

ROCHESTER'S NEW MEDICAL GROUP— AN EXAMPLE OF PROGRESS

THE new medical group recently opened in Rochester, N. Y., consists of the school of medicine and dentistry, the Strong Memorial Hospital and the school of nursing of the University of Rochester, and the Municipal Hospital of the City of Rochester. Simplicity of structure and economy in construction of buildings, consolidation in the organization of school and hospital and elimination of duplication were the guiding principles in the development of these institutions.

A fund of nine million dollars was given in 1920 by George Eastman and the general education board for the founding of a school of medicine and dentistry, and an additional million dollars was given by Mrs. Gertrude Strong Achilles and Mrs. Helen Strong Carter for the erection of a hospital in memory of their father and mother. The spirit of their gift is embodied in the inscription in the waiting room of the hospital, shown above.

As soon as these gifts were announced, steps were taken by the city government and the university toward the association of the recently planned municipal hospital with the medical group of the university. This resulted in an agreement between the university and the city, whereby the new municipal hospital was built adjacent to and joining the Strong Memorial Hospital.

The teaching faculty of the school serves as the clinical staff of both hospitals and provides medical care of municipal hospital patients with-



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out charge to the city. Intern and nursing service, operating rooms, and x-ray department, kitchen, laundry, storerooms and shops are carried on in common and the expense is shared. Duplication of service departments is thus avoided and a material saving in the initial expense of construction and in future operating costs is made possible for both hospitals. Additional teaching facilities are also gained.

The medical group is situated about three miles south of the center of the city, adjacent to the campus of the new college

for men of the university, and is served by both trolleys and rapid transit trains. The large tract of land controlled by the school and city will permit of expansion in all directions and to any extent. Construction was begun in 1922 and all buildings were completed in 1925. The medical school and the school of nursing admitted their first classes in September, 1925; the Strong Memorial Hospital opened on January 4, 1926, and the municipal hospital on July 30, 1926.

The Strong Memorial Hospital and the school of medicine and dentistry occupy the larger central building of the group. The nurses' dormitory, resident staff house, and the animal house are separate from the main building, but are connected with it by short corridors. A central heating plant, constructed to supply both the medical group and the college for men, is situated midway between college and school.

All buildings are of brick. The main building

is six stories high, with intersecting axes running north and south and east and west. The hospital occupies the southern and the school the northern half. It contains 4,589,954 cubic feet, of which approximately 2,455,260 is school and 2,134,690 is hospital. The cost was \$2,619,398 or fifty-seven cents per cubic foot. Since many parts of the building serve both school and hospital, it is impossible to divide accurately the cost of construction between school and hospital. A reasonable estimate would place the hospital cost at sixty-five cents per cubic foot, which includes plumbing, heating, electrical wiring, refrigeration, pneumatic tube system, vacuum cleaning system and everything but movable equipment. Equipment for the school cost approximately \$100,000 and for the hospital \$250,000. The total cost of the main building, including equipment, was approximately \$2,970,000.

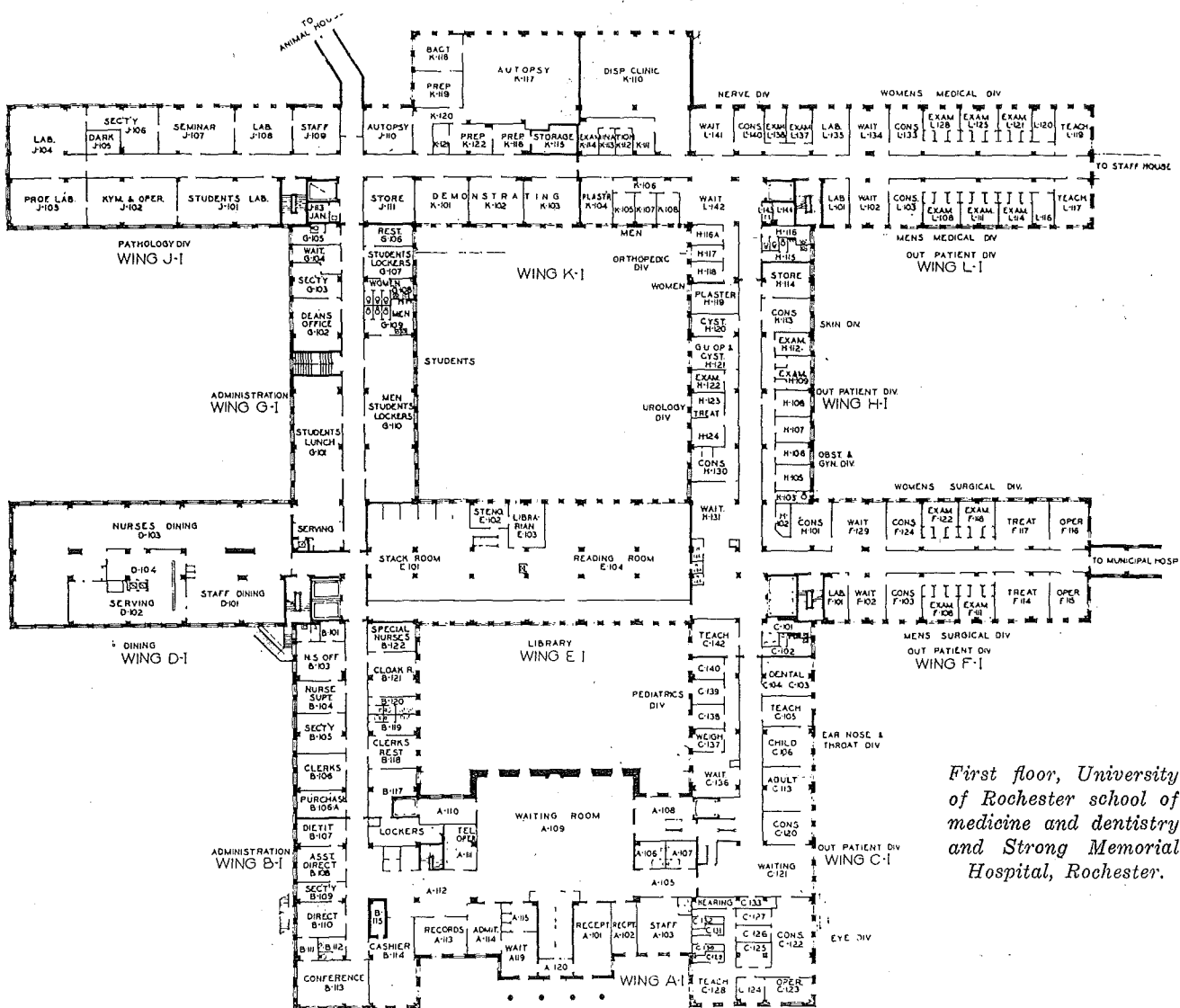
The nurses' dormitory, a four-story building of 968,130 cubic feet, accommodating 230 graduate and undergraduate nurses, with classrooms and

reception rooms, was built for \$604,056 (or sixty-two cents per cubic foot), or \$2,673 per nurse accommodation.

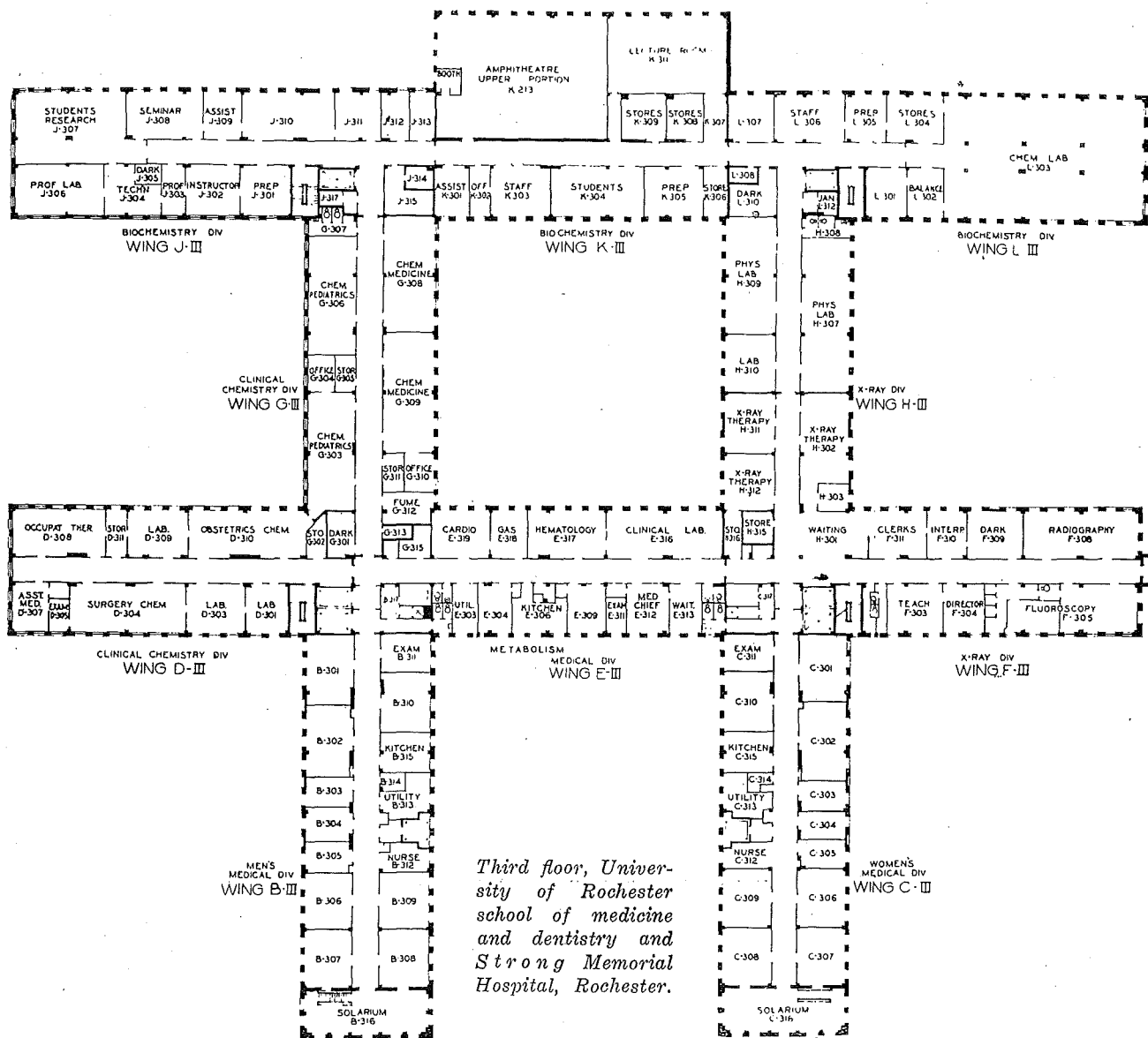
The staff house, which provides for a resident staff of fifty-six, contains 290,818 cubic feet and cost \$178,465 (or sixty-two cents per cubic foot), or \$3,187 per person.

The total cost of the entire plant, including land, buildings, fees and equipment was approximately \$4,500,000.

The framework of all buildings, except the heating plant which is of structural steel, is of reinforced concrete, with monolithic floors, upon which rest outside curtain walls of red brick and inside walls of brick and plastered fire-resisting tile. In the school and service departments and laboratories of the hospital, inside partitions are of an inexpensive light gray sand lime brick. The walls of the main kitchen and sterilizing rooms, which are exposed to heat and steam, are built of salt glazed brick, which is more economical than tile and apparently as satisfactory. The outside walls and



First floor, University of Rochester school of medicine and dentistry and Strong Memorial Hospital, Rochester.



Third floor, University of Rochester school of medicine and dentistry and Strong Memorial Hospital, Rochester.

ceilings were sprayed with a mixture of asphalt and coarse grits and the plaster applied over this.

A uniform wing width of 45 feet was chosen as suitable for both hospital and school. The length varies from 100 to 120 feet. With the exception of the two-story administration building between the southerly hospital wings, and the section containing amphitheatres and lecture rooms, no deviation from this arrangement was permitted. A material saving in time and cost of construction resulted. The ceiling height is 11 feet 2 inches from floor to floor. All corridors are 8 feet wide. Concrete columns and sand lime brick walls are unpainted. All piping in both school and hospital is exposed.

All schoolrooms and corridors, laboratories in school and hospital, the out-patient department, and most service departments have concrete floors. Rubber floors were laid in the main waiting room, the out-patient waiting room and the emergency

division, and battleship linoleum in the remaining hospital divisions and corridors. Tile floors were placed in operating rooms, kitchens, utility rooms, toilets and wash rooms.

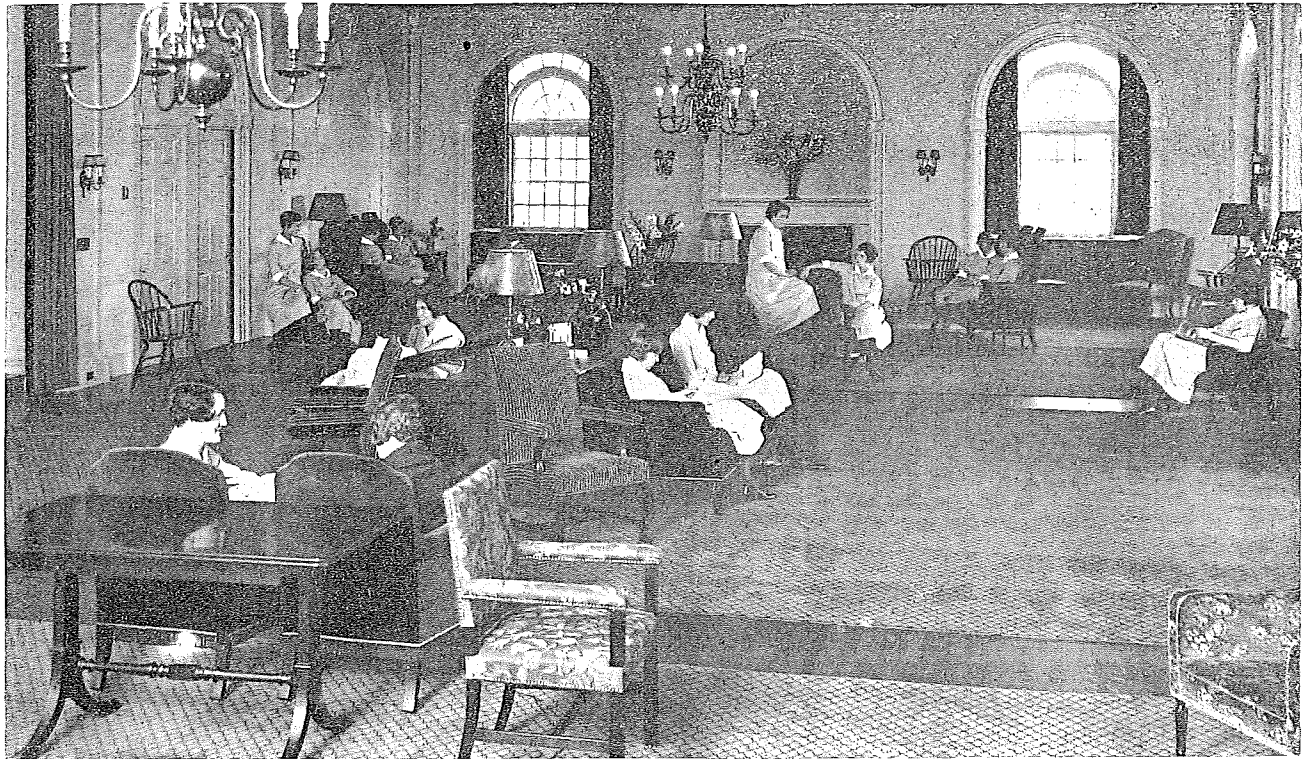
Emphasis was placed upon natural window ventilation, aided by straight ducts from patients' rooms leading to the roof. Exhaust fans placed on the roof are used only in the kitchen, operating and sterilizing rooms, toilets and autopsy rooms. Individual ventilating and heating units are installed in the amphitheatre and lecture rooms, permitting the lecturer to control directly the heating and ventilating of the room.

Casement metal windows are used throughout school, hospital and staff house. Wooden double-hung windows are used in the nurses' dormitory. Double thick fire walls and kalamein doors separate each wing. An automatic sprinkler system is installed in the storerooms, laundry, shops and animal house. A central vacuum cleaning system

with fan in the basement and service outlets in all parts of the building has greatly facilitated routine cleaning.

A four-bed room, with dividing curtains was selected as the ward unit that would give the max-

imum of privacy for the patient, the greatest convenience in nursing, and the highest economy of operation. This contains the general utilities serving hospitals and school, such as receiving rooms and storerooms; the main kitchen; laundry; sewing rooms; room for patients' clothing; pharmacy; carpenter, ma-



Reception room in nurses' dormitory

imum of privacy for the patient, the greatest convenience in nursing, and the highest economy of operation. By using partitions with glass panels, four of these units, accommodating sixteen patients may be observed from the nurse's desk. Three single rooms for very sick patients are placed opposite the nurse's station. Each division consists of a nurse's station, seven four-bed units, three single rooms; kitchen, utility room, and linen room; examining and treatment room; toilets and baths. This division is administered by a head nurse. An enclosed solarium is placed at the southern end of each division. An inside fire escape serves conveniently as an additional stairway.

The location of the various departments of school and hospital was made with the idea of placing each department close to the other departments with which it would have the most natural relation.

All service mains, steam, water and gas; sewers, rain water conduits; water heaters, and transformers, are in the sub-basement, where they are easily accessible.

The ground floor is at ground level. (No rooms

in which people work are below this level). This contains the general utilities serving hospitals and school, such as receiving rooms and storerooms; the main kitchen; laundry; sewing rooms; room for patients' clothing; pharmacy; carpenter, ma-

chine, electrical and orthopedic shops; employees' entrance; locker rooms and dining rooms. The refrigerating plant is placed upon separate foundation to prevent the transmission of vibration from the compressor and circulating pumps. The entrance for out-patients and waiting room, and the social service rooms are on this floor. An emergency division of sixteen beds is so placed as to be readily available for the care of accident and emergency cases of both hospitals. Ample space for the handling and storage of records is provided. A carrier tube system with the central station in this room, and connecting with all divisions, out-patient department clinics and other parts of the hospital, has proved of great service in transmitting records, memoranda, and even small supplies from the nearby pharmacy.

On the first floor the main entrance to the hospital leads by an inside stairway into the main waiting room. Every effort was made to produce an attractive room, free from all institutional atmosphere. The various hospital offices open from this room or from the corridor of the adjoining wing. The same out-patient department serves both hospitals and occupies nearly half of this

floor, each clinic being a unit of similar arrangement, with waiting room, consulting room and examining rooms opening from an inside corridor, each slightly modified to meet the particular demands of the clinic served. At least 300 patients may be cared for daily and room for expansion has been planned in the adjoining wing of the municipal hospital on this floor.

The medical library, with a capacity of 100,000 volumes and serving both school and hospital, is placed in the central wing with stacks on three levels and a reading room of ample size on this floor.

The main dining room for staff and nurses, and the adjoining students' luncheon room are served by dumb-waiters from the kitchen directly below.

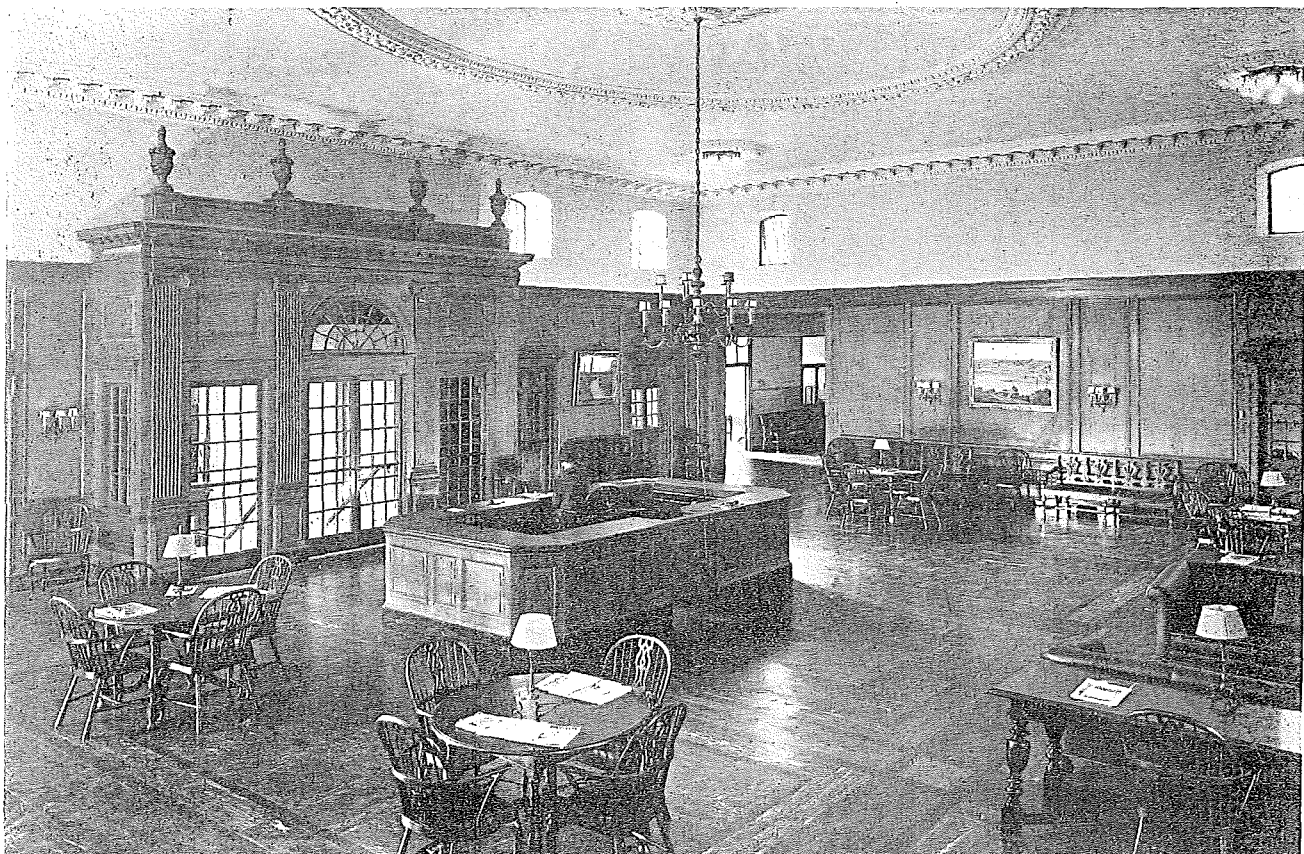
One wing is occupied by the medical school entrance, administration offices, student locker rooms and the department of pathology laboratories. Offices and autopsy suite occupy the remainder of the floor. The undertaker service door is on the north side of the building and cannot be seen from

the surgical staff and the physiotherapy department in the connecting wing. On the same floor level in the municipal hospital are two additional divisions for the care of surgical patients (sixty-one beds).

Four of the wings are occupied by the department of bacteriology and the laboratories of the health bureau of Rochester. This arrangement is fortunate, in that it provides abundant field material for school teaching and expert supervision of the laboratories by the head of the department. All media for the school, hospital and health bureau are prepared here. These laboratories examine all bacteriological specimens for the Strong Memorial Hospital and the municipal hospital.

Additional space for the department of pathology, a museum for teaching specimens, rooms for experimental surgery, and special clinical pathology, together with space set aside for the development of medical photography, occupy the remaining wings.

The medical divisions for men (thirty-one beds)

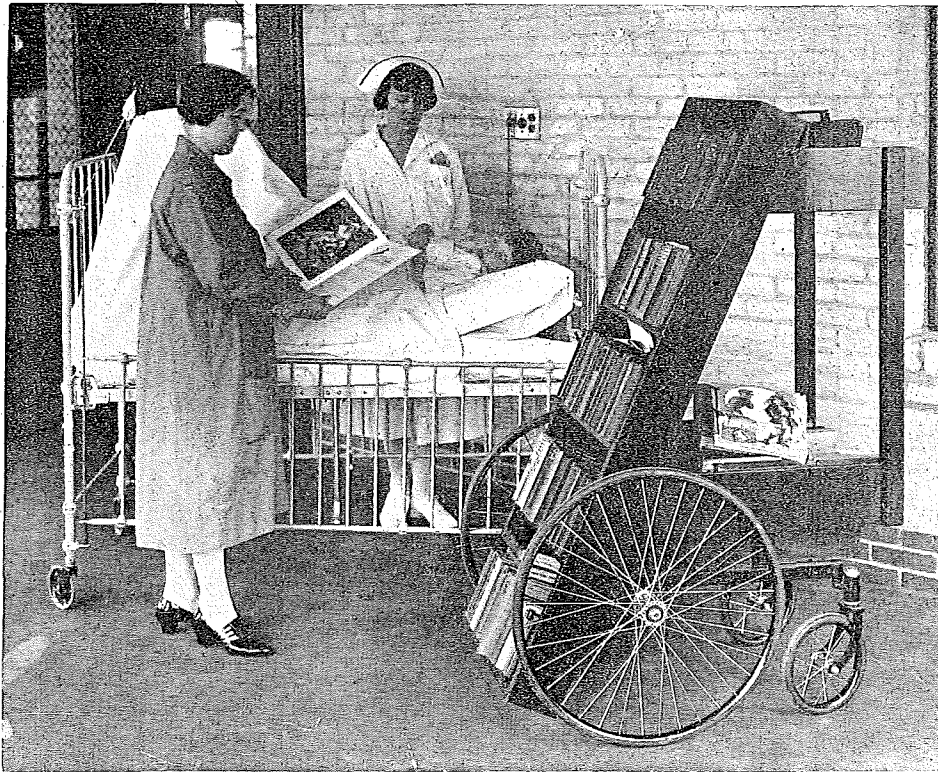


Main waiting room, Strong Memorial Hospital

any part of the hospital, a feature to be commended.

On the second floor are the surgical divisions for men (thirty-one beds) and women (thirty-one beds), with the clinical laboratory, the offices of

and women (thirty-one beds) occupy the southern wings of the third floor. The medical staff offices, a metabolism unit (four beds) and special laboratories are in the connecting wing. In the municipal hospital, there is an additional medical



A library on wheels. If a patient cannot go to the library, then the library must go to the patient.

division of thirty beds, and sixteen rooms are provided for the care and study, during a limited period, of carefully selected psychopathic patients.

The radiographic section of the x-ray department with associated developing, interpreting and filing rooms, occupies an entire wing and the therapy department half of another.

The remainder of this floor is given over to the department of biochemistry. In addition to the teaching and research space normally required for such a department, special laboratories are allotted to the various clinical departments for the study of special problems.

The department of obstetrics and gynecology occupies one wing of the fourth floor (twenty-nine beds), with a nursery, premature room, and isolation room in a connecting wing, joining with that part of the department of pediatrics devoted to the care of children under two years of age (fourteen beds). Thirty-three pediatric beds are provided for children from two to fourteen years of age in the other southern wing. The offices of these departments, clinical laboratories, and teaching rooms are in adjoining wings.

In the municipal hospital, for the care of contagious cases developing within the city limits, is a division of twenty-eight beds for children with contagious diseases, under the direction of the department of pediatrics and a division of seventeen beds for similar adult patients under the care of the department of medicine.

The departments of physiology and vital economics share the remainder of the floor.

Two divisions of 13 beds each, for private patients, occupy the southern wing of the fifth floor.

Three wings are devoted to the operating suite—one for major operating, one for obstetrical deliveries and gynecological operating and one for special operating. All sterile dry goods for both hospitals and school are prepared in an adjoining room. The major operating rooms have overhead balconies from which visiting physicians and students may observe operations. Anesthesia rooms open directly into each operating room. A scrub room and a sterilizing room serve two operating rooms.*

The department of anatomy occupies the remainder of the floor and includes a modern crematory.

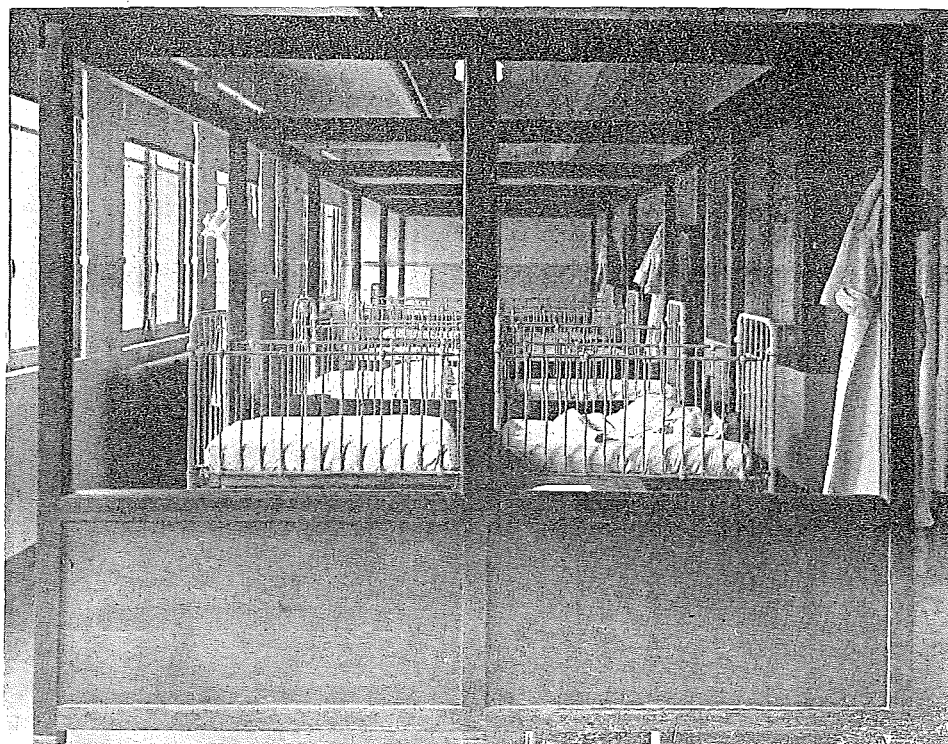
In the municipal hospital are thirty additional beds for obstetrical patients and the same number for children. All divisions are identical in details of construction, in the municipal hospital with those in the Strong Memorial Hospital, but are so arranged that they may be used interchangeably for the service having the greatest number of patients.

Six small suites of sitting room, bedroom and bath are provided in the nurses' dormitory for the administrative staff; also twenty large bedrooms, with bath between, for graduate nurses, and 190 smaller single rooms, with lavatory, for undergraduate nurses.

There is a large reception room, and there are

*For detailed description see THE MODERN HOSPITAL YEAR BOOK, seventh edition, page 108A.

Cubicles for infants in the department of pediatrics, devoted to the care of children under two years.



four small reception rooms; a library for periodicals and books on nursing, and classrooms for lectures and the teaching of nursing procedure. All teaching requiring laboratory facilities is carried on in the laboratories of the medical school. Toilets and baths are provided in the ratio of one to five persons. There is a sitting room with kitchenette attached on each of the three upper floors.

In the staff house there are four suites for the resident administrative officers of the hospital; fourteen for clinical and preclinical residents, and thirty-nine for hospital interns, including four rooms for women interns. Each preclinical department of the school is allotted two or three rooms, and members of the junior staff are encouraged to room in the staff house. It is hoped in this way to encourage a closer bond between preclinical and clinical departments. All rooms have lavatories, and toilets and baths are provided in the ratio of one to five persons.

The Strong Memorial Hospital is designed primarily for the care of patients of moderate means. Six semi-private divisions or wards contain thirty-one beds each, apportioned among seven rooms of four beds and three single rooms. There are twenty-six private rooms. Both adults and children with acute medical and surgical conditions and maternity cases are admitted. Of the 247 beds in the hospital, 221 are for patients of moderate means.

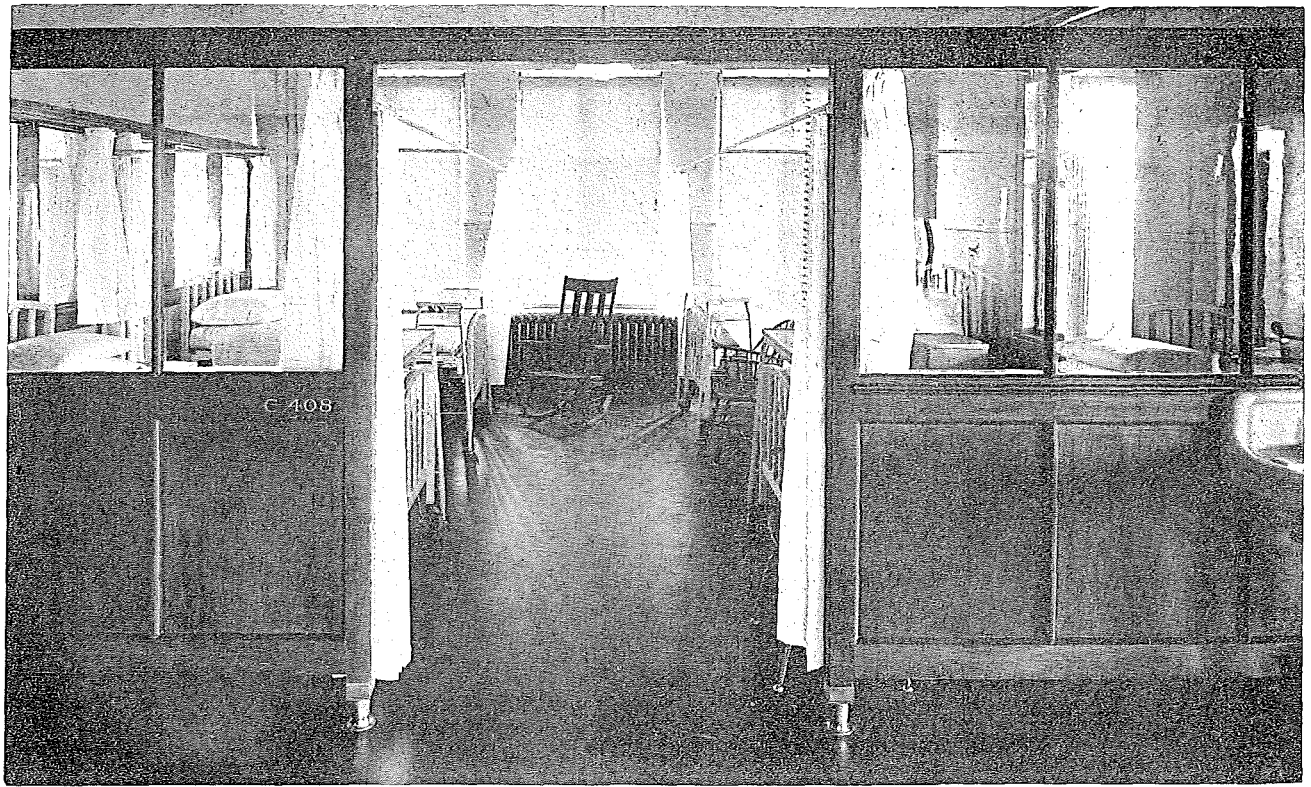
The charge for hospital care in divisional beds is based upon the actual cost of such care. It is estimated that this will be about \$5 a day, with

the hospital running 75 to 80 per cent full. (At present it considerably exceeds this amount). This includes all charges except those for x-rays, which are charged at cost, varying from \$3 to \$10, and the operating or delivery room charge, which is \$10. Special nurses are seldom needed and no professional fee is charged.

A limited number of patients especially valuable for the study of certain groups of diseases are admitted at reduced rates. The number of these patients is limited, according to the income from the endowment fund. The arrangement of the rate is in all cases the result of an individual conference between the patient or patient's family and a member of the hospital administration. No distinction in hospital care is made after the patient is admitted. In fact, doctors and nurses are seldom acquainted with the financial relationship of patient and hospital, an arrangement that is of benefit to the patient.

Private patients may be referred to the hospital for care by the staff, as private patients. There are twenty-six private rooms, the cost of these being from \$7 to \$15 per day. A professional fee is charged to these patients. Full-time members of the staff do not see patients outside the hospital except in consultation.

Insofar as is possible, the hospital admits patients only upon the recommendation of physicians. A letter may be given to the patient, referring him for admission; a letter may be sent to the hospital, describing the case and requesting an appointment, or the doctor may telephone



*Above, typical four-bed room.
There are seven such rooms in a
division.*

*Below, one of the major operating
rooms, showing the overhead bal-
cony.*



the admitting office. If a patient comes to the hospital without such a letter or previous telephone conversation, he is questioned as to his physician and the doctor is communicated with before the patient is admitted. An exception is made in emergency cases, when the condition of the patient demands immediate admission, but in all such cases the doctor is promptly notified. If the patient denies having previously consulted any physician, or having any family doctor, and still requests admission, he is admitted either to a private room or to a division, according to his economic condition.

Only members of the hospital staff may treat patients in the hospital. The staff is composed of the faculty of the school of medicine and dentistry. There are twelve full-time clinical staff members, who devote their entire time to the care of hospital patients, teaching and research, and thirty-nine part-time members, who devote a part of their time to hospital patients and teaching and the remainder to private practice. There is a resident and intern staff of twenty-five members.

Students in the third and fourth years of medical school are divided into small groups and serve in the out-patient department and divisions as clinical clerks or assistants to the resident staff.

The Municipal Hospital of the City of Rochester is intimately connected with the Strong Memorial Hospital. The full-time medical, resident and nursing staff are the same in both hospitals. The municipal hospital admits medical, surgical, pediatric, maternity and contagious cases, and a limited number of psychiatric cases for diagnosis and temporary care.

The out-patient department of the Strong Memorial Hospital is open daily (except Sundays and holidays) from 9:00 a. m. to 4:30 p. m. It is primarily intended to serve those members of the community who cannot afford to consult practicing physicians. The admission fee is \$.50.

Patients having no physician may be admitted or referred to outside physicians, according to the situation, after a thorough consideration of each

individual case. Fees may be remitted by the administration in suitable cases. X-rays, apparatus, and medicine are charged at cost, and a small charge is made for minor operations.

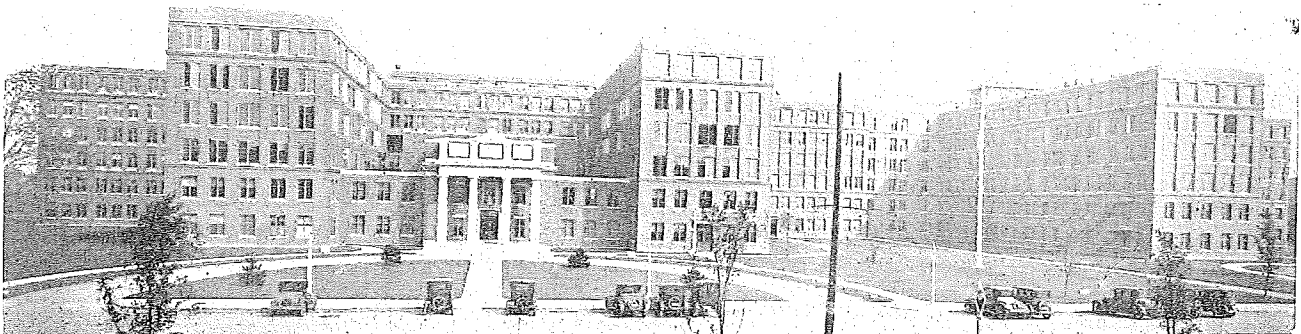
The out-patient department is run on the appointment system.

There is an emergency department to which patients may be admitted at any hour, day or night. Ambulance service is likewise available. A minimum charge of \$5, or \$1 per mile one way, is made to those who are able to pay for this service.

When a patient is discharged, he is recommended to return to the doctor who referred him, and a summary of the patient's record is mailed to that doctor within ten days. If further information regarding details of examination or treatment is desired, this may be obtained by correspondence, or the doctor may come to the hospital to inspect the records or x-rays.

The last paragraph of the agreement between the university and the city reads as follows: "The parties hereto recognize the fact that the relation between the medical school and hospital of the university and the municipal hospital sought to be established will, necessarily, be intimate and interdependent and that each will derive the greatest benefit only by promoting the interests of both, and each of the parties hereto is, therefore, entering into the contract with the intention of loyally cooperating with the other in carrying out the terms of the contract, and agrees to interpret its provisions, in so far as it may legally do so, in such manner as will best promote the interests of both and render the highest service to the public."

The combining of the Strong Memorial Hospital, the municipal hospital and the school of medicine and dentistry has meant an initial financial saving to the community of approximately half a million dollars. It offers unusual opportunity for the efficient care of the sick, the study of disease and the promotion of public health. It is unique in vision and in form, an example of cooperation between a progressive university and a broad-minded city government that is to be admired.



South elevation and entrance, Strong Memorial Hospital and Rochester Municipal Hospital