

Zeitschrift: Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift

Herausgeber: Bauen + Wohnen

Band: 12 (1958)

Heft: 5: Bauten der Gesundheitspflege = Maisons de santé = Hospitals

Rubrik: Summary

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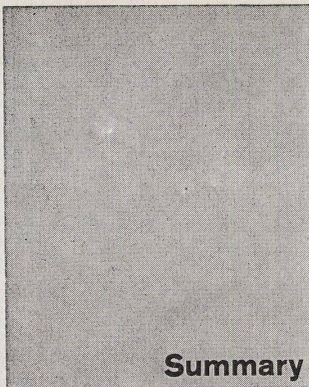
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Summary

Hospital Buildings (pages 141–143)

The most important types of building engaging public attention at the present time are home building, school and hospital construction. The transformation in types of hospital construction over the last 100 years represents a visible symbol of the corresponding changes which have occurred in the medical sciences and in methods of treating patients. Whether the hospital should be a low, flat-roofed building or a tower structure is at the present time a hotly debated issue. The whole trend towards grouping hospitals in large complexes comprising over 1000 beds is being countered by a movement towards decentralization with hospitals containing up to 200 or 300 beds being distributed among urban districts or rural communities. We have lately come to realize that as long as the patient is treated as an anonymous object of a scientific investigation, medical treatment as a whole and hospital construction especially are in a blind alley. Although the architectural problem involved in hospital construction is closely bound up with the entire modern trend toward functionalism, relatively few good buildings have so far been erected. This frequently arises from the fact that new hospital construction falls within the scope of extensions to old plants, and there consequently results an architectural hodge-podge of old construction, renovation and new construction. But then even entirely detached new buildings are often unsatisfactory architecturally, in particular when they reach a certain scale. It should always be borne in mind that the core of the problem remains the human aspect, the patient in the sick room, and that all other problems grow out of the basic unit, the sick bed, arrangement of beds and the organization of the given division. Therefore, in addition to purely architectural aspects, this issue devotes space to the development of the nursing unit and the design of the hospital bed.

Beilinson Hospital, Tel Aviv, Israel (pages 144–149)

This hospital houses the chronic and contagious divisions, and it contains 200 beds. The new structure with 450 beds is the acute division proper. The whole complex is later to be enlarged to comprise 1000 beds. Tel Aviv has a Mediterranean climate, which means that the patient has to be shielded in summer from the blazing sun and in winter from cold winds. The plan has the usual H-shape with a double ward on the south side, the treatment division on the north and the connecting section with lift and stair-well in the middle of the complex. There are one-storey annexes on the west and north. The reception ward in this hospital is particularly well arranged on a large scale, as is required for a population which in part is still very primitive. Also the personnel dressing rooms are carefully worked out, seeing that many of the personnel live outside and work only part time in the hospital. One of the main problems in this hospital is the stream of visitors, as with rather primitive patients whole families and even clans, as it were, visit their sick, and this frequently gives rise to disputes and altercations. The nursing unit consists of 35 beds, divided into 11 rooms for three and 2 single rooms. The whole complex is simple in design and gives an effect of restfulness. It is especially noteworthy that this construction was carried out with the very simplest materials.

Hôpital Avicenne, Rabat, Morocco (pages 150–154)

The hospital complex with its two large wards is oriented toward the south-east facing a park-like stand of trees. Separated from the hospital by the trees are the various quarters for doctors, nurses and personnel. In the level featureless landscape the symmetrical lay-out of the hospital stands out sharply. The climate in North Africa is similar to that in Tel Aviv, i.e. hot summers and windy, often cold, winters. At the present time the hospital has 750 beds in service, but it can be enlarged to contain 1000 beds. In accordance with Mohammedan custom, the hospital had to be very strictly separated into a men's section and a women's section; this applies even to reception. Projecting from the hospital proper is a large reception and sanitary station. The wards are subdivided into small units. On each side of a utility group is a sick room with seven beds. Protection from the sun is an exacting problem in this climate, and it has imposed upon this whole complex its characteristic architectural effect. The operating theatre is completely isolated from the outside world and surrounded by the necessary technical rooms. It has an oval shape and is thus without corners. The lighting equipment is built-in above the operating table, and the table can be illuminated from all directions by spotlights. The whole operating complex is fascinating owing to its technical perfection, but is rejected by many of our doctors who favour rather the small operating room with a view outside, restful colour scheme and as little technical apparatus as possible.

Some Ideas on the Nursing Unit (pages 155–158)

Around 1860 Florence Nightingale, distinguished for her services in the Crimean War, wrote to the authorities in London, "Wards with more than 32 beds are undesirable because they require a greater ceiling height and are therefore more expensive to build and more difficult to ventilate." From this consideration there was evolved the one-room 4.5 m. high whitewashed sick room with 12 to 16 beds disposed along both long walls, capable of being surveyed at one glance by the nurse on duty. The utility rooms were extremely modest: nurses' room, sluice room, WC and very modest washing facilities at the "most convenient" place, i. e., at the two ends of this long room. These 30 "row" patients were tended affectionately by one ward nurse and two practical nurses. Thus the proportion of Patient to Personnel was at that time 70:1 down to 10:1; at the present time, on the contrary, it is 2:1 to 1:3. This standard unit with from 28 to 32 patients became accepted throughout the world and has remained popular down to the present. The nursing unit on this scale has been kept over the years because 32 patients represent just about the maximum number that a nurse can care for and at the same time maintain real human contact with her patients. There has recently been a development towards side rooms for the patients, but in the first instance for the nurses. At the present time there are on the average about 10 to 12 service rooms for the same number of patients. This arrangement is what characterizes the nursing unit in our day. The tremendous progress in science and technology which is overwhelming us is having its inevitable repercussions on the functioning and the lay-out of hospitals. Two facts dominate the present situation with respect to the hospital problem: 1. There is a greater flow than ever of patients into hospitals, which can be ascribed to our higher standard of living entailing no doubt an enhanced susceptibility to infections and ailments. 2. It is becoming increasingly difficult to recruit reliable personnel for hospital staffs. When architects have to tackle the problem in the light of these factors, what happens quite simply is that the hospital is compromised, and that in two ways: 1. By introduction or re-introduction of three or more rows of beds per room, along with introduction of the double ward lay-out with central utility rooms and east-west lighting for the wards and artificial light for the utility rooms. Passageways are kept short, and the unit is economical to operate, and east-west lighting is just as good as south lighting for no more than two rows of beds. 2. Then there is the temptation to extend this concentration on the horizontal plan into the vertical dimension, for why should the mania for skyscraper structures stop short at hospitals? In view of this development we have to get back to a realization that the nursing unit

remains the core of the whole hospital and that the nursing unit in turn exists for the individual human being. We must be perfectly clear as to what our architectural task consists in if we are not to lose sight of the individual human being and of the human scale in a mass society. We demand therefore the abandonment of the huge ward in hospitals, we do not wish to be the victims of an over-technical medicine. We do not wish to be swallowed up in the amorphous mass. We seek on the contrary decentralization and subdivision of functions into small-scale spheres without forsaking all the advantages of large-scale organization. Human contact between nurse and patient should come first and should not be sacrificed to technical convenience. The patient wants continuity in his care and treatment, i.e., he wants the same nurse or small group of nurses all the time. This entails hospital organization on the basis of small groups. The most interesting new developments in hospital organization are taking place in England.

Children's Hospital, Aarau (pages 159–161)

The children's hospital was erected as a special division of the already existing general Cantonal Hospital and shares with the latter its technical services (kitchen, laundry and heating plant). The design and the operation of a children's hospital are more complex than those of other hospitals, since children of all ages from birth to 15 or 16 and of both sexes have to be cared for all together even though they are suffering from the most various ailments, individual needs and demands having at the same time to be attended to. The 55 m. long ward on the south side contains three divisions. On the mezzanine floor, with separate entrance, and cut off from the rest of the hospital, is the division for contagious diseases with 19 sick rooms for 35 patients. It has been sought by combination of wall surfaces and window elements to introduce some system into the design of the elevation, and since in each case the floors are visible on the outside the whole building is given an additional horizontal accent.

Medical Group Practice Clinic in San Bernardino, California (pages 162–165)

The clinic was founded by a group of specialists in various fields. The reception desk, the administration and the pharmacy serve all the patients in common and the physicians and personnel share common lounges with a library and a separate entrance. Thus an out-patient clinic on a private basis has been built up, making it easier for the patient to visit one or more specialists and at the same time simplifying the secretarial work and the record keeping for the individual doctors. Waiting is pleasant in the spacious corridors and halls with their view of trees and shrubbery; this presents a striking contrast to the usual dreary waiting rooms of our own dentists and other specialists, the thought of which often deters one from arranging for a necessary consultation.

Valbella Sanatorium in Davos (pages 166–168)

The architects were commissioned by the Federal Bureau of Construction and Building to remodel the Valbella sanatorium, built in the nineties, and to make it more efficient to operate. In doing so, the number of beds was reduced from 225 to 185. The entire structure furnishes an excellent example of how a modern building can be fitted into an alpine landscape. The flat roof, which has proved itself so well suited to the high alpine climate, produces a very natural effect in this case and the general construction of the southern elevation emphasizes the relationship of the building to the slope. The general purpose rooms (administration, lecture room, therapy, dining rooms and lounges) could be concentrated on the ground floor and on the first floor, so that the upper stories might be used exclusively for patients' rooms and utility rooms. The nurses and employees are housed in a side wing. There is a special entrance in the east wing for the women's and children's section. The dining room, as well, could be placed on the same floor as the new kitchen. To avoid having to put up an expensive reinforcing roof and to make the entire attic story available for patients, the attic was left as studding and a solid flat roof with interior drainage was built over it. Then the attic roof could be removed, the steel beams incorporated into the masonry of the elevation and the entire storey rebuilt.

Unicef Advisory Center for Women and Children in Zagreb, Yugoslavia (page 169)

The long, two-story building, which runs along the eastern edge of the hospital grounds, connecting two streets, serves its intended purpose conveniently and by simple means. The main entrance, i.e., to the children's section, is located on the more southerly of the two streets and the entrance to the women's section is approached from the street to the north. Because no windows could be put in the outer wall, the waiting rooms of both sections have skylights. The treatment rooms are located above the consultation rooms.

Home for Senile Patients, Stratheden Hospital, Fife, Scotland (pages 170–172)

This structure is the section for senile patients in a large mental institution in Stratheden. The building was planned for 102 patients, divided into four nursing units—two for men and two for women. Each nursing unit consists of an attended area with six rooms of four patients each and a lounge for recreation and therapy. Next to the lavatories is the sluice room, with its own exit, so that waste and soiled linen may be picked up. Each two attended areas share a common ward and three private rooms for patients who must be isolated for some reason. In the center of the grouping are the common rooms serving all four units. These are grouped around the spacious dining room, which can also be used for festive celebrations and for meetings.

Orthopedic Children's Clinic in South Bend, Indiana, U.S.A. (pages 173–175)

The State of Indiana erected this orthopedic institution for 100 bed-ridden children and also as an out-patient clinic for ambulatory cases. The bed-ridden patients can be kept here for treatment up to their twenty-first year and also are given a basic elementary and secondary education. The clinic is divided into two parts. In the west is the entrance and the receiving station with ten beds. The consultation rooms surround a courtyard. In the south is the treatment division and in the east the wards.

The Problem of the Hospital Bed (page 176)

The most important piece of furniture in the hospital patient's room is the bed. The effectiveness of the patient's treatment depends in great measure on the mechanical flexibility of the bed as well as on its appearance. The various seemingly irreconcilable approaches to this problem emerge succinctly in an informal discussion of the subject held recently among an architect, a head nurse and a furniture manufacturer. It is pointed out that the sick bed was at first merely the ordinary bed, but that with time steel beds were introduced for sanitary reasons. It is noted, on the other hand, that wooden beds are being re-introduced in some American hospitals in order to create a more homelike atmosphere, the metal hospital bed often unpleasantly resembling a mechanical apparatus. In the main, the architect represented the point of view of the patient, who requires comfort along with the feeling of being at home. The architect stresses the psychological aspects of the aesthetic problem of design. The nurse approached the subject from the point of view of the working hospital personnel, who require a high bed in order to care for patients efficiently without constantly bending and who also rely on the various mechanical devices by which the bed can be moved, tilted, etc. The manufacturer sought to strike a balance between the two opposing approaches, with reference to technical problems of raising and lowering, tilting and moving, stressing in particular that if beds of adjustable height are to be designed, they will of necessity resemble even more mechanical contrivances than the beds now in use. The nurse again insisted on the need to make things as easy as possible for the hospital personnel. The architect then summed up the manufacturer's problem as an effort to strike a nice balance between mechanization and harmonious design. The manufacturer warned that it would not be easy to produce such a bed at a reasonable cost, particularly for such a limited market as that represented by Switzerland. The architect concluded that the whole problem would have to be tackled on an international, or at least European, level.