy. The more they get the more they ask for, and I think the whole system bad. I should very much like to stop all the tobacco, and which I now issue contrary to my better judgment.

The attendants' and servants' diet, as will be seen by the scale, is very liberal. It is well cooked and served, and they live well, as persons with hard work and long hours must do. Their home-brewed beer is the best I have tasted in any asylum. I have allowed an extra pint of coffee for breakfast. The coffee, tea, and cocoa are bought direct through a London broker, and are so good that I purchase my supply from the stores and use them at my own table. The coffee and cocoa are bought in the green bean and roasted in the asylum.

The contract prices owing to our distance from a large town run high. We have all along been paying 7d. a lb. for meat.

The Site. The asylum is situated on the southern border of Hayward's Heath, about a mile and a quarter from the Hayward's Heath Station on the Brighton line, which station is 12 miles from Brighton, and 38 miles from London Bridge. The estate comprises 120 acres of well wooded, undulating ground, sloping rapidly to the south, and commanding a view of the entire range of the South Downs.* Since the erection

* The following poetical remarks on the beauty of our site occur in one of the published Lectures by the late Frederic Robertson of Brighton, a thinker, whose premature death must be deplored by all who wearied with the strife and narrow thoughts of our popular theology, look with hope to the broader teaching of the Church of the future.

"Nay, even round this Brighton of ours, treeless and prosaic, as people call it, there are materials enough for Poetry, for the heart that is not petrified in conventional maxims about beauty.

"Enough in its free downs, which are ever changing their distance and their shape, as the lights and cloud-shadows sail over them, and over the graceful forms of whose endless variety of slopes the eye wanders, unarrested by abruptness, with an entrancing feeling of fulness, and a restful satisfaction to the pure sense of form. And enough upon our own sea-shore and in our rare sun-sets.

"A man might have watched with delight, beyond all words, last night, the long deep purple lines of cloud, edged with intolerable radiance, passing into orange, yellow, pale green, and leaden blue, and reflected below in warm, purple shadows, and cold green lights, upon the sea, and then the dying of it all away. And then he might have remembered those lines of Shakespere; and

of the asylum, Hayward's Heath has been enclosed under the Enclosure Act, and sold in building lots, so that we shall have a town of villas about our gates, the resort of the Brighton citizens during the hot summer months. At present, things look very like an American settlement, and have a most unfinished aspect.

Hayward's Heath is about the centre of the county of Sussex, and railroads converge here from every part of the county; the London and Brighton, the East Grinstead Branch, the Eastbourne, the Hailsham and the Uckfield Branches, and the Lewes and Hastings lines from the east, and from the west the Mid-Sussex and the Worthing and Chichester (south coast) lines render Hayward's Heath a central station, singularly suited for the site of an asylum requiring ready railway access to every part of the county.

It is not an easy matter to purchase freehold land for a county lunatic asylum, as the recent experience of the neighbouring county of Dorset shews, and I think the Visitors are to be congratulated on their success, in procuring at a reasonable sum, so large an estate (120 acres) in this central site, and within such easy access of the railway. This facility of access leads to more frequent visits of the poor to their relatives and friends, visits of incalculable value as curative moral agents in the treatment of insanity.

A site within two or three miles of Brighton or Worthing would have been more desirable, had such been possible. Either of these towns would have given us the command of

often quoted as they are, the poet would have interpreted the sun-set, and the sun-set what the poet meant by the exclamation which follows the disappearance of a similar aerial vision :

" We are such stuff
As dreams are made of ; and our narrow life
Is rounded with a sleep."

" No one has taught us this so earnestly as Wordsworth, for it was part of his great message to this century, to remind us that the sphere of the poet is not only in the extraordinary, but in the common and ordinary.

" The common things of earth and sky
And hill and valley, he has viewed
And impulses of deeper birth
Have come to him in solitude.

From common things, that round us lie,
Some random truths he can impart ;
The harvest of a quiet eye,
That sleeps and broods on its own heart."

" But of course, if you lead a sensual life, or a mercenary or artificial life, you will not read these truths in nature. The faculty of discerning them is not learnt either in the gin-palace, or the ball-room. A pure heart, and a simple manly life alone can reveal to you all that which seer and poet can."

the markets for our daily supplies, and would also have furnished from their companies, water and gas at a more reasonable rate than they can be provided for in a single establishment. The vicinity also of a town would, beyond this economical view of the question, have had the farther advantage of affording change and amusement to the patients, and relaxation to the officers and attendants when relieved from duty. It is, I think, Sidney Smith, who says in one of his letters, that it is no joke to be three miles distant from the nearest lemon; now, we are twelve miles from the Brighton shops, and the railway fare is 3s 6d. Hence the communication between the asylum-staff and Brighton is only occasional.

A large number of the English county asylums have the disadvantage of an isolated site; the Essex is the only asylum I can recall, which is less than three or four miles from the county town, and in this instance it is near that poor little place Brentwood, instead of Colchester or Ipswich. Four miles, and the worst road in England, lie between the county asylum and the city of Oxford; the Cambridge Asylum is good four miles from that seat of learning, and so also the asylum at Michelover from Derby, Bracebridge from Lincoln, &c., &c. In Sussex we have the advantage of being within a mile and a quarter of a central railway station, and within an hour's ride of the great metropolis, which is after all, the centre of everything in England.

The works at the asylum were commenced in June, 1857, and, together with the engineering works, completed in March, 1859. The patients were admitted for the first time on the 25th July, 1859; it was intended that they should have been removed from Bethnal Green in March, but unexpected difficulty in the sinking of the artesian well arose, and so delayed their admission.

The architect of the asylum is H. E. Kendall, junr., Esq., of Brunswick Square, who built the Essex Asylum at Brentwood. The contractors were Messrs. Ayres and Co., of Dover, who, unfortunately, obtained the engineering contract also; not, in my opinion, a desirable arrangement.

General Plan. The general design of the building will be seen by a reference to the ground plan. The form of the main building for the accommodation of the patients is a single longitudinal line, in length about 800 feet, facing almost due south. At each end of this line are built, to the north, the workshops and laundry, and to the south a small detached wing, (one story) which can accommodate twelve

patients. The centre front of the main building is occupied by the recreation hall on the ground floor, and by the medical superintendent's rooms above; while the the north portion of the centre building is devoted to the kitchen, offices, committee room, officers' rooms, &c., &c. In the open court in the centre building are placed, underground, two boilers for supplying the house and kitchen with steam and hot water, and a small engine attached to the original well. In describing the position of the laundry I shall have occasion to notice the advantages as regards the working expenses which would have resulted had it been placed near the central building, instead of at the western extremity. Mr. Kendall informs me that in the new plans which he has submitted to the visitors of the Dorset asylum he has introduced this alteration, and brought the laundries and workshops in close connection with the main central building.

The style of architecture is Lombardic. Its outline is most picturesque, and seen from the Downs, or any of the surrounding county; it is, in an architectural point of view, most effective. The varied coloured brick-work, in which it is finished, gives it a most bright and cheerful appearance. I never saw a building look less like an asylum, or have less appearance of confinement or restraint about it, and yet so efficient are the internal arrangements for the safety of the patients, that I have not had one instance of escape since the opening of the asylum.

The asylum will accommodate 450 patients—an equal number of both sexes. It has, besides, accommodation for the medical superintendent, the chaplain, assistant medical officer, the steward, housekeeper, the asylum attendants and servants. The offices are most complete, and well arranged, and adapted for an asylum of 800 patients. Should the asylum, therefore, require enlargement, the only outlay to be incurred will be the patients' sleeping and living rooms; and the asylum is so designed by Mr. Kendall as to be capable of such further extension without spoiling (as has been the case at Colney Hatch) the simplicity of the original design.

A reference to the ground plan will shew that the form of the main building, for the accommodation of the patients, is a single longitudinal line, in length about 800 feet, facing almost due south, and commanding an uninterrupted view of the entire range of the South Downs from the windows of the wards and from the airing terraces.

The centre building between the wings is occupied by the

recreation hall, the asylum kitchen and offices, the stores and private apartments of the steward, housekeeper, &c. On the first floor the committee rooms and entrance hall occupy the north front, looking towards the lodge and chapel; the medical superintendent's rooms the centre south front. The workshops and laundry project at the end of each wing to the north, while a small detached ward, the refractory, runs south on each side.

Internal Arrangements. The central building between the wings as shewn in the ground plan, is, on the ground floor, devoted to the offices and stores, including the kitchen. Under the entrance hall, (30, 31, 32, 33) are the cook's room, the hardware, the earthenware, and grocery stores. The space between 31 and 32 forms a large coal cellar for this part of the building. On each side of these offices are the sitting-rooms of the steward and housekeeper, (29, 30) with side doors opening on the main north approach. On the farther side of these doors is a detached building forming, on the male side, the steward's offices and store (25, 26, 27), the latter a large lofty room with open-timbered roof, with an outer door opening on the male working court for the delivery of stores. A similar building on the female side is devoted to the housekeeper's store, the head attendant's sitting room, and the reception room (22, 23, 24). On the other side of this corridor is the kitchen, scullery, pantry, servants' hall, bread room, with fixed beer engine, officers' pantry, and vegetable room, thus forming the second part of the centre ground floor. It has a corridor on the south side also looking on to the small open-paved court, in which are situated, under-ground, the steam boilers and a well for the supply of the centre building.

The kitchen is large, well lighted and ventilated, the roof open-timbered, with a lantern. The kitchen and all these centre offices and corridors are paved with black and red tiles in fancy patterns. The fittings were by the kind permission of Dr. Campbell copied from those at the Essex Asylum. The cooking is done chiefly by steam, for which purpose six large steamers are provided. There is also a large kitchener, forming a hot plate and oven roaster, and a separate baking oven in the scullery. The kitchen slide for the distribution of the provisions opens by a window on the south corridor, which is the centre of the two corridors of communication leading to the male and female wings. Under the north centre corridor and the bread and vegetable rooms (18, 19, 20)

is a large under-ground meat larder, also with a door for the access of meat, which opens into the male working court.

The south front of the centre building is occupied on the ground floor by the assistant medical officer's rooms, the dispensary (10, 11, 12), the recreation hall, 60ft. by 25ft. (9), and the Medical Superintendent's kitchen, &c. (15, 15, 15). The other two stories of the south centre front form the public rooms and bed-rooms of the Medical Superintendent, and include also the Chaplain's rooms. The two water towers flank this south centre building with a large room above each, fitted, on the one side for the the female house servants, and on the other as an observatory or smoking room for the Medical Superintendent. The view from these two towers, lighted on all four sides, is very extensive, ranging from Newhaven up to the Surrey Hills.

Under the recreation hall (9) is a large dairy and beer cellar, both under-ground. The beer is conveyed in metal pipes from the brewhouse (39) across the male working court and under the corridors to this cellar, where it delivers itself by its own gravity.

These offices are well designed, central and together, and are fitted for the use of an asylum for 800 patients. Great credit is, I conceive, due to Mr. Kendall for the design of this central building. I have nowhere seen anything more compact or better fitted for its purpose.

On the upper floor of the centre building, on its northern side, is the main entrance, ascended by a flight stairs, with the entrance hall, porter's lodge, committee rooms, visiting room, Medical Superintendent's office, and head attendant's (male) room. The entrance hall is very handsome. A private door leads from it to the Medical Superintendent's rooms. The only objection which I make to this central building is that the Medical Superintendent's rooms are thus placed in it. It is central certainly, and has easy access to all the wards. But it is also noisy, and the windows of the principal rooms, looking south, overlook the male and female terraces, not at all times a desirable prospect for ladies or young children. No bell rings in the hall or kitchen, which does not resound through the private apartments, and this, to a literary man, though a small matter, is yet a daily grievance. The recreation hall is directly under the library and dining-room. I must add that this small misery of noise is gilded by handsome spacious rooms, with their stone balcony and glorious prospect, and by the liberal manner in which the visitors have consulted my comfort in the fittings and furnish-

ing. I think the south centre building would have been more economically employed, looking to its extent, if fitted as wards and dormitories for the convalescent and orderly female patients. The inevitable extension of the female population of every asylum may possibly lead in future years to this application of the Superintendent's rooms, and to the erection on the grounds of a house of more modest dimensions and with more quiet.

Male and Female Wings. To the east and west of the central south front, just described, lie, with the same south aspect, the male and female wings, as shewn in the ground plan. These wings are three stories high. The ground and second floor are built alike, and contain the galleries and day rooms, as well as dormitories and single bed rooms. The third story is entirely devoted to sleeping accommodation. Each of the two wards on the ground and second floor (four in all) have been arranged for the day accommodation of fifty patients. The infirmaries, (16 and 17,) (originally on the suggestion of the Commissioners built as day rooms for the working patients—a plan I did not find to work) hold twelve beds each, and the small one-storied building, running south at right angles from the male and female wings (built as infirmaries) form the fifth (refractory) ward, holding thirteen patients. Each wing therefore, including the third dormitory story, has accommodation for 225 patients. The original design was for 200 of each sex.

A reference to the ground plan will shew the arrangement of the wards. They are each exactly alike. They consist of of a day-room (2), of a gallery (1), and of a dining-room (3). The entire length of these three rooms, which form the ward, is 113 feet. The dining-rooms of the adjacent wards communicate with a glass door. The galleries are 11 feet wide and 11 high. The roof is ceiled. The single rooms are 9 feet by 7 feet. The day rooms open into the passages at each end, from which there is a direct communication on to the terrace. At the end of each gallery is the bath-room and lavatory (7), with a double water-closet and urinal adjoining. The engineering fittings of the baths, lavatories, and water-closet are not satisfactory. Two of the single rooms (4, 4), leading out of each dining-room, are appropriated respectively for the scullery and ward store. The attendant's room (6) enters off the gallery (1), and is between two dormitories (5), each of which it commands by a side window. The recess under the stairs in the passage outside is on each side fitted as a slop and broom room. Each

ward has three open fire-places, one in the gallery, one in the day room, and one in the dining-room. There are also open fire-places in the dormitories and attendants' rooms. The windows are all cast-iron, of the Bethlehem Hospital pattern, opening in the lattice shape. The only objection I see to this window is that cast-iron never fits. For the purpose of ventilation this window answers better than any asylum window I have seen.

The galleries and day rooms are furnished in stained deal, from patterns designed by the architect; they are simple and elegant, and harmonize well with the style of architecture. The beds are of birch, French polished, with canvas bottoms, and all have horse-hair mattresses; they were supplied by Mr. Gregory, of Finsbury Square, upholsterer to Bethlehem Hospital. The bedding and patients' clothing were supplied by Messrs. Koope, of Sloane Street. The dinner and breakfast utensils are all white earthenware, with the arms of the county on each article; they were supplied by Mr. Sharpley, of Vauxhall Bridge Road, likewise one of the Bethlehem Hospital tradesmen. The wards throughout the house are laid with matting; each bed is provided with a piece of bed-side carpet. On the female side of the house, wash-hand stands with ordinary earthenware basins and jugs are used in all the dormitories.

At the back of each wing, as shewn in the ground plan, is a corridor of communication running the whole length of the building; it is glazed with rough plate glass on the entire roof, and paved with black and red tiles in fancy patterns. At each end of both wings is a wide, well lighted, stone staircase, with a door passing into the corridor of communication.

The third story in each wing has a passage in the centre with sleeping rooms on each side.

The proportion of single rooms are 124 to 326 in dormitories; two of the dormitories over the infirmaries and workshops (17, 35, 36) in the detached two storey building, hold each 20 beds; the others are much smaller.

At the farther end of each wing, projecting southward, as shown in the plan, is a small, detached, one storey building, very ornamental externally to the front, and designed by the architect as the infirmary of each department; it consists of a day room, gallery, small dormitory, attendants' room, and several single rooms. I have appropriated it to the refractory ward; it has ready access to the smaller airing court shown in the plan, and the building being detached, all noise at night is cut off from the main building. The removal of a

dozen noisy dangerous patients from the wards, into a separate building, promotes peace and quiet throughout the house, whether the term refractory be applied to the ward or not; noisy would be a better term, as it is more discord than rebellion that reigns in these regions.

At the farther end of each corridor of communication, is a detached two storey building (16, 17), communicating on the ground floor, with the laundry corridor, and with the workshop corridor on the male side. On the second storey are the two large dormitories with an attendant's room between. The rooms marked on the ground plan 16, 17, were intended as day rooms for the artizan and laundry patients, and are each furnished with an attendant's room, (6) bath room and lavatory, (7) and water closet. I have given up the idea of employing them for the working patients; I do not think it desirable to employ either the artizans or laundry-maids as ward attendants. A better class of artizans is obtained by engaging them as out-door attendants, and confining them strictly to their workshops, while if the laundry maids do their duty in the laundry, they have work enough to do from six to six, without undertaking the charge of patients. I have, therefore, arranged that the day residence and care of all the patients should on each side of the house, belong to the four wards, with their gallery, day room, and dining room, as shown in the ground plan (1, 2, 3). When the house is full, this will give fifty patients to each ward. In the two convalescent and quiet wards two attendants will suffice; in the epileptic and admission wards, which are those on the ground floor, three will be necessary.

This working day room (16, 17) is appropriated to the infirmary on each side; it is 30 feet by 33 feet, it has a southern aspect and ample light,* having seven large windows on two

* "It is the unqualified result of all my experience with the sick (says Miss Nightingale) that, second only to their need of fresh air, is their need of light; that, after a close room, what hurts them most, is a dark room, and that it is not only light, but direct sunlight they want. I had rather have the power of carrying my patient about after the sun according to the aspect of the rooms, if circumstances permit, than let him linger in a room when the sun is off. People think the effect is upon the spirits only, this is by no means the case. Without going into any scientific position, we must admit that light has quite as real and tangible effects upon the human body. * * * *The sick should be able, without raising themselves, or turning in bed, to see out of window from their beds, to see sky and sunlight at least, if you can show them nothing else, I assert to be, if not of the very first importance for recovery, at least something very near it. And you should, therefore, look to the position of the beds of your sick, one of the very first things. If they can see out of two windows instead of one so much the better. Again, the morning sun and the mid-day sun, the hours when they are quite certain not to be up, are of more importance to them, if choice must be made, than the afternoon sun.*"—Florence Nightingale. *Notes on Nursing.*

sides of the room ; on the third side is the fire-place, fitted with a kitchen oven range (to keep the necessary beef tea, &c. hot,) the fourth side opens into the bath room, scullery, water closet, and attendant's room. The beds, twelve in number, are ranged against the wall as in any other hospital ward, between the windows, *thus affording light on each side of the bed*. The table is in the centre of the room ; two couches are against the fire. Three of the beds are iron, with German spring matrass, (as used at Guy's Hospital) and which, I think, with the aid of a water pillow, is a cleaner and better contrivance for bed-ridden patients than the water beds. The walls are hung with illuminated texts for the Christian Seasons, a series of which, on glazed canvas, can be had at the National Society's depot for 12s.

I am very much pleased with the success which has attended this alteration of the Infirmary.

Internal Decorations. The internal fittings are of the most simple and inexpensive. The wood-work is all deal, stained and varnished. When this process is carefully done it looks very well. I was particularly struck with the finished manner in which the deal is stained and varnished at the Idiot Asylum at Red Hill. I suspect, however, that it will not stand much wear, and that for the use of an asylum, oil paint will, in the long run, prove a more efficient means of protecting the wood. It certainly looks more comfortable, and has a cleaner appearance than the staining. The walls throughout are brick, lime-washed of a yellow tint. I think these brick walls better than plaster for the wards of an asylum, and notwithstanding the progress in decoration recently made in some asylums by even hanging paper on the walls of the wards, I still give the preference to the white-washed brick wall ; painting the lower part in oil colour to prevent the patients' clothing being soiled with the lime. A neutral tint mixed with the lime relieves the deadness of the white, and is, with a southern aspect, less trying to the eyes. I am pleased to have the support of Miss Nightingale in my objections against papering the walls of an asylum.

In her *Notes on Nursing* (a pamphlet which should be studied by every man and woman who in any way is concerned with the care of the sick), she says, "*As for walls, the worst is papered walls ; the next worst is plaster. But the plaster can be redeemed by frequent lime washing ; the paper requires frequent renewing. A glazed paper gets rid of a good deal of the danger. But the ordinary bedroom paper is all that it ought not to be. I am sure*

that a person who has accustomed her senses to atmospheres, proper and improper, for the sick and for children, could tell blind-fold the difference of the air in old painted and in old papered rooms, *ceteris paribus*. The latter will always be musty, even with all the windows open. The best wall now extant is oil paint. From this you can wash the animal exuvia. These are what make a room musty. The best wall for a sick room or ward that could be made is pure white non-absolvent cement, or glass, or glazed tiles, if they are made slightly enough. Air can be soiled just like water. If you blow into water you will soil it with the animal matter from your breath. So it is with air. Air is always soiled in a room where walls and carpets are saturated with animal exhalations."

The walls of the official rooms, entrance hall, and corridors are all papered. Oil paint would have been better and more durable.

Ventilation and Warming. The Commissioners in Lunacy in their *Suggestions and Instructions*, have a short paragraph, s. 26, which comprises the principle of all efficient ventilation. "The ventilation (they state) should generally be provided for by means of flues taken from the various rooms and corridors, into horizontal channels, communicating with a perpendicular shaft, in which a fire box should be placed for the purpose of extracting the foul air."

This seems simple enough to read and understand, and yet in practice how often do we find the most carefully contrived systems of ventilation fail. The system of ventilation at the Sussex Asylum is an illustration of the truth of this observation. According to Mr. Kendall, "all the wards, galleries, day and dining rooms, and the dormitories, are warmed by open fires, and they are ventilated by opening doors and windows, the foul air being drawn off both from the galleries and all the rooms by means of vertical flues in the walls, communicating with a large foul air chamber, constructed horizontally in the roof, and connected with ventilating towers over the staircases, so as effectually to carry off the vitiated air. This, (Mr. Kendall adds) with opening windows, is as perfect a system as can well be adopted, though simple and non-costly."

During the nine months the asylum has been open, I have, in every alternation of temperature, carefully tested this system of ventilation. I have not found it as perfect in practice as the above description of the design would lead me to expect. In hot weather, from the absence of any extracting power, an

atmospheric balance is early in the day established, and the flues of the hollow walls cease to act at all ; while, in certain states of the wind, the foul air is forced before the descending current back again into the wards and dormitories.

Divested of architectural description, this system of ventilation resolves itself simply into openings into the hollow walls placed near the ceiling in the day rooms, dormitories, and single rooms, by which the foul air may, if it will, pass up through the hollow walls into the roof below the slates, and so pass into the atmosphere. The ventilating towers are merely architectural ornaments, and the large horizontal foul air chamber is not air-tight in its construction, and hence serves no purpose.

This system can hardly be termed one of artificial ventilation, which term, as generally understood, supposes an artificial aid to the removal of the foul air, and a similar arrangement for the supply of pure fresh heated air to take its place. If the horizontal air-shaft were air-tight, and an extracting power existed at the farther end of it, the vertical flues in each ward for the exit of the foul air, might be found sufficient and the open doors and windows trusted to for a supply of fresh air. Such a system, however, would be at best a makeshift. In my opinion, no system of ventilation can be considered perfect which does not embrace in its design the means of supplying pure warm air to replace the vitiated air removed by the ventilating flues. If such a supply of pure warm air be not provided, it is self-evident that in winter the better the ventilating flues act, the more will cold draughts through doors and windows rush in to replace the air removed ; while in summer, so soon as an equilibrium of temperature, inside and outside the building, is established, all exchange of air, *i.e.*, all ventilation will cease.

We are thus even inferentially led to the conclusion that, some artificial means of warming an asylum is a necessary element to the success of all attempts at systematic ventilation. I do not think *the Instructions and Suggestions* of the Commissioners in Lunacy sufficiently enforce this requirement ; although they incidentally speak in S. 25, of some simple system of hot water pipes in connection with the open fire stoves, or fires being desirable for the warming of large rooms and corridors. The Sussex Asylum is warmed entirely and solely with open fires. *Were I building a similar asylum, I should warm it throughout with hot water pipes on Price's principle, which works so admirably at the Lincoln County Asylum.*

I should, while retaining open fire-places in the day rooms, thus lessen the expense, and dirt of open fires and coals in the wards, and I should for the sick and debilitated especially ensure an equal temperature during the night and day. With the system of open fires only, the temperature at night, in frost, falls near the freezing point; a temperature which must exert a most injurious influence on the enfeebled circulation and restless habits by night of the insane.

It is much to be regretted that the Commissioners in Lunacy should have allowed, in the plans of this asylum, so fatal an omission as the absence of all means of artificial heat whatsoever. It is no easy matter to introduce an efficient system of artificial warming in a building erected and finished; *nothing more simple or inexpensive than to do so in the course of its erection.*

It is not within my present limits* to enter further into the general question of ventilation and warming of public buildings, and I have therefore to conclude this part of my descriptive notice of the Sussex Asylum with the statement that the system of ventilation and warming, if the primitive contrivance of open fires can be called a system, is neither efficient nor economical.

Water and Gas supply. I know of no asylum so well supplied with a constant flow of good water. I copy the following account of the water supply from Mr. Kendall's final report to the Visitors. "The asylum and all its offices are supplied with hot and cold water in the usual manner, viz., from large cast iron cisterns or tanks, constructed in the towers right and left of the centre building, each holding 10,000 gallons. From these tanks the distribution of cold water is effected throughout by means of wrought iron pipes. The tanks are supplied from an artesian well, sunk in a field at the bottom of the asylum grounds, about 2,400 feet distant from the building. The well is eight feet in diameter, and 70 feet deep, with a twelve inch boring below, to the depth of 127 feet. The water is of excellent quality, and so abundant that left to itself it would overflow the top of the well at the rate of 60,000 gallons per day. It is forced up to the asylum, the

* If any of my readers desire to see what I consider an efficient system of ventilation and warming, I would advise a visit to the new convict prison in course of erection under the superintendence of Sir Joshua Jebb, on Woking Common. It is built for 400 inmates, and it is effectively heated and ventilated with two boilers. As a perfect model of simple economical construction it is worthy of inspection by any one concerned with the erection of any public asylum or similar building.

height being about 150 feet, by steam power. The cast iron hot water cisterns, fed from the boiler rooms, are placed in the roofs over the wards, and supply at all times hot water to the baths, lavatories, and sculleries throughout."

Every part of the asylum is lighted with gas made on the grounds. There is only one service, so that the gas must either be left on all night or none burnt. At the Lincoln Asylum there are two services to the wards, one of which is constructed with the lights intended to burn only until bed time, and the other with the night lights in the galleries and dormitories. In fitting the gas service, the pipes have all been chiselled into the brick, a stupid arrangement, which obliges the wall to be cut to pieces when any leakage is suspected.

Drainage. The drainage is most extensive and complete, and leaves nothing to be desired further. The site is admirably adapted for perfect drainage, the falls being great every way, and full advantage has been taken of these capabilities. The surface water is kept distinct from the sewage, and the latter is collected in a series of tanks, placed at intervals throughout the vegetable garden, for the purpose of manure. The sewage water when it has passed the garden, is available for field irrigation.

The Workshops and Laundry. These, as will be seen by the ground plan, (35—40, and 44, 44), run at a right angle with the two wings due north, forming one boundary of the working court, the corridor of communication being a second, and the steward's store and offices the third. Both the workshops and the laundry are of most ample dimensions, indeed, I have not seen better arranged workshops in any asylum.

A reference to the ground plan will shew the distribution of the workshops. The tailors' shop (35) opens from the corridor of communication, and is connected by a glass door with the shoemakers' shop, (36); the matmakers' shop (37) is next in order, followed by the carpenters' (38); the brewhouse (which has been well fitted by Messrs. Langworthy and Reed, of Brighton,) joins the carpenter's shop (39), and the range is completed with the bakehouse, (40) which is provided with an excellent bread room, flour store and coal room. All these workshops open on the male working court, and thus have ready access, both to the steward's department and to the centre building, either across this court or by the corridor of communication; they are all supplied with hot and cold water, and are lighted with gas. They are, I think, most complete, and leave nothing to be desired. The smith's shop and forge

are attached to the gas house (42). The laundry department occupies, on the female side, a similar position to the workshops, (44, 44, 44). The sorting room, laundry, and wash-house are all of ample dimensions; there is a distinct building for the foul linen, which is an absolute necessity in every asylum; a special drying closet is attached to the foul linen wash-house; there are two other large drying closets in the laundry; an underground boiler supplies all the hot water and steam required for the washhouse. It is to be regretted that the complete steam washing apparatus of Messrs. Manlove and Alliott, of Nottingham, which they have so successfully fitted at the Lincoln Asylum, was not introduced into the original design. The cost necessary to add it, would be £700, a sum which the Visitors are not at present disposed to disburse for the purpose, although the apparatus was strongly recommended by the Commissioners in Lunacy at their recent inspection. It is also in successful operation at Colney Hatch. It includes a washing and wringing apparatus, worked with steam power, and is the most complete thing of the kind I ever saw. The labour entailed by hard washing, for so large an establishment, is drudgery, not curative employment, and, I think, so far as the cure and treatment of the patients is concerned, that the work in the wash-house does more harm than good. The entire length of the laundries is 145 feet.

The distance of the laundry from the centre of the building, where the hot water boilers and engine are, is an objection to the design, inasmuch as it entails the cost of a second boiler, to serve the drying closets and wash-tubs with hot water, steam the coppers, &c. The loss to the county, in this one particular, is not less than fifty pounds a year, including fuel and stokers' wages. At the Wilts Asylum, designed by Mr. Wyatt, two steam boilers serve alike the laundry and kitchen purposes. Another objection to the laundry being placed at one end of the building, is that only a small portion of the rain water from the roof can be diverted to its use. At the Wilts Asylum the tank in the wash-house receives half the rain water falling on the roofs, and holds 5,760 gallons. The waste steam-pipes also discharge into this tank, and Dr. Thurnam states, that the supply of soft water has been found quite sufficient for the purposes of washing. Hard water which has passed through a long range of iron pipes is very apt to stain linen brown, and linen washed with hard water never has the pure white colour that soft water imparts to it.

Airing Courts. The principal airing court for the patients

is a large terrace extending the entire length of the front of each wing, as shown in the ground plan. The land falling rapidly to the south, the wall is sunk in a hollow, and the view is uninterrupted by any break, and extends along the entire range of the South Downs. There is also on each side a smaller airing court with a south aspect, behind the refectory ward, and a third large airing court, termed on the ground plan the working court. No county asylum has anything approaching to this extent of airing court. The view from the south terrace reminds me of that from the Worcester Asylum grounds.

The Chapel. The chapel is detached and stands to the right of the principal entrance from Hayward's Heath, the porter's lodge being on the left. It is shown on the ground plan. It is a good piece of English Byzantine, and the design and execution are very creditable to the architect. At the Worcester Asylum the chapel is similarly detached, and is the only asylum chapel which has the slightest pretension to be compared with the Sussex asylum chapel. The situation at the Worcester Asylum is better chosen being to the south of the front airing terraces. At the Sussex Asylum the chapel rather blocks the view of the asylum from the Heath. It is the best imitation of a Venetian church which I have seen in England, but then I have not seen Mr. Sidney Herbert's new church at Wilton. It has a handsome campanile, with a belfry and clock room, standing on the north side of the chancel. The interior as well as the exterior, is executed in varied coloured brick-work, in the Lombardic style. The gas fittings are very handsome, from Messrs. Hart and Son, Cockspur Street. The clock was supplied by Messrs. Moore, of Clerkenwell. The chapel is fitted with open benches to accommodate 300.

The present services in the Chapel are :

Sunday. 10 a.m., Morning Prayer.

12 noon, Litany, Communion Service and Lecture.

8 p.m., Evening Prayer, with Sermon.

Daily. 8.30 a.m., Morning Prayer (on Wednesday and Friday, the Litany only is read.)

Tuesday, 7 p.m. A special service for the household only.

Holy Communion is administered on the Festivals, and on the third Sunday of each month.

Burial Ground. A piece of ground, of one and a half acre, has been set apart as a burial ground. It lies to the east of the stable-yard and gas-house, and it is sheltered on one side by a plantation. It commands a most beautiful prospect.

Farm. The farm consists of about one hundred acres, independent of the ground occupied by the buildings. It all lies to the south of the asylum. It is a clay soil, and has for years been farmed by an old Sussex farmer, who let things grow as they liked. Everything implied under the idea of modern farming has yet to be done. Twelve acres were drained last spring, and cultivated as a vegetable garden, and already with the labour of the patients, a fair supply of vegetables has been obtained for the house.

The farm house is an old Elizabethan farm house, and has been put in thorough repair for the occupation of the bailiff and under-gardener. The erection of the farm buildings has been deferred till spring. In the mean time we have made a beginning with a lot of pigs and half a dozen cows.

The perfect arrangement of the distribution of the sewage over the vegetable garden and farm, must ultimately make the farm a considerable item of profit in our accounts.

There is abundance of wood on the ground, and a beautiful dell of a mile in extent which will form a shaded walk for the patients.

The Establishment. I subjoin a copy of the list of the establishment, with the wages paid, contained in my report of last Christmas to the Visitors.

OFFICERS.

† Medical Superintendent	..	...	£450	0	0	per annum.
* Chaplain	..	..	200	0	0	"
‡ Assistant Surgeon	..	..	100	0	0	"
Clerk and Steward	..	..	90	0	0	"
Housekeeper	..	..	50	0	0	"
Head Attendant, Male	..	..	40	0	0	"
Ditto Female	..	..	30	0	0	"

ATTENDANTS AND SERVANTS, (MALE.)

8 Attendants, each	..	..	28	0	0	"
4 ditto "	..	..	24	0	0	"
1 House Porter	..	..	24	0	0	and Livery
1 Store Porter	..	..	24	0	0	per Annum
1 Engineer	..	..	1	10	0	per week
* 1 Carpenter	..	..	1	10	0	"
* 1 Bricklayer	..	..	1	5	0	"
* 1 Painter and Glazier	..	..	1	5	0	"
* 1 Baker	..	..	1	5	0	"
* Brewer, Tailor, Shoemaker, and Smith, each	..	..	1	1	0	"
* 1 Stoker	..	..	15	0	0	"
|| 1 Bailiff and Gardener	..	..	1	8	0	"
|| Assistant ditto	..	..	16	0	0	"

† Furnished house, light, fire, vegetables, and washing.
 ‡ Board, lodging, and washing.
 * Non-Resident.
 || Lodged only at Farm House.

|| Cow Boy and Farm Servant	..	..	12s 0	per week.
|| Carter	..	..	15s 0	"
ATTENDANTS AND SERVANTS, (FEMALE.)				
2 Attendants	..	..	£20 0 0	per annum
6 ditto	..	..	18 0 0	"
5 Attendants	..	..	15 0 0	"
1 Laundry Maid	..	..	21 0 0	"
2 Ditto	..	..	15 0 0	"
1 Cook	..	..	24 0 0	"
1 Kitchen and Dairy Maid	..	..	16 0 0	"
1 Scullery Maid	..	..	8 0 0	"
2 Housemaids	..	..	12 0 0	"

Cost of the Asylum. I annex a copy of the abstract of the capital account, as presented by the Visitors with their report at the January Sessions.

<i>Buildings, Land, &c.</i>	£	s.	d.
Purchase of land, timber, conveyancing, compensation to tenant for draining, and tenant's out-going valuation	7263	5	11
Buildings as per contract, additions to the building, including further accommodation, airing courts, &c., recommended by Commissioners in Lunacy	42404	15	6
Gas and Engineering works for house	3849	17	4
Water supply, sinking wells, engine house, engines and pumps	2118	14	6
Leveling, draining, enclosing, laying out and stocking kitchen garden, and supplying the same with water, and also cultivating and improving the farm	823	16	4
Earthwork on the estate generally, forming approaches to the asylum, roads, yards, slopes and terraces, levelling and draining the grounds	2273	6	2
Architect's commission and salary, and expenses of the Clerk of the Works	2756	1	2
Total for Building, Land, &c.	£61,309	16	11
<i>Establishment Charges.</i>			
Fittings	2695	18	0
Furniture, linen and bedding	8625	1	3
Clothing and drapery	1938	3	11
Coals and coke	449	12	2
Salaries, wages, and maintenance	1158	17	8
Medicines and surgical instruments	86	19	8
Printing, advertizing, stationery, books & forms	351	18	6
Rates, tithes, carriage of goods, and other incidental expenses	458	7	10
Insurance of building	101	17	6
Farming implements and stock	479	19	5
Total	16342	15	11
Clerk to the Committee, and Solicitor's charges for professional business, disbursements, &c., for the years 1854, 5, 6, 7, 8, 9	751	7	2
Costs of the Solicitors to Mortgagees for preparing their securities	300	10	6
Premiums to Architects, surveys, &c., previous to building	227	17	6
Total	£78,932	8	0

The total cost per head (450 patients) is thus £177, while the average cost of the new asylums exceeds £200 per head.

I would conclude this descriptive notice of the Sussex Asylum with a general examination of how far it fulfils the official requirements laid down in the Suggestions and Instructions, issued in 1856, by the Commissioners in Lunacy for the building of asylums. These instructions have reference to

I. Site.

II. Construction and arrangement of buildings.

I. *Site.* 1. The site meets every requirement of the Commissioners in Lunacy. It is perfectly healthy, and the rapid fall of the land to the south offers every facility for a complete system of drainage. The elevation is one the highest in the county. It is not near any nuisance. It is not overlooked nor intersected by foot-paths, but stands in a ring fence of its own.

2. The proportion of land, exclusive of what the building occupies, is exactly the requirement, one acre to four patients.

3. The site of the building is elevated, undulating in its surface, and has a fall to the south.

4. The building is placed on the northern boundary of the land, has ready access from the north, and the whole of the southern portion of the land is available for the undisturbed use of the patients.

5. The asylum is exactly in the centre of the county, and railroads from all sides meet at the Hayward's Heath station.

There is a constant supply from an artesian well of pure soft water. The minimum daily quantity is 60,000 gallons.

As regards site, therefore, the asylum meets every requirement of the Commissioners' circular.

The Scotch† Commissioners in Lunacy have added to their suggestions in reference to sites, a very important one which the English Commissioners entirely overlooked, and which the site at Hayward's Heath is very deficient in, viz: *That the asylum should be within such distance of a town as to command the introduction of gas, water, &c., and one of sufficient size to afford the means of amusement and recreation for the medical staff, the attendants, and such of the patients as might derive benefit from a change in the asylum routine.*

II. *Construction and arrangement of buildings.*

1. The general form, as will be seen on looking at the

† *Journal of Mental Science*, July, 1859. Annual Report of Commissioners in Lunacy for Scotland. (*Review.*)

ground plan, commands an uninterrupted view of the surrounding country, and free access of sun and air, while all the day rooms have a southern aspect.

2. The general entrance and offices are all on the north side of the building.

The building is certainly as cheerful and attractive as due considerations of economy permit; it is the brightest and most cheerful asylum I have seen.

4. The accommodation for the male and female patients is distinct on either side of the centre; the patients can be separated into five classes (exclusive of the infirmary), and the numbers in each class will require the services of two or three attendants.

5. The building consists of three stories, but the upper storey is devoted to sleeping accommodation only.

6. Associated dormitories, not in connection with the galleries, and other expensive curative arrangements have been provided over the infirmaries, (16, 17).

7. The chapel, and all the offices in the centre building, are sufficient to meet the prospective wants of the asylum, should the numbers be doubled.

8. The chapel is detached; simple, yet ecclesiastical, in all its arrangements.

9. The recreation hall is conveniently situate with reference to the kitchen, should it be found wise to use it as a general dining hall.

10. The officers of the establishment and domestic servants have been fairly provided with accommodation; only the servants' hall is small and badly lighted.

11. The proportion of single rooms is then about the third part, as advised by the Commissioners.

12. In the upper storey, wide corridors have been avoided, and a passage of moderate width adopted.

13. The stairs are of stone, built up without wells.

14. A staircase at both ends of each wing, as shown in the ground plan, enables visits to be made from one ward to another, without passing through the same wards on return.

15. The floors of the corridors, day and sleeping rooms are boarded; but the boards are not tongued, nor are they well laid, or of seasoned material. This is much to be regretted, and has already spoilt the ceilings, as after each washing of the floors part of the water stains through. There is no disconnection of the floor and joists at the internal doorways as advised by the Commissioners, nor, indeed, any protection from fire applied, nor any approach to a fire-proof construction.

Oak floors, as recommended for the day-rooms and corridors, and which might be cleaned by dry rubbing, would have been a great addition. The walls of the galleries and rooms are not plastered, but simply brick, white-washed, an arrangement which for hospital purposes I much prefer.

16. No associated bed-room contains less than three beds.

17. The height of each storey is the eleven feet recommended by the Commissioners. At Lincoln the wards are 12 feet 6 inches—a better height.

18. The associated dormitories and single rooms exceed the prescribed cubic measurement.

19. The day rooms are of the required size, afford ready communication with the grounds, and those appropriated to the aged and infirm are on the lower storey, as recommended.

20. The attendants' rooms are in each ward, placed between two dormitories, with a window looking into each.

21. The windows of the day rooms and corridors are large and cheerful. The architect has been very successful in his supply of light and air. They all open freely and with safety to the patient. The wall below each window is recessed for a seat. The windows in the dormitories and single rooms are large, and not more than four feet from the ground. Shutters are provided for the single sleeping rooms, but they are of inferior construction and workmanship.

22. All the doors open outwards, and are so hung that when open they will fold back close to the wall.

23. Each ward is provided with a scullery, a lavatory, a bath, water closets, and a store room, but they are not satisfactorily fitted. The style of architecture adopted would not admit of the Commissioners' most wise suggestion, that all water closets, lavatories, &c., should be placed in projections.

24. The infirmaries do not hold the proportion suggested of one tenth of the population resident. I believe half that accommodation to be sufficient for the wants of an asylum.

25. The day rooms and galleries are warmed by open fire places, as suggested by the Commissioners, and fire places also are built in all the associated dormitories.

The Commissioners, in their circular, suggest farther provision for warming the corridors, &c. I have already expressed my regret that all artificial means of heating has been omitted. I strongly entertain the opinion that all public buildings, such as asylums, hospitals, and gaols should be heated throughout by artificial means, and this is both on the ground of health, and also of economy in fuel and labour.

26. I have already stated that I consider Mr. Kendall's system of ventilation defective and imperfect. The Commissioners here recommend that ventilation should be provided for by means of flues taken from the various rooms and corridors into horizontal channels communicating with a perpendicular shaft, in which a fire-box should be placed for purpose of extracting the foul air. This is an excellent statement of what asylum ventilation should consist.

27. 28. These sections refer in detail to the construction of this system of ventilation, and to the care necessary in protecting flues and shafts of lathe and plaster from fire.

29. The drainage is excellent; glazed tubular pipes, with sufficient fall. The surface water is kept distinct from the sewage. The latter is collected in tanks, available both for agricultural and garden use.

30. Two airing courts on each side are enclosed, the number suggested by the commissioners. They are most successful. No asylum in England has such splendid airing terraces. The walls are entirely sunk in a ha-ha, as advised. The planting and cultivation has yet to be done.

31. Although the rain water is collected in tanks, and introduced into the wash-house, according to the suggestion of the commissioners, the tanks are too small, and the supply quite insufficient.

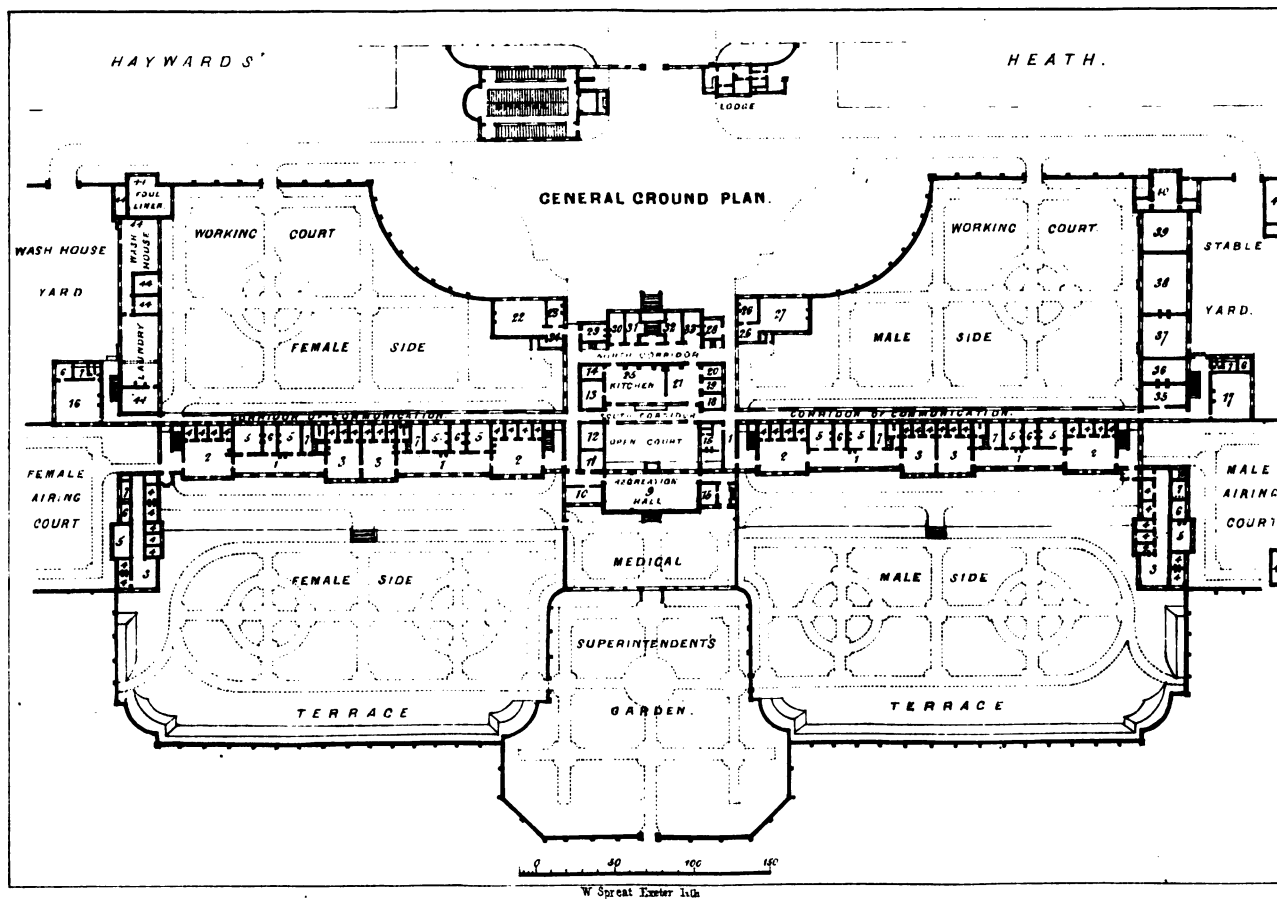
Lead pipes and reservoirs have been avoided. Iron pipes and slate and cast iron tanks have been used.

Lightning-conductors are provided for the chapel and centre building.

33. A suitable stable has been erected for the visitors and medical superintendent. The farm buildings are to be begun in spring. The old farm house of the property is in good condition, and occupied by the bailiff and under-gardener and their families.

The suggestions of the Commissioners, therefore, with the exceptions I have above indicated, have been carefully conformed with by the architect, and I may fairly here endorse the following statement by Mr. Kendall, in his final report to the Visitors. "The asylum (he says) is designed strictly in accordance with the rules of the Commissioners in Lunacy. It is three stories in height, and is built with the external walls hollow, so as to render the edifice free from damp. It is simple in its form, substantial and economical in its construction. Its convenience is well studied, so as to embrace every thing conducive to the comfort of every inmate, sane, or insane, and sufficient character is given to it its exterior by

To illustrate D^r Lockhart Robertsons paper - *Journal of Mental Science*, April 1860.



SUSSEX COUNTY LUNATIC ASYLUM.

picturesque treatment and outline, and varied coloured brick-work to render it cheerful and effective, such character having a beneficial effect upon the patients in a curative point of view. The style of the building generally is Lombardic or Byzantine chosen for its appropriate, effective and inexpensive character, little ornament being used beyond that conducive to utility."

INDEX TO GROUND PLAN.

PATIENTS' ROOMS.

1. Galleries (11 feet wide)
2. Dining rooms.
3. Day rooms.
4. Single bed rooms.
5. Dormitories.
6. Attendants' rooms.
7. Bath and lavatories.
8. W. C.
- 16, 17. Infirmaries.
9. Recreation hall.
- 10, 11. Assistant medical officer bed and sitting rooms.
12. Dispensary.
- The Medical Superintendent's rooms are above the recreation hall, (9). His kitchen, &c., are 15, 15, 15, in the ground plan.

OFFICES.

13. Servants' hall.
14. Meat pantry,
18. Bread room.
19. Vegetable store.
20. Officer's pantry.
21. Scullery.
25. Kitchen.

STORES.

27. Steward's store.
- 26, 26. Steward's offices.
22. Housekeeper's store.
24. Receiving room.
31. Hardware store.
32. Earthenware store.
33. Grocery store.
28. Steward's sitting room.
29. Housekeeper's sitting room.
23. Head attendant's sitting room (female)

WORKSHOPS.

35. Tailors' shop.
36. Shoemakers' shop.
37. Matmakers' shop.
38. Carpenters' and painters' shop.
39. Brewhouse.
40. Bakehouse.
- 44, 44, 44. The laundry, wash-house, drying closets, &c., &c.
42. The gas works.
41. The stables (Committee and Medical Superintendent)
- Dead house at the back of the stables