

**CIHM  
Microfiche  
Series  
(Monographs)**

**ICMH  
Collection de  
microfiches  
(monographies)**



**Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques**

**© 1997**



The copy filmed here has been reproduced thanks to the generosity of:

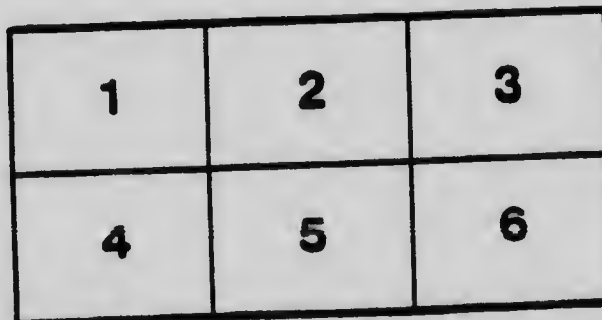
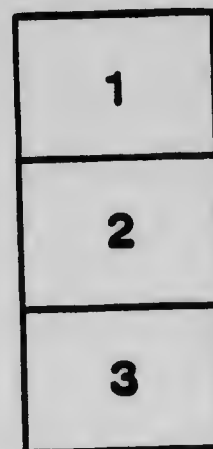
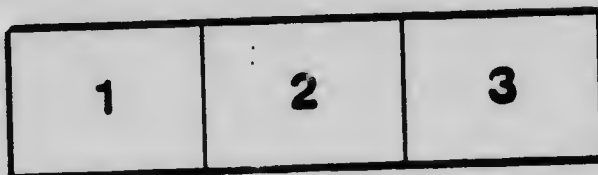
National Library of Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol  $\rightarrow$  (meaning "CONTINUED"), or the symbol  $\nabla$  (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Bibliothèque nationale du Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de l'état de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

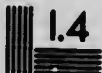
Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole  $\rightarrow$  signifie "A SUIVRE", le symbole  $\nabla$  signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaires. Les diagrammes suivants illustrent la méthode.

# MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



1.5

3.0

3.6

4.5

5.6

7.1

9.0

11.2

14.0

18.0

22.5

28.0

36.0

45.0

56.0

70.0

88.0

110.0

140.0

175.0

220.0

280.0

350.0

440.0

550.0

680.0

850.0

1050.0

1300.0

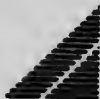
1600.0

2000.0

2500.0

3150.0

4000.0



**APPLIED IMAGE Inc**

1653 East Main Street  
Rochester, New York 14609 USA  
(716) 482 - 0300 - Phone  
(716) 286 - 5989 - Fax

*Can.  
Pan.*

*Brown, J. N. E.*

**EUROPEAN HOSPITAL**  
**NOTES**



**DR. J. N. E. BROWN**  
Secretary A.H.A., Toronto

AC901  
C3  
m. core  
1.000

## EUROPEAN HOSPITAL NOTES.

DR. J. N. E. BROWN SECRETARY A. H. A., TORONTO.

It was my privilege to spend a part of the last summer, in company with my friend, Mr. Stevens, of Boston, in visiting hospitals in some of the European centres. These included Amsterdam, The Hague, Utrecht, Hamburg, Berlin, Dresden, Vienna, Paris, and London. Our President honored me with a request for a few notes and reflections on what I had seen, which I gladly give to the Association.

## HOSPITAL SUPPORT.

In Great Britain, where the system of voluntary hospitals has obtained for centuries, continuous urgent appeals for assistance appear in the advertising columns of the daily papers. In response to these appeals reports are published at intervals of moneys received from such sources as Hospital Sunday funds, some big dinner under Royal patronage, or other social function. Once in a while one may read that a hospital has been remembered in the will of some rich old gentleman, who has, perhaps, been unobtrusively visiting the hospital for many years.

In contrast to this precarious system of support, we find that the Continental hospitals depend on the public purse for their maintenance, and are quite independent of the benevolence of wealthy philanthropists.

In Paris, hospitals are supported by the city, and are governed by a Board of Charities, which has likewise the supervision of asylums and of poor relief generally.

In Vienna, the hospitals look either to the city, the province or the state for maintenance; and, though for a long time, none of these bodies wanted to shoulder the responsibility, yet the hospitals have been maintained through the aid of one or the other of them.

Hospitals in Holland are similarly supported, but receive in addition a certain income from patients who are able to pay.

Hospitals in Germany are built and supported by the State. Some of them, the Virchow, for instance, also receive pay from patients.

In America, excepting Pennsylvania and some of the Canadian provinces, not many hospitals receive State aid, as most of you are aware. Here and in Great Britain hospitals are supported mainly by the aristocracy of wealth; on the Continent by the democracy. While in many respects the former are better managed than the latter, yet, I must say, from the point of hospital maintenance, there is no question in my mind that the easier and better method of raising money is to get all you need from all of the people, rather than a part of what you need from a few of the people.

Through the years which shall intervene between the present and the time when that ideal condition is reached, let us be thankful that so many are disposed to give of their means for this purpose.

At the time of our visit to London, a committee from the leading voluntary hospitals of Great Britain was interviewing the Chancellor of the Exchequer and pointing out to him how his Insurance Bill, if passed in the form it then was, would decrease the revenue of the hospitals, and, perhaps, necessitate their closing.

The Chancellor's reply was significant: "The Government," said he, "cannot allow the hospitals to be closed."

In view of the fact that 45,000 of the infirm poor in London are supported by taxation, it may not be long until the remaining 10,000 cared for in the voluntary hospitals, are maintained in part or in full at the public expense.

Another result of this paucity of money for the support of voluntary hospitals was impressed on me while being shown through the medical teaching department of one of the large London hospitals. The Professor who accompanied



me complained that the college authorities had only about one-half the amount of money necessary to carry on up-to-date methods of teaching medical students. Surely the institutions which train the men who are to look after the health of the nation should be kept in the highest state of efficiency, and, hence, should not depend for their support on a comparatively few well-disposed individuals, but upon all the people. The recent report of the Carnegie Committee would indicate that in the interests of public safety most of the privately supported medical schools in America should be closed. Their existence is a farce and reflects discredit on the medical profession.

Let us look at Germany.

In the large teaching hospitals, not only does the State supply a full equipment for the care of the sick, but also for the training of medical students. One sees commodious and well-equipped laboratories for chemical, physical, and bacteriological investigations. There is also a full staff of assistants at the command of the investigator, the teacher and the professor. Not only is the condition of the patient elucidated for his own benefit, that he may receive intelligent treatment; but also for the benefit of the coming physicians and surgeons, who will convey the valuable knowledge thus acquired throughout the country.

Do you suppose for a moment that Germany would abandon this general support of her hospitals and medical colleges and resort to the voluntary system of Great Britain, or the partially voluntary system of America?

#### HOSPITAL ADMINISTRATION.

It is a common custom in Holland and Germany to have as superintendent or director of a hospital a medical man, who, in addition to his administrative duties, has charge of a clinic as well, or undertakes the specific treatment medically of a certain number of patients. In some instances, we found

the director busy with his patients, during which time, there appeared to be no one on duty in the head office who could act for him.

In such cases anyone seeking to transact business or confer with the chief executive would be required to wait an undue time.

The writer is of opinion that a medical man, *ceteris paribus*, makes the best sort of director of a large hospital. But, if he is appointed to fill such a position, he should be relieved of work which belongs to the medical staff. The proper administration of a large hospital demands the sole attention of the head. He should not even be required to prescribe for nurses or servants, which duty is sometimes assigned to him. I was told of one administrator who kept a nurse suffering from a sore throat and a high temperature, on duty for two or three days after the onset of these symptoms. She transmitted diphtheria to several inmates of the hospital, including patients. My informant, a member of the medical staff at the time, stated that the chief officer, though a doctor, had had so little active practise during the twenty-odd years of his administration, that he was not sufficiently alert in the matter of diagnosis, and was no longer *au fait* with the latest ideas and procedure in medical practise.

In a large hospital in a German city, Mr. Stevens, my travelling companion, had asked permission of the director to be allowed to take some photographs of various novel features in the place. The favor being granted, he had reached the kitchen, when he was accosted by a gentleman, who, considerably surprised, inquired what right he had there. Explanations followed, wherein it was learned that the hospital had two directors of equal status, one in charge of the purely medical side of the work, the other, called the technical director, in charge of the kitchen, laundry, engineering, supplies, etc.

It is the opinion of the writer that a hospital, large or small, should have but one head, and that the work of that head in a large hospital should be administrative only.

## MEDICAL ORGANIZATION.

There is considerable similarity between the medical organizations of hospitals in Great Britain and those of the United States. In making appointments somewhat the same methods are employed. Able men, who serve without pay, are chosen. There are several seniors of equal status appointed in the chief divisions of medicine and surgery, each of whom is given one or more assistants. House officers are relatively few in number, serve for one or possibly two years and are not paid.

In continental hospitals members of the visiting staff are servants of the State, they are paid for their services and often move from one hospital and teaching centre to another. Each department has one head, unless the hospital is a large one, in which case there may be two clinics in medicine and two in surgery presided over by chiefs of equal status. The other departments—gynaecology, obstetrics, etc., have each one head. In the medical and surgical clinic there may be sub-divisions in charge of certain specialists, who are thus able to make intensive studies of certain diseases. One finds skin and venereal diseases under a separate chief, and the patients suffering from such in a building by themselves.

Separate groups of buildings or portions of buildings are assigned to certain sorts of cases; and much provision is made for laboratory investigation and research in all departments. Laboratories in the medical and surgical departments of the new buildings of the Charity Hospital, Berlin, are constructed as a part of the hospital or ward unit. These large laboratories enable the workers to carry on their bacteriological and chemical investigations in a much more convenient way than when placed in more or less remote buildings. The students are not limited by lack of apparatus and helpers, as was found to be the case in many places in this country by the compilers of the Carnegie report.

The various departments in the German hospitals are well manned with resident medical officers. These men are on salary. They serve three and four years. In some of the hospitals even the chiefs of the departments are resident and paid.

The only hospital in America where I have seen this German method of organization is in the Johns Hopkins Hospital at Baltimore; and, I believe, the work done in that institution during the past fifteen or twenty years has been made possible, to a large extent, by the type of organization, and amply justifies its adoption.

In Great Britain and America the chief interest generally of the head of a hospital service, and of his assistants, is their private practises; hospital work is secondary. In Germany, it is largely the reverse. In America, under present conditions, we cannot expect ideal results. Where a hospital is dependent for its maintenance on vountary contributions, it has been found prudent for it to have as many friends among the resident medical men of the town or city in which it is located, as possible. The larger number of competent medical men that are appointed on its staff, the more private paying patients it will receive, and the easier it will be to keep its revenue on a level with its expenditure. This point was well brought out by Dr. Kavannagh in his paper at the Toronto meeting of this Association.

This is one of the points to be thought of in considering the idea of trying to introduce German methods of medical organization into our American hospitals.

To work out the problems connected with the study of disease and cure, or to supervise their working out, the chief of clinic and his assistants require more time at their disposal than the men in the average American hospital give—more time than they can afford to give. To do this work properly means hours of hard daily labor. Too often, the visit of the hospital physician is a hurried one, and the work of investigating his cases and their management is left in the hands of inexperienced house officers.

The visiting chiefs in all departments should be familiar with all the more recent methods of inquiry and research; and should have a practical knowledge of the technique of all the more common apparatus used in diagnosis and treatment. This is a great strength to a man, particularly if he be a teacher. If he can with facility make a differential blood count, "do a Wasserman, or widal," make a lumbar puncture and intelligibly examine the fluid withdrawn, analyze stomach contents, determine the significance of a gross or minute pathological section, use the sphygmomanometer, test electrical reactions, know what he sees through the fluoroscope and has the time and inclination to roll up his sleeves and do them, he is the man who will be of great value to a hospital. That this sort of work is not done in hospitals may not be the fault of the visiting staff. The administration has its part to do: All necessary apparatus for such investigations should be provided; enough skilled assistants and servants should be engaged to do the purely routine, mechanical and clerical work.

These ideal conditions are approached in Germany; but to realize them more nearly in America and Great Britain, I am of opinion that the unitary system of organization should be introduced, providing the hospital has sufficient financial strength to be independent of the favor of its visiting staff.

The best man available should be sought for to direct each of the several services, medical, surgical, gynaecological, etc. He should be given or allowed to select first-class assistants. There should be plenty of resident officers, the chiefs of which should be retained at least three years. Men who would be willing to serve in such work should be allowed a good salary, and permitted, perhaps, to do a certain amount of purely consultant work.

This would raise the status of medical education, the sick would receive much more consideration of their condition, and the people at large would be the benefactors.

## HOSPITAL CONSTRUCTION.

The larger hospitals of the Continent may be divided roughly into three classes, in so far as the grouping of buildings is concerned. In the first class you see a large number of low pavilions (chiefly one story) scattered over a large area of ground; in the second, a block or blocks of buildings, some three-storeys in height, completely surrounding a large court, and covering an area considerably smaller than the first sort; while the third consist of a series of detached pavilions, two, three or four storeys in height, set more or less regularly surrounded by lawns and spacious gardens, with plenty of trees and flowers. Examples of the first type are seen at the Eppendorf at Hamburg, and the Virchow in Berlin. The second sort are exemplified by the old municipal hospitals of Paris—the Beaujon, La Charite, La Pitie, and others; the third, by the Charity Hospital, Berlin, the West End Hospital of Charlottenburg, and the new hospital at Rixdorf.

It appears to me that the tendency in Europe is to build the hospitals of to-day of pavilions detached, but nearer together than was the fashion twenty years ago. In America and Great Britain there is more of a tendency to spread out hospital buildings than there was formerly.

In most of the Continental hospitals visited it was gratifying to see the ample and beautiful grounds surrounding them. The Eppendorf looks like a little town lost in a forest. The Virchow is spread through over sixty acres of woodland. In London, on the other hand, many of the leading hospitals, are crowded on all sides by mercantile houses and subject to the din of traffic—Charing Cross, King's College, Westminster, St. George's, St. Bartholomew's, and a number of others. The new King's College Hospital, however, has much more elbow room and will serve a large section of the great metropolis that is now hospitalless. We had to travel some miles into the country to reach the mag-

nificent new hospital which the corporation of Rixdorf has provided for its sick. All about are farms of waving grain-fields and rich meadows; surely an ideal site for a home for the sick.

The sunny and wooded grounds of the Wilhelmina Gasthuis, Amsterdam, are divided for the separate use of the various inmates. One plot is marked off for one class of nuses; another for another; another for nurses who serve in the contagious pavilions; another for the male employes; another for the female. A wire fence thirty feet distant from the street keeps the ambulant patients convalescing from contagious diseases that distance from their relatives who, peering through the fence at the street line, are able to see them and converse with them.

#### WARDS.

The general wards of the European hospitals are considerably larger than those of our hospitals in America; they often provide for the accommodation of thirty or forty patients. We frequently found them overcrowded. Ceilings, as a rule, are 16 feet in height; sometimes more; the maximum being reached in the beautiful gothic British hospital in Paris, in which the arch of the ceiling must be at least 35 feet from the floor. Floors are of Terrazzo, tile or wood, and battleship linoleum. French double windows, with transoms, are, I should say, the most popular.

On the Continent I do not remember seeing any sanitary towers at a distal end of the wards, which one finds universally in Great Britain; nor did I notice that they were often placed at the proximal end, as one generally finds them in America.

In the long double pavilions of the Virchow, the accessory rooms are placed centrally, the ward for the male patients being on one side of them, that for the female on the other.

In the Welheilmina, Amsterdam, pavilions run east and west. The ward unit is rather unique. The patient enters through a double reception room; in the outer his clothes

are removed, and after disinfection handed to his friends who take them home. Passing through the inner ante-room he turns into a small ward containing about ten beds. If he is not in a serious condition he remains here with the non-serious and convalescent patients. If seriously ill, he passes through this ward into a second *en suite*, containing the same number of beds as the first ward. Here all the serious cases are kept. A common toilet suite serves both wards. A small serving kitchen and two bathrooms are attached. These dependencies are all on the north side of the pavilion. When the patient is ready to leave the hospital he is taken into one of the bathrooms, given a bath by a non-exposed nurse. His friends meet him here with his clothes. The above-described arrangement is duplicated on the other side of the entrance hall for patients of the opposite sex. I may add that the nurses who work in this pavilion have their meals in a small dining-room remote from the ward.

#### BATH HOUSE AND DISINFECTION HOUSE.

There are two buildings found in connection with the European hospitals which are worthy of special notice by a transatlantic visitor interested in hospital construction: the bath house and the disinfection building.

In the bath house rooms are provided for giving baths of all kinds, which are most essential to the best treatment of diseases of the skin, kidneys and nervous system.

The disinfection house is usually a two-storied building, the lower storey of which has two divisions, in one of which the infected articles are collected. The disinfection chamber intersects the intervening wall. Into this the clothing, mattress, blankets, etc., are placed and exposed to steam and formaldehyde, and, when thoroughly disinfected, withdrawn from the opposite end of the disinfecting chamber into the clean compartment. Special laundry machines are available for the disinfection of linen and other washable material. Infected underwear is disinfected by boiling, and,



after being wrung out, passed over in a damp state to the wash house. A furnace or furnaces in the disinfection building consume the collections of dust, soiled bandages, etc. In some of these houses in a suite of small rooms provision is made for the disinfection of isolation patients, and of the workers in the disinfection department, e.g., Charlottenburg, West End Hospital, Germany.

In some hospitals one sees attached to each pavilion a small pair of rooms with a tank filling a space in the intervening wall. The infected articles are taken into one compartment, placed in the tank which contains disinfecting solution, and, afterward, withdrawn from the other half of the tank in the other compartment.

In the infectious pavilions there are apparatus for sterilizing the stools, urine, sputum and other excretions with steam or hot water. The water which has been used for bathing is disinfected in the tubs by the use of chemical disinfectants. The waste water from the infectious pavilions is collected in a special disinfecting pit and treated with chloride of lime, and then allowed to escape. The effluent from the apparatus which disinfects the excretions is piped off in some places to irrigated fields.

I learn that there is much less cross infection and house infection in European hospitals than we have on this side of the Atlantic. The provision I have above attempted to describe to secure medical as well as surgical asepsis and antisepsis explains in great part the reason.

#### VENTILATION.

In Germany, as in the United States, opinion and practice vary as to the merits of different systems of ventilation. In one of the large Berlin hospitals, completed in '96, the ventilation is secured in somewhat the following way:

In the underground floor of each of the pavilions are placed one or more ventilating fans, according to the requirements. These draw in fresh air from vertical little air

houses. The air passes through a chamber for straining out the dust, a cotton wool filter being used. The air is then driven into a steam-heated chamber, and from here through distributing channels, and thence through wall channels into the different rooms. As the local climate is sufficiently humid, the air is not moistened, as we see done in some places. The foul air is withdrawn from each room by sufficient outlet channels, which extend to the roof storey and terminate in a chamber in front of an exhaust fan. It is sucked from here and driven through ridge turrets into the open. In addition to this mechanical system, provision is made for natural ventilation through trap windows. The ventilating apparatus of the lavatories, kitchens, and sink-rooms is made particularly effective, in order to quickly carry off the vapors and mal-odors which form there.

One of the leading hospital architects of Germany, whom we interviewed, expressed the strongest objection to the plenum system. "The great difficulty," said he, "is to keep the intake pipes free from dirt. When the fans which propel the air are set going, clouds of fine dust are pumped into the room, which condition is intensified by the too rapid rate at which the fans are often operated. Moving air carries dust. The rate of its admission to a room should not exceed one and a half metres a second. The filters have been taken out of the schools in Berlin. In Cologne," he continued, "fresh air is brought from the street directly to the radiators without the intervention of any mechanical devices."

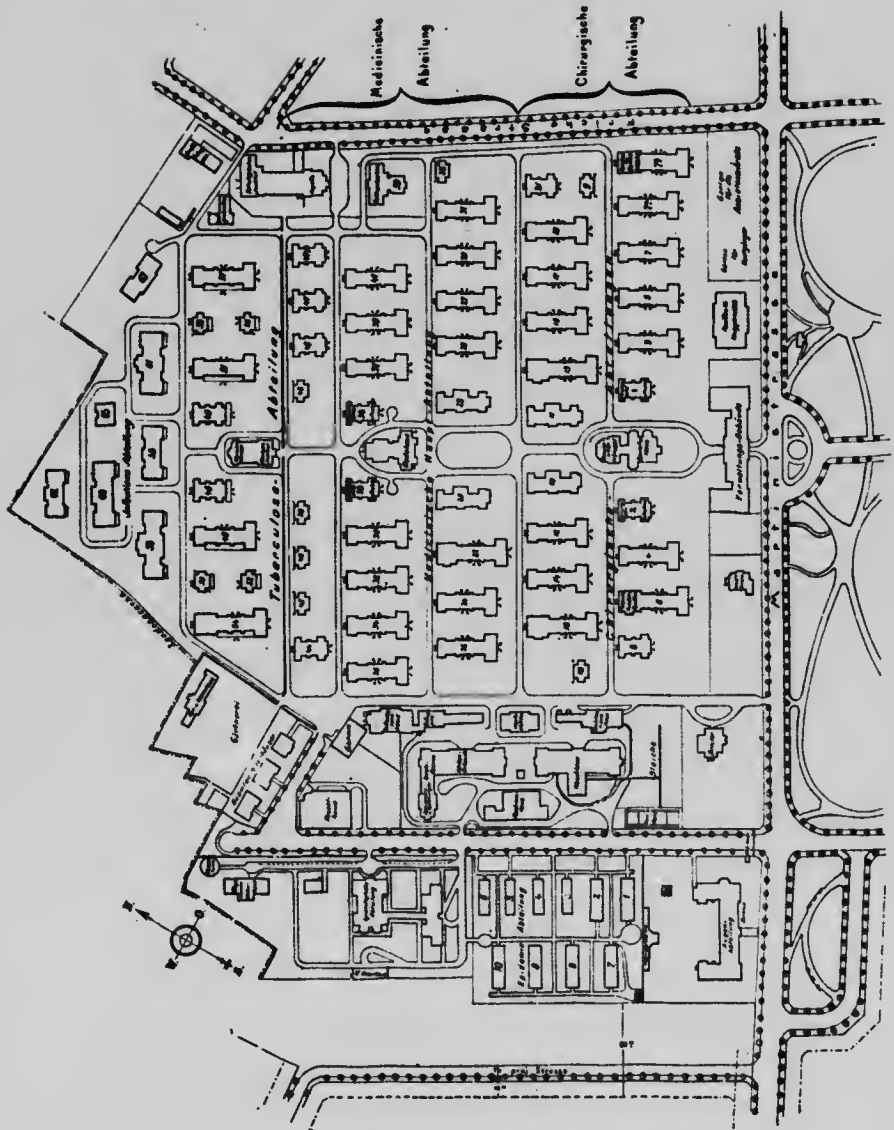
In the St. Georg's Hospital, at Hamburg, the greatest pains are taken in ventilating their new operating room. The air is drawn by electrically-driven fans into a room in the basement. It passes first through a large box filled with fine pebbles. This strains out all particles of dust and smoke. The air is then forced through a box containing layers of sand of different degrees of fineness. This strains out the bacteria. It then enters the operating room and is dis-

charged through openings in the walls. I may add that after operations live steam is injected into the room with the object of destroying any infectious material left in the room. Just how far all these precautions are necessary or advisable, I am not prepared to say. The general opinion is that both these procedures are works of supererogation. I should not like to venture an opinion until I have compared their statistics as to pus with other places where these precautions are not taken.

To my mind, the best system of ventilation has yet to be worked out. I am of opinion that in temperate climates fresh air strained if necessary should be admitted near the floors through the required number of openings, allowed to warm against charged hot water or not too overheated steam radiators, be drawn off near the ceiling through several openings which may lead into one or more pipes which are heated by steam and have at their terminal an exhaust fan, the fan to be used at such times when the draught caused by the heated pipes is insufficient. This plus natural ventilation by windows, transoms, fireplaces, etc., appears to me to be most satisfactory.

To sum up: I have tried in this paper in a brief way to indicate some of the points of difference noted between our hospitals and those across the Atlantic in respect to hospital administration, hospital maintenance, hospital construction, and medical organization.

I will show you sixty slides illustrating hospital sites, grouping and style of building, plan of wards, ward interiors, operating rooms, bath houses, disinfecting houses, etc.

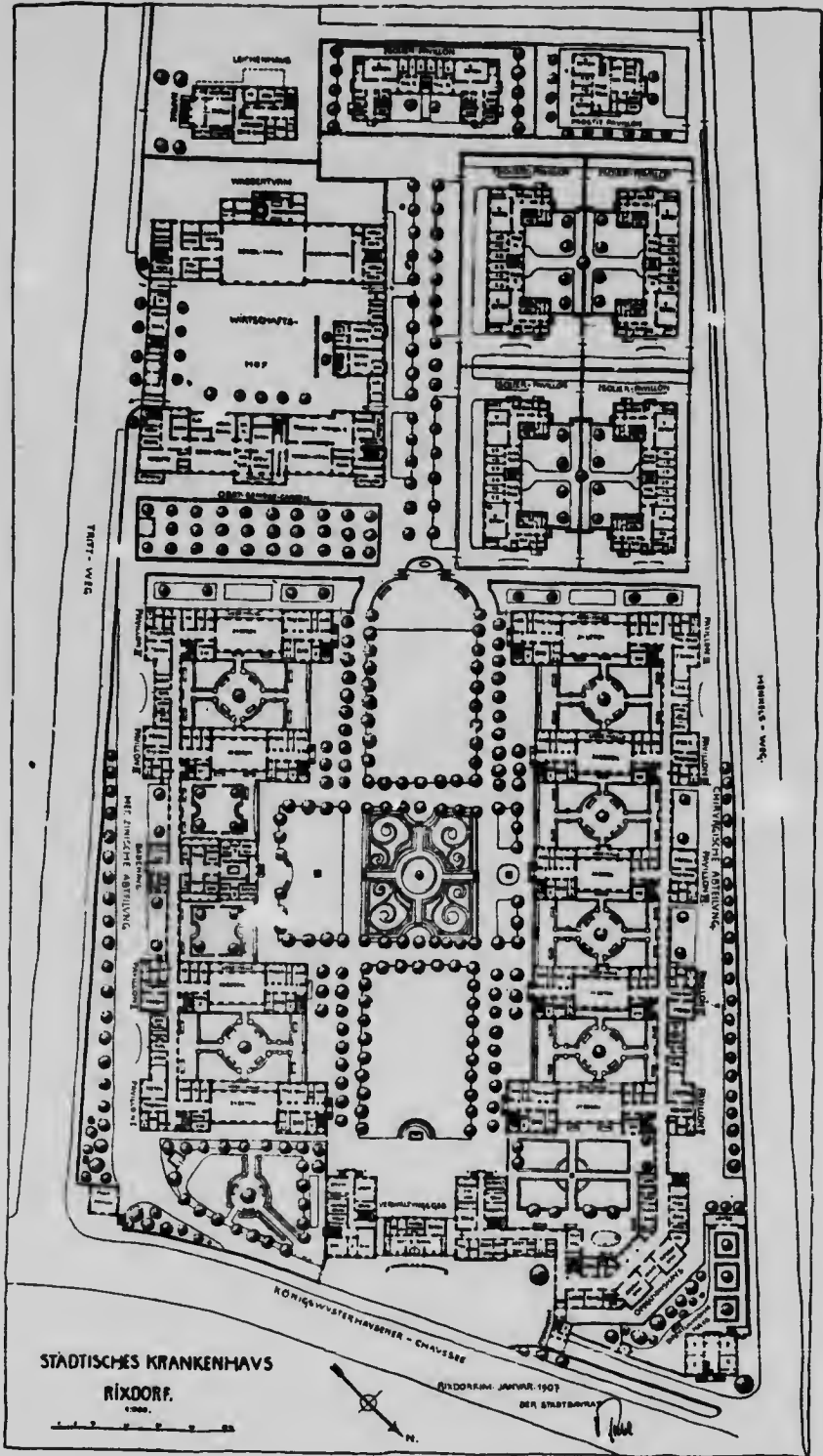


The Eppendorf Hospital

The Eppendorf Hospital at Hamburg is one of the most complete hospitals in the world. It accommodates some 2,000 patients and covers some sixty acres. The names of the various departments are seen on the plan.

The pavilions are mostly one story in height. The surgical pavilions surround an operation house; and the medical, a bath house. The bathing establishment, to an American or Canadian visitor, is a marked feature. At the right of the main entrance is a large building devoted to mechaniotherapy. This is a department one misses in many large American and British hospitals. The Massachusetts General Hospital, with its fine Zander Institute, is a notable exception. Note the four receiving buildings for both sexes—medical and surgical. See the disinfection house. This is a provision in which the continental hospitals excel. Beyond the medical and surgical pavilions, the tuberculosis pavilions are to be noted, and, beyond them, the contagious diseases buildings. To the extreme left notice the barracks for leprosy, plague, and for other diseases which may become epidemic.

To the right of these are the buildings for power, laundry, and kitchen. In the upper right hand corner is the pathological building, and in the lower left hand corner that for diseases of the eye. Also note the building provided for alcoholic cases, and another building for diseases of the brain. Many continental hospitals have a pavilion for this class of case. Isn't it about time we began to realize that, under one administration patients suffering from acute brain disease, may be treated as well as those suffering with pneumonia, septicaemia, and other toxic diseases? In the upper left note the gynæcological division; also the building for animals required for experimental work. These are only a few of the features of this great hospital. It resembles the Virchow in Berlin very much. We were struck amusedly with the scarred visages and scalps of the resident physi-



TRIFT - WEG

LABORAT - WEG

STÄDTISCHES KRANKENHAUS  
RIXDORF.  
1900.

KÖNIGSWATERHÄBERER - CHAUSSEE

RIXDORF IM JANUAR 1907

DES ARCHITECTEN



*[Handwritten signature]*

cians, from the chief down. Some of them wore their hair clipped to the skin, in order (apparently) to show their honorable scars. It was whispered to us that German students often used caustics to prevent healing by first intention, and that the number of scars measured the amount of appreciation in which they were held by the fairer sex.

The Rixdorf Hospital is a run of an hour into the country from the centre of Berlin. The plan is worth study—a reading glass may be needed. Note that the groups of buildings are arranged round a central court, and that the members of the groups are separated by lawns, gardens and trees. The arrangement in the ward unit is rather unique. Note the arrangement around a court of the kitchen, laundry and power house—beyond the vegetable garden.

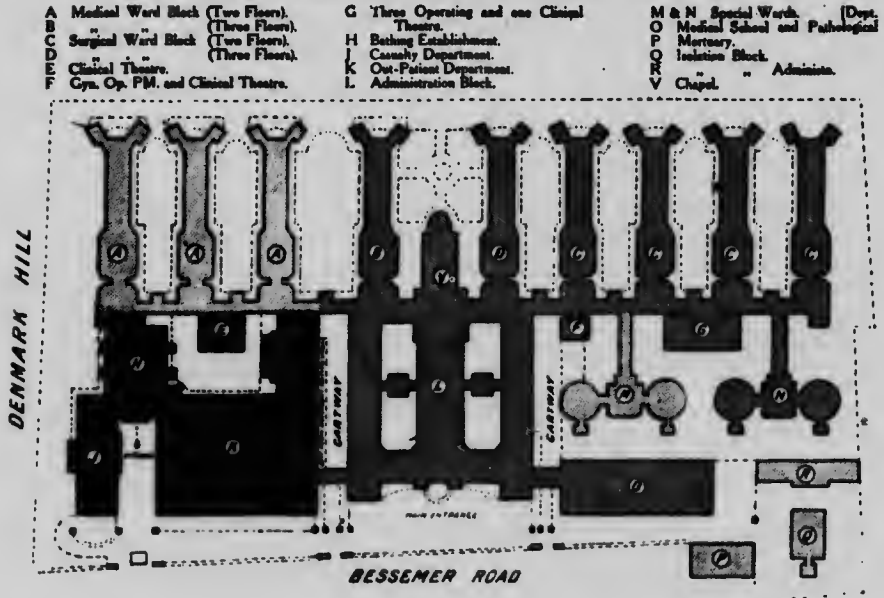
King's College Hospital, London, now under construction, will be one of the most modern hospitals in Great Britain when completed. The out-patient department, the casualty department, and the bath house (which includes the admitting department), are about completed, and some of the ward buildings are well under way.

The first thing pointed out to me was a place for "prams" (perambulators). "This," said my guide, "was an afterthought. It is placed under a sort of bridge like entrance to the casualty department, and occupies a space about 12 by 15 feet.

Between the out-patient and the casualty department is a covered shelter, roofed in with translucent glass, where patients who wish may remain while waiting for attendance.

The main entrance to the out-patient department is by two doors some fourteen feet apart. By one door the men are admitted; by the other, the women. There is another entrance for children; and still another for children suffering from whooping cough. These pertussis cases have a separate waiting room and a separate examining room.

## KING'S COLLEGE HOSPITAL BLOCK PLAN.



Between the two corridors by which adult patients enter there is a good-sized room which is occupied by the porter and the admitting clerk. On the opposite side of each corridor is a toilet room. These corridors lead into a large reception room, beyond which is the great main waiting hall 90 feet in length by 43 feet in width. The height is 35 feet, I should guess. Running all round this commodious room and well lighted is a low arched corridor, connected with the main waiting room by three entrances on each side. On the opposite side of this low arched corridor are many doors leading to the medical surgical, gynæcological and other divisions, the rooms of which are ample, light and well provided with wash basins.

A buffet will be provided in the centre of the main waiting hall, and a separate tea room is provided with scullery adjoining. The walls of this room are of terra cotta, the



surface of each brick being about 9 by 14 inches. The walls of the examining rooms are plastered with a granitic silicon.

The out-patient building is heated by steam. The radiators are hinged and swing out from the wall. Below them the fresh air enters, passes over the surface of the radiator and is distributed through the room. Just above each radiator is another large opening for the admission of cold fresh air. This, like the place for the "prams" was an after-thought. It was the original intention to sink the radiators into the air shaft below them; but this idea was abandoned. The foul air is drawn out from three openings along the centre of the arched roof, by means of large fans operated by electric motors.

The pipes for gas, electricity, etc., run in shallow airtight metallic trenches; these trenches are about 14 inches wide and about 10 inches deep. They are covered with the same material as the floor. One sees along their course two metal strips only, corresponding to the edges of the trenches.

The bath house contains the admitting department. Here one enters the admitting room first and sees adjoining a room for patients' clothes. Passing into the corridor one sees on either side a series of bathrooms—one series for male patients, the other for females. The floors are laid with a fall to a small open tile trench. The wall brick are of the Kent's stock variety, and contains so much shale oil that they require dovetailing in order to hold the plaster. The dado is made of Bickell's patent cement. The doctors objected to tile being used on account of the numerous seams. One bathroom of each series will contain tubs for continuous baths; another will be used for vapor baths, another for CO<sub>2</sub> baths, and so on. The partitions are built of narrow tiled brick laid on edge and framed with ironwork. They do not extend to the ceiling or the floor. Passing through an air cut-off one enters a suite of two rooms in

which sulphur baths are to be administered. In rooms nearby, provided with cubicles, the X-Ray and electric apparatus are installed. The partitions between these cubicles are built of a double row of these narrow tile brick on edge with a sheet of 5-lb. lead between. These partitions reach the floor. Adjoining is the photographic department, its rooms being provided with light-tight shutters. The walls of the developing rooms are of ruby tile. Adequate provision is made for mechanico-therapy. The gymnasium is 24 feet long and 22 feet wide. Near the main entrance is a padded room for the temporary reception of delirium tremens cases.

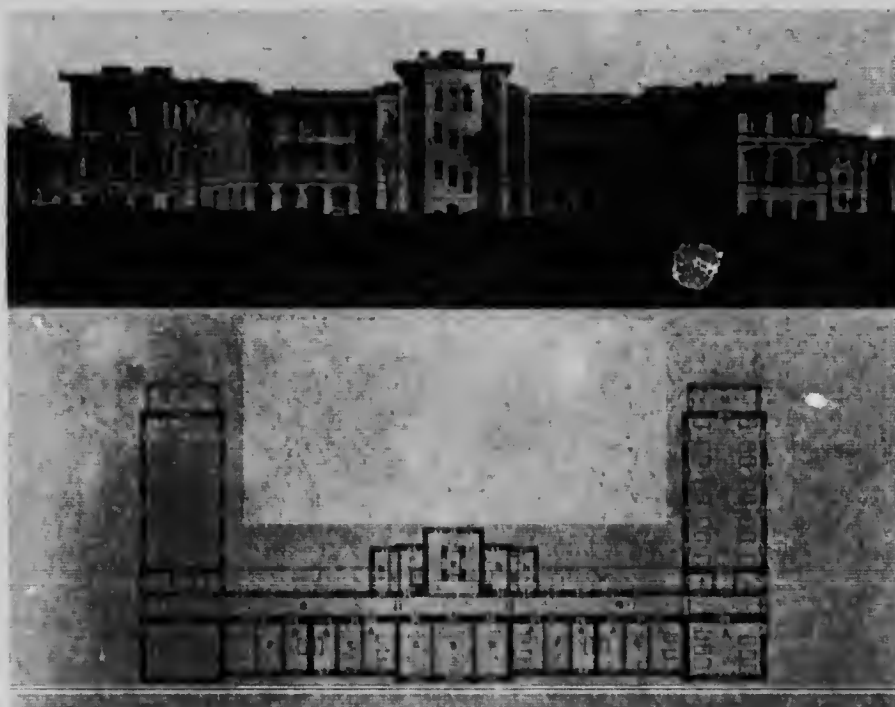
The casualty department is built on the double corridor plan, and will provide for eight patients, four on each side of the corridor, each having a single room. The partitions on each side of the corridor are of wood from the floor to a height of three and a half feet; above this they are of glass. This will enable the nurses to watch the patients from the corridor.

The new Charlottenburg Hospital in Charlottenburg (a portion of Greater Berlin, like Rixdorf) is another delightful place. This birdseye view shows to the left (the long side being near the spectator) the administration building. Behind it is a row of medical and a row of surgical buildings; the pavilions of each department are connected by corridors. The surgical row has its operation house and the medical its bath house, each of which may be seen. Note also the small examining building connected with the corridors. The buildings for contagious diseases stand to the extreme right, while to the left are the kitchen, laundry and the heating, lighting, and power plant.

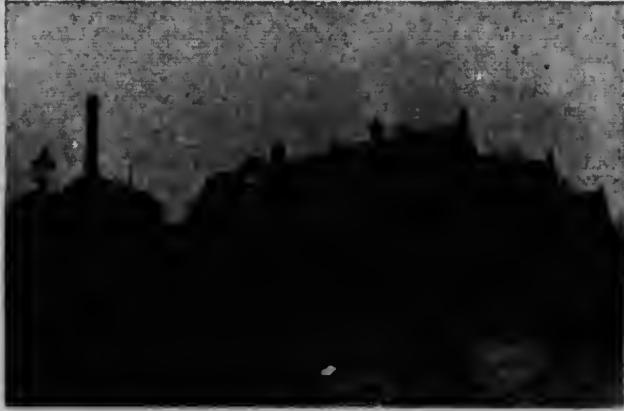
The next picture is a view and ground plan sketch of a new 400-bed hospital for Vienna sick nurses at Lainz. Near this main building is an isolation house of 36 beds, and also an observation barrack with 4 beds. It is well-lighted and well provided with airing balconies. The surroundings are beautiful, being situated near the Thiergarten.



**Charlottenburg West-end Hospital**



**Nurses Hospital at Lainz**



**Frauenklinik, Dresden**

These are two views of the new Frauenklinik at Dresden. Provision is made for septic cases in a separate pavilion. I was greatly impressed with the privileges accorded here to young doctors desiring post-graduate work in gynæcology and obstetrics. The course is five months and costs, including tuition and board in the hospital \$3.50 per week.



**Frauenklinik, Dresden**

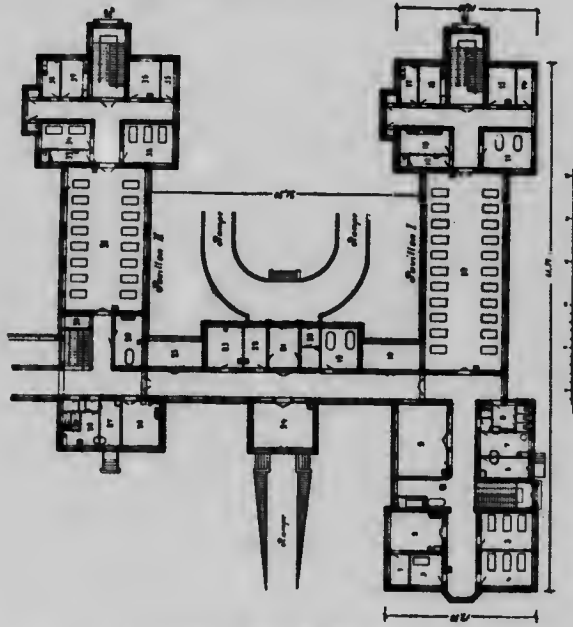
The ground plan of the Frauenklinik of the Allgemeine Krankenhaus, Vienna. Obstetrics and gynecology are a combined department, as is the case in most of the large centres we visited. The large ward to the extreme right is occupied by the waiting women; the central one for the women in labor, and the one to the left for gynecological cases. The operation suite for these latter is seen in the upper lefthand corner, and the obstetrical demonstration room is located centrally at the end of a corridor. Note the single rooms for isolation, library, laboratories, linen, dressings, bathing, examining, etc. The service here is very active and much teaching is in evidence.



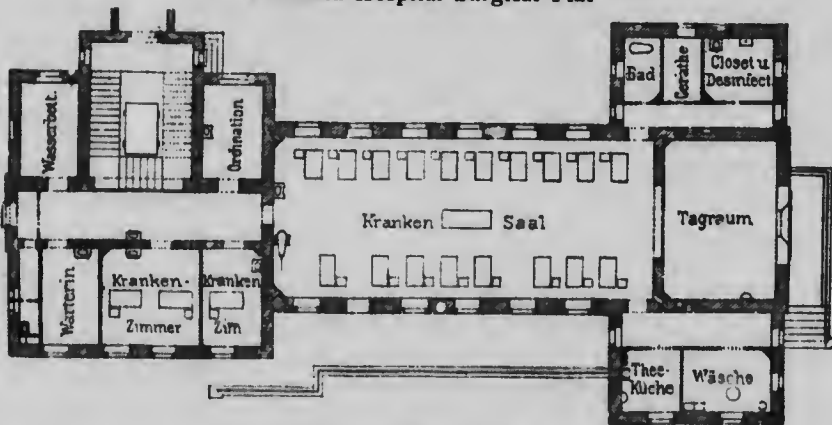
Frauenklinik of General Hospital, Vienna

The plan of this Vienna surgical pavilion shows a double entrance. To the left of the main entrance is an admitting room where the patient leaves his clothes; next is a bath-room where he is cleaned. Then he puts on hospital garb and is admitted to the wards. If he is an unsuitable case he passes into the adjoining small room near the entrance and is sent home or to the proper institution. Note the relation of the accessory rooms to the ward. See also the rooms marked 6 and 7, with the receptacle intersecting the wall. One room is used for the reception of the soiled and infected linen

whence it is placed in the receptacle and after sterilization withdrawn into the clean room, No. 7.

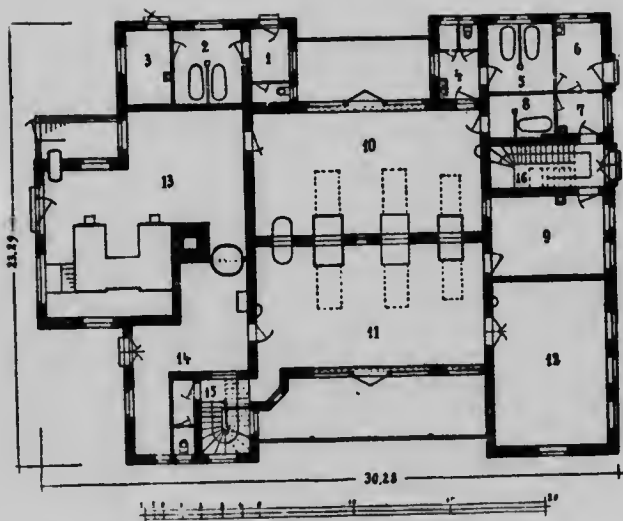


A Vienna Hospital Surgical Flat



Vienna Ward Unit

This is a typical ward unit in one of the new Vienna hospitals.



A Disinfection House

This is a picture of one flat of a disinfection house, which also contains an incinerating plant. In room 1 the patients discharged from the contagious pavilions are received, disrobed, passed into room No. 2, bathed, admitted to No. 3, given clean clothing and allowed to go home. Rooms 4, 5, and 6 show a similar suite for the disinfection house employes; 7 and 8 provides for the officers. Room 10 receives the infected mattresses, other bedding, etc., requiring disinfection. They are then placed in the large sterilizers intersecting the wall, subjected to steam pressure and formaldehyde; and when sterilized withdrawn into room No. 11, and stored in No. 12 until required. All infected material needing to be destroyed is taken into room No. 13 and incinerated in one of the two Kori ovens. The left-over infected food is sterilized in the small receptacle just to the left of the door entering room No. 13. The infected dishes and utensils are placed in the tank intersecting the wall between rooms Nos. 13 and 14. They are removed through room No. 14. Note the toilet room accommodation. This sort of building is needed in many hospitals on the American continent.



Lying-in Room



Babie's Washroom





These three pictures show respectively the labor room, the babies' bathing room, and the incubating room for premature babies in the new Frauenklinik, Dresden.



Corner of Section Room, St. Georg

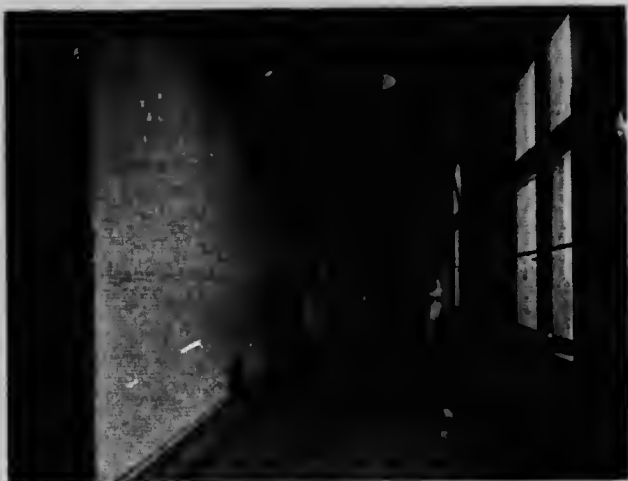
This shows a corner of one of the finest pathological section rooms on the continent—very well appointed and kept with scrupulous care. Note the elbow valves and read

Mr. Stevens' description of the fittings. The presiding genius is Prof. Simmonds who was very kind to the Canadian who addressed him in very bad German, replying to him in perfect English.



Wax Room, Dresden, Frauenklinik

This shows a room containing specimens in wax. Generally found in the departments of skin and venereal diseases. The form, color and general appearance of the lesions are well represented—the various syphilides, smallpox, leprosy, etc., etc. St. Georg, Hamburg, has thousands of specimens. America should import some of the modellers of these wax specimens.



Corridor

One is struck with the amount of corridor space in any of the continental hospitals, as compared with the amount seen in the hospitals of Britain or North America.



Ward Interior, "St. Bart's"

Here is a "homey" old ward in St. Bartholomew's Hospital, London. Note the flowers, the pictures, the rug, and the open grate. Though you cannot see the fire, it is there.

In addition to the above, Dr. Brown showed the following pictures: An outside view of the Royal Infirmary, Manchester, England; one of its typical wards and operating suite; a story showing one long and one rectangular ward; and an interior ward view. A general plan of the wards of the Royal Victoria Hospital, Montreal; a view of a portion of the Eppendorf at Hamburg; one of its typical wards (interior), and a pavilion plan. A ward plan of the Derbyshire Royal Infirmary, England, England. A ward plan of one of the Johns Hopkins pavilions, Baltimore. First floor plan of the new hospital, Albany, N.Y. Ward plan of a double surgical pavilion, Dresden. Ward plan of the new City Hospital, Muelhausen. Plan of double pavilion, Virchow Hospital, Berlin. An interior of a Virchow ward. Plan of ward unit New Hospital, Nuremberg, Germany. General plan of wards of the University Hospital, London, England. Plan of ward unit of the new Scarlet Fever Hospital, Philadelphia. Ward plan of the Pasteur Hospital, Paris. Interior of ward of new Burnham pavilion of the Boston City Hospital.

---

