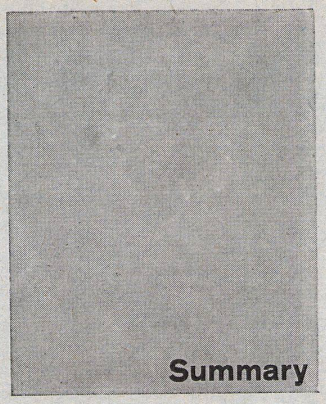
Summary



Summary

New Building of the Swiss Industrial Medical Insurance Program in Winterthur (pages 37—42)

The site is in a residential district surrounded by parks and apartment houses. The fine old stand of trees and a neighbouring building on the west, a Baroque structure to be preserved for its historical value, had to be taken into consideration. The owners and the municipal building authorities are to be thanked for producing a modern functional building in this setting harmonizing with the surrounding park. It is relatively rare to find lay-out, town-planning and architectural problems solved in such a harmonious fashion as in the case before us. The selection of a double office section in the north-south axis, in the east part of the site ensures adequate lighting of the offices. There is also an optimum interval between the building and the neighbouring Baroque house and the park. The offices all look out into the park. The plan involves a three-storey main building, in which connection the special premises such as conference rooms, lounge and refreshment room and the garages are housed in a one-storey annex at right angles to the main building, on account of their specialized functions and corresponding dimensions. At the intersection of these two cubic structures is the entrance hall with stairways and lift. The articulation of the main building in a ground floor and two compact upper floors was determined by aesthetic considerations and on a functional basis. In contrast to the ground floor with rooms serving various functions, only offices are housed on the two upper floors. These offices can be easily adapted to changing needs at any given time by way of their sliding partitions. The cubic interpenetration of the one- and the three-story sections presented an architectural problem. The present structure was decided on after thorough study of possible alternatives carried out on scale models. The framework elements and the front ends are covered with large artificial stone slabs. The exterior walls constructed as metal elements are recessed behind these frames. The elevation supports are, from the ground floor to the roof, continuous steel tubes covered with concrete. The ground floor is entirely in glass, with glass brick walls in the office section. It was sought to base the working out of all structural details on purely functional considerations, and to subordinate the choice of building materials as well as the design and colour scheme to this same principle. As for the colour scheme, all structural elements are in various shades of black and white. The furniture and fittings, consisting for the most part of already existing office equipment, were accordingly added to and together with the view out into the park constitute the desired aesthetic effect.

Rolleiflex Camera Factory in Braunschweig (pages 43-47)

This is the way the owner stated the problem: I need a factory building that is just as logical and efficient in operation as my camera. The factory is in a way a huge instrument, and it ought to inspire every worker with its own precision to be meticulously exact, which exactness has to be the basic condition of the production of high-grade precision instruments. With this ideal in view the architect came up with the following: Plan and construction: Work areas with optimum lighting, on 5 floors so as to gain the required 4500 sq. m. working area. Technical fittings: Complete insulation of the entire plant from outside dirt and dust. All windows with fixed panes, oil heating in winter, water cooling in summer with maximum rate of 60 cu.m. per hour. Structural details: Untreated reinforced concrete skeleton. Ventilation ducts and electric wiring brought in between core structure and stair-wells. Elevation elements watertight glued plywood panels with plate glass panes, parapets of 4 cm. cork insulation slabs, with asbestos-cement shell on both sides, air vent about 10 cm. with Novopan slab inside and enamelled sheet metal outside. The proper impression of Precision has been achieved by simplicity, exactness, durability and brilliance in design and structure. The stairwell towers, stereometrically exact towers on the square plan, give an effect of perfect symmetry. The »finished« effect is owing to the use of plate glass and enamelled sheet metal with 4 cm. narrow panels varnished white on both front and rear elevations and the yellow hard burnt brick on the gable ends and the plate glass stair-well walls.

Office Building of the Furniture Cooperative, Basle (pages 48—53)

The warehouses of the owner are situated in the area between the railway station complex and Güterstrasse. The new office building had to be accommodated on the site of an old house, which was torn down, with as extensive a shop area as possible, a display room, an administration floor and floors with office space to let. It was sought to place the building at right angles to Güterstrasse to break up the prevailing monotony, but this plan failed in the face of the strict building code. The building is flush with the other premises and the independent shop pavilion is vertical to it. The dimensions of the building as well as all the construction and detail measurements were determined by a system of proportions worked out especially for this building, it being set up on the basis of the length of the structure. The overall effect is determined by the strict separation of the office and the shop cubes. The original plan for steel construction had to be abandoned on account of the building regulations and the cost. The fireproof insulation around all structural parts, which is still prescribed, would have entailed excessive dimensions. Calculations showed the economy involved in selecting a concrete construction. The supports and the roof of the shop pavilion were constructed of steel. The all-glass elevations of the office building are set up in front of the concrete structure. The framework is made up of AP-sections supporting the large elevation elements of aluminium sections, with glass panel elements between. The parapet spaces have on the inside a glass grill to give diffuse sunlight. The entire elevation is without any moulding; there is neither a vertical nor a horizontal tendency. The colour scheme is markedly uniform. The large smooth glass elevations reflect the light and colours from the surroundings and the sky. The only significant colours, except for black and white, are the natural colours of the materials used, glass and aluminium. There is nothing insistent about the visual effect made by this building, an endeavour having been made to keep it all as modest as possible. There is no large electric signboard on the building; in its place is an illuminated mast erected in front of the elevation. The vertical neon tubes are supported by an aluminium structure. The firm name is run in discreet lettering across the top of the display windows at eye level.

Tavaro & Co. Administration Building, Geneva (pages 54—56)

The administration building of a large-scale enterprise has to serve many different purposes. In the first place it has to be a pleasant place in which to work, special emphasis in this example being placed on ample sunlight, sufficient room, a view out on to grass and trees, and quiet. Moreover, an administration building, in contrast to the factory building, in which simplicity and possibility of easy conversion are the prime desiderata, should also have public appeal and contribute in some measure to selling its product. The site available for this particular building was very restricted. The offices were all alined on the south side so as to be shut off from the noise of traffic on the Lyons highway. The building has garages in the basement, which are accessible from a ramp, heating units, air-conditioning plant, safety equipment and records. The ground floor consists of a large bright hall in which the porter's office and the lifts are located. The first floor has typical offices in the east wing, the equipment for which was carefully studied out in advance and could thus be prefabricated. The east wing is completely isolated from routine operations and contains conference rooms and their corresponding utility rooms along with the management offices. The second floor is again reserved for ordinary offices of the same type as those on the first floor. The building is entirely air-conditioned. Every office unit can be given any desired ventilation, heat and cool air depending on the season. The supporting structure is designed for an eventual additional two stories.

Construction of Municipal Halls (pages 57—68)

The problem of roofing over wide spaces at low cost and in an aesthetically convincing fashion can not be solved without the aid of new industrially produced building materials. Also the static engineer opens up a new world of creative possibilities to the architect, enabling him to manipulate large volumes in wholly novel ways. All solutions to the problem stated above have in common the following: they all seek a weightless spacing of elements and a new dynamic relationship between the roof area and its support points. This development is opening up a whole series of boldly conceived designs which up to now seemed possible of application only by using the very lightest materials or were known only in organic nature: pre-stressed surfaces like the membrane of a drumhead, etc. etc., structures in which molecular tensions remained in equilibrium, serving at the same time as partitions and as supporting elements. All cultures known to us have had places of public assembly in which the manifold interests of the whole society converged. The underlying idea beneath all these institutions, agora, forum, cathedral, market place, etc. was to strengthen the feeling of togetherness in people; this principle ties together in one single tradition the early Christian basilica and the modern community centre. Nowadays people of all walks of life insist on full participation in the social heritage and on enjoyment of all the fruits of progress. All this imposes a great responsibility and a great opportunity on the architects of our age. Their creative vision enables them to see that a brighter future has already begun.

The first step toward the building of a modern municipal hall was undertaken by the city of Vienna when, in 1952, it instituted an international competition for the construction of a sports and convention hall. The jury after examination of all the plans submitted awarded two first prizes, to Prof. Alvar Aalto, Finland, and to Prof. Roland Rainer, Vienna. This municipal hall confronted the architects with complex problems, as did the sports arena alone with its manifold functions: gymnastics, boxing, handball, wrestling, tennis, ice hockey, bicycle racing, giving rise to all kinds of difficulties with respect to flooring, disposition of space for the various activities and the problem of flexibility of grandstands. In selecting the type of construction for the central arena both aesthetic and economic points of view were borne in mind. The requirement of an unobstructed view from all the seats meant that a wide, supportless roof structure had to be devised. The fact that the arena is to be used for a great many different kinds of events had to be taken into account, as well as the greatly fluctuating number of spectators. For small-scale events the area can be reduced by means of easily movable partitions or curtains. All these manipulations had to be taken into account in planning the entrances and exits, the lighting of the arena, heating and ventilation, etc. Vienna was followed by the city of Essen, which in 1955 instituted a competition for the construction of a new municipal hall on the Exhibition Grounds. The hall had to be suited for all kinds of sports events, including horse shows and bicycle racing, and also had to house a restaurant. As in Vienna, removable seats permit the area to be altered at will.. There are roomy accesses to the lobbies, the entrance area and the parking lot in the rear. A huge steel framework extends straight across the hall, and the steel purlins rest on this. The grandstands consist of reinforced concrete with V-supports for added strength.

The city of Bremen went about the problem of building an up-to-date municipal hall in a particularly methodical and systematic way in that it took into careful consideration all the experiences had in the meantime in other cities. The following was what was essentially required: a) a convention hall for 6000 people, b) an auditorium for theatrical performances, concerts, revues and exhibitions, and c) a sports arena with an area of 23 x 46 m. In order to keep free the maximum area for public functions and exhibitions, the arena in the main hall was situated on the upper level. This proved to be the best solution of the traffic problem in that ramps from outside lead directly up to the arena over the tram line which goes by the hall. The grandstands project widely and furnish shelter from the weather for the activity underneath. The grandstands and the roof construction possess a novel static unity with their common reinforced concrete supporting structure. The lightly suspended tie rods extending 85 m. across the hall space contribute, along with the arena and the grandstands, to one single, consistent complex which is strikingly daring.