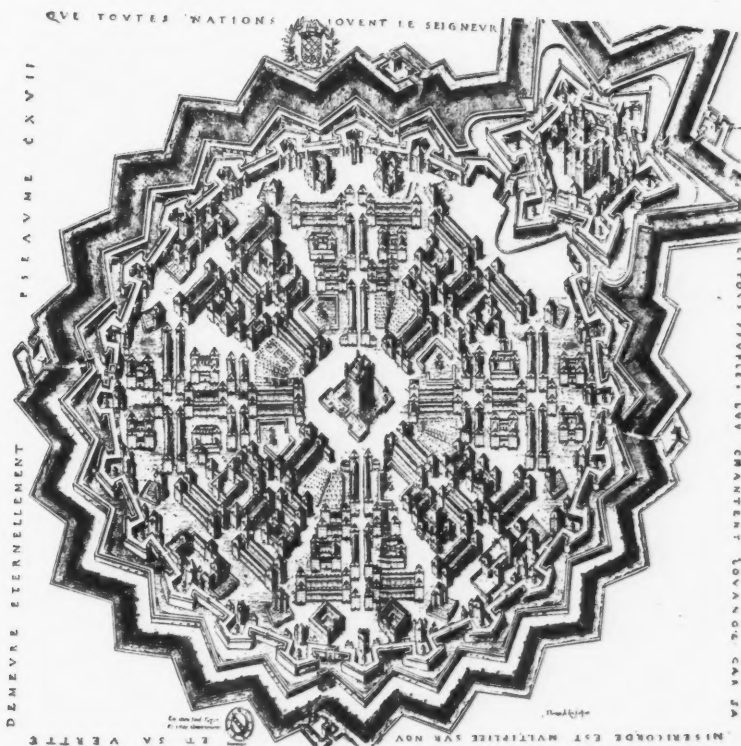


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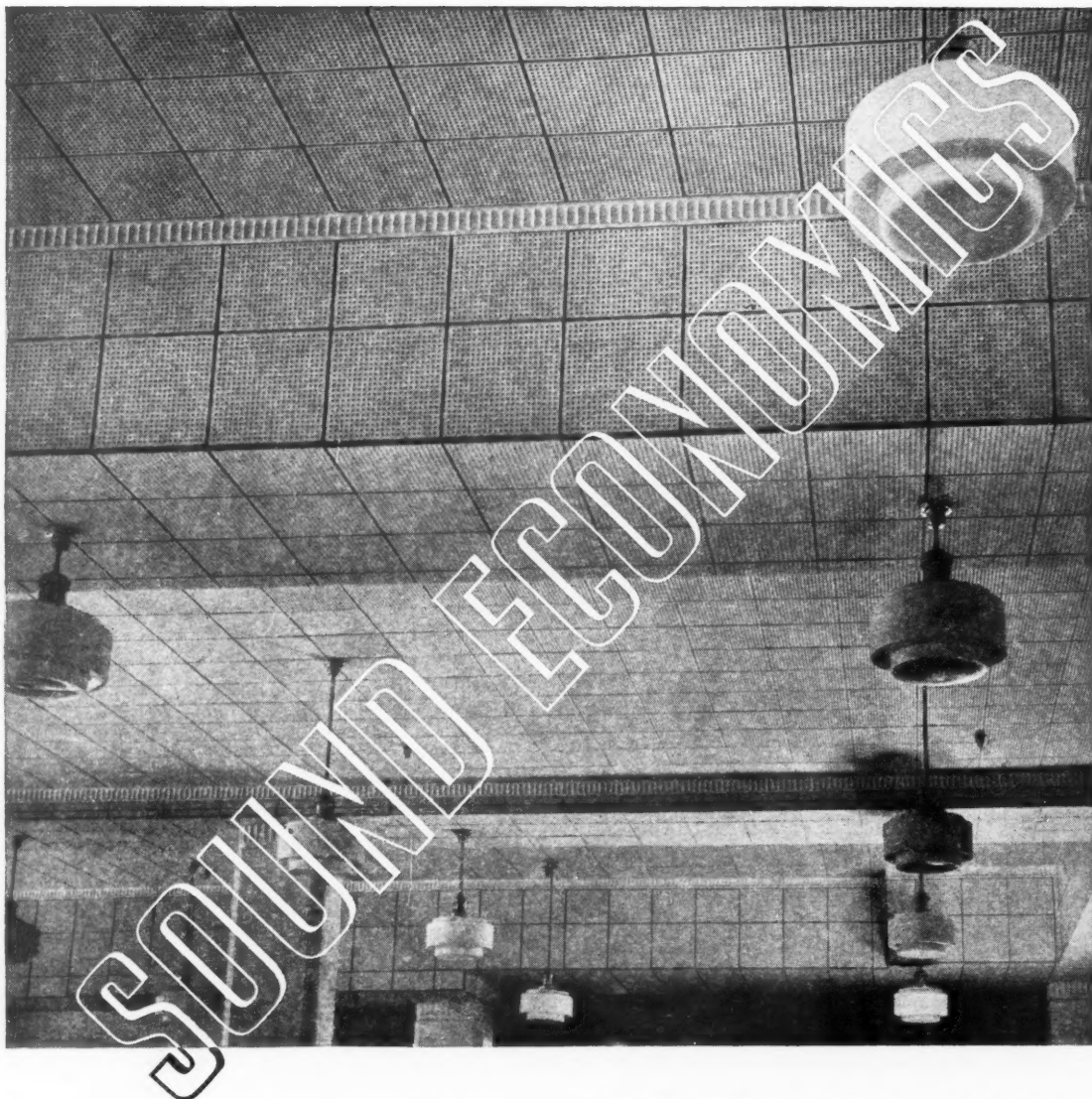
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MODERN SWEDISH DETAILING



Swedish decoration and detailing of the stylized type which grew out of the "national romantic" movement of the early twentieth century has for many years had its admirers and imitators in England. Meanwhile the Swedes themselves, concerned more with the social aspect of architecture than with the emulation of craftsmanship, have established a strictly Purist movement in which many of the leaders of the romantic school, Tengbom and Asplund for example, have become leading figures. And within the same movement the precious design of the romantic school has matured into a logical and

imaginative use of material for architectural detail which may ultimately prove to be one of Sweden's most valuable contributions to modern European architecture. Above is a view of the staircase in the Building Trades Club in Stockholm, designed by Sven Markelius, which in the combination of wood handrailing with metal balusters and in the contrasts in the floor finishings provides a good example of this architect's handling of materials. Further illustrations of the building are on pages 63 and 64 of this issue, together with an account of the development of modern architecture in Sweden and illustrations of recent buildings.



A water-colour drawing by Adolf Hitler: from an old sketch book.

The New Laokoon

By Francis Watson

In 1906 a bundle of drawings submitted by a boy from Upper Austria failed to secure his admission to the Vienna Academy, though some architectural merit was remarked in them. Become a man the unsuccessful student now announces vast building projects, some of them already completed, which "are not intended for the year 1940, nor even for the year 2000, but . . . made to project like the cathedrals of the past into the millennia of the future."

It is a sufficiently astonishing piece of personal history that has placed the amateur architect and watercolourist Adolf Hitler at the head of a powerful totalitarian state. But in the attempt to explain what we may dislike or fear politically in terms of one individual's narcissism, a striking fact is sometimes overlooked. The significance of Hitler's speeches on race-conscious culture lies not alone in their content (no one who has attended the opening ceremonies of provincial art exhibitions in England can seriously be upset at this hour by round condemnations of "degenerate half-wits who on principle see blue fields, a green sky and sulphureous clouds"). It lies also in their context and in their very subject. Never before in history have discourses on aesthetics found a fraction of the numerical audience that they reach in the Third Reich. It is neither a city councillor telling a hundred collapsible chairs that he knows what he likes, nor a fashionable critic expounding Vico and Breton to a drawing-room. It is the responsible head of the government speaking for an hour and a half to as many citizens as can be assembled in a megalithic stadium and further served by a radio network. And he is speaking about art. In face of this unprecedented phenomenon what he says begins to seem of secondary importance.

Nevertheless, it deserves some attention if we are interested in the immediate cultural future of the nation to which his words have been addressed. The Führer's prohibitive mood, particularly as expressed towards the end of the opening ceremony at the House of German Art last year, has recently received emphatic publicity in connexion with the London Exhibition of Twentieth-Century German Art.* But these negatives, however picturesque, are too vague and too familiar to invite serious discussion. In themselves they suggest no new dialectic, no programme, not even a definite black-list. Their interest lies in their echo of the resentful bewilderment of the "man-in-the-street" in all countries. "Ask these uncorrupted people, and you will receive an unqualified

reply" (*Cultural Address at the Nuremberg Party Congress, 1937*) Hitler in these speeches is the mouthpiece of *demos* and the declared enemy of cliques, intellectuals, "literati," "ink-slingers," and "the yelping of the critics against a decent and solid average." If he is not quite sure what he likes, at least he knows what his uncorrupted audience does not like. It does not like MODERN ART.

Yet art of some kind it will have. So much has been recognized. "No era can shelve the duty of cultivating the arts" (*Nuremberg, 1935*). Some may be inclined to agree with Hitler that in Germany there has during the past century been more cultivation than art. "If a man has an inner experience or a compelling impulse, let him prove it by his work and not by a lot of silly chatter" (*Munich, 1937*). But the chatter is to go on, and the cultivation. Only the gardeners are different.

How different are they, and what, on the positive side, is to be found in the new packet of seeds so hopefully labelled *Giant Sunflowers*? A hundred and seventy years have passed since Lessing published his *Laokoon*, and Lessing is reported to be out of favour in the Third Reich. The same has been said of Rembrandt and even of Grünewald, but both receive almost continual tributes in German periodicals. The *Laokoon* is still within easy reach upon the shelf, the well-thumbed memorial of an age of enlightened despotism. It could well supply a text or two, for its author was mindful that under Theban law "the state itself did not deem it beneath its dignity to confine the artist within his proper sphere by an exercise of its power."

Continuing this Draconic train of thought, Lessing indicated the aim of art as pleasure; and since pleasure, unlike knowledge, is not indispensable, "it may depend upon the lawgiver to decide what kind of pleasure, and what degree of every kind, he would allow."

Then, as now, he would allow the pleasure of *beautiful* art, which is the competent portrayal of beautiful objects. "Painting as an imitative power," Lessing conceded, "can express ugliness; but painting as a fine art refuses to do so." The peculiarly Germanic art of Dutch "low life" was to Lessing what *Kultur-Bolschewismus* is to Hitler—unworthy of the Temple of Apollo.

It is conceivable that Hitler might not now be thinking in terms of Greek temples if Lessing and Wincklemann and Herder had not crystallized in industrious and intelligent prose the spiritual *Drang nach Süden* of their race, of the forest-tribes who clamour for a place in the sun, and of the philosophers who take

* The First Exhibition of Twentieth-Century German Art at the New Burlington Galleries: July 8th—August 8th.

train for the lemon-groves of lyricism and the antique monuments of æsthetic treatise. Beauty has her mystic abode on the shores of the Aegean. "It was not because the Greek was handsome that he succeeded in reproducing his beautiful body in picture and sculpture, but because it was given to the Greek to perceive this beauty" (*Hitler, Nuremberg, 1937*). Captured by a premature eugenic enthusiasm Lessing hazarded that "as beautiful men produced beautiful statues, so the latter reacted upon the former, and the state became indebted to beautiful statues for beautiful men." The voice of Julius Streicher provides the antistrophe: "Be natural, be god-like, be beautiful!"

Hence the clumsy neo-Hellenic figure-paintings of Adolf Ziegler and Richard Klein in the House of German Art. Hence the sculpture of Fritz Klimsch and Arno Breker, Thorak's groups outside the German building at the Paris Exhibition, and the endless, restless bronzes, frowning defiance, flexing muscles for the mere sake of effort, marching towards they know not what, with never a hope of achieving that finite quality that brought *Laokoon*, struggling in the death-grip of the snakes, under the acute notice of Lessing. It is the Romantic-Classical confusion over again, and there are no artists good enough to tackle it.

The poverty seems to be recognized. Hitler himself could do little more than commend the "high and satisfactory average" of the standard of drawing at the Munich exhibition and hope that honesty and diligence might one day be rewarded by the divine gift of genius. "Fate does not seem to have decided to give us a great musical composer or painter or sculptor" (*Nuremberg, 1935*). There remains architecture, the Führer's favourite art, to which he returns again and again in his cultural discourses.

Here the purpose is plain enough. Analogies are still drawn from the Greeks, but also from the Egyptians, the Romans, the Mayas, from all building that is monumental, imposing, and politically grounded. The architecture of banks and warehouses is no longer interesting. Too much display has previously been permitted to such capitalistic concerns. The architect must now turn his attention to public works and undertakings that express the authority of the state. "What you see in the course of erection in this city, what is planned and in part already ripe for execution in Berlin and Munich, in Hamburg and other places, is intended to strengthen and support this authority" (*Nuremberg, 1937*).

The scale, then, is agreed upon. The Amalienburg strengthens no authority. The crowd must catch its breath and murmur "*Kolossal!*" Proceeding now to the "decisive fundamental of the art of National Socialism," we learn from Alfred Rosenberg that the new architecture demands "simple, monumental forms, which always derive from structural necessity and at the same time develop that inner architectural logic which has constantly led, when mastered by a strong instinct, to a comprehensible beauty; recognition that certain formal rhythms which reveal burden and support possess an eternal character and may not be debased by purely technical tricks, practicable perhaps but, nevertheless, infractions of the essential law of load and resistance." That cannot be said to take us very far, though one may suspect an intended dig at Gropius and the *Bauhaus*.

Surely, beyond the ordinary competence of the qualified architect, it is *style* that must be found for a new age so eager to

justify itself. The *Bauhaus* may not have originated an absolute style, but at least it made possible intelligent application to style in its relation to a wide variety of new problems, social as well as structural. Bounded by the æsthetic requirements of the uncorrupted populace, the architects of the new Reich hover uncertainly between Meistersinger-Medieval and Rucksack-Classical. It is resolved upon a return to the "German tradition" of sloping roofs. But there is that more recent and remarkably insidious tradition requiring that even Flemish primitives be housed in a *Pinakothek*. Gazing astigmatically at Athens through the *Brandenburger Tor*, no sloping roofs and wrought-iron insigns are to be perceived, but row upon row of Ionic columns supporting nothing but a coping.

From this dilemma a new brand of *Sachlichkeit* has provided the illusion of rescue. "Fitness for purpose" has decided rather arbitrarily on a Classical manner for Troost's House of German Art and Speer's buildings for the party rallies at Nuremberg, and on a Romantic manner for the *Ordensburgen* in which the future leaders of the people are put through their Mithraic training. The plans for the new public buildings in Weimar suggest a wish to compromise, while remaining in the debt of the Ludwigs of Bavaria.

It is, of course, a difficult matter. Some quality of repose is necessary to all great art, and that is not a quality which a *Schaffendes Volk* can very well pause to enjoy. One cannot be marching and building at the same time, and the appropriate architect for a nation on the move is the tentmaker. Yet one wonders whether Hitler, who has mentioned in his addresses no German architect earlier than Schinkel, might not more profitably have studied Schlüter or even Fischer von Erlach. Neither of them built stadia, it is true. But a style which applied itself to the harmonizing of restless rhythms, and one which was successfully adapted to the purposes of a militant ideology, might have been expected to hold more interest for the leader of the new Germany than the obscured ideals of Mediterranean hedonists.

The old German name of *Baumeister*, borne by the new architects as proudly as by the old, reminds us that where architecture hesitates building may yet be sound and solid. Sound and solid it must be if these vast monuments are to project into the millennia of the future in face of those material threats which oppress the nations today. And perhaps there is after all not much more required of them. The "decent and solid average," the diligence and patience for which the Führer constantly calls in his speeches on art, bespeak the nation of craftsmen rather than of artists. But it is also a nation of tireless æsthetic analysts, and there is little likelihood that the "literati" will mitigate their labours. The theorising which has been so severely censured has indeed been intensified by the very act of censure, and the speech at the opening of the House of German Art was followed by a flood of explanations, modifications and extensions in the official German cultural organs. So that those who may have come away from the London Exhibition of "Degenerate" Art with indignation against æsthetic dictatorships may be cheered by the express demand of the *Schwarze Korps* for "men who above all have the courage to create without first expecting a programme for every brush-stroke and an officially recognized list from which to select their themes."

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L A T I P S O H R E V E F



THE SOUTH MIDDLESEX FEVER HOSPITAL, ISLEWORTH

P. J. B. HARLAND, ARCHITECT

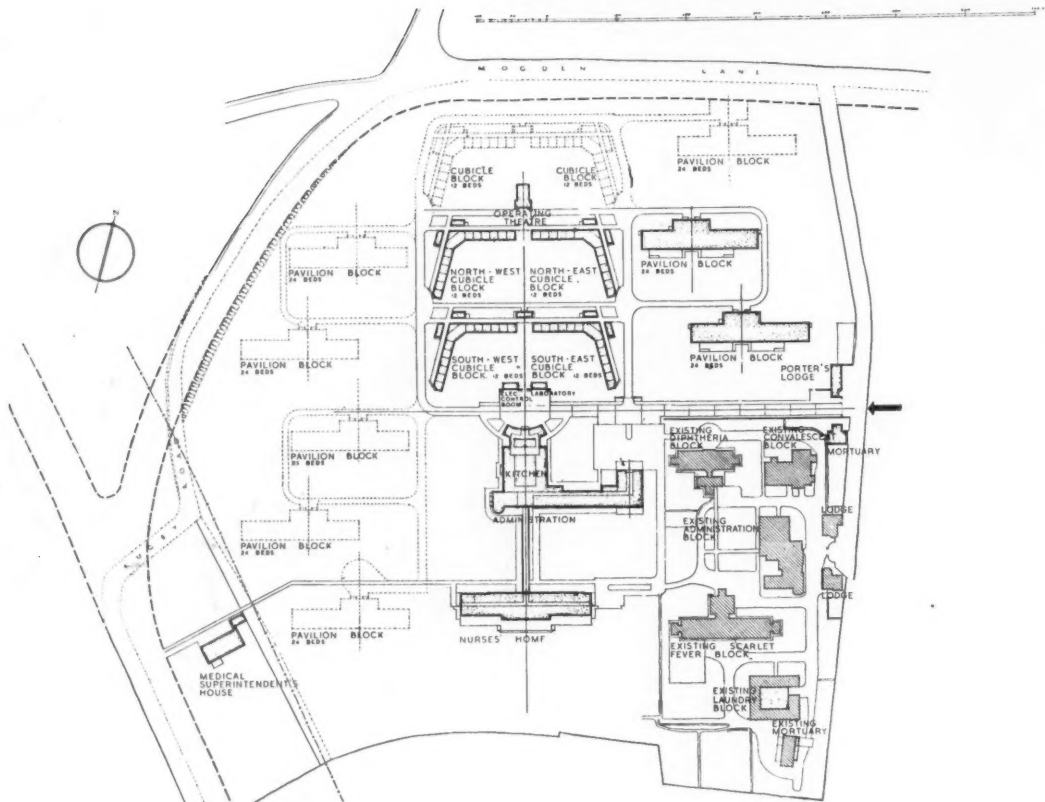
The present buildings of the South Middlesex Fever Hospital are no more than the substantial nucleus of a scheme to combine the functions of three existing hospitals, at Twickenham, Hampton Hill and Isleworth. Designed to serve the growing populations of Hampton, Heston, Isleworth, Richmond, Teddington and Twickenham, the site at Mogden Lane, adjoining the Rugby Football Ground, was already occupied in one corner by a small, rather haphazard isolation



hospital, put up in yellow stock bricks and purple Welsh slates some fifty years ago. For reasons of economy it is temporarily retained as a convalescent wing and maids' quarters to the present scheme. The main body of the site was an orchard, covered largely with apple and pear trees which are being left as far as possible to serve as screens between the building units. Sloping gently to the South and extending to about 18 acres, the site was chosen as being centrally placed for the area mentioned, readily accessible, and in open healthy country. With the exception of one building, the 3-storey Nurses' Home, none of the main units rise above ground floor level, so that construction was of the structural brick wall type, combined with hollow-tile and reinforced concrete floors and roofs. Facings throughout are of a pleasant hand-made, sand-faced, reddish brown brick, in a light sandy mortar, with door trims, curbs, wall and parapet copings in Portland stone. Window frames and external piping (of which there is little) are painted a light stone colour.

F E V E R H O -

The open planning necessary to a fever hospital is combined with a comprehensive road system for direct communication with each unit and frequent turning spaces for the ambulances. At present capable of receiving 100 patients, the extensions indicated on the site plan will increase this figure to 318, while further extensions would be possible on the continuation of the orchard site which still covers a considerable acreage to the east of the north-south approach road. Ideally, planning of the fever hospital should provide for the peak demands of an epidemic rather than for normal requirements, even though this inevitably means well-nigh empty wards during non-epidemic periods.



SITE PLAN

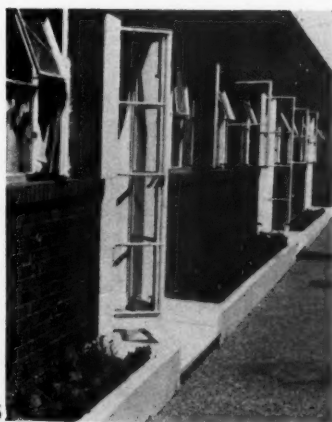
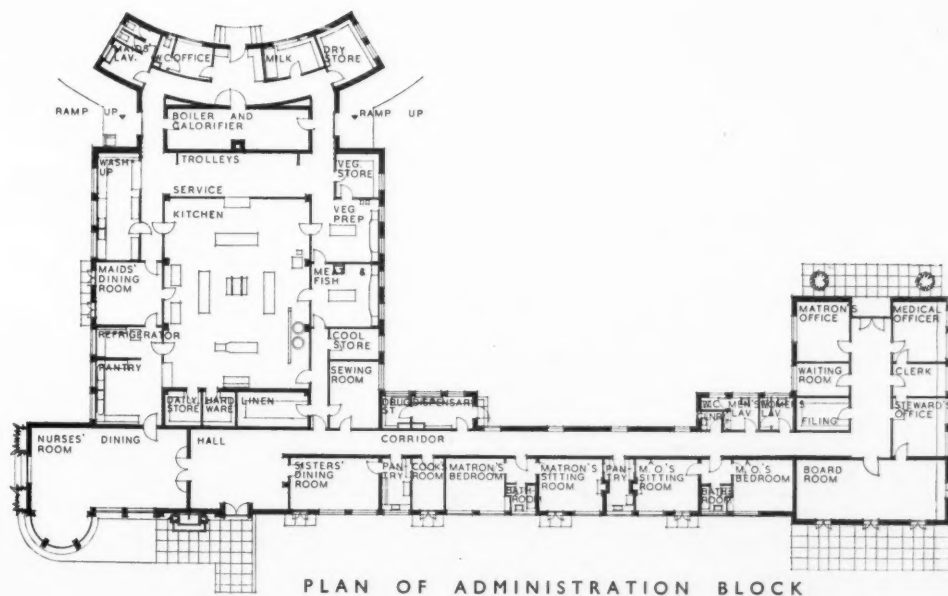
A D M I N I S T R A T I O N



Marking the focal point of the scheme stands a sundial displaying the east-west lines of the buildings, 1. At night lamps concealed under the bronze hood floodlight the Portland stone shaft and the circular steps, providing a landmark for ambulances and doctors' cars on the approach road. To the left of the sundial is the main entrance of the Administration Block. The Portland stone paving is continued in the reveals on either side of the glass doors, finishing on the face of the wall in a roll feature. Above, the purpose of the entrance is indicated in standardized stainless steel lettering. The flower vases, of which there are two on the entrance paving, are in biscuit-coloured marble with a circular plinth of grey granite. The Administration building is the nerve-centre of the fever hospital. Giving directly off from the entrance hall the Resident Medical Officer, Matron, Home Sister and Clerk's offices connect with every building unit by telephone, by which much of the routine business of the day is conducted. Behind the offices, facing south, lie two-room flats for the Matron and Assistant Resident Medical Officer: 2, right foreground.

S P I T A L

While much routine business of the hospital is done by telephone between isolated blocks, the more material problem of food transport was not so easily overcome. It was solved by making the kitchen quarters, which constitute the western end of the Administration building, the "key" to the layout of the site plan. From this unit, 3, its walls, floors and ceilings faced in a mottled cream-brown faience, food for all the wards is prepared, being then distributed in electrically heated trolleys to the various parts. Patent metal sinks and draining-boards are used while gas rather than electric cookers are installed as giving a greater flexibility of heat for the preparation of invalid dishes. Placed south of the kitchen quarters are the Sisters' and Nurses' dining-rooms. The latter, 4, finished in a pale green paint, with light, coarse-textured curtains and polished wood block floor, is surrounded by a paved terrace which increases the natural lighting of the room while the concrete canopy partially screens the large glass area from the direct rays of the sun. Bordered by neatly banked flower beds, and french windows ajar, the Matron and Assistant Medical Officer take meals in their private rooms, 5.



From the Nurses' Home a covered way, 6, is provided to the dining-room. Though in summer time the windows stand open, hospital etiquette does not permit entry to the dining-room to be made by this means: the ornamental fluted Portland stone rainwater tank, separating the walk from the dining-room terrace is symbolic of this restriction. The right-hand wall supporting one side of the canopy screens the neighbouring lawn which lies in front of the Sisters' dining-room and the Matron's and Assistant Medical Officer's flats. The concrete canopy is finished with a white aggregate to a slightly textured surface and the supporting columns painted cream.



7

T H E P A V I L I O N



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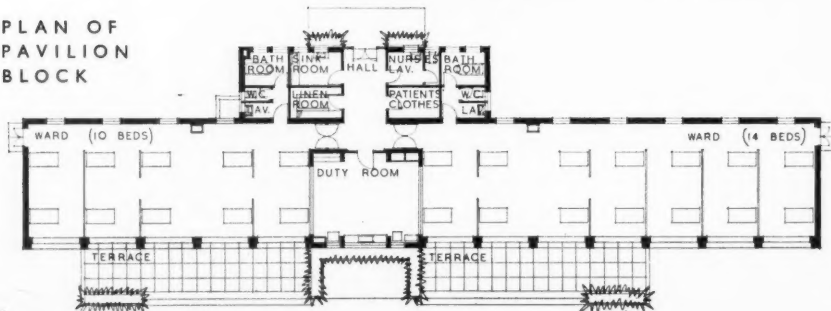
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Linked with the Administration building by gravel roads capable of taking the ambulance, are disposed the 4 cubicle blocks and the 2 pavilion blocks, eventually to be increased to 6 cubicle and 8 pavilion units. The pavilion, 7, is the normal type of unit found in most public hospitals. Taking approximately 24 beds, there is provided a male ward of 10 beds, with a female ward of 14 beds—since in the latter are also placed the smaller child patients. Pavilion blocks are intended to house only those patients suffering from the milder fevers where there is no risk of cross-infection. Entered from the north, and flanked by bathrooms, the hall, 8, derives its natural light from a reeded-glass and concrete door surround. The walls and ceiling are in cream with a dado of a mottled green. The flush panelled inner doors are finished in a light grey veneer, the outer teak doors being oiled and polished on both sides.

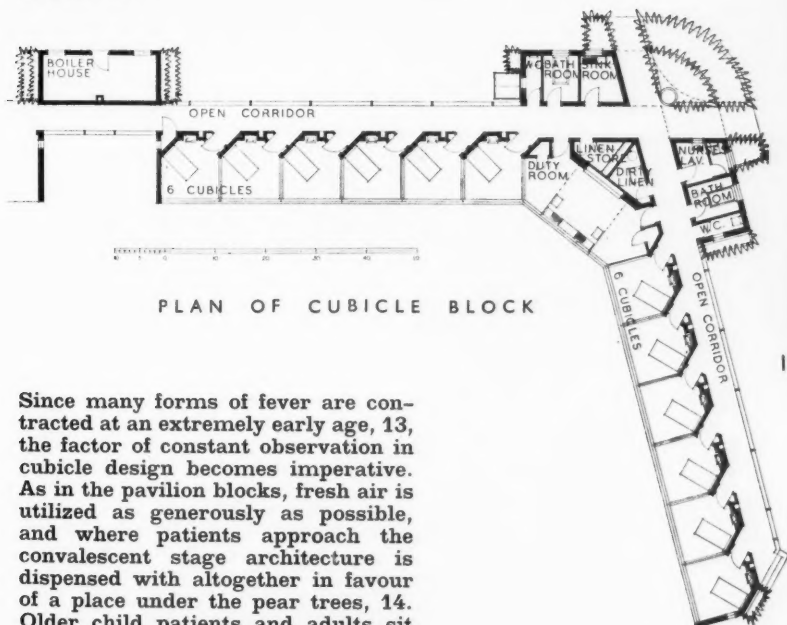
PLAN OF
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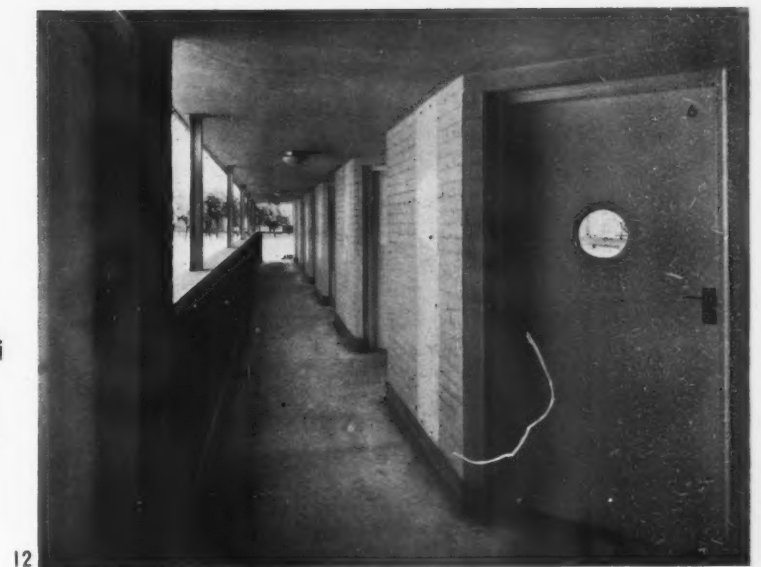
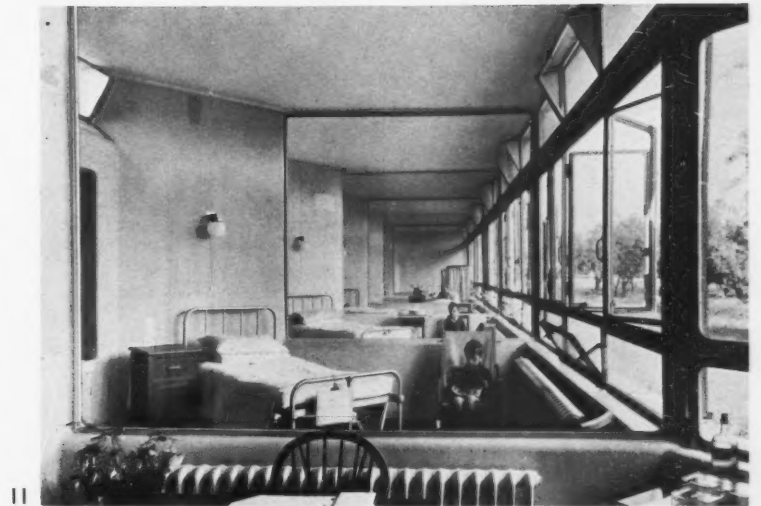
The hall gives on to the duty room, 9, where a cup of tea may be made, reports written-up and the radio listened to while patients remain out of hearing though not out of sight. Food from the kitchen is brought to the duty room, where it may if necessary be kept hot in the gas oven. Walls are finished a uniform cream colour with flush doors in natural-colour waxed veneers. The ceiling lamp is of a special type spilling the minimum of light sideways into the wards. In the ward itself, 10, where a loud speaker (from the duty room radio) transmits the lighter B.B.C. programmes to the sick bed, the most striking feature is the sectional window adopted. In the form of three large horizontal panes, the two lower sections may be thrown up by one person to leave the lower two-thirds completely open to the air. With any degree of clemency in the weather the patients are then wheeled on to the outer terrace.

F E V E R H O S P I T A L

Where fevers are such as to cause risk of cross-infection, as well as for serious cases in general, the cubicle block is favoured. Largely initiated by the present architect at Tolworth Isolation Hospital, the advantages of the cubicle (as against its high cost and the lack of companionship for the patients), are that a number of differently diagnosed cases may adjoin one another, while remaining under observation from a single duty room with its minimum staff. Each L-shaped cubicle block contains 6 cubicles in each leg of the L, with the duty room placed at the angle. The number of cubicles used is arbitrary and could possibly be increased to 10 if necessary. Large plate-glass windows between the cubicles give the nurse in charge a clear view in either direction, 11. When attention is needed an open-air corridor, 12, provides communication between duty room and cubicle. Besides suiting the plan-form, the cubicle doors placed at an angle give greater protection from one another when they are momentarily opened for the entry of the nurse or doctor. The white-painted metal panels seen in the brickwork between doors, conceal double-lock hatches for the disposal of used bandages and other refuse from each cubicle. Cubicles are decorated in biscuit-colour and green, with windows folding back in leaves to give the maximum of fresh air.

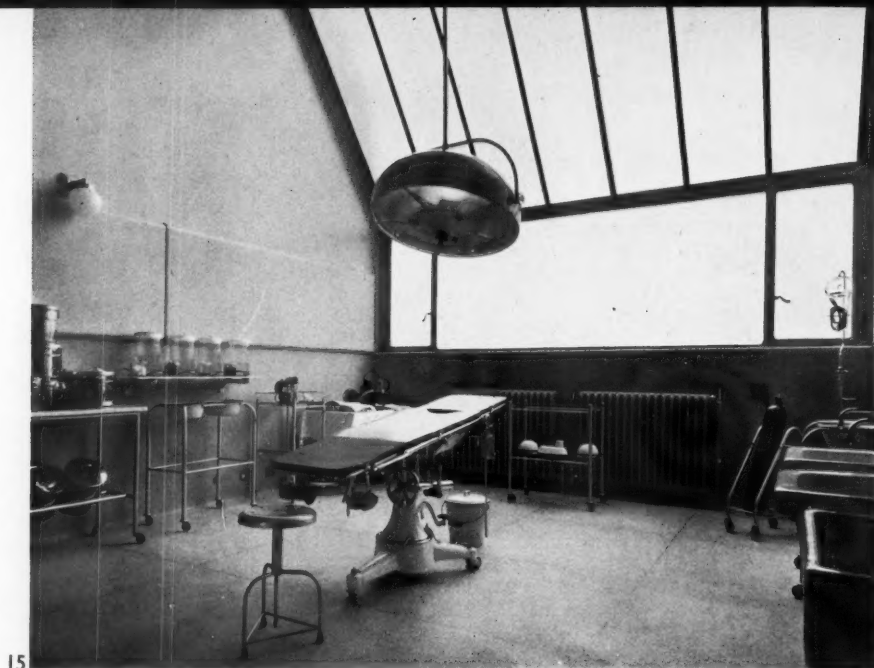
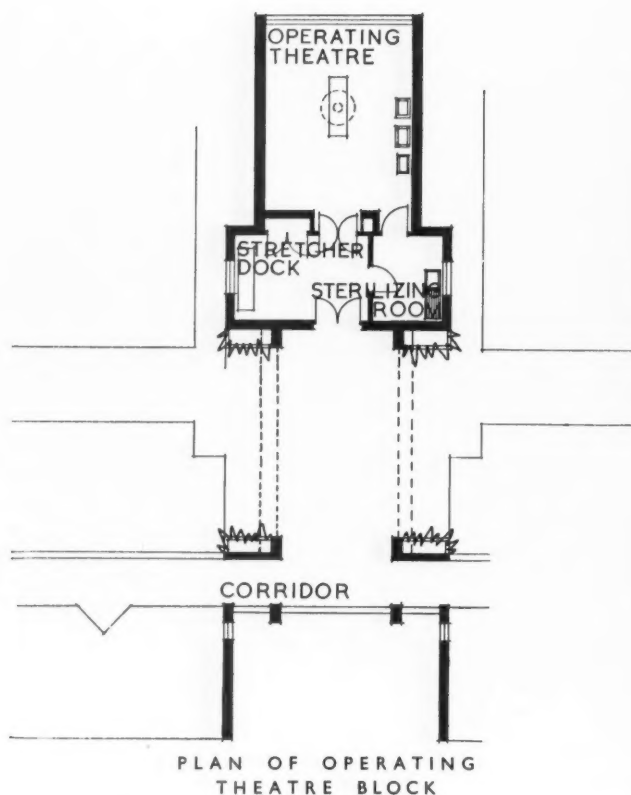


Since many forms of fever are contracted at an extremely early age, 13, the factor of constant observation in cubicle design becomes imperative. As in the pavilion blocks, fresh air is utilized as generously as possible, and where patients approach the convalescent stage architecture is dispensed with altogether in favour of a place under the pear trees, 14. Older child patients and adults sit out in similar positions, though without being allowed in groups until convalescence is well advanced.



T H E C U B I C L E

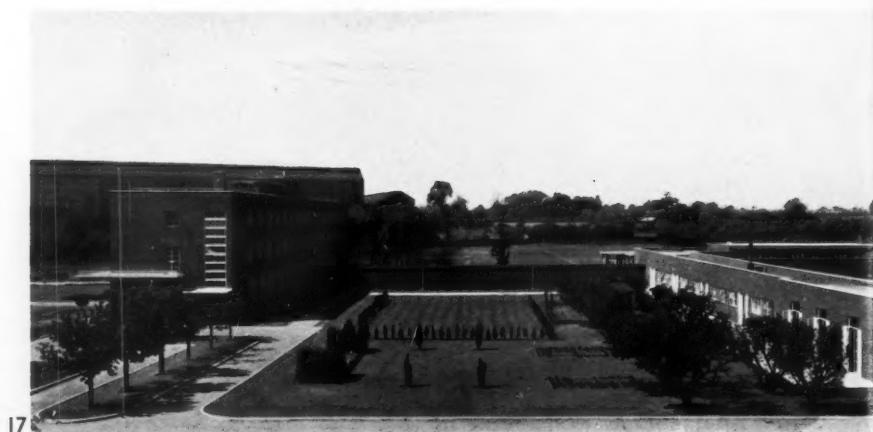




Lying on the axial line from the kitchen is the Operating Theatre, 15. Few fever cases require surgery, however, and the most frequent use to which the theatre is put is found to be for employing the mechanical "breather," where the respiratory organs are failing to function satisfactorily. The building has thus no terrors for the discharged patient, who plays under the herb-bordered porte-cochère while awaiting the homeward ambulance, 16.

OPERATING THEATRE

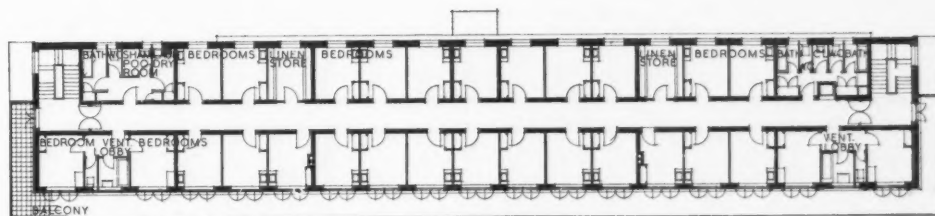
Isolated from the wards and the Administration building by trees and lawns, the Nurses' Home, 17, left, is the only considerable building on the site rising above ground floor level. Planned about a long spinal corridor with a large open-well stair at each end, the ground floor is devoted mainly to public rooms—the library and lecture room, individual sitting-rooms, the Sisters' sitting-room, and the central recreation room dominating the south front terrace, 18. The terrace itself has as its central motif a circular fishpond with a small fountain, while the extremities of the paving are marked by stone flower containers, from which chromium fish spout into small subsidiary pools. The balcony above the terrace serves 17 of the bedrooms, of which there are 28 on each floor: a further five bedrooms being situated on the ground floor. Other external features are the tall windows marking the staircases at either end, their main form boldly contrasted with horizontal panes and composing admirably with the return end of the balcony: also the service units grouped together on the roof—round which there is a promenade—and surmounted by a flagstaff. The window frames and balcony rails are painted a cream white.



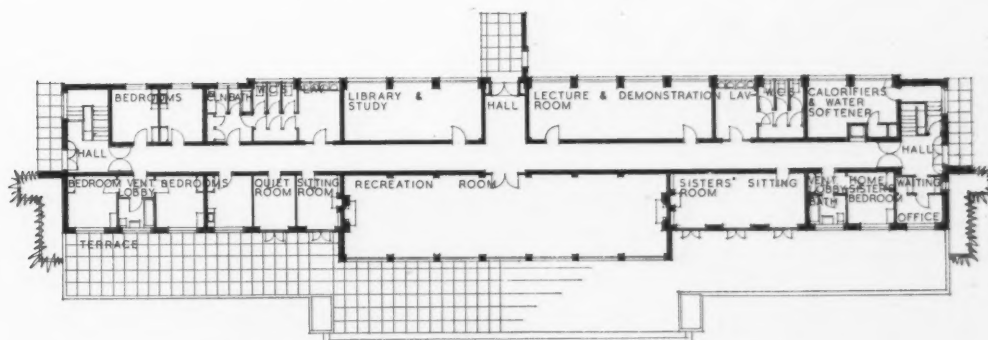
NURSES' HOME



In the recreation room, 19, finished in pastel shades of cream and green, with light-coloured waxed veneers panelling the end walls, fenestration is of a similar type to that of the pavilion wards. The wood-framed cream painted windows can be arranged in a louvred position, or the two lower units may be slid alongside the uppermost, leaving the greater part of the outside wall open to the air. The curtains are in shades of russet-brown, the carpet a single tone of russet.



FIRST FLOOR PLAN OF NURSES' HOME



GROUND FLOOR PLAN OF NURSES' HOME

The central corridors on the upper floors, each serving 28 bedrooms, have a colour scheme of cream and brown, the floor finish being of brown grained linoleum. At each end on the first floor, glass doors open on to the balcony continued round from the south face of the building. While each of the 6 Sisters' bedrooms have their own bathrooms adjoining, all bedrooms in the Nurses' Home, a total of 61, are provided with hot and cold water wash basins, 21. The decoration of each bedroom varies slightly to rob the building of an institutional character, the general colour schemes being in green and brown.



A G R O U P O F H O U S E S

ERNST L. FREUD, ARCHITECT

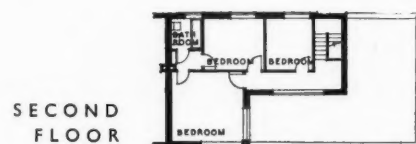
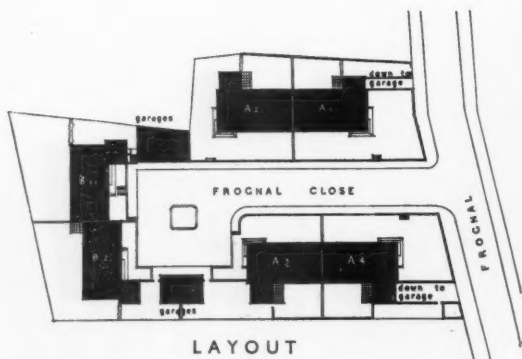
The interest in this group of six medium-sized speculative houses is particularly a town-planning one. They are grouped in pairs round a private cul-de-sac street whose end widens into a small square, and appear to offer a serviceable solution to the problem of planning in a well developed residential area to preserve a proper urban unity and provide at the same time seclusion from a main traffic route. The site, in Frognal, Hampstead, contained a large nineteenth century house, planned on so uneconomical a scale that it had been empty for some years. It was surrounded by a garden nearly an acre in extent, rising about 18 feet from the Frognal frontage to the back. This district is zoned for a maximum of 8 houses to the acre, and the architect's first proposal was for six houses, four of them detached (two on each side of a new cul-de-sac road) and the other two semi-detached at the end, the detached houses to be on different levels but linked by garages between.

This scheme allowed all houses to face south and to have comparatively good gardens, but it was rejected by the L.C.C. because the distance across the road did not comply with their minimum of 70 feet.

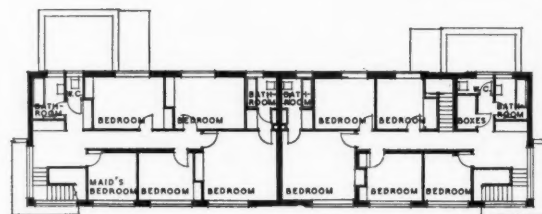
In the scheme carried out (see layout plan below), therefore, the houses on either side of the road were turned parallel to the road to form pairs of semi-detached houses, giving the required 70 feet between them. Each house is terraced to follow the rising ground, but the end houses, nearest Frognal, have a third storey so that the roof line of each pair of houses is continuous. The other four are two-storey houses. Each house has a front garden, a small but private back garden and a separate yard. The entrances are marked by canopies and flower boxes. The houses at the lower level have garages beneath them, reached by a ramp direct from Frognal. For the other houses a row of lock-up garages is provided on either side of the internal square.

The exteriors of the houses and all garden and retaining walls are in a 2-inch sand-faced brick of a buff colour, a small amount of stone being used for copings. The windows are metal, painted cream colour, and the front doors will be coloured individually. The houses are electrically equipped, with invisible ceiling panel heating in the reception rooms and the best bedroom and tubular heaters elsewhere. The principal sitting-rooms have sliding-folding windows giving on to the gardens.

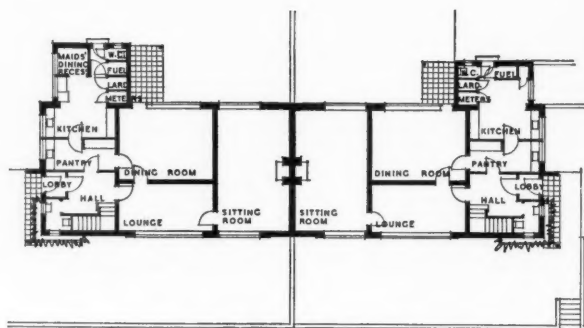
1, the view up the private access road from Frognal, showing one pair of identical houses, the nearest house having the addition of a third storey and roof garden. 2, the pair of houses at the end, facing across the square down the hill towards Frognal. 3, looking diagonally across the square. The rows of lock-up garages are seen on the left in 2 and on the right in 3. The plan of these houses, facing page, shows how, by setting one a few feet behind the other, extra privacy is given to the windows at front and back.



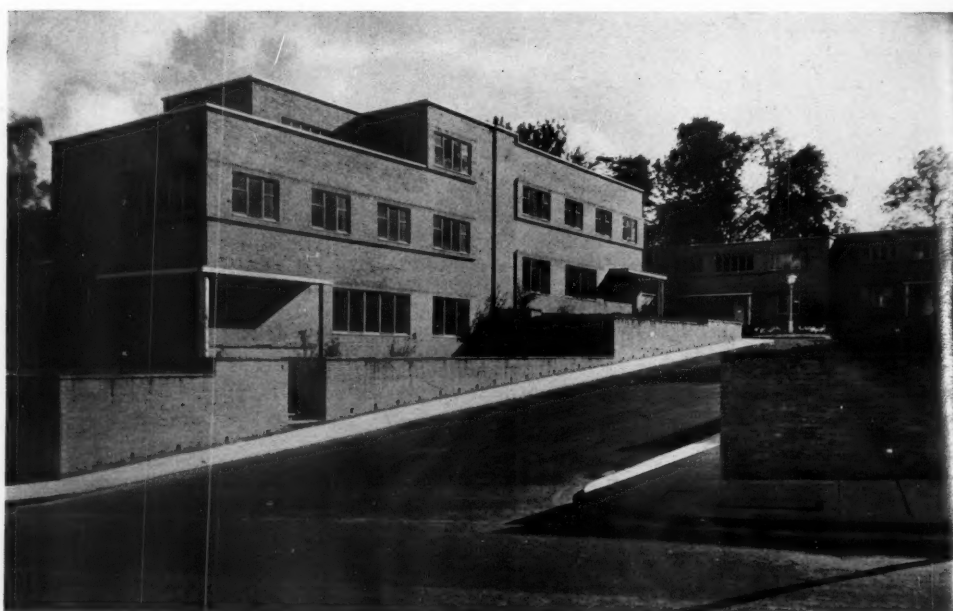
FIRST FLOOR



GROUND FLOOR



PLANS OF HOUSES A1 AND A2
(A3 AND A4 IDENTICAL)



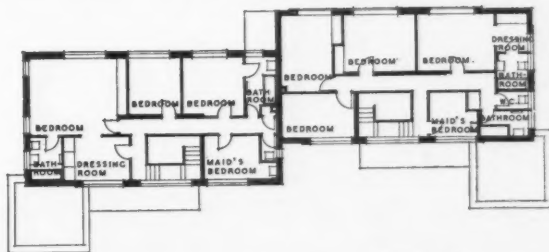


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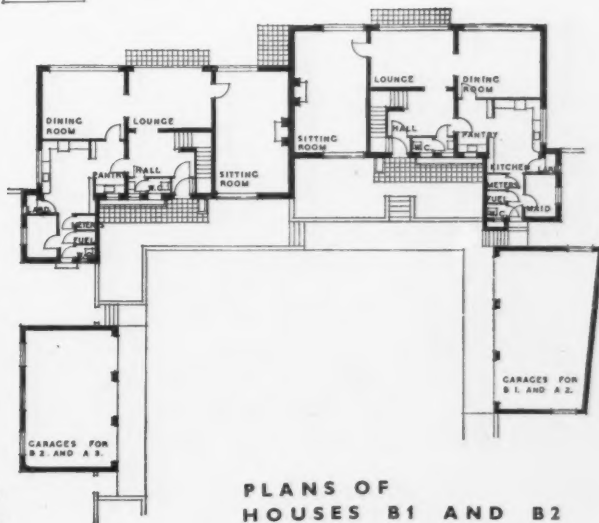


3

FIRST FLOOR



GROUND FLOOR



PLANS OF HOUSES B1 AND B2

H O U S E S I N H A M P S T E A D



4

4, a close-up corner view, showing the rough texture of the 2 in. facing bricks. The same bricks, with a small stone coping, are used in the retaining walls to the front gardens. 5, the entrance terrace and steps to the end pair of houses. 6, a garden elevation.



5



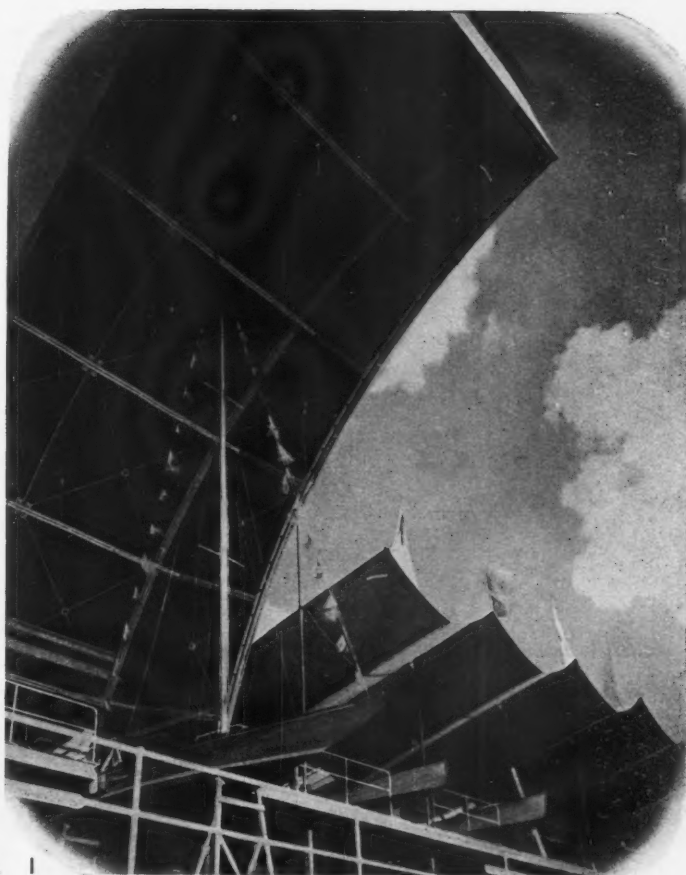
6

PHOTOGRAPHS TAKEN FOR THE ARCHITECTURAL REVIEW
BY FRANCES HOPE.

1, a portion of the Stockholm Exhibition of 1930. It was at this exhibition that there appeared the first signs of a "functionalist" approach to architecture in Sweden.

The Growth of Modern Architecture IN SWEDEN

With unsettled political conditions increasingly curtailing architectural development in many parts of Europe we look towards the Scandinavian countries to maintain a sane tradition of modern building, one that is based on modern architecture's own rational premises rather than on any ideological aspirations. For the same reasons the Scandinavian countries, and probably Sweden in particular, will this year be more than ever the summer holiday destination of the architectural tourist. The principal examples of modern architecture in Sweden are well known, but in the following article Mr. Arnold Tucker and Miss Gun Sjödin summarize the background against which modern Swedish architecture has grown and the influences that go to maintain its present remarkable equilibrium. The illustrations that accompany the article, though they do not pretend to constitute a guide to what the visitor to Sweden should see, summarize in each building category the peculiarly Swedish contribution to modern architecture.



At the end of the nineteenth century Swedish architecture, in conformity with the general standards of European architecture, was eclectic. Buildings at this time were generally imitations, in cheap materials, of Renaissance-Classic, Gothic, Oriental or other historic "styles": sometimes several different styles were used in the same building. Even the industrial and mercantile buildings of the time were pressed into one or other of the historical moulds.

An effort to create a unified style out of all these impulses was made by the "national-romantic" school, which appeared during the eighties and nineties and which to a certain extent co-operated with the new Art-in-Industry movement. The first important representative of this school was I. G. Clason, who, in his design for the Nordic Museum at Djurgården, attempted to rejuvenate the old northern ornamental art of the "Stav" churches, but designed in stone instead of in wood. He was followed by Carl Westman who gave a less extravagant shape to "national-romanticism" by adding to it some of the forms of the national Renaissance architecture of the sixteenth century. His greatest work, the Courthouse in Stockholm, is suggestive of the well-known Vadstena Castle on the Göta Canal. Westman, however, was something more than a skilled pastiche artist and in its quiet surroundings, which are generally overlooked by the tourist, his bold Courthouse design takes on a real beauty and shows a studied balance of parts.

Ragnar Östberg too, internationally the best known representative of the Swedish "national-romantic" movement, in his famous Town Hall in Stockholm turned Swedish architecture back to the Renaissance castles of the Vasa kings. But many of his motifs are foreign ones; the lake-side arcades and the elegant details show the influence of Venice: the domes are Russian, and there are many similar influences to be found in it. But the most remarkable feature of the building is its attempt to rejuvenate modern industrial art by giving more scope to artisan craftsmanship, a belated attempt to put Ruskin's theories into practice. Also there is a decided accent on expressionism. Its proportions have been changed without attention to the rules of design, and it reflects clearly, as Le Corbusier says, the faith of the bourgeoisie.

But by the time the Town Hall was opened, in 1923, the "national-romantic" movement was already almost spent and was making way for a "neo-classic" school. In the *avant-garde* was Professor Bergsten, in whose work, as exemplified in the Liljewalchs art museum (a building which was however before its time) characteristic classic form is seen adopting a more dashing dress. This "neo-classicism" may at first sight appear to be merely a continuation of those movements of the eclectic period which were influenced by the Italian Renaissance, but in its reaction against the economically impractical decoration in the "national-romantic" buildings it also brings us to the threshold of Functionalism.

The pioneers of the modern movement in Sweden, Asplund and Markelius, began their careers as "neo-classicists."

The best known examples of the "neo-classic" are Ivar Tengbom's Concert Hall, set off by Milles' fountain group at the entrance, and Asplund's State Library, both in Stockholm. The latter was partly influenced by a Danish classical building of the nineteenth century, Thorvaldsen's museum in Copenhagen.

The modern theory of building, which, for lack of a better definition, we can describe as "functionalism," arrived rather late in Sweden. It is only since the Stockholm Exhibition of 1930, which so admirably expressed the spirit of modernism and made a deep and lasting impression upon public, critics and contemporary architects alike, that Sweden has acquired an important voice in modern architecture. When it came there were few preliminary battles to fight, and the movement was accepted with unanimity. The problem was to find the correct method of approach to Swedish ways of living, of finding ways of using technical methods in a northern country, and of absorbing logically existing refinements of design.

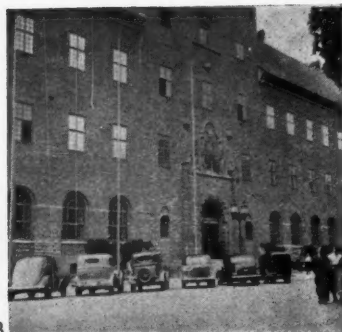
Modern architecture had been thoroughly tested on the Continent by 1930 and was then accepted with characteristic slowness by the Swedes. From this point on the story is one of the way in which they adapted it: of what was added to and subtracted from the theories and practises of its original masters.

It is the Swedish forte to build well. In

THE GROWTH OF MODERN



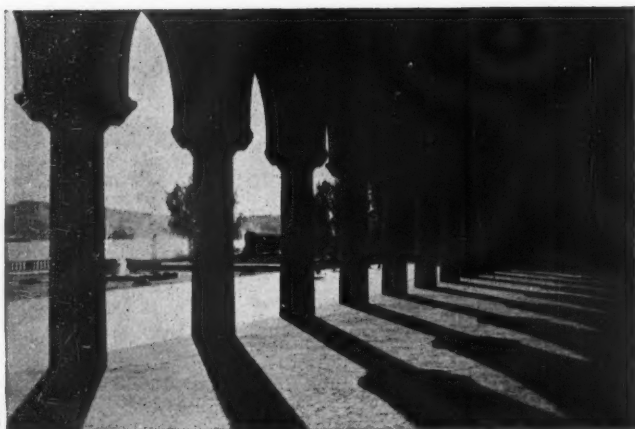
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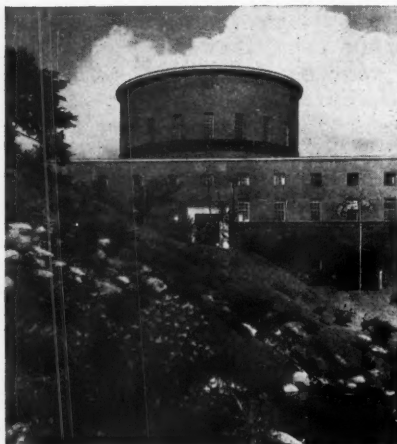
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2, a Government building in Stockholm by G. Clason, an important representative of the "national-romantic" school. This building, which is actually only a few years old, indicates the strength of a more conservative school of thought. The marble portico is a Renaissance feature and belonged to a former building on the same site. 3, the Courthouse at Stockholm by Carl Westman, a follower of Clason's who established a less extravagant version of "national romanticism." An early example of the "neo-classic" school to which "national romanticism" gave way during the early nineteen-twenties, is the Liljeholms Art Museum, 4, built between 1913 and 1916, and designed by Professor Bergsten. The sculpture is by Carl Milles. 5 and 6, the arcading and the waterfront terrace of the Stockholm Town Hall: Ragnar Östberg, architect. This building, which had a wide influence abroad, marked the beginning of the expressionist style in Sweden. 7, the State Library in Stockholm, Professor Asplund, architect: a building in the "neo-classic" manner which, at the same time, derives certain features from a nineteenth century building, Thorvaldsen's Museum in Copenhagen. 8, the Concert Hall in Stockholm, Ivar Tengbom, architect, with Milles' sculpture group in front.

heating, ventilation, bathroom and kitchen equipment Swedish practice is second only to the standards of the United States. In its use of wood the quality of workmanship and design is rivalled only by the other Scandinavian countries; and the refinement of the interiors is outstanding. A great deal of thought is devoted to the living quarters of buildings, in their personal aspect, and it has long been an axiom that the interior is more

important than the façade. In this lies the strength of modern Swedish buildings. Today, as the forces of reaction multiply on the Continent, while non-European countries seem unable to take the lead, it is an encouraging thought that modern architecture remains secure in Sweden: not always perhaps of a very high standard in individual designs, but certainly alive to the future and its possibilities.

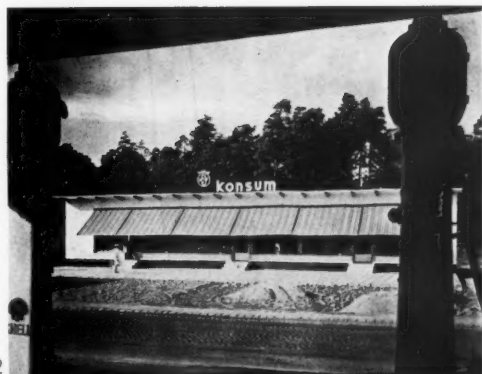
Two factors which have had considerable

influence on the development of modern Swedish architecture, and which today are undiminished in their influence, are the Swedish rationalization of industry and the existence of National Societies. In Swedish industry, although the machinery of production may have grown up in a haphazard manner, constant reconstruction has made it efficient in many branches. Thus the section of

[continued on page 65]



1. THE CO-OPERATIVES



2



3



4



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7

Examples of buildings financed by the Co-operative Societies, which have played an important part as sponsors of modern architecture in Sweden. 1, working-class flats by Hakon Ahlberg and Reinius built in 1936. 2, a Rural Co-operative Societies' shop. Between four and five thousand of these shops have been built. 3, the Co-operative Society's lamp factory near Stockholm. 4, housing for foremen and workers' families at Kvarnholmen, where the mills of the Co-operative Society are situated. 5, H. S. B. housing in Fredhäll, near Stockholm. Some of these flats are so financed that the largest families pay the least rentals, while at the same time maximum rentals can successfully compete with private enterprise. 6, H. S. B. flats in Stockholm. These flats are designed by the Society's own architectural staff. They are equipped with nurseries, children's playgrounds, communal washing facilities, shops on the ground floors, garages in basements, etc. 7, the Co-operative Society's headquarters in Stockholm. Attached to the building is a restaurant, which is reached by means of a lift. This also provides a short cut, by way of the roof of the restaurant, to the streets above and behind the building.



8



9



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2. HOUSING

8, a view of Norr Malarstrand-Stockholm, showing the housing development on the water-front. These buildings, although perhaps not of an especially good architectural quality, show an appreciation of many of the special problems of urban housing. A more penetrating study of social problems is shown in the well-known Kollektivhus in Stockholm, 9; Sven Markelius, architect. Stockholm is a city of notoriously high rentals and the block of flats shown in 10 represents a special effort to build low-rental flats. From this point of view there is a particular interest in the materials used: teak window bays and large red facing bricks. This block, the architects for which were Bäckström and Reinius, was built in 1937, as the result of a competition, and is the first of a series of blocks to be built by the same architects.



11



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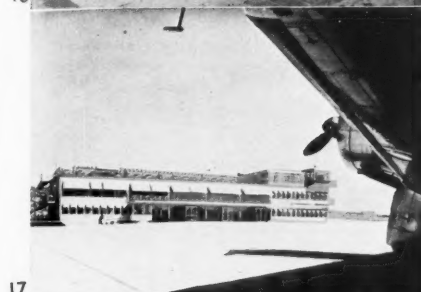
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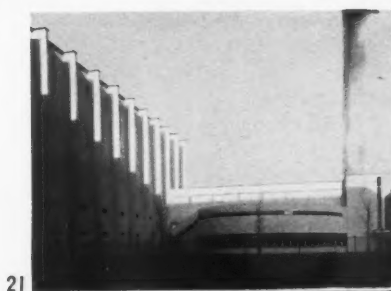
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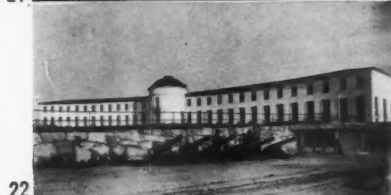
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3. PUBLIC SERVICES AND TRANSPORT

A thorough examination of practical requirements and the use of functional necessities to architectural ends gives a noticeable consistency to the best buildings of this type in Sweden. This can be seen in the examples given. 11 is a sanatorium in Uppsala: Birch-Lindgren, architect. 12, a school in Bromma: Paul Hedquist, architect. 13, a school in Stockholm: Ahrbom and Zimdahl, architects. 14, a biological research laboratory near Stockholm, constructed in light yellow brick: Professor Asplund, architect. 15, an interior view of the building, showing the lift encased in glass, and the gallery. 16, a bus garage for the City of Stockholm: Professor Sundahl, architect. 17, the airport at Bromma, Stockholm: Paul Hedquist, architect. 18, an air view of the traffic cross-over at Slussen, Stockholm. This immense complex of roads, locks, street car stations and shops is perhaps the most interesting solution to this type of problem which has been carried out in any country. 19, a reinforced concrete shelter at a traffic intersection in Stockholm: designer, Helger Blom. 20, a market building in the centre of Stockholm. Hakon Ahlberg, architect.



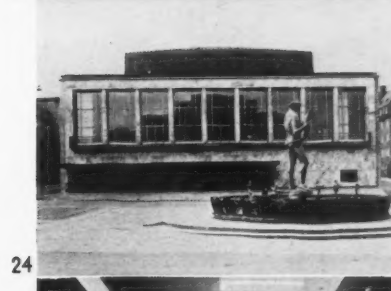
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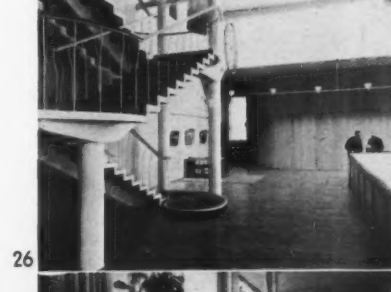
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4. PUBLIC BUILDINGS

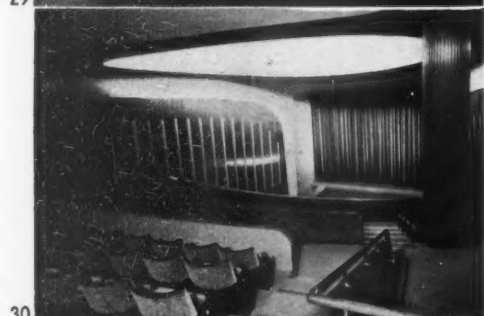
In the category of public buildings there is less consistency of thought, but on the whole a noticeable development away from the romanticism which in England is generally associated with the design of public buildings in Sweden, and towards a more direct statement of function. The Concert hall in Hälsingborg, 21: Sven Markelius, architect, is an uncompromising design of this type. 22, the Maritime Museum in Stockholm, Professor Ragnar Östberg, architect, was the result of a competition held in 1937. It shows how the architect still clings to the romanticism of which he is the most famous exponent. A halfway stage is represented by the Concert House in Göteborg, 24, E. Ericsson, architect, while the Malmö Museum, 23, A. Stolz architect, is designed throughout in accordance with the special demands of the building, a particular consideration being the method of lighting the exhibits. The general trend in the design of public buildings is perhaps best illustrated in the work of an individual architect, Professor Asplund. 25, 26 and 27, are views in the extension to the Court-house at Göteborg, built in 1937 as the result of a competition. This design completes the story of the architect's personal development which from the early work influenced by the Paris Exhibition of 1925, as seen in the details of the Stockholm Library, has developed through a period of successful but rather forced "functionalism" about the year 1930 to the purity and balance of his interiors of today.



28



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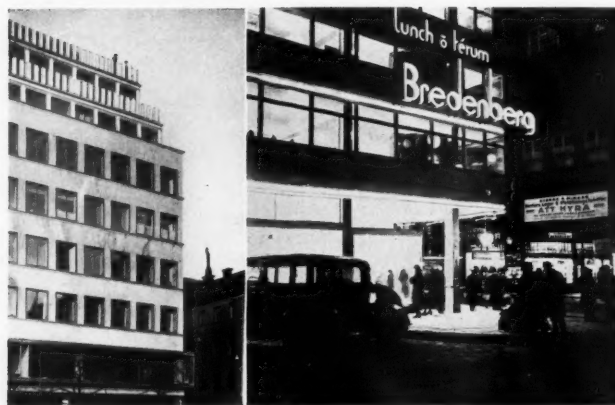
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32

5. LEISURE

In much of the architecture of leisure there is an opportunity for an imaginative use of decorative materials. The attempts which are being made in Sweden to design in this way, but on a rational basis which was seldom appreciated by architects of the romantic school, may prove, collectively, to be one of Sweden's most valuable contributions to the development of modern architecture. A building for leisure of an essentially "functional" type is illustrated in 28, a football stadium at Råsunda: B. Borgström and Sven Ivar Lind, architects. 29 and 30, the Saga Cinema, Stockholm: Adrian Peterson, architect. This cinema, particularly in the foyer, 29, illustrates a special type of decorative design worked out in conformity with the more expensive finishing materials used by the architect. 31, a restaurant in Stockholm, designed by S. Gate, showing a straightforward decorative scheme which has been developed on a strictly architectural basis. 32, a "Norma" restaurant in Stockholm: K. Westin, architect. Although it is one of a series of "popular" restaurants, in which economical planning and equipment are in this case important considerations, the decorative aspect of the design has not been overlooked.

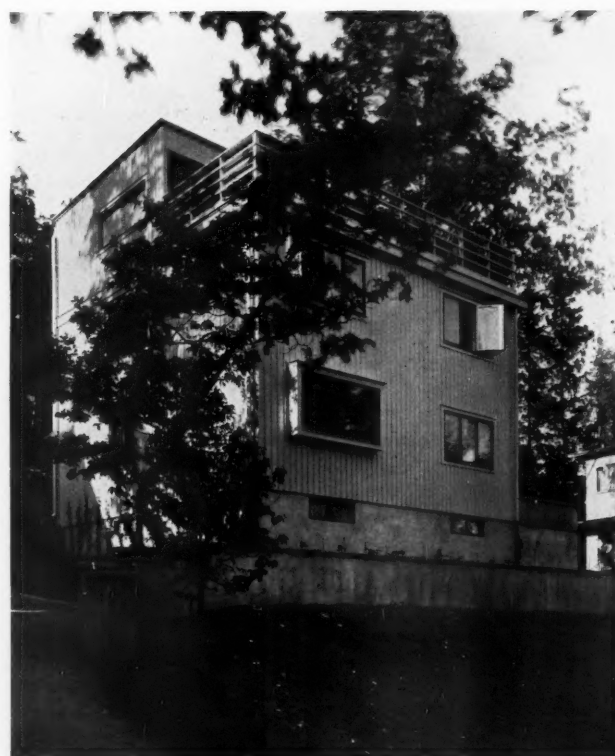


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34

6. BUSINESS

In business buildings, as well as in architecture of the more "monumental" type architects originally associated with the romantic school are seen falling into line with the strict rationalism of modern architecture. Examples of this are the office block in Stockholm designed by Ivar Tengbom, 33, and the department store in Stockholm, 34, designed by Professor Asplund and built in 1933.

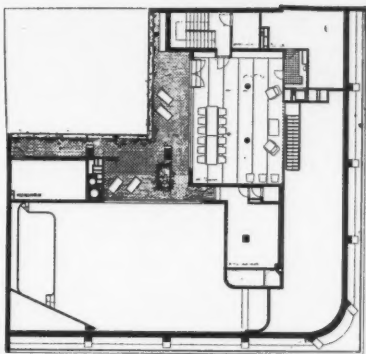


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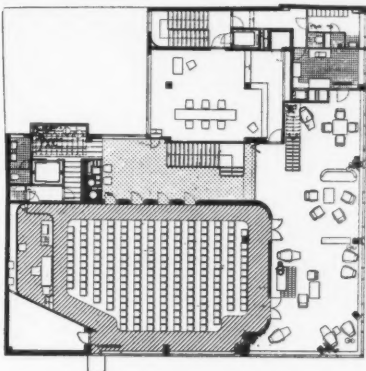
7. DOMESTIC

For the design of private houses wood remains, in general, the accepted medium of construction. Architects who in other fields have carried out startling architectural innovations seem, in the case of domestic architecture, to be more interested in establishing a good modern standard of the type shown in 35, a private house near Stockholm: Sven Markelius, architect.

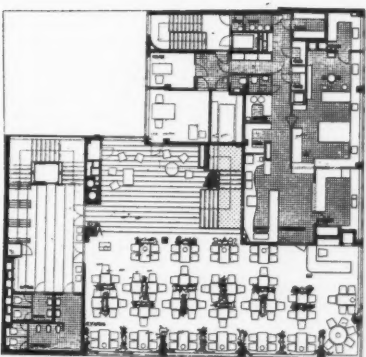
SIXTH FLOOR PLAN



FIFTH FLOOR PLAN



FOURTH FLOOR PLAN



SVEN MARKELIUS, ARCHITECT

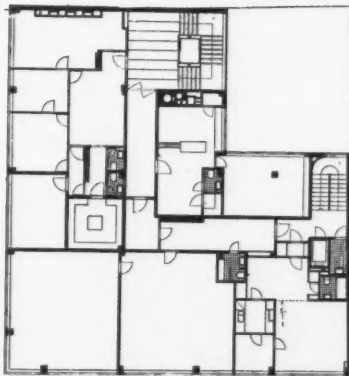
This building, which, as can be seen in 2, occupies a rectangular site at the intersection of the Norlandsgatan and the Mästersamuelsgatan, is set back 19 feet from the old building line on both street fronts. The whole of the ground floor with half the first floor is occupied by a district post office. The rest of the first floor and the whole of the second and third floors are let as offices. Thus, apart from a ground-floor entrance foyer, the club premises proper only begin on the fourth floor. On this floor is the dining-room, seating 100, from the cloak-room foyer of which a wide flight of stairs, (illustrated in Plate i), leads up to the club's premises.

The fifth and principal floor is treated partially as an entresol. It contains the lecture-hall, holding 200, and the larger of two club lounges. A staircase leads from it to the smaller club-room and library above.

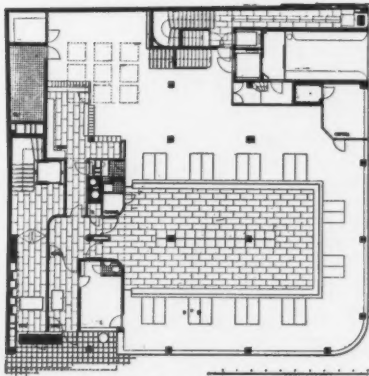
The main entrance on the Norlandsgatan, like the post-office entrance alongside, forms a shallow recessed portico, the walls being faced with polished slate slabs and yellow tiles relieved with chromium-plated metal-work. The isolated stanchion is sheathed in stainless steel. The main staircase ends at the fourth floor and the lift at the fifth.

The only external decoration is a reproduction of the club's original crest in greyish-yellow tiles and wrought copper just under the parapet and centred above the entrance portico, 1.

FIRST FLOOR PLAN



GROUND FLOOR PLAN



STOCKHOLM
BUILDING
TRADES CLUB

STOCKHOLM BUILDING TRADES CLUB

The staircase, 4, up to the club-rooms is panelled with birch-veneered laminated boards with a frieze of unfaced stone wall above, each stone bearing a plate commemorating the contributions of firms or private members to the building fund. The panelling is decorated with enamel paintings by Bibi Lindström, 3, depicting dates in the history of the club (which was founded in 1848) and stages in the erection of the building.

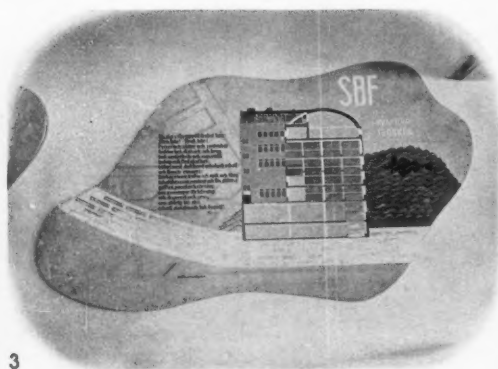
The larger club-room, 5, and library are carpeted with a subdued pattern of greyish brown. Durability and comfort have been aimed at in the furniture, which is mostly of mahogany or oak, upholstered in solid fabrics or Rexine. Brass predominates in the metalwork.

The lecture-hall, 6, has a vaulted roof so as to make full use of the 45° set-back angle from the roof-parapet. The walls are panelled with mahogany battens in which the air-vents are concealed, the ceiling being of plain white-washed plaster. A cinema screen can be pushed out of sight through a slot in the wainscoting. For acoustic reasons the projection-chamber at the back is faced with perforated fibre board on a packing of acoustic wool. The birchwood seats are of a nesting type designed by the architect.

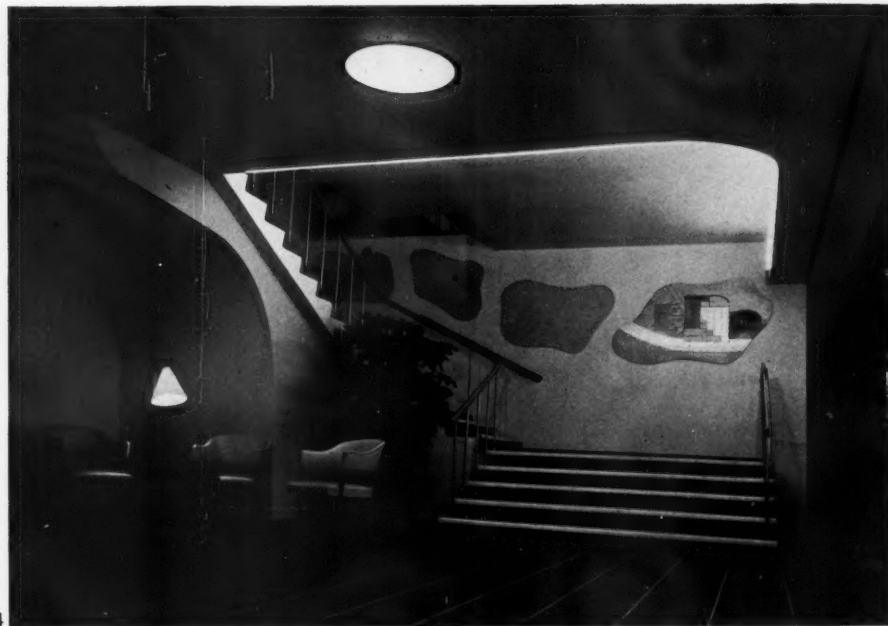
As a structure the building is a composite steel and concrete framework, the floors and roof-vault being of solid concrete, of a patent Swedish type of very hard and strong light-weight synthetic aggregate which has exceptional sound-insulating properties. The façades are rendered in greyish-yellow stucco, the window mullions being cased in asbestos cement sheets with an enamelled surface. Window-cills and drip-boards are of copper, and the roof of galvanized iron painted a greyish green.

Hot-water heating is employed throughout, supplemented by a combined hot-air and ventilating system, except in the office-floors where all rooms are fan-ventilated, the suction-vents being just below the windows.

All details, including the whole of the furniture and fittings were designed by the architect.



3



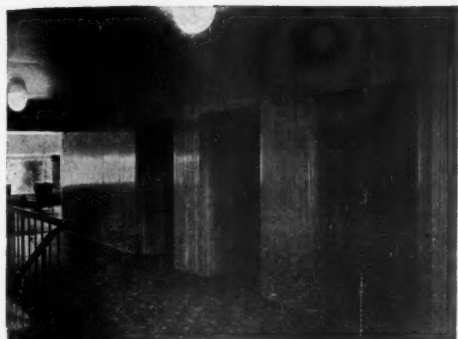
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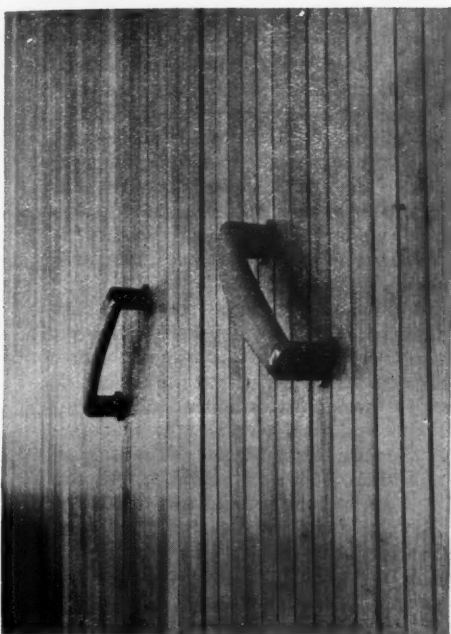
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6



7



8



9

7. Head of the staircase leading to the upper hall with the lift entrance opposite. The walls are panelled with birch-veneered laminated board. A partition of ribbed cedar panelling separates the larger club room, 5, from the lecture hall, 6. 8, is a close-up detail of one of the twin doors between them. An expanding glass screen enables the smaller club room to be isolated for committee meetings, etc. This L-shaped room has a sort of conservatory terrace, a corner of which is seen in 9, running round its outer walls.

[continued from page 58]

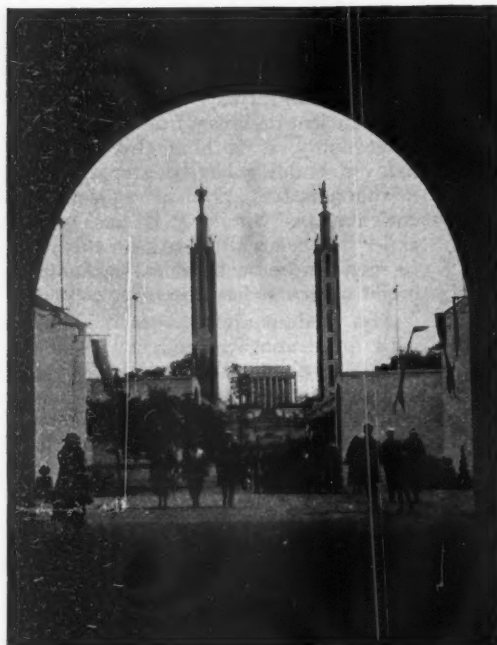
industry which supplies the community with most of its building has been subject to enough progressive rationalization since the middle twenties to enable it to collaborate with efficient designers from the point of view of economy, if nothing else. In this way many a building has been spared a glut of marble pilasters, plaster cornices or stucco enrichments. Similarly it has been made easier for the architect to plan efficiently and to spend more on technical equipment than might otherwise have been the case.

Also modern architecture is in sympathy with quite another tendency than the one mentioned above, and one that is quite typical of Swedish people, namely the attainment of a high standard of living for the bulk of the people through social-political activities. The existence of a progressive government has undoubtedly been one of the strongest factors in establishing a well-balanced building industry; also in fostering those large national undertakings which have had such important repercussions on the economic life of the people and, less directly, on the development of modern architecture. Not only have the Societies been willing to accept modern architecture, but, by creating their own architectural staffs under progressive leadership, they have made certain that they will get it. This is understandable when one realizes that one of the aims of the Societies is to cultivate in its members that practical idealism which is achieved by means of direct instruction on cultural and economic subjects.

Probably the most important and certainly one of the largest architectural staffs in the country is that of the Co-operative Society, an institution of great economic power whose shops alone number between four and five thousand. It has worked steadily to eliminate haphazard design, and so successfully that the standard of shop design has risen throughout the whole country, from the large department stores down to the smallest milk shops. The architectural staff of the K.F., as the Co-operative is known in Sweden, numbers about sixty architects and assistants. Incidentally this is about the size of the C.W.S. architectural staff in London. The K.F. staff are concerned with work as varied as competitions, exhibitions, and the design of furniture and materials, as well as with the usual practise in shop, factory, mill and housing design.

Their associates, the staff of the Co-operative Housing Society, known as H.S.B., do work of equal social significance and of a steadily growing volume. They attempt to supply modern housing on the lowest economic basis by means of flat dwellings in the cities, family houses in the garden suburbs or cheap and easily erected timber houses, which are generally built in the country.

This enterprise originally started following a serious housing shortage about the year 1870, and obtained its initial impulse from England. After various developments the Society eventually took on its present form, in which it is controlled by the tenants and is actually associated with the Social-Democratic movement. It has been able to organize its building activity on the basis of support in the form of credits obtained in the towns and municipalities in which it builds. Loans are often granted up to 90 per cent. of the value of the property, the other 10 per cent. being deposited by the members themselves, or



These are two important exhibitions which mark definite points in the development of modern Swedish architecture. The first was Göteborg's Exhibition of 1923, a view of which is shown on the left. It was this exhibition which established the expressionist type of design which in the following years acquired considerable influence in other European countries. The second was the Stockholm Exhibition of 1930, above, which introduced the "functionalist" creed, which has since taken the lead in Swedish architecture.

coming out of the Society's funds. The members' rents are used to amortize the loan, at which time the flat or house becomes their personal property.

Modern architecture shows a fondness for vast unified schemes in contrast with the preference for grouping and distribution which characterized an earlier age. The present day sees streets and squares not only dominated by gigantic business buildings but by tenement houses as well. Consequently, a few years ago, when a military exercise-ground in Stockholm became available for building purposes there was erected on the site what may be described as an "adulterated" type of ideal city. The area was planned by the City of Stockholm on a rational system with open spaces and plantations and with orientated blocks of uniform height. Most of the blocks erected originated in the H.S.B. offices. The area represents an interesting solution, with good perspectives and massing, but too great a density of building has caused many of the advantages of this type of planning to be lost, and the excessive depths of the blocks results in some bad planning. Nevertheless it is a very popular residential district and from some points of view reveals what the future may have in store.

The public architectural competitions in Sweden are particularly interesting and have a considerable influence on design. These competitions are distinguished by the large number of premiums awarded: often six or eight in addition to the three first prizes; and it is in these competitions particularly that new ideas are demanded. Comparatively little time is spent on the drawings, which are in pencil, unrendered, and illustrated by simple line perspectives only.

Many of the young Swedish architects have first achieved notoriety by winning a competition, for many of the important public and private buildings are the subject of closed or open competitions, and the result is always a barometer of current architectural trends. Judged by juries of five, including one or two experts besides the

architects, they have a visible influence on the design of successive buildings of the same type, and they ensure that architecture shall develop along consistent lines. In the limited competition, for example, the ultimate designer has the privilege of adopting any ideas which may have been put forward by the other competitors, but the actual winner of the competition has no guarantee that he will be asked to erect the building. All of the competitors are paid a given amount to cover all working expenses before they commence the drawings.

The victory of modernism, as has already been mentioned, was brought about by Asplund's exhibition in Djurgårdsbrunnviken, on the outskirts of Stockholm, in 1930. The illustrations on the following pages will show how the spirit of the exhibition has been interpreted in general by Swedish architects since 1930.

The most prominent creations of Asplund's since the exhibition are the Bredenberg store and the Bacteriological Institute, both in Stockholm, and the extension to the Court-house in Göteborg. These buildings are distinguished by clever interior design and by an imaginative use of materials.

Besides Asplund, the architect who has brought Swedish "functionalism" to its finest manifestation is Sven Markelius. A creation like the Kollektivhus, of which he was the initiator, is not only an interesting social experiment but also one of the most memorable products of Swedish architecture. Still more successful is Markelius' Building Trades Club in Stockholm, the restaurant and club rooms of which can perhaps be described as representing the climax of Swedish interior design. Like Asplund, Markelius is particularly successful in his handling of materials, and is deeply interested in the sociological aspect of architecture.

The K.F. architectural office has already been mentioned. The founder was Eskil Sundahl, who has also an extensive private practise and an international reputation in the modern field.

A few years younger than the above-

mentioned architects is Uno Åhrén, who worked with Markelius in his first advanced building (for the student corps at the University). But Åhrén is chiefly interested in the wider social aspects of architecture and is at present chief of the town planning office in Göteborg. With the well-known political economist Professor Myrdal he has made an extensive investigation of the postulates for a rational building unit, an investigation which has since proved very important in certain public enterprises.

Apart from these more prominent men there are several younger and flourishing firms which may acknowledge direct influence to them but are not incapable of outstripping them, given suitable opportunities. Among these may be mentioned Sven Ivar Lind, architect of the Swedish Pavilion in Paris, 1937, Åhrbom and Zimdahl, who have designed several interesting schools, sports buildings and private houses, Backström and Reinius who have specialized in flats and cinemas, Weijke and Ödén, and the brothers Ahlsén. They have all been successful in competitions and their work has a special vitality, a fastidiousness and a polish whose lustre will be increased with continued use.

In a small country where the architects are well known to each other, each examines the work of the others with meticulous care. This tends to establish a certain degree of homogeneity which is independent of all natural and technical causes. This is particularly the case in such types of building as shops and flats. Here we might quote the example of the housing competition of 1931 in which certain economic unit widths were evolved which have been used ever since in the greater part of flat buildings throughout the country.

This homogeneity is also extended to Sweden's neighbours, the Danes and Finns. Aalto's furniture is popular and is used in large quantities in Sweden, a country which itself is not deficient in furniture designers, while Danish ideas of planting and flower culture are studied and adapted (the same relationship of light yellow brick to the natural green used so well in Fischer's Aarhus University buildings in Denmark can be seen in Asplund's Bacteriological layout) as well as certain aspects of Danish interiors, as in the case of Markelius' Building Trades Club.

A study of the buildings erected in the last seven years can give an idea of the strength of the reaction against their fore-runners. That a higher stage of development can be reached there is no doubt, but it is also true that great æsthetic advances have already been made. With the solution of certain technical problems the architect has been at the same time liberated and restricted: he is no longer of necessity an artist, but he is a servant of and can be a slave to Business, Industry or the State. It is his task to be not only an organizer and administrator but a master of beautiful design as well, and this in the midst of important social transformations. In Sweden we know that a spirit of national tolerance can be a sympathetic mother to modern architecture but no prophesy of the future can ignore the possibility of influence from abroad. But until they have taken root a continuation of present trends in Swedish architecture may be expected to produce simplicity without barrenness and a strong sense of citizenship and order.

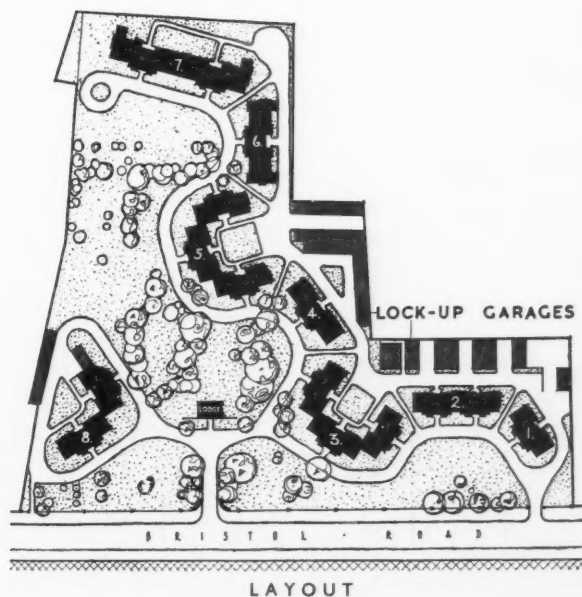
FLATS

MITCHELL AND BRIDGWATER
AND GOLLINS AND SMEETON
ASSOCIATED ARCHITECTS

THE SITE The flats, known as Viceroy Close, are in Bristol Road, a penny tram fare from the centre of Birmingham. Several old Victorian houses were demolished and a layout adopted that ensured the maximum of sunshine in living-rooms, and the preservation of practically all the fine old trees on the site. A great deal of garden work, planting and turfing, has been done. There are three main courts, all open on one side to the sun, giving a considerable amount of privacy in spite of the large number of flats. In each block a standard entrance hall, staircase and lift gives access to the various flats.

THE VIEWS ILLUSTRATED 1, the main entrance. 2, a general view of block 4. 3, a detail of the entrance to block 1.

ASSISTANTS The architectural assistants were E. G. Mambery, L. W. Aked, and H. E. Round.



LAYOUT



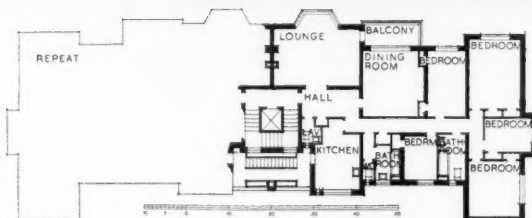
FLATS

MITCHELL AND BRIDGWATER
AND GOLLINS AND SMEETON,
ASSOCIATED ARCHITECTS

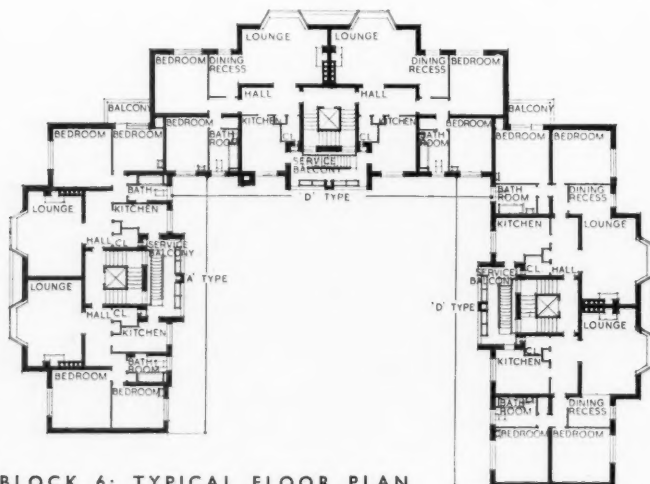
PLANNING There are eight main types of flats, ranging from small flats containing one bedroom, bath room, reception room, dining hall and kitchen, to those containing five bedrooms, two bathrooms and two reception rooms. Garages, a pump-room for water supply, porters' mess room, and a petrol station, etc., are incorporated in the scheme.

STRUCTURE AND MATERIALS The buildings are almost entirely of brick wall and concrete floor construction, with little steel used other than for reinforcement. Over each entrance is a sculptured keystone by Mr. O'Connor Barrett, who has also carved a decorative panel on the lodge.

THE VIEWS ILLUSTRATED 4, blocks 5 and 6, seen from the roof of block 7. 5, the porter's lodge and estate office. 6, a corner of block 5. 7, the courtyard at the back of block 3. 8, the back of block 2.



BLOCK 3
TYPICAL
FLOOR PLAN



BLOCK 6: TYPICAL FLOOR PLAN



7



8

F L A T S

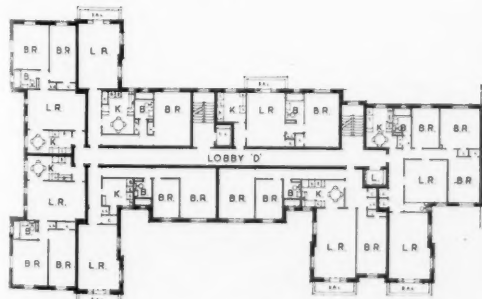
HECTOR O. HAMILTON
OF HAMILTON AND GREEN

THE SITE The building, known as "San Remo Towers," is on the summit of a cliff overlooking Boscombe Bay, near Bournemouth and with a southerly aspect. The building is accordingly planned in a U formation with the open end facing the sea.

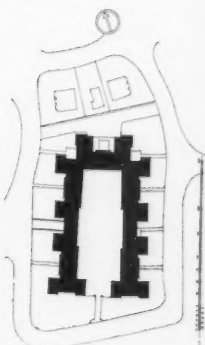
PLANNING The flats are sized from one to six rooms, with nett floor areas consistent with the very low rents asked. The garaging problem was most acute in this restricted residential neighbourhood, and as at least two-thirds of the 164 families housed were expected to require garaging facilities a one hundred car garage was built under the large central court, where by virtue of not being under the flat construction, it could be designed with a minimum number of columns and with daylight from above.

STRUCTURE AND MATERIALS The height of the building was controlled by the local Town Planning Committee, and as the contour of the site required, it was necessary to step the building at several points. For the exterior a yellowish-pink brick was used with natural terra-cotta tile roofs and polychrome terra-cotta motif in reds, yellows, blues and greens. Interior partitions are breeze block : floors, reinforced concrete, in some cases augmented by steel beams. Stairs are in pressed steel with precast terrazzo treads. Windows, metal casements.

THE VIEWS ILLUSTRATED 1, general view from the approach road. 2, view from the south east.



TYPICAL FLAT PLANS



LAYOUT



2

✓ CIVIC HALLS

LYONS AND ISRAEL



THE SITE

Wolverhampton. This new building containing the Civic Hall will ultimately be connected to the Town Hall by a bridge for civic purposes.

PLANNING

The building contains two halls, a large one with organ for use by choral and musical societies and for important social functions, and a small one with a stage for amateur theatricals. Both halls have cinematograph projector rooms and spring floors for dancing. The large hall seats 1,283 persons on the ground floor and 497 in the gallery, and the lower platform accommodates an orchestra of 80 and the tiers behind a choir of 200. The small hall seats 700 persons. Both halls can be used as separate units or en suite.

STRUCTURE AND MATERIALS

Steel frame ; brick walls, 14 ins. external, 9 ins. internal, surrounding halls ; 4½ ins. for inner linings and partitions. Floors are hollow tile ; balconies, reinforced concrete ; roofs, steel trusses, boarded and slated. The elevations are in multi-coloured facing bricks and Portland stone, with windows and grilles in anodized aluminium. The plinths to the side elevations are in faience.

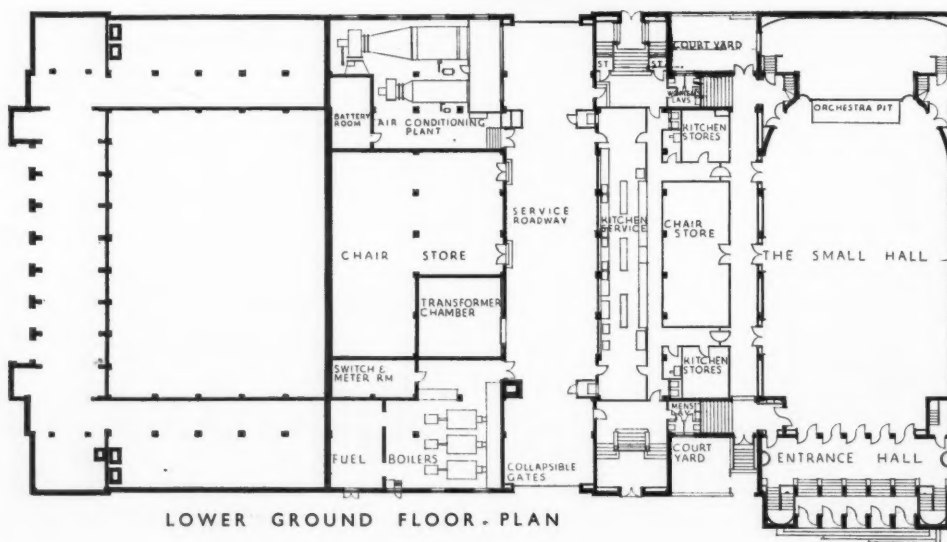
EQUIPMENT AND FINISHES

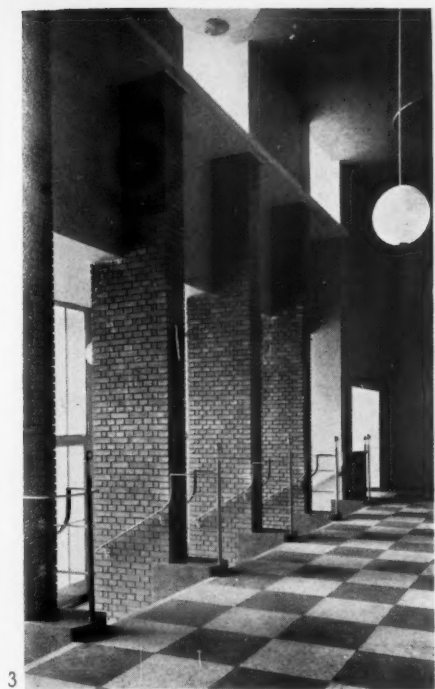
In the main foyer are a series of 2 in. brick piers ; walls are of plaster, painted ; terrazzo floor ; plaster ceiling on expanded metal, with domes of fibrous plaster, painted slate blue. In the large hall walls are of plaster, distempered off-white ; piers to balcony promenade in grey tiles with yellow strip tiles ; walls to promenade, plaster, painted yellow ; main ceiling, solid plaster on expanded metal, painted yellow ; beams to main ceiling in fibrous plaster, painted yellow and grey ; laylight, metal, glazed with spray-tinted glass ; walls surrounding stage and acoustic hood, faced with

silver leaf ; panelling to walls, to under side of balcony and stage, Indian white mahogany veneer, with cover fillet painted primrose yellow ; floor and choir stepping, teak ; fabrics are specially woven and designed to be incorporated in the decorative scheme ; carpets, nigger brown with fawn stripes ; tip-up stacking arm-chairs of tubular steel.

Walls in the small hall are finished in wallboard fixed solid, uncoloured ; dado and proscenium opening joinery, Indian white mahogany ; ceiling, solid plaster, painted terra-cotta colour ; beams, fibrous plaster, painted grey and off-white ; acoustic hood over stage, solid plaster faced with silver leaf ; furniture, as large hall.

In the ante-room the ceiling is of plaster painted off-white, with beams painted primrose yellow one side and grey the other side, soffits off-white ; anodized aluminium metal glazed screens ; walls, plaster, painted off-white ; reveals to entrances painted lacquer red.





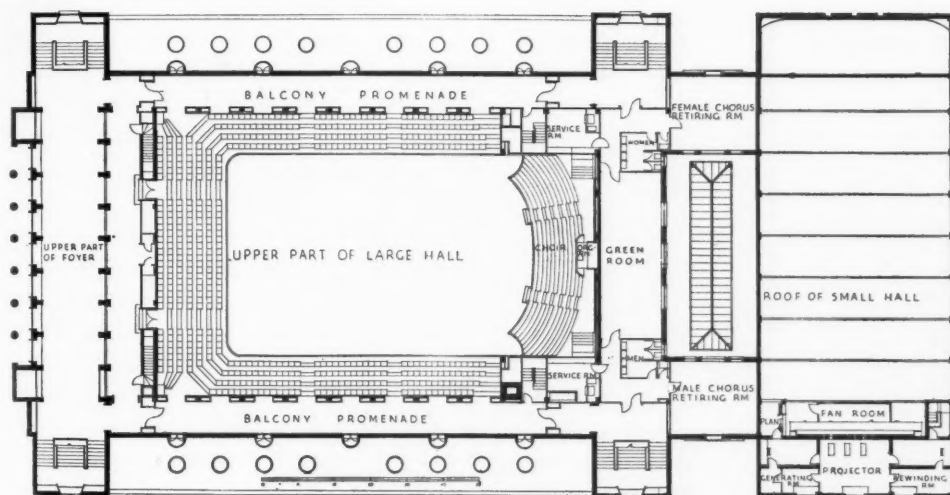
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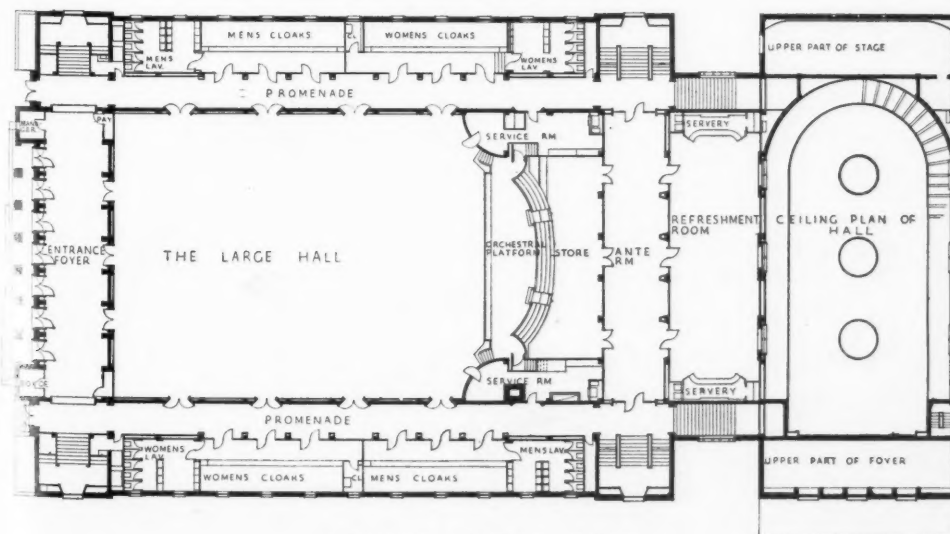
4

THE VIEWS ILLUSTRATED

1, the main front and entrance portico to the large hall. 2, the entrance to the small hall. 3, street entrances to the foyer of the small hall. 4, the large hall. 5, the small hall. 6, one of the entrances to the balcony promenade.



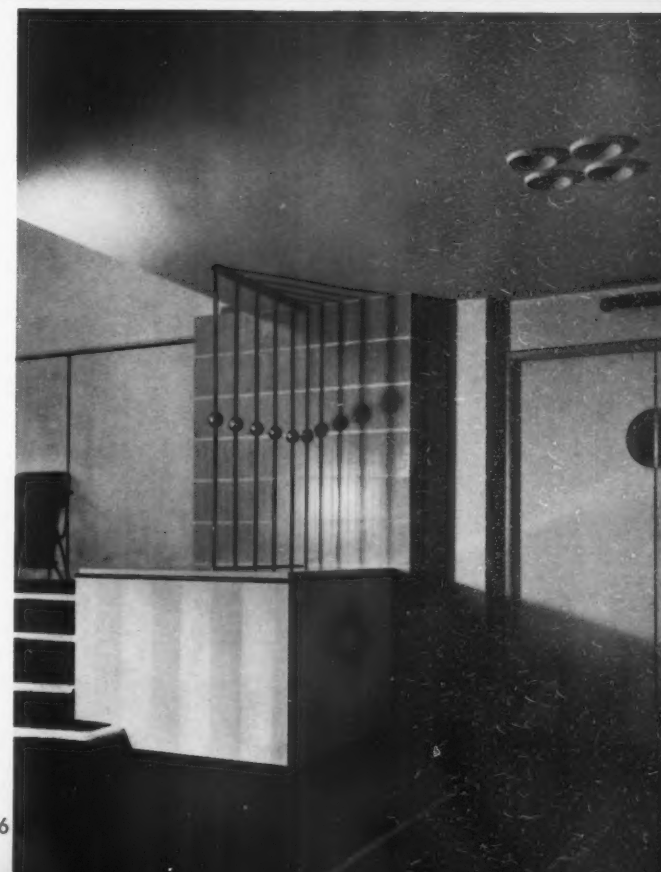
FIRST FLOOR PLAN



GROUND FLOOR PLAN



5



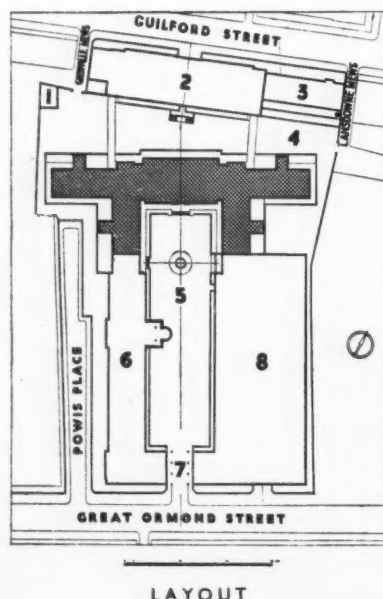
6

CURRENT ARCHITECTURE HOSPITALS

STANLEY HALL AND EASTON AND ROBERTSON

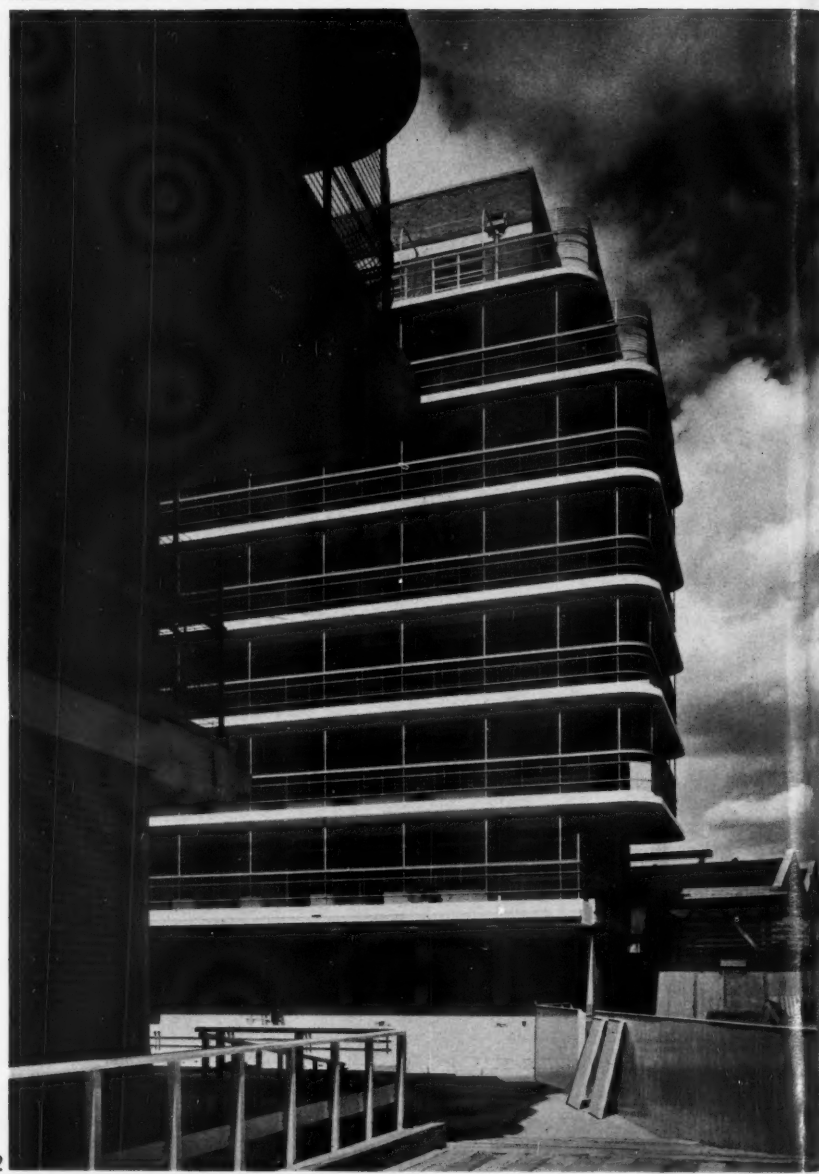
THE SITE Guilford Street, London. The building is the second section to be built of the Hospital for Sick Children. One of the problems of rebuilding the hospital was the necessity of keeping all in-patient and out-patient work running during the whole of the rebuilding programme. The architect's first report was made in July, 1930, and the general scheme then laid down is being carried out. The Nurses' House faces Guilford Street and was the first to be built, on extra land purchased by the hospital. The first part was completed in May, 1934, and a further wing was added in 1937, in which is the new boiler house for the whole hospital. On the completion of the Nurses' House, the old boiler house was pulled down, together with some of the wards, the children being moved temporarily into three floors of the Nurses' House. The Hospital Block proper was then started in January, 1937, and is now in process of being taken over. The next stage will be to move the out-patients' department into part of the old hospital and the new out-patients' block will then be started. Finally the remainder of the old hospital buildings facing Powis Place and Great Ormond Street will be demolished, and quarters for some 20 residents and 60 private nurses will be erected. The main entrance to the hospital will be from Great Ormond Street. The out-patients' entrance will also be in this street. There is a separate entrance to the Nurses' House from Guilford Street. The trades entrance is from Guilford Street via Lansdowne Mews and the exit from the mortuary is via Grenville Mews.

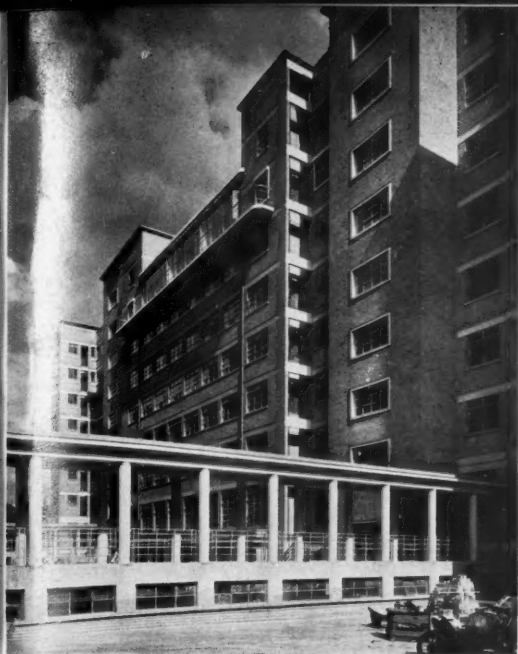
THE VIEWS ILLUSTRATED 1, view from the south. 2, one of the ward blocks. 3, an operating theatre. 4, cubicles in one of the wards. 5, one of the covered ways linking the existing Nurses' House with the new Hospital Block.



1. GARAGES
2. EXISTING STAFF HOUSE
3. STAFF HOUSE: NEW EXTENSION
4. SERVICE YARD
5. FORECOURT
6. FUTURE EXTENSION: R.M.O.'S AND PRIVATE NURSES
7. MAIN ENTRANCE
8. FUTURE OUT-PATIENTS' DEPARTMENT.

LAYOUT



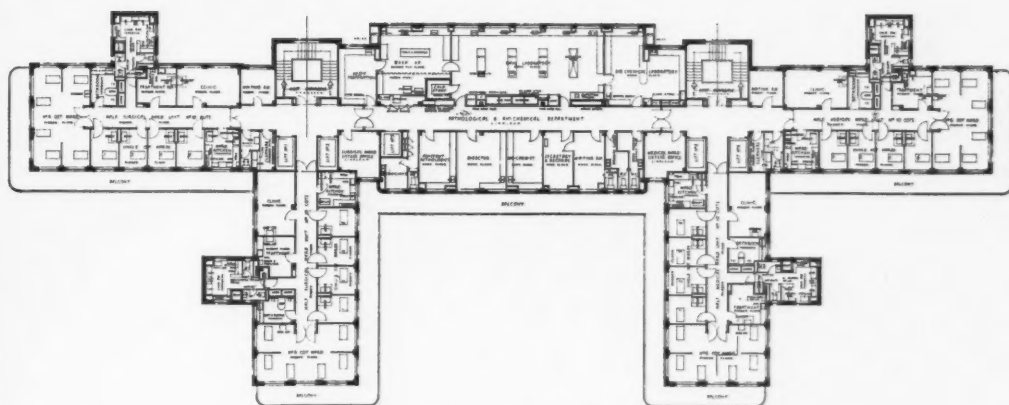


PLANNING

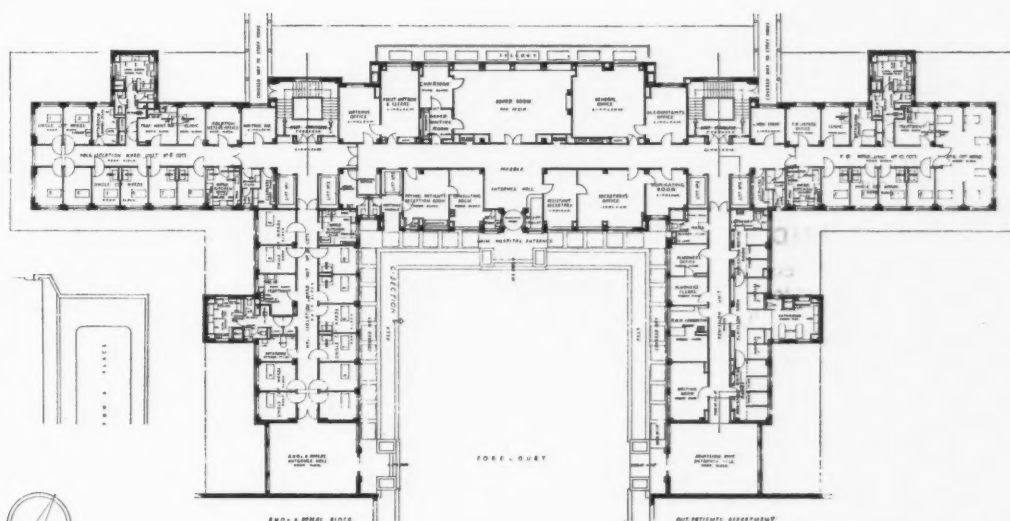
The Hospital Block is placed on an axis roughly E.N.E. by W.S.W. at a point on the site where the width is about 320 ft. In plan it consists of a centre block, with staircases and lifts at the E. and W. ends, with two L-shaped pavilions at either end, one arm of each L extending on the E. and W. axis and the other southwards. The approach from Great Ormond Street is on an axial line with the main entrance in the centre block, and the two southern wings form an open quadrangle. The Hospital Block has a lower and upper ground floor, and seven floors of wards above. None of the new buildings to be erected on the south of this block are more than two storeys high above the ground floor: thus unrestricted sunshine is obtained to all ward units in winter as well as summer. The L-shaped extensions of the centre block are planned on each floor as ward units of 20 beds under one sister: each arm of the L is a complete half unit with its own sanitary annexe, ward kitchen, treatment room, etc., and generally the half unit of 10 beds consists of one 6 bed ward at the south end, and 4 single cot wards on the sunny side. This subdivision of wards into small units is made with the object of reducing cross infection as much as possible. Surgical wards are on the west and medical on the east of the centre block. This block contains on the south side of each floor a special ward unit of 6 cots where children whose illness requires special study are grouped. On the north side of the centre are laboratories, lecture room, museum, etc., and on the 6th floor are a twin theatre suite, plaster and x-ray rooms. The whole of the 7th floor is for private patients, who have a separate entrance to the west of the main entrance with reception and consulting room, and a lift taking them direct to their floor. On this floor is a third theatre exclusively for private patients. The entrance for general patients, whether from outside or from the out-patients' department, is on the east wing of the quadrangle, and there is a specially designed admission unit in following with examination, bath and waiting rooms. The Administration Offices are in the centre, and on the lower ground floor are the stores, stores, milk, laboratory, sundries, laundry, disinfectant, water-softening plant and pathological department.

STRUCTURE AND MATERIALS

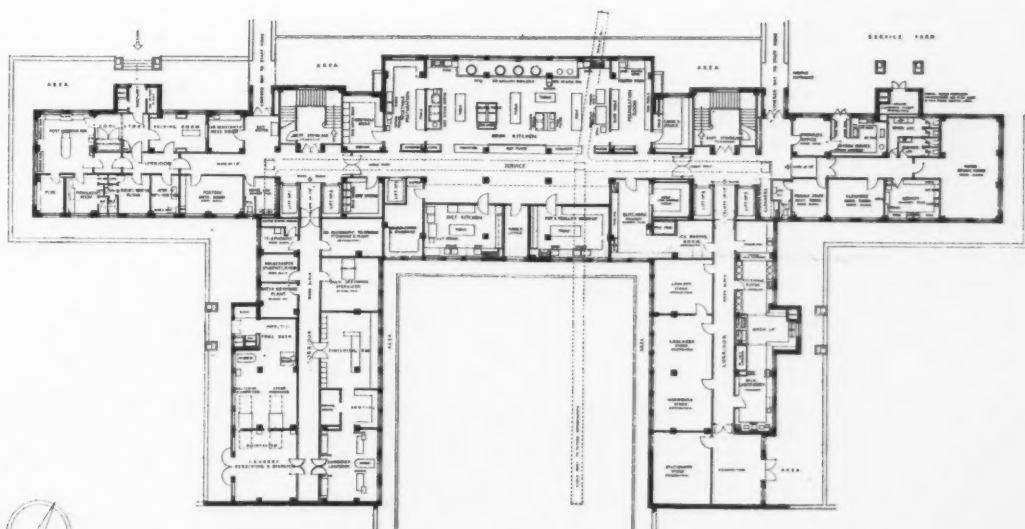
The building is faced with golden coloured Stafford brick, with a reinforced concrete frame, concrete and hollow tile floors, and a solid concrete roof 8 in. thick to resist incendiary bombs. Artificial stone has been used very sparingly on the ground floor around the quadrangle.



TYPICAL UPPER FLOOR PLAN WITH LABORATORY BLOCK IN CENTRE



GROUND FLOOR PLAN



BASEMENT PLAN

THE FIRST PLYWOOD FURNITURE



The dining-room sideboard designed by J. V. Cissarz and Karl Schmidt in 1898 and suggested by Dr. Pevsner to be the first example of the application of plywood to furniture design.

By Nikolaus Pevsner

IF historians do not take care, we shall soon be in greater ignorance of the events which were taking place in art and architecture about the year 1900 than we are of the discoveries of painters and builders under Henry III or Henry VIII. I have noticed this on several occasions when I have been dealing with dates in the development of æsthetic tendencies between 1860 and 1900. Here is another case in point.

Who knows when laminated plywood was invented? Where and by whom was it first used for cabinet work? E. Vernon Knight and M. Wulpi's book on *Veneers and Plywood* (New York, 1927) contains no answer to these questions, and Mr. P. Morton Shand in his admirable article in *THE ARCHITECTURAL REVIEW* Timber Issue of February 1936 (vol. 79, p. 76) writes only that: "Plywood seems to have been first made towards the beginning of the present century, in the part of Russia that is now Estonia, where it was used in the mass-production of the seats fitted to bent-wood chairs for the Indian market." A London timber importer,

a Scotsman whose name is not disclosed, then discovered—so Mr. Shand continues—the suitability of the new principle of lamination for the production of lighter and more durable tea-chests. The next step was taken by engineers who had to construct aeroplane wing-coverings. Nothing is, however, said by Mr. Shand on the introduction of ply into cabinet-making. It is here that I hope I can go one step further.

The following story is contained in letters which I received from Professor J. V. Cissarz and Herr Karl Schmidt. As the names of these two gentlemen are not particularly well known in this country, it is necessary to devote a few lines to introducing them. They were both born in 1873, Professor Cissarz in East Prussia, Herr Schmidt in Saxony. Young Cissarz went to Dresden to become a painter. However, while he was still a student in the academy, he became interested in commercial art. He was one of the first in Germany to design posters in that new progressive style which was initiated by Steinlen, Vallotton and Toulouse-Lautrec and in England by

the *Beggarstaffs*. From 1903 onwards he belonged for some time to the colony of modern artists which the adventurous young Duke of Hessen—the same who had commissioned Mr. Baillie Scott and Mr. C. R. Ashbee to design rooms for his palace—had founded at Darmstadt. Cissarz has for several decades now been famous in Germany as a designer of book covers, book illustrations, posters, packages, stained glass windows, etc.

Karl Schmidt, one of the most remarkable personalities in twentieth century industrial art on the Continent, started in a small way as a cabinet-maker. He was an apprentice in the trade first, and later a journeyman. Then, like an enterprising Saxon, he set out to see foreign countries and travelled without money in Denmark, Sweden and England, where the growing Arts and Crafts Movement impressed him greatly. In 1898 with only two men, he started a workshop of his own, *Schmidt and Engelbrecht*, at Laubegast, a suburb on the outskirts of Dresden. He had very little borrowed capital, but a lot

of ideas, developed out of the theories of Friedrich Naumann and Ferdinand Avenarius on social reform which were being much discussed at the time. Right from the start he seems to have been clear about his ultimate aim. He wanted to produce cabinet-work of modern, as against period, form, and of honest workmanship as against unscrupulous factory methods. So he got into touch with young artists—painters first, because, he says, "architects were still far too much attached to period architecture"—and asked them to design for him. He would see to it that the rooms would be well made, and the names of the designers always published. Among his earliest connections were, besides Cissarz, E. H. Walther, Heinrich Vogeler, and Otto Fischer. An exhibition held in Dresden in 1899—1900 immediately made Schmidt's workshops famous. He showed—a noteworthy feat—the complete furniture for a three-room flat (two living-rooms, one bedroom and kitchen) for just under £40. Art critics and a few of the most distinguished of the art historians (von Seidlitz and Woermann) noticed the go-ahead young man and gave a good deal of publicity to his efforts.

He now also communicated with a few of those modern-minded architects who had appeared in the meantime: Richard Riemerschmid above all; also Bruno Paul, Heinrich Tessenow and others. His workshops grew to necessitate a staff of 14, then of 60, then of 200. The name had been changed to *Deutsche Werkstätten*, and under this name the company now employs about 1,200 men, and is known far beyond the boundaries of Germany. Besides their factory they have their own shops in several German cities. The factory incidentally lies in Germany's first and only independent garden city, Hellerau near Dresden, which was based on Letchworth, and founded on Karl Schmidt's initiative in 1908. Among the other pioneer work of the *Deutsche Werkstätten* which history will remember, are their first exhibition of "furniture developed in accordance with the spirit of the machine," held in 1906, the introduction of training courses for boys in the workshops in 1907, and the exhibition of the first European unit furniture (*Normalien*) in 1910. This was designed by Bruno Paul.

In the light of such evidence of Karl Schmidt's astounding enterprise and inventiveness, the story, to which I now revert, will not sound at all unlikely. In October 1898, I am told, young Cissarz came to young Schmidt with a design for a dining-room including the sideboard illustrated on this page. (In the illustration, incidentally, the handles to the drawers, and the little rings to the pull-out slides are not in accordance with the artist's design.) The four doors, it will be noticed, are flush. No frames are visible. So Schmidt had to tell Cissarz that this, unfortunately, could not be done. Thereupon Cissarz showed deep distress. He had spent days getting the curves of the wrought iron mountings right in his drawing. Could Schmidt really not help? So Schmidt started thinking, and in the end they constructed the doors on an

entirely new principle. Schmidt had seen chair seats of $\frac{1}{4}$ inch thickness made of layers of veneers. (Which shows, incidentally, that these existed in 1898.) He now built up two boards, each just under $\frac{1}{2}$ inch thick, consisting of five layers of veneers glued together with the grains running crosswise on the bent-chair-seat principle, and then glued these on to the front and back of an approximately $\frac{3}{4}$ inch frame. This made quite a neat door, and enabled Schmidt to carry out the artist's design. The system was not wholly satisfactory, the plyboards being liable to sag where the frames did not

hold them in position. But it was a beginning; improvements were now an easier matter, and in 1902 so much progress had been made that a friend of Herr Schmidt was able to build the first German plywood factory, at Rehfelde near Berlin.

Here my story ends, but if anyone reading it knows of any other early evidence referring either to this country or to the United States, Scandinavia or France, his information* would be of great value to historians of twentieth century art.

* The Editor would be glad to pass on to Dr. Pevsner any information supplied on the above subject.

A NEW DUTCH LINER



On August 3rd a visit has been arranged by the Design and Industries Association to the new Holland-America liner the "Nieuw Amsterdam." Points of special interest in the interior design are discussed in the note which follows.

The "Nieuw Amsterdam" is the largest Dutch ship ever built, and the flagship of the "Holland-America Line." With her approximately 36,000 tons she stands between the "Queen Mary"—"Normandie" class and the "Orion" and "Orcades." The directors of the Line had originally planned to do what the "Orient Line" had done: to entrust the interior design of the boat to one firm of architects entirely, who would have been authorized to select collaborators for individual rooms. Brinckmann and van der Vlught were chosen: architects whose fame is based on the design of the van Nelle factory at Rotterdam. However, van der Vlught died early this year and it became necessary for the "Holland-America Line" to call on a number of architects. The choice made by the Company is much to its credit. H. T. Wijdeveld was made responsible for the grand hall, foyers, library and the cabin class bar, and J. F. Semey for the cabin class dining-room, etc. These rooms are certainly not as uncompromising as van der Vlught might have designed them; a certain magnificence is aimed at, alien to van der Vlught's style and also to O'Rourke's. But what decoration there is, is all in a decidedly modern spirit. The use made of new materials for decorative purposes is extremely interesting. John Raedecker, one of the leading of the younger Dutch sculptors, has carried out his allegories of human life for the ceiling of the grand hall in aluminium: the walls of the cabin class staircases are in silver-finished aluminium plymax: the flooring of the promenade decks consists of rubber tiles. If any part of the equipment is likely to disappoint, it is in the cabins, where the mass-produced furniture seems hardly up to the standard of the other work.

Among the most successful rooms on the "Nieuw Amsterdam" are unquestionably those by J. J. P. Oud and Frits Spanjaard illustrated on these pages. Oud, who was born in 1890, is recognized as one of the leaders of strictly modern architecture in Holland: in fact, in the whole of Europe. Spanjaard, also born in 1890, is less well known outside his own country, although his People's Clubs and Assembly Halls in Leiden, Rotterdam, etc. and his work on the Town Hall at Utrecht and the Academy of the Hague are very remarkable indeed.

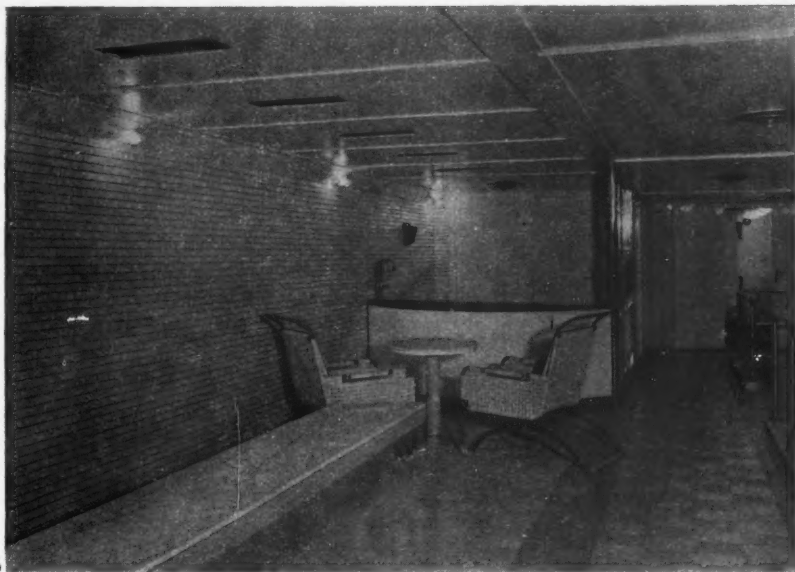
On the "Nieuw Amsterdam" Oud was commissioned to design the cabin class swimming pool, the tourist class lounge and the tourist class smoke room, Spanjaard the cabin and tourist class nurseries, and the third class smoke room, lounge and library.

The swimming pool, 6, has walls of white Delft tiles and some cane-seated tubular steel chairs of a new and excellent design: sturdy, yet graceful. In Oud's tourist class lounge, 1, the most remarkable details are the circular windows with their semi-transparent printed curtains, the enormous red carpet with charming, freely-drawn Dutch and American motifs, the construction of the armchairs, and the cantilevered settees along the walls.

Spanjaard's two nurseries are brilliant pieces of interior design, full of ideas and full of fun. The illustrations show the spiral ball chute around one of the supporting columns, 2, and the painted plywood figures (by Piet Worm) stuck up above the windows, 3. The colour scheme in the cabin class nursery is cream and white with polished maple chairs and a white rubber floor; in the tourist class it is light blue and white with metal chairs cellulosed blue. In the tourist class library, 4, the design of the armchairs is a splendid example of a fresh approach to an old problem. The handwoven upholstery material in grey and off-white was designed by Polak. An annexe to the smoke room is the cocktail bar, 5, another splendid example of Spanjaard's spatial and decorative sense. The dark stripes on the one side of the rubber flooring are echoed by the stripes along the bar counter and the angle-shaped ceiling lighting above the counter. The spirited glass, decanter, bubble and star motifs along the counter and in the windows are the work of Can Alons.

INTERIORS IN





Book of the Month

Vauban

By J. M. Richards

SEBASTIEN LE PRESTRE DE VAUBAN, 1633-1707. By Sir Reginald Blomfield. London: Methuen and Co., Ltd. Price, 15s.

THE invention of gunpowder (or rather its application in attack by artillery) transformed military architecture from a matter of sheer mass and situation, wherein thick walls rising to a sufficient height and surrounded by a moat constituted a fortress that was virtually impregnable, to a matter of scientific planning with the object of preventing the effective utilization of the new weapons. Design was no longer the elaboration of defences provided by nature, but depended instead on a calculated balance of scientific factors; in fact on knowledge, instead of on faith in a margin of safety extending into the infinite: much as ordinary architectural construction, liberated at the beginning of this century by steel and concrete, came to depend less on confidence in nature, gravity and mass than on exact knowledge of the factors involved and the use of a calculated margin of safety. And for a period of perhaps a hundred and fifty years, concluding with the end of the seventeenth century, military architecture enjoyed a golden age, when it was one of the most respected of the arts, a knowledge of which was among every gentleman's accomplishments, and when war was a ritual performance played by small professional armies, in accordance with the rules and with no great rancour. Afterwards the invention of nationalism and its periodic explosions that we now call war, the Napoleonic marshalling of nations, put an end to the gentlemanly practices on which the science of fortification thrived. Once more the factors were unpredictable.

Whether this golden age produced its master architect or whether the master architect

through his works guided the pursuits of war into channels that made a golden age of fortification inevitable, we cannot say; though the new science was already well established in Italy before Vauban, the greatest of all military architects, made France the centre of the art and Louis XIV—*Le Roi Soleil*—the most successful military commander in Europe.

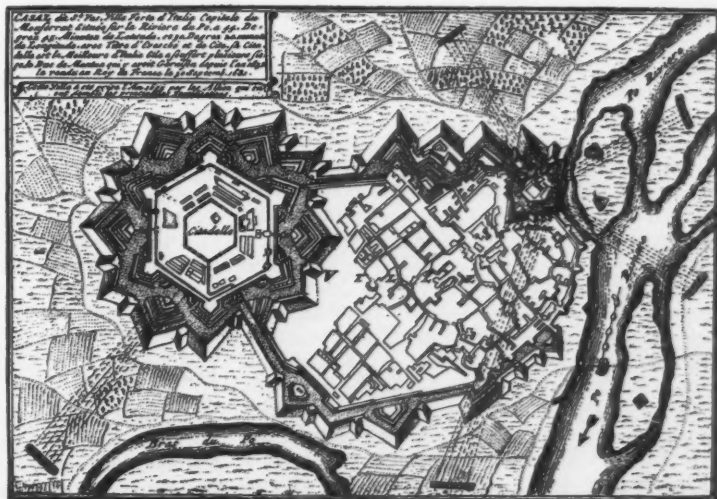
However, Vauban was solely responsible for elevating the technique of fortification to the elaborate science that the seventeenth century made of it. The naively planned polygonal town illustrated on the next page—a design by Jacques Perret, Vauban's predecessor of the previous century, represents the type of fortification prevalent when Vauban began his

career and initiated at once the principle of pushing the system of fortifications beyond the wall itself far into the open country, to engage and obstruct the besieging enemy by means of a series of outworks; and he developed to this end his characteristic Hornworks, Demi-lunes, Ravelines and other functionally designed features—early forms of which can be seen in his design for the fortress of Casal reproduced on this page, and the later forms of which resulted in the astonishing geometrical fantasies of some of his more famous designs. This method of defence by a system of outworks was his great contribution to the theory of fortification, and one might say that the difference between the art of fortification as he found it and as he left it is the difference between designing in section—the simple castle wall, guarded by a moat—and designing also in plan—the re-entrant bastions allowing enfilading fire and the out-works keeping the besieger at bay.

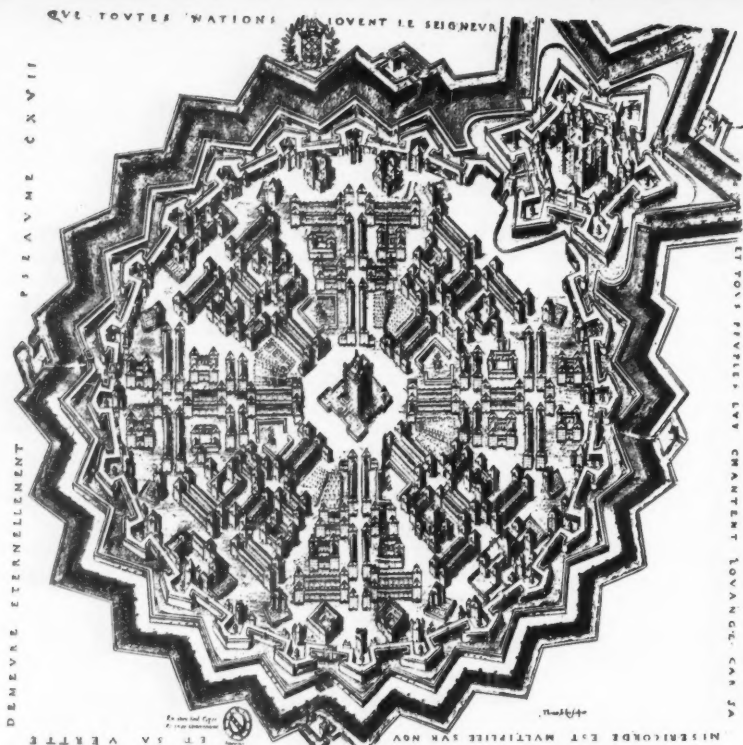
The engineering achievements of the great Vauban are sufficiently significant as well as spectacular, and his personality sufficiently remarkable, for the literature about him to be already considerable; though the biographical material available is very meagre, partly because such family documents dealing with his private life as exist are kept to themselves by his descendants and partly because he really seems to have had little private life to record. His life was lived in camps and about the works of towns he was fortifying, or was a nomadic one during the periods of his tours of inspection round the frontiers of France.

During an age when the road to success was by way of interest and intrigue Vauban was remarkable in reaching the highest position, without the advantage of noble birth, through sheer honesty of service and single-mindedness; though the same bluntness brought about his eventual disgrace. The outspokenness of his criticism of those in authority and the tactlessness of his attack on the vested interests of the civil service and the law was embodied in quite gratuitous, though well-meaning, schemes for the reform of taxation and such-like subjects which in his later years he insisted on submitting to the King.

Sir Reginald Blomfield has of course based his study of Vauban on the existing biographies, particularly on Colonel Lazard's exhaustive work, *Vauban 1633-1709*, and on the invaluable *Abrégé des Services du Maréchal de Vauban*, notes on his military career edited by Augoyat in 1839 from papers left by Vauban himself. But the present book should have been of



Vauban's fortification of Casal, Italy, illustrated in the "Atlas Portatif," 1702. From "Vauban."



Bird's-eye view of a fortified town with twenty-one bastions and citadel; an illustration to Jacques Perret's "Des Fortifications et artifices," 1594; 3rd edition, 1620: from "Vauban."

especial interest and of new value through being the first study of him by an architect. The facts of his life are already sufficiently known, as are the location of his works and their military significance. What, however, needs still to be studied is the nature of the peculiar quality his fortifications have as architecture. In common with many primarily engineering works of his and of later periods, they undoubtedly have an architectural value that is more than the drama of their scale and the simplicity of their restricted geometrical idiom, and that seems particularly in tune with the aesthetic of today. Vauban, of course, was an artist as well as an engineer, but he was not an architect in the conventional sense. This is shown by his designs for classical gateways to Lille and other French cities, which are pompous and at the same time trivial. Whereas on his own ground (though he seems rather to have fancied himself as an architect) his sureness of touch, aided one imagines by the rigid functional discipline to which the designer of fortifications has to submit, results in a quality of rightness and a permanent aesthetic significance.

Is it simply their quality of rightness that produces the aesthetic value of such engineering works? Sir Reginald Blomfield does not discuss this. He merely condemns the classical gateways, saying that "a deeper understanding of the functions of that art (architecture) would have saved him from these deviations into the commonplace and the unessential," and praises instead the "massive simplicity" of his ramparts; a strange part to find played by the author of *Modernismus*. Perhaps he is wise not to pursue these differences to their conclusions.

Regarding the book then as a simple biography instead of as an architectural study, it is adequate in its relation of the facts and fascinating if only because of the fascinating character of its subject. Sir Reginald has included a fine series of reproductions from contemporary plans of Vauban's fortifications, taken from a rare book in his own possession, but instead of the descriptive photographs which such a book needs before anything else he has provided us with pencil sketches of his own which, whatever their merits as sketches, give no

suggestion in their tentative and rather woolly style of the vigorous lines from which the originals take so much of their quality.

Finally the book is difficult to read, as the extensive quotations from Vauban's own papers have been left untranslated: the reader has to switch uncomfortably on nearly every page from English to French and French to English again. Whatever the charm of Vauban's own phraseology a paraphrase by the author would have been sufficiently more intelligible to repay the labour of translation. Some of Sir Reginald's equivalents, incidentally, for French military terms are not altogether accurate in sense.

The most effective chapters in the book, oddly enough, are those in which the author gives a very able summary of the history of military engineering before the time of Vauban.

THE MINIATURES OF THE PARIS PSALTER: A Study in Middle Byzantine Painting. By Hugo Buchthal. London: The Warburg Institute 1938. Price 45s.

THE so-called Macedonian Renaissance of the tenth century is an event which students of Byzantine art are too apt to take for granted, as though its origins were self-evident and its products were unproblematical. Misled by the sudden revival of interest in antique formal motifs among the court painters of Basil I and Constantine Porphyrogenetos, they assume that this renaissance was as deliberate and self-conscious as the humanism of Mantegna or Giovanni Bellini; and they fail to reflect that renaissances are in fact of many kinds, and that analogies from one to another may easily prove deceptive. Above all, it is the duty of the historian to enquire into the mental attitude of the archaizing artist towards his antique models, and to distinguish between the cultivated and discriminating use of ancient formal discoveries by an artist like Raphael and the superstitious and uncritical ingestion of classical commonplaces by the antiquizing painters of the middle ages.

It is the great merit of Dr. Buchthal's work that he persistently asks himself whether his Byzantine painters are behaving intelligently or stupidly in the presence of their ancient models. Instead of assuming (with Professor Morey and his school) that they were mere dogged copyists, or alternatively (with Dr. Weitzmann) that they were accomplished eclectics capable of composing learned variations on antique themes, Dr. Buchthal has chosen the more laborious, but certainly more

rewarding, method of deciding in every case what is antique (and correctly rendered), what is antique (and misunderstood), and what is the original contribution of the Byzantine painter of the mid-tenth century. The results are extremely illuminating. Dr. Buchthal succeeds in making this mysterious movement credible by showing that the miniaturists of the Paris Psalter were neither transcendent geniuses nor perfect dolts: that their paintings, though certainly no masterpieces of independent invention, were not merely witless and blundering transcripts either. In order to demonstrate Dr. Buchthal's method, we will cite one or two instances of his happier discoveries.

The miniatures of the *Paris Psalter* (*Bibliothèque Nationale MS. grec 139*) are fourteen in number, full-page rectangular compositions in ornamental borders. Their subjects are: (1) *David as Harper*; (2) *David slaying the lion*; (3) *David anointed by Samuel*; (4) *David and Goliath*; (5) *The Daughters of Israel dancing before David and Saul*; (6) *The Coronation of David*; (7) *The Exaltation of David*; (8) *The Penitence of David*; (9) *The Crossing of the Red Sea*; (10) *Moses receiving the Tables of the Law*; (11) *The Prayer of Hannah*; (12) *The Story of Jonah*; (13) *The Prayer of Isaiah*; (14) *The Prayer of Hezekiah*. In treatment and style they vary considerably. Some contain only a couple of large figures against a plain gold background; others contain a greater number of small figures more loosely grouped in a landscape setting. In some the relation between figures and setting obeys the conventions of ancient painting; in others the spaceless surface art of the medieval miniature already predominates. It is easy to show not only that the miniatures are the work of several differently trained and variously gifted hands, but also that the models which inspired them were of diverse and not always mutually compatible kinds. By an ingenious argument, too intricate to summarize here, Dr. Buchthal persuades us that the original compositions from which the tenth-century artists worked were not self-contained miniatures in frames, but strip narratives like those in the *Joshua Rotulus* in the Vatican, an approximately contemporary manuscript (circa A.D. 900-930); these archetypes were probably two in number—a *Rotulus* of Moses and a *Rotulus* of David. The problem of reducing these strip narratives to panel form was the main preoccupation of the miniaturists of the *Paris Psalter*; they solved it with varying degrees of skill and varying measures of success, for it must be admitted that in some of the miniatures—notably the *Prayer of Hannah* and the *Story of Jonah*—the dislocating effect of the transformation is painfully evident.

In the opinion of Dr. Buchthal the iconographic motifs are in the main traditional. In particular, he believes that the allegorical attendants, which Dr. Weitzmann took to be inventions of the miniaturists, descend in fact from the original archetype. What the date of this may have been cannot now be determined: comparative material is lacking, and the internal evidence—as Dr. Buchthal candidly admits—is ambiguous. It is possible that the original rotuli may have been productions of the fifth or sixth centuries; but this must remain a guess. As for the relation between the *Paris Psalter* and other manuscripts of the same school, such as the *Paris codex of the Homilies of St. Gregory Nazianzen* (*MS. grec 510*) and the *Vatican Cosmas*, Dr. Buchthal observes with perfect justice that it is useless to attempt to derive any one member of the group from any other; they are more or less remote cousins, and their family likenesses are due to their having the same forbears rather than to contemporary interpenetration of influence.

The miniatures are reproduced full size from new and excellent photographs, much superior to those in earlier publications; and at the end is a most interesting collection of comparative material, largely iconographical, which adds very greatly to the value of this admirable book.

R. P. HINKS

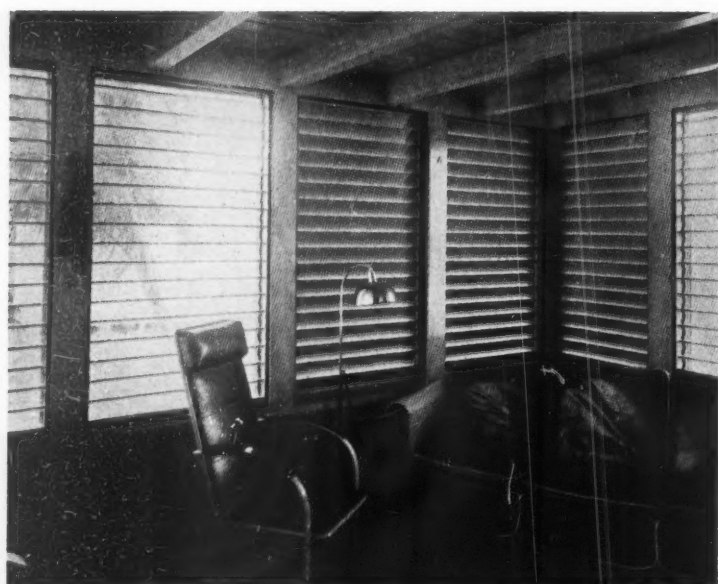
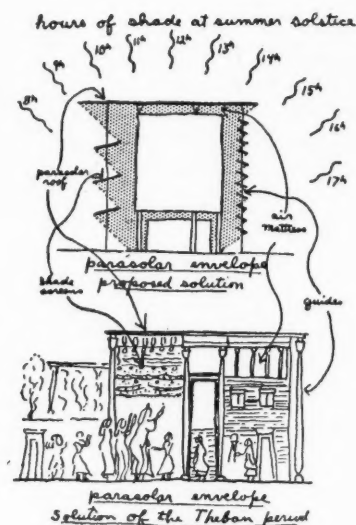
A black and white photograph of a modern interior space, likely a library or study. The room features a long, dark, low-profile desk or counter in the foreground. Behind it, a large bookshelf filled with books is visible. The ceiling has three circular recessed lights. To the right, there are windows with sheer curtains. The overall design is minimalist and functional.



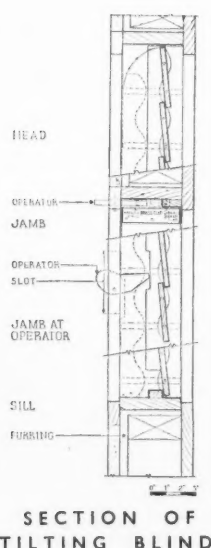
79

VENTILATION AND AIR CONDIT-

Ventilation, which has in the past been mainly considered in terms of the design of door and window openings has always played an important part in determining the forms of architecture. Today, with developments in mechanical ventilation and complete air conditioning so rapid and complex that the architect finds it hard to keep up with them, we may expect to find corresponding developments in interior design. The supply of partly or completely conditioned air has become in many buildings a service whose canalizations are to a large extent determining the shape and disposition of the interiors they serve and whose equipment is acquiring an individual importance as an element in their furnishing. It is the purpose of these pages to examine certain aspects of ventilation and air conditioning in relation to the design of the modern interior. The sketch, right, made by Paul Nelson in connexion with a project for a surgical pavilion on the Suez Canal, in which a glass-enclosed building, mechanically ventilated, is protected by a "parasolar roof" and inclined shade screens, describes sufficiently clearly the influence of ventilation on architectural form both in the historical precedent and in its modern counterpart.

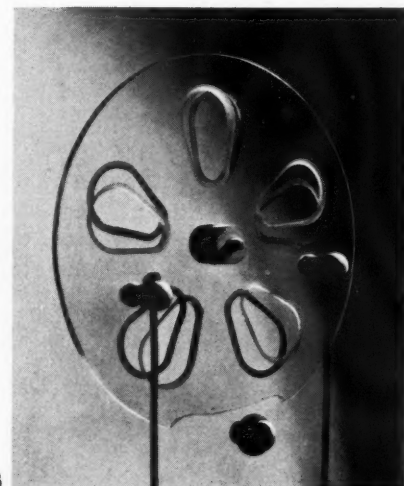


THE ARCHITECTURAL FORUM

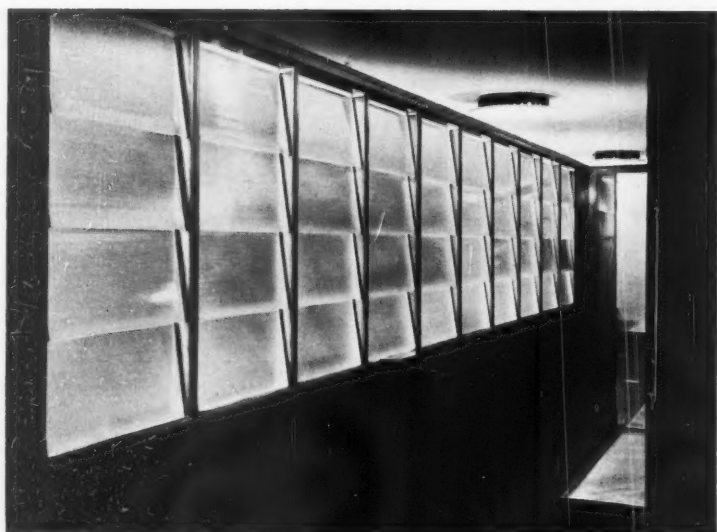


SECTION OF TILTING BLIND

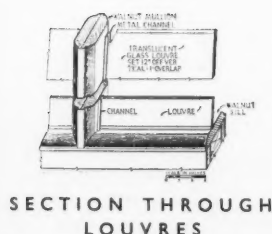
N A T U R A L



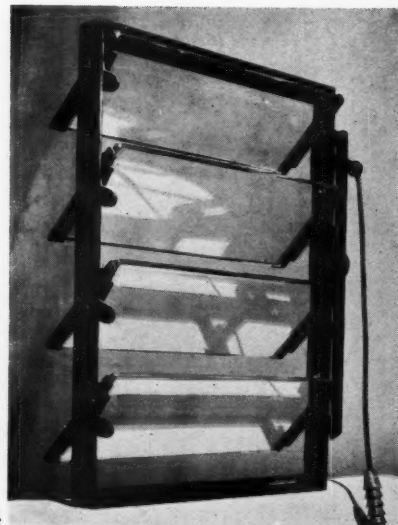
3



THE ARCHITECTURAL FORUM



SECTION THROUGH LOUVRES



4

The traditional louvre type of ventilation still has an important part to play in modern architecture. The Venetian blind, which is so freely used in modern American practice, might be quoted as an example. 1, shows a more permanent version of the same principle in a porch designed by Courtenay Stuart, with wood louvres forming adjustable tilting blinds. 2, is a glass louvred wall in a bank in New York (Eugene Schoen & Sons, architects) which by combining the source of ventilation with the source of light provides a modern version of an age-old traditional practice. And technical improvements in materials and construction have produced new and more efficient versions of traditional types. The familiar glass louvre, the "Was ist Das" of the architectural dictionary, is still in use, 3, while more complex and efficient forms of glass louvre are marketed by the same firms in standard sizes, 4. Another familiar form of natural ventilation is the "hit and miss" ventilator which in 5, a nursery at Barnet (Ralph Tubbs, architect), has been used to relieve the window of its traditional duty as a ventilator, so that it can act as the removable screen which modern building technique allows it to be.

IONING OF THE INTERIOR



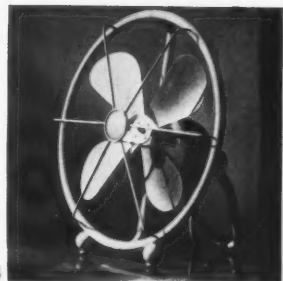
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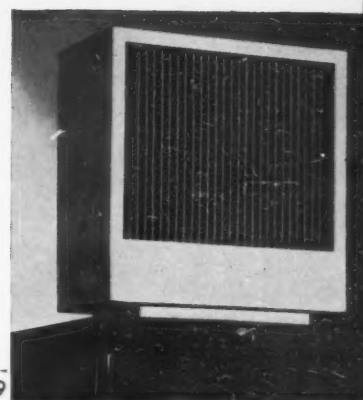
7

AIR CIRCULATION

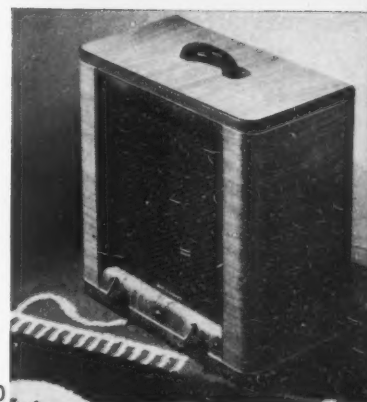
Forced air circulation, which started with the man-operated punkah, is used today in its simplest form in the form of the portable fan. Various well-designed models are made, two of which are illustrated in 7 and 8. There are also types which can be fitted into walls or windows, 6. They extract a known volume of air per hour and in so far that this factor can be related to the desirable number of air changes for rooms of different functions, mechanical ventilation, even in these simple terms, becomes a calculable factor in interior design.



8



9



10

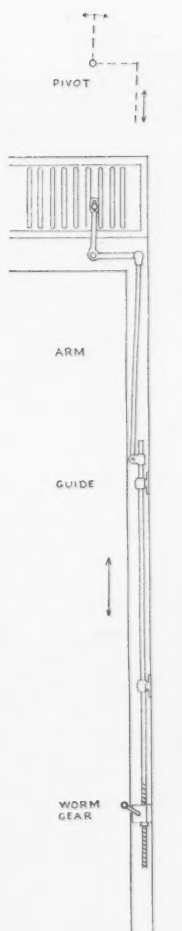


11

V E N T I L A T I O N

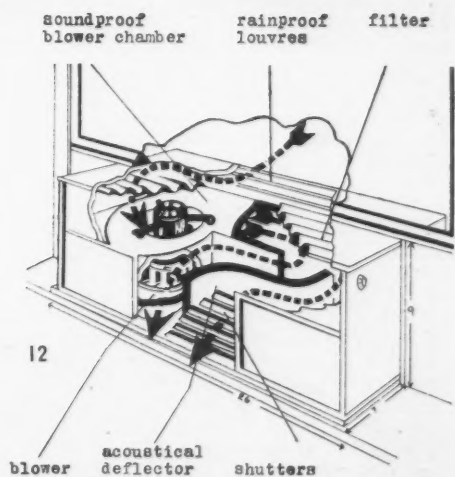


5



DETAIL OF VENTILATOR

UNIT EQUIPMENT



soundproof
blower chamber

rainproof
louvres

filter

12

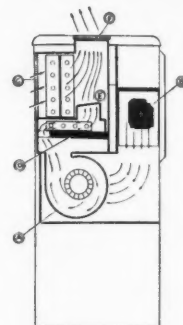
blower
acoustical
deflector
shutters

In the form of unit equipment modern ventilation introduces a new, and increasingly important, furnishing element into the interior. Many units are available performing functions in addition to air circulation. 9 is a portable air-filtration unit: 10 a portable air circulator and heater, and 11 a wall type of air circulator. 12 shows diagrammatically the action of a unit for supplying filtered air, designed to be built in under a window.



13

Even complete conditioning (in which the air is humidified or dehumidified in addition to the other mechanical functions of air circulation, cleaning, heating and cooling) can be obtained by the use of unit equipment. A section of one such unit is shown on the right. A, is a high pressure fan into which the primary ventilating air is drawn through a filter, B, and discharged into the plenum chamber. From here it passes through a silencer and through the ejector nozzles, E. The discharge through the nozzles induces a flow of air from the room into the unit through the grille, G. This joins the primary air stream and passes into the room through the grille, F. This system prevents high humidities and gives an even distribution of air. These units are generally placed in positions under windows, owing to the convenience of this position for running the duct for the intake of primary air, but, if suitable arrangements are made for ducts, they can be placed in any position in the room, as in 13, the restaurant in Simpson's Store, Piccadilly (Joseph Emberton, architect) an interior which shows a careful consideration of this new furnishing element in relation to its architectural surroundings.



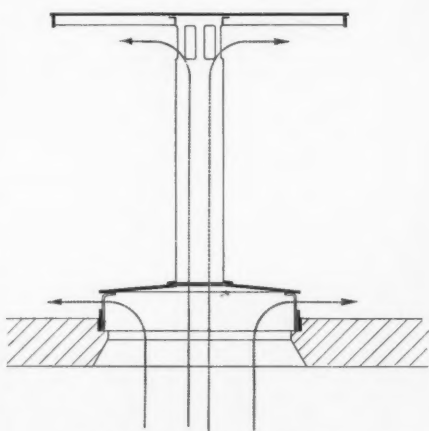
UNIT EQUIPMENT

THE ARCHITECTURAL PROBLEM

The introduction of complete or partial air conditioning in modern buildings in the form of centralized equipment introduces considerations which have far-reaching consequences for architectural design. The building, as in the case of the air conditioned laboratory building at Cambridge, 14 (Sir Owen Williams, engineer) becomes in many cases an air-tight box in which practically all of the architectural features which have in the past given the architect a guide for his design, have been eliminated. But the same technical process which is removing accepted architectural features introduces another factor, namely the complexity of the new technical equipment and its penetration into the organization of the interior, which indicates possible solutions to this special problem of design. For example, necessary architectural features are often pressed into the service of ventilation as in the case of the Cabaret in Berlin, 15 (M. Berlowitz, engineer) in which air is introduced through openings in the tables. As a parallel to this, the engineer's solution, the efforts of the architect must be directed towards moulding a new type of interior round the new mechanical factors involved. Examples of buildings in which solutions have been sought along these lines are given on the following pages.



14



DETAIL SHOWING METHOD OF VENTILATION THROUGH TABLES



15

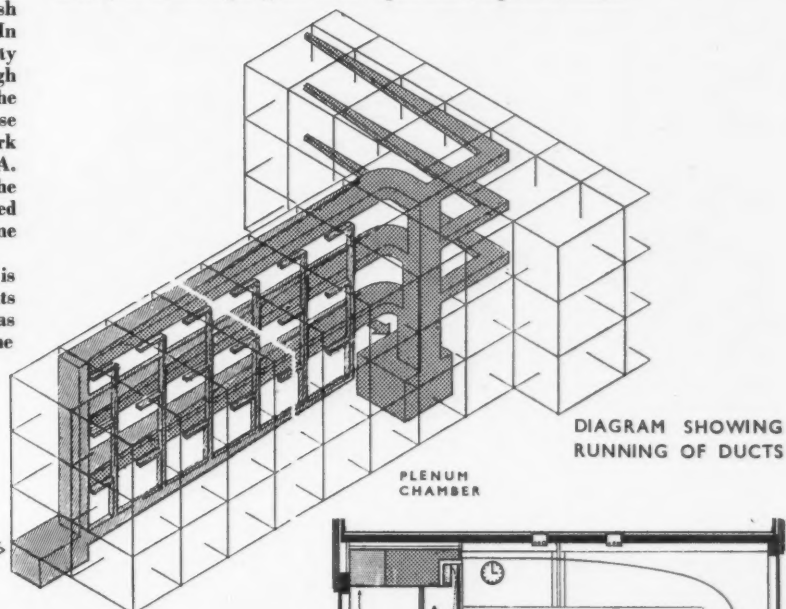
VENTILATION AND AIR CONDITIONING INDIVIDUAL SOLUTIONS

1. LABORATORIES AT MANCHESTER

Mechanical air conditioning for the whole building was adopted as the only means which could guarantee consistent ideal conditions within the building. The automatically purified, warmed or cooled air is taken to each individual working space through ducts running the full length of the building over the corridor. The used air is extracted again below the fume benches, partly by means of an extract duct, and partly by displacement under pressure from the incoming fresh supply. The extract duct runs parallel to the intake in the corridor ceiling. In addition to the general air conditioning of the building, a system of high velocity extract was installed for each fume cupboard for light and heavy gases through an entirely independent system of vertical ducts. The section below, through the standard unit of corridor, fume cupboard and laboratory, shows the run of these separate ducts in the corridor ceiling. The plenum intake is shown in dark hatching and the used air extract in light hatching. The special gas extract is at A. The diagram shows the air conditioning system in relation to the plan of the building. The incoming conditioned air is in stippled tint and the extracted vitiated air and the fume cupboard gas extract in hatched tint. 16, shows a typical fume cupboard.

The second section of this scheme, comprising a block of Biology laboratories, is at present under construction, in which certain modifications and improvements have been made. It is now intended to ventilate all rooms (laboratories as well as animal rooms) by extracting at 100 per cent. of plenum input, independent of the

corridors. All corridors are being ventilated under plenum pressure without extract, so that the tendency of air-flow will always be from corridors to rooms. This means that the principal extraction from the whole building will be through the fume cupboards from the top floors and through the individual room extracts on the lower floors. Consequently, the chance of smells from the laboratories, or air-borne infection and smells from any of the animal rooms, causing nuisance in corridors should be minimized. A further point is that by the use of a new type of plenum grille the input will be of a much higher speed than in the Research, so as to make sure that the air reaches and effectively warms the far window wall and at the same time reduces the possibility of a short-circuit of the air-flow directly from the input grille to the open fume cupboard sashes.



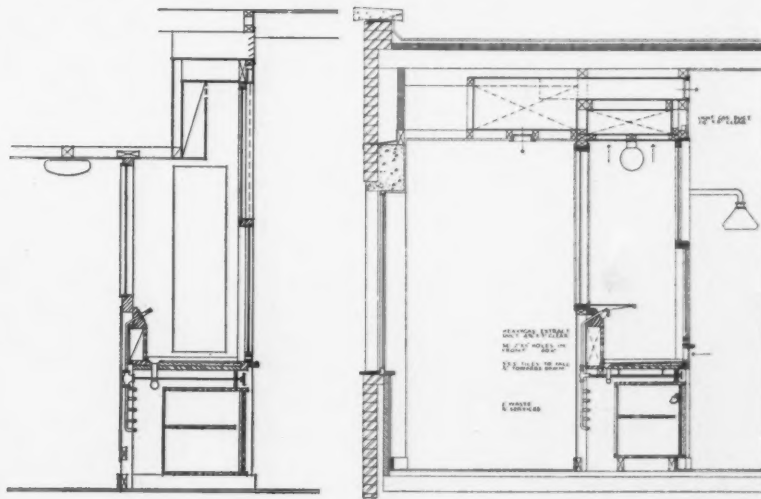
SERGE CHERMAYEFF, ARCHITECT



SECTION THROUGH CORRIDOR, FUME CUPBOARD AND LABORATORY

Below, left, a section through the fume cupboards in the Research, showing the teak ducts for extract of light and heavy gas, with connexion to dash-board above and continuous trough below the heavy gas duct. Right, the corresponding section in the new Biology block.

The process of extracting the laboratories 100 per cent. of plenum will mean that the volume of air passing through the fume cupboards will be greatly increased. It will also ensure that there will be no tendency to short-circuit fumes from the bottom of the cupboard to the corridors when the sashes are open, since there will no longer be any connexion or extract to the corridors. Furthermore, both heavy and light gases will be extracted through the same ducts; this will simplify the duct system and should reduce the possibility of the high leakage losses experienced on the Research. Since the whole laboratory room is now extracted through the fume cupboards, provision will have to be made for a 4 in. high gap for the whole width of the fume cupboards to remain open even when the sashes are closed. This should not constitute any real risk when using dangerous gases inside the fume cupboards since the air speed through the slots into the cupboard will then be approximately 600 linear feet per minute.



2. CAFÉ DUNAPARK, BUDAPEST

The Café occupies the ground-floor of a "deluxe" apartment house in Budapest; it provides a good illustration of the extent to which internal planning can be influenced by considerations of mechanical ventilation. From the kitchen in the basement an open flight of stairs leads up to a large undivided ground-floor hall. Similarly there is no wall to divide the air space of the large hall from the other main rooms (a small special hall and a card-players' room opening from the gallery, and a large special hall on the ground floor). The whole group of rooms was thus designed to form an undivided air space and by this means the problem of ventilation was considerably simplified.

The fundamental idea of the ventilating system consists of using the structural columns as air ducts. In conformity with this system the ground-floor columns of the building, which is of reinforced concrete skeleton type, are constructed of steel. The reason for not constructing the whole building with a steel framework was that the reinforced concrete skeleton proved to be less expensive. The air ducts of the horizontal system are run below the ground floor and the fresh air is drawn in on the roof, and conditioned in a special room in the basement. (Strictly speaking, the air is not completely conditioned, but preparatory arrangements for this have been made.)

The air is introduced into the interior through inlet louvres in the capitals of the columns, four inlet louvres being provided in each column, one on

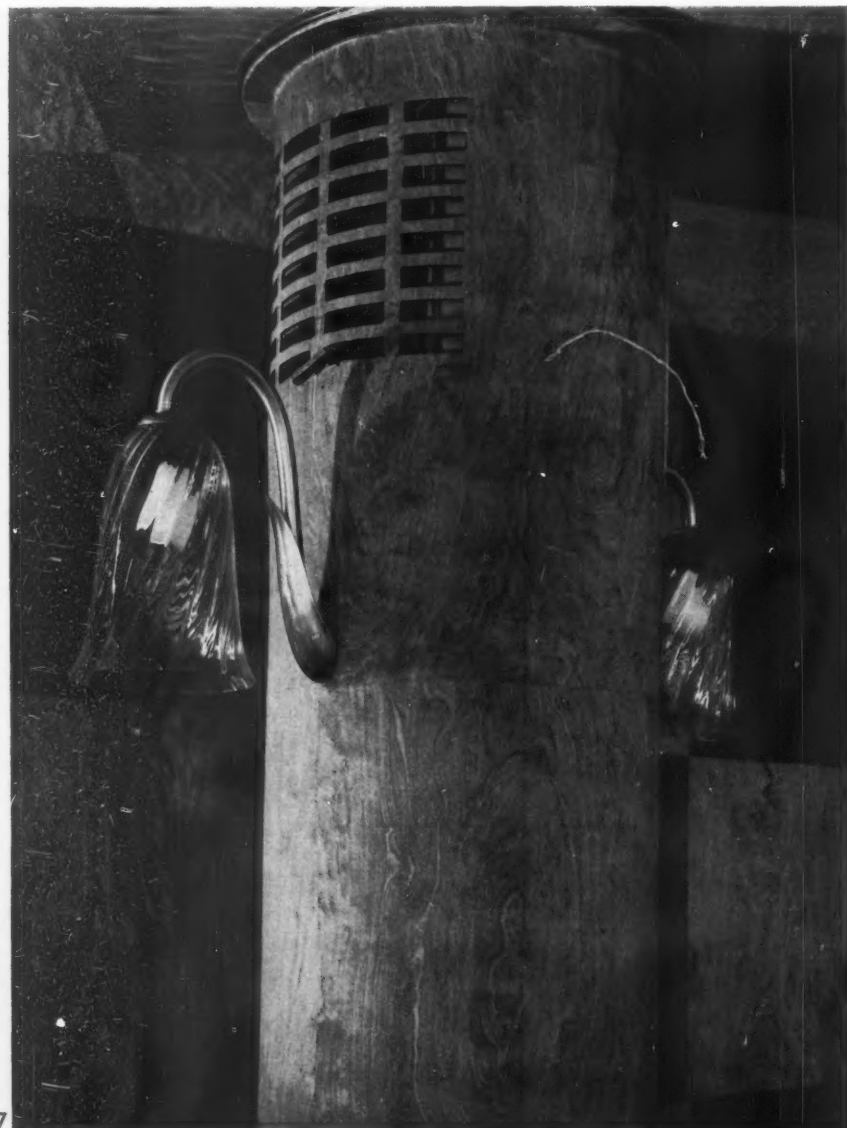
each side below the gallery floor and one on each side below the first floor. A relatively large surface area is thus obtained enabling the velocity at which the incoming air leaves the duct to be kept low (0.7 metres per sec.) and thus minimizing the sensation of draught. In case even this low velocity should be found troublesome, provision is also made for shutting off or regulating the flow of air locally by providing control of the open cross-section of the louvres at the inlets. The greater part of the used air is extracted through the louvres of the air duct below the Café ceiling, while a small part is discharged towards the kitchen, the ventilation of the latter having been arranged in such a manner as to cause the air pressure in the kitchen to be lower than that in the Café. Consequently there is a constant flow of air in a downward direction, from the Café towards the kitchen, in the staircase connecting the two; owing to this arrangement, it has not even been found necessary to insert a door to prevent the flow of kitchen smells towards the Café.

The used air extracted from the Café passes down to the exhaust fan in the basement and from here is discharged to the roof, while the air extracted from the kitchen is discharged through a separate exhaust fan and chimney.

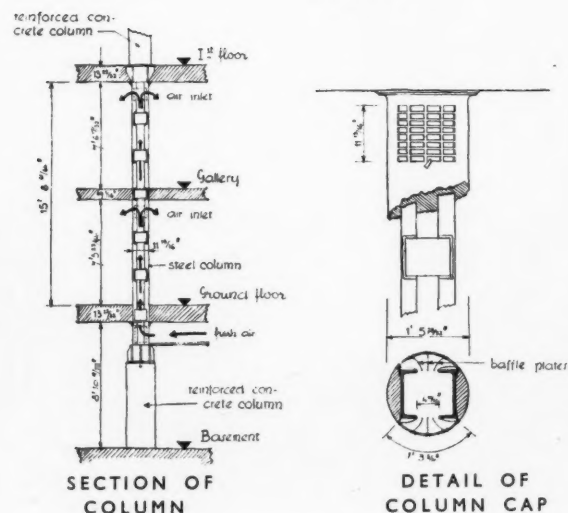
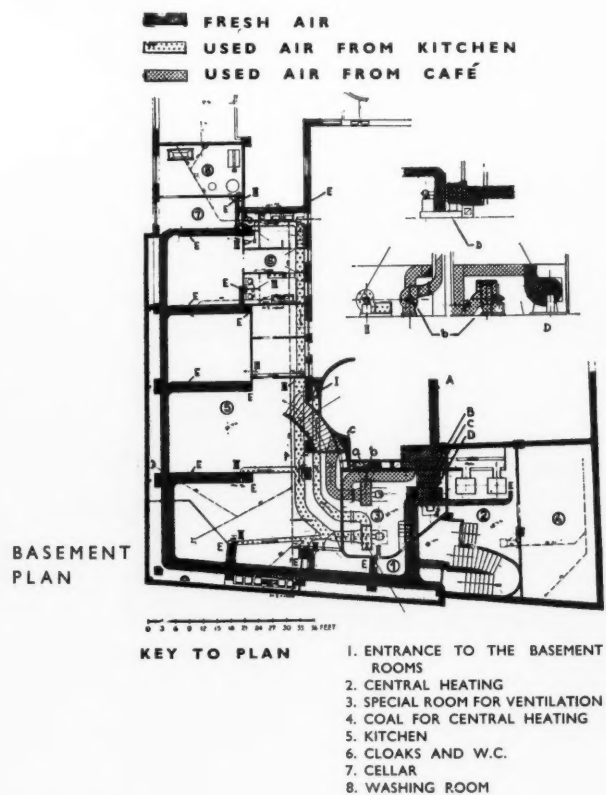
Permanent control of the air temperature and of the operation of the plant is effected by means of distance thermostats, remote control switches and signalling equipment. When the Café holds the full number of guests, the quantity of fresh air introduced is about 36 cubic metres per hour per guest. When the plant is working at full capacity, the air of the Café can be changed in 10 minutes. The illustrations show: 17, detail of a column capital: 18, the gallery: 19 and 20, night and day views of the main hall.

The ventilating equipment was designed and calculated by Lajos Lázár.

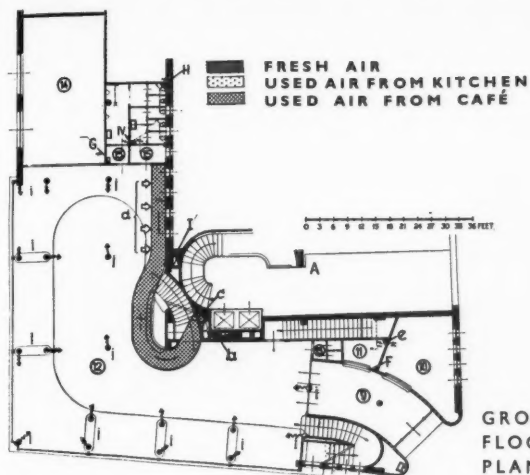
BÉLA HOFSTÄTTER AND
FRANCIS DOMÁNY, ARCHITECTS



17



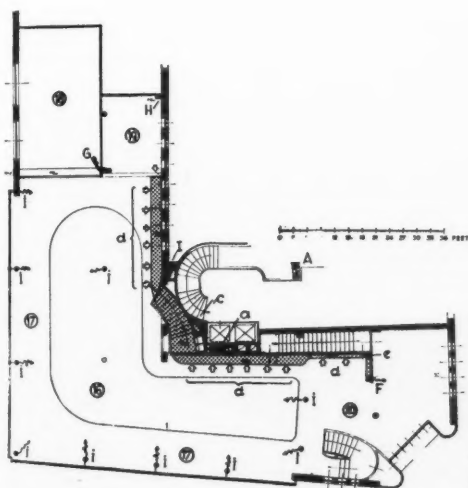
VENTILATION AND AIR CONDITIONING



GROUND FLOOR PLAN

KEY TO PLAN

- 9. ENTRANCE
- 10. } CLOAKS
- 11. }
- 12. LARGE HALL
- 13. TELEPHONE
- 14. LARGE SPECIAL HALL
- 15. W.C.



GALLERY PLAN

KEY TO PLAN

- 16. LARGE HALL
- 17. GALLERY
- 18. LARGE SPECIAL HALL
- 19. SMALL SPECIAL HALL
- 20. CARD-PLAYERS' ROOM

SYMBOLS USED IN PLANS

FRESH AIR

- A. DUCT FOR INTRODUCING FRESH AIR
- B. AIR FILTER
- C. AIR HEATER
- D. FRESH AIR FAN
- E. VERTICAL DUCTS
- F. FRESH AIR FOR CARD-PLAYERS' ROOM
- G. FRESH AIR FOR THE LARGE SPECIAL HALL
- H. FRESH AIR FOR THE SMALL SPECIAL HALL
- I. INTRODUCTION OF FRESH AIR AT COLUMN CAPITALS

USED AIR FROM KITCHEN

- I. DISCHARGE DUCT FOR USED AIR FROM KITCHEN
- II. EXHAUST FAN OF KITCHEN
- III. FRESH AIR FOR KITCHEN
- IV. EXTRACT DUCT DOWN TO EXHAUST FAN OF KITCHEN

USED AIR FROM CAFÉ

- a. DISCHARGE DUCT FOR USED AIR OF CAFÉ
- b. EXTRACT FAN OF CAFÉ
- c. EXTRACT TOWARDS BASEMENT
- d. EXTRACT DUCT FOR USED AIR
- e. EXTRACT DUCT OF CLOAKROOM



18



19



20

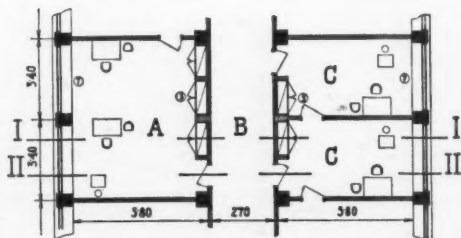
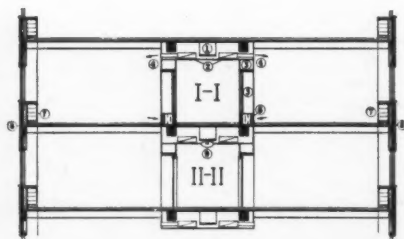
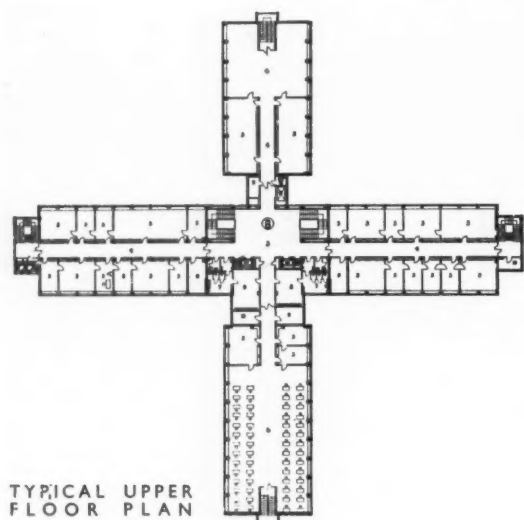
3. PENSIONS OFFICES: PRAGUE

The height of the building, which would make it particularly liable to draughts caused by strong winds, the time which would be wasted in opening and shutting some 1,000 windows and the proximity of the building to the main railway station were some of the factors taken into consideration in deciding on a system of complete air conditioning for the building. This has influenced the interior design in several respects, the most noticeable being the placing of cupboards in positions which would otherwise have been used for heating equipment. For the winter, a minimum temperature of 20° C. was required in the offices and an average moisture saturation of at least 40 per cent. In summer, when the outside temperature is 35° C. and the average moisture saturation of the air 40 per cent., it was necessary that the temperature in the offices should never rise above 26° C. nor the moisture saturation above 55 per cent. The greatest temperature variations were laid down at plus or minus 1° C. The complete plant for the heating and the ventilation of the building comprises the following units:

(a) The boiler room: (b) The cooling plant: (c) The central ventilation

and temperature control installation. This is divided into two parts, each serving two blocks of the building. (d) The floor ventilation plants, provided on each floor, for the distribution of fresh air from the central installation into each room and for the re-circulation and warming of the used air. These plants consist of an air filter and an air warmer. The air, thus treated for supply to the rooms, is then blown into all the offices by means of fresh air supply pipes arranged in the corridors and the ceilings and evenly distributed by means of special inlets. The removal of the air from the rooms is effected on the principle of pressure excess, by means of panel or partition ducts arranged under the cupboards. The diagram on the facing page shows a wing of the building and illustrates the system by means of which the air is supplied to the rooms and extracted from them by means of the floor ventilation plant. The whole installation is provided with temperature, moisture and air volume regulators, so that the working output in temperature and moisture content is automatically maintained. The illustrations show: 21, the large meeting hall; 22, the vestibule to the meeting hall; in both cases the air outlets are combined with the ceiling lighting. 23 and 24, small and large office units, showing the air inlets near the ceiling and the extract grilles at floor level. The apparatus for controlling the air conditioning can be seen in 24, between the cupboards. 25, an office wing under construction, showing the running of the ducts.

HAYLICEK AND HONZIK, ARCHITECTS



KEY TO PLAN AND SECTION

1. ELECTRIC CABLES
2. FRESH AIR DUCTS
3. LIGHTING FOR CORRIDORS
4. FRESH AIR INLETS TO OFFICES
5. CUPBOARDS
6. USED AIR RETURN
7. CUPBOARDS UNDER WINDOWS

21



22



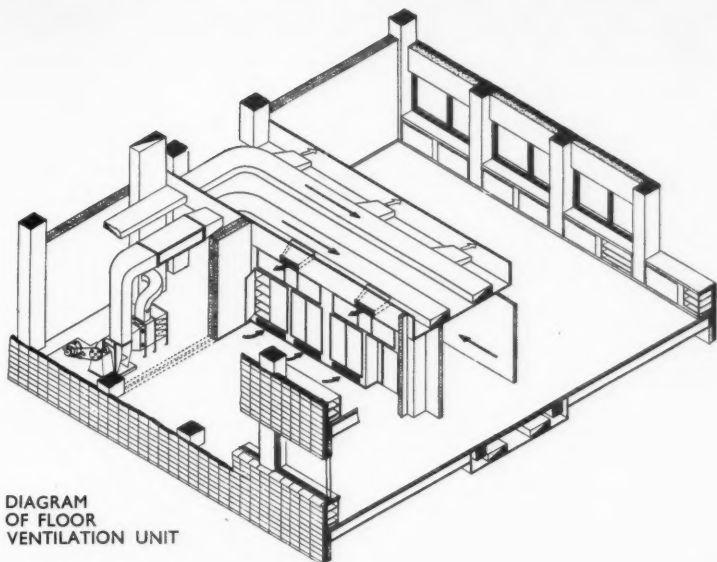


DIAGRAM
OF FLOOR
VENTILATION UNIT



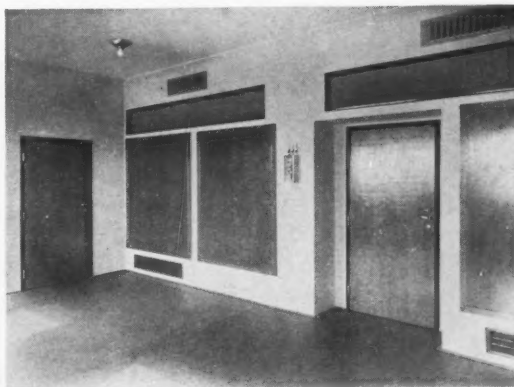
25

KEY TO DETAIL BELOW

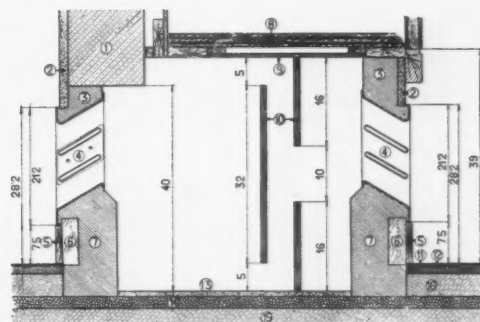
- | | |
|---|---|
| 1. CONCRETE PARTITION | 10. FIBRE BOARD BAFFLE FOR SOUND-PROOFING |
| 2. PLASTER FINISH | 11. LINOLEUM |
| 3. 7. CEMENTED FRAMEWORK | 12. SCREEDING |
| 4. LOUVRE WITH BEVELLED FINS | 13. CEMENT RENDERING |
| 5. SKIRTING | 14. CORK |
| 6. WOODEN BLOCKS FOR SECURING SKIRTING | 15. CONCRETE |
| 8, 9. SLOPING SHELF AT BOTTOM OF CUPBOARD | 16. PUMICE CONCRETE |



23



24



DETAIL OF AIR OUTLET
BETWEEN CORRIDOR AND OFFICES

INDIVIDUAL SOLUTIONS

4. ATRIUM CINEMA, BUDAPEST

LUDWIG KOZMA, ARCHITECT

In this building separate systems are used for winter and summer ventilation. Both have materially influenced the interior design. The dimensions of the winter ventilating installation were determined by the fact that, in the case of a maximum attendance, the auditorium was to accommodate 800 spectators, and that these would require a supply of 30 cubic metres of fresh air per head per hour: therefore a total supply of 24,000 cubic metres. The air warming apparatus has been so designed that air can be supplied to it at an even temperature of 5° below 0 Celsius. Fresh air is drawn in from a dust-free yard at third storey height and passed through a suitable trellis plate into a vertical shaft and, through this, into the central room of the ventilation installation on the ground floor. The warmed air is then introduced into the auditorium by way of ducts running under the floor and the side walls of the auditorium, from which it passes into the distribution pipes, which are arranged partly around the ceiling and partly under the gallery seats. From the distribution pipes round the ceiling, the air passes through 1600 small openings into the auditorium, 26.

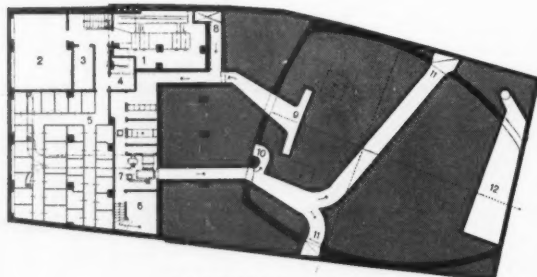


26

4. ATRIUM CINEMA, BUDAPEST

KEY TO BASEMENT PLAN

- | | |
|--|---|
| 7. SPACE FOR CALORIFIER OF AIR HEATING AND VENTILATION PLANT | 11. VERTICAL VENTILATING DUCT, TAKEN UP ON BOTH SIDES OF THE AUDITORIUM, COMMUNICATING WITH AIR TROUGH ROUND AUDITORIUM CEILING |
| 8. VERTICAL FRESH AIR INLET DUCT | |
| 9. RETURN AIR DUCT | |
| 10. VENTILATING DUCT TAKEN UP TO BALCONY | 12. USED AIR EXTRACT DUCT UNDER STAGE |



BASEMENT PLAN

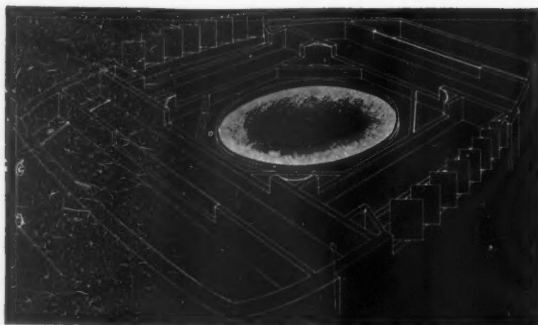
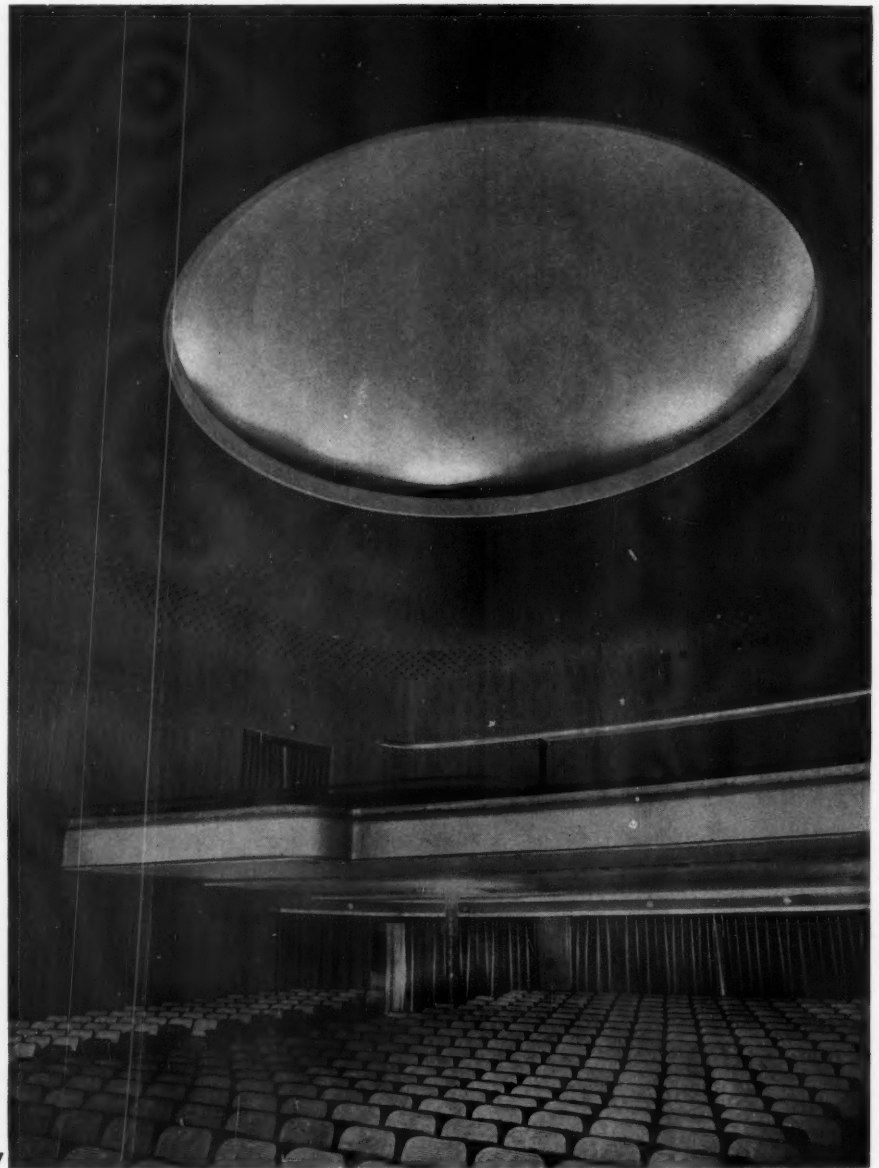
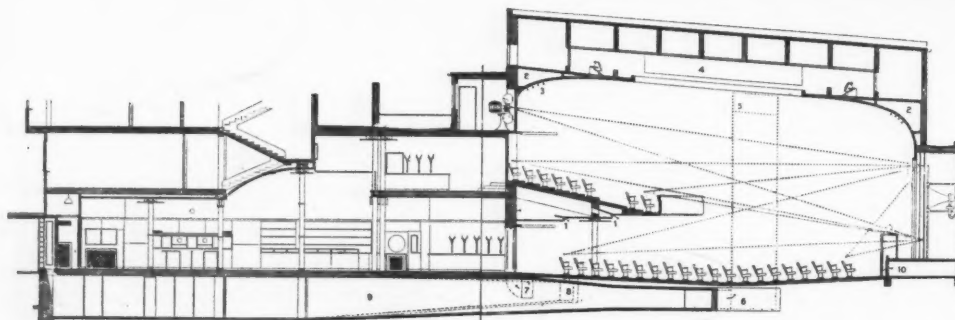


DIAGRAM OF ADJUSTABLE BAFFLES FOR SUMMER VENTILATION



27



SECTION THROUGH FOYER AND AUDITORIUM

KEY TO SECTION

1. FRESH AIR INLET GRILLES UNDER BALCONY
2. FRESH AIR DUCT RUNNING ROUND AUDITORIUM CEILING
3. 1600 HOLES FRAMED WITH BRONZE RINGS
4. ADJUSTABLE BAFFLES, RIGHT AND LEFT, ABOVE DOME FOR SUMMER VENTILATION
5. HEAD OF FRESH AIR DUCT
6. DISTRIBUTION DUCT UNDER GROUND FLOOR
7. DISTRIBUTION FRESH AIR DUCT FOR SPACE UNDER BALCONY
8. EXTRACT DUCT FOR USED AIR UNDER LAST ROW OF SEATS
9. ACCESSIBLE DUCT UNDER GROUND FLOOR
10. EXTRACT GRILLES FOR USED AIR UNDER STAGE

The portion of conditioned air carried under the gallery seats is admitted into the auditorium through a grille, impervious to infiltration, which runs the length of the auditorium.

On account of cooling off it was necessary to introduce the air supply through small openings, placed high up in the interior, 27. The air supplied mixes with the warmer air rising from the audience, so that draughts are eliminated. The foul air is removed by means of a suction fan. It is extracted through a grille arranged in the pit and from an air space under the stage and then discharged through a pipe over the roof.

The ante-room requires an air supply of 6000 cubic metres per hour. The fresh air is taken through the fan air duct into the ante-room, through louvred plates, placed at the sides of the entrance. The foul air from the ante-room flows out through the entrance doors, and by this means unpleasant cooling off is avoided.

In summer time, the auditorium is ventilated from the sides. The double ceiling has, on both sides, an opening measuring about 24 square metres, which can be opened or closed by means of flaps. These flaps are operated from the projection room. A special advantage of this sideways ventilation is that in summer, even in rainy weather, the flaps may be left open.

In the ducting round the auditorium from which the air passes to the 1600 openings, an equal number of blue tinted bulbs are fitted. This lighting system is switched on between the semi-obscurity of the projection and the full lighting of the intervals. With the large circular opening in the ceiling, which provides indirect lighting and direct ventilation, set off by the 1600 points of light, this interior provides an especially good illustration of the consideration of ventilation and air conditioning in relation to the design of the interior.

The Graceful and the Genteel

And now I will speak of the Great House of Allington. After all, it was not very great; nor was it surrounded by much of that exquisite nobility of park appurtenance which graces the habitations of most of our old landed proprietors. But the house itself was very graceful. It had been built in the days of the early Stuarts, in that style of architecture to which we give the name of the Tudors. On its front it showed three pointed roofs, or gables, as I believe they should be called; and between each gable a thin tall chimney stood, the two chimneys thus raising themselves just above the three peaks I have mentioned. I think that the beauty of the house depended much on those two chimneys; on them, and on the mullioned windows with which the front of the house was closely filled. The door, with its jutting porch, was by no means in the centre of the house. As you entered, there was but one window on your right hand, while on your left there were three. And over these there was a line of five windows, one taking its place above the porch. We all know the beautiful old Tudor window, with its stout stone mullions and its stone transoms, crossing from side to side at a point much nearer to the top than to the bottom. Of all windows ever invented it is the sweetest. And here, at Allington, I think their beauty was enhanced by the fact that they were not regular in their shape. Some of these windows were long windows, while some of them were high. That to the right of the door, and that at the other extremity of the house, were among the former. But the others had been put in without regard to uniformity, a long window here, and a high window there, with a general effect which could hardly have been improved. Then above, in the three gables, were three other smaller apertures. But these also were mullioned, and the entire frontage of the house was uniform in its style . . .

And the house stood much too near the road for purposes of grandeur, had such purposes ever swelled the breast of any of the squires of Allington. But I fancy that our ideas of rural grandeur have altered since many of our older country seats were built. To be near the village, so as in some way to afford comfort, protection, and patronage, and perhaps also with some view to the pleasantness of neighbourhood for its own inmates, seemed to be the object of a gentleman when building his house in the old days. A solitude in the centre of a wide park is now the only site that can be recognized as eligible. No cottage must be seen, unless the cottage orné of the gardener. The village, if it cannot be abolished, must be got out of sight. The sound of the church bells is not desirable, and the road on which the profane vulgar travel by their own right must be at a distance. When some old Dale of Allington built his house, he thought differently. There stood the church and there the village, and, pleased with such vicinity, he sat himself down close to his God and to his tenants.

ANTHONY TROLLOPE
(*The Small House at Allington.*)

State Art

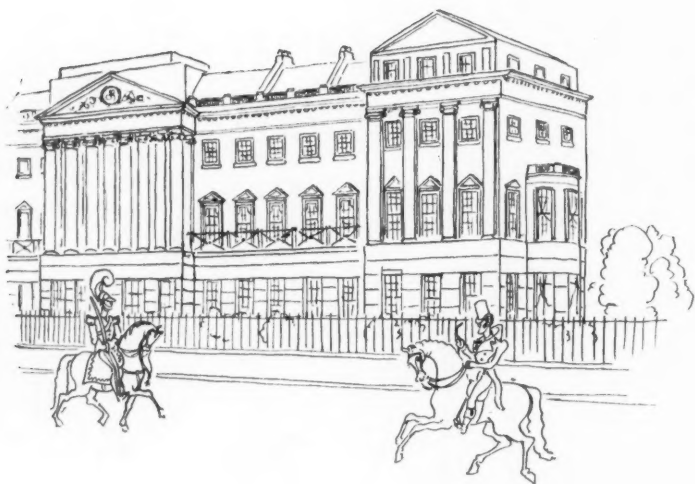
In view of the exhibition of "Degenerate" art at the New Burlington Galleries and the article on the subject on pages 45 and 46 of this issue, a special interest attaches to the official National Socialist panegyrics on the Führer as artist which are periodically reproduced in the German press. The following are relevant extracts from an article by Dr. Goebbels printed in German and English in the monthly publication *Freude und Arbeit*. ✓

"Long before his assumption of power, the Führer once said in a speech, 'If the German artists knew what I intend to do for them in the future, they would stand by me to a man.' At that time the words were scattered to the winds; but without the reminder of impatient creditors, the Führer has made them come true sooner than one dared to hope.

"It might have been realized how deep a need for art is within him when, before he came to power, in times of the most difficult political deliberation or the most exhausting tactical struggles, he would sometimes sit, alone or with a few comrades, in an unobserved corner of a theatre, and in the heroic measures of a Wagnerian opera would perceive the artistic harmony with his own political being. There are today few people who have heard—to take a random example—the 'Meistersinger' or 'Tristan' as often as he. He is a fanatic in the tracing out of artistic associations. He does not do homage to that bourgeois self-complacency which considers that it has grasped and understood a

A New Architectural Glossary

ITEMS FROM A BADLY NEEDED ATTEMPT TO ACHIEVE A CO-ORDINATED ARCHITECTURAL TERMINOLOGY, WITH ILLUSTRATIONS BY OSBERT LANCASTER.



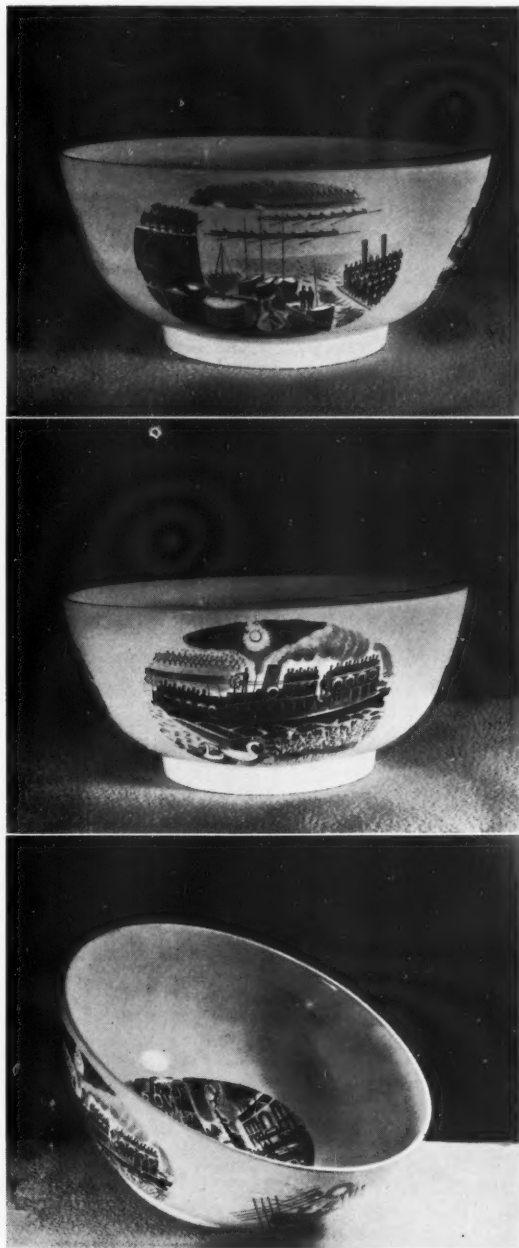
ACADEMICIANS BANE. A dull and unsightly style displaying a poverty of inspiration on the part of the architect only equal to the carelessness with which the details are conceived and executed. The employment of stucco, so characteristic of the buildings of this period, is symbolic of the shoddiness and deceit which lay behind this bombastic and vulgar display of pseudo-classicism.



ACADEMICIANS DELIGHT. A scholarly and cultured style very popular at the beginning of the present century. Although deriving its inspiration in part from the eighteenth-century Baroque it was universally admitted to be a great improvement on the model; an eighteenth-century style, in fact, from which all the grosser elements had been purged and an element of gentlemanly refinement introduced.

genius by merely according which a period lacking both smallest detail. The Führer stroke and reveal the pre-
it a single view or a single taste and style had im- always has time for build- cision and minute exact-
hearing. He is still filled pressed upon them . . . ing plans. How often were ness of an expert architect.
with deep, almost humble. "The monumental build- we able to watch him in It is said that there are
veneration before the God- ings of the Party, the con- the studio of Professor certain smart imitators
given greatness of artistic version of the Königlicher Troost, that architect of whose skill in forging
genius which is revealed Platz, the Haus der genius who died all too and copying these little
in human form. Deutschen Kunst in soon, how enthusiastic masterpieces is unrivalled;
"To the small circle of Munich, the plans of he was over the plans and but those who really
those accustomed to be near projected buildings which models which, stone by know cannot be deceived.
him there are unforgettable reflect the grand scale con- stone, were becoming A genuine picture done
hours when the Führer, version of the capital of the reality. How often were by the Führer is dis-
then only the leader of the Reich, all these are the first we privileged to accompany tinguishable from an
opposition, sketched swiftly visible acts of completion him to new buildings in imitation at the first
on loose sheets of paper of those earlier plans which their various stages of de- glance, because there is
grandiose plans for the then seemed well-nigh velopment and to realize for part of the Führer in
architectural transforma- fantastic. And to the ourselves his touching all his pictures, and one
tion of Berlin and Munich. outsider it seems almost pleasure even in the can see here, if only in the
Here was a happy com- incomprehensible that the smallest details which beginning, the modification
bination; modern, tech- Führer not merely provides fitted in each in its place of all those artistic laws
nical ideas with supreme the initiative and sugges- into the whole uniform which appear in such
architectural vision. Here tions for these pro- plan. monumental grandeur in
arose the original model of jects destined for future "The pictures too, which his historic construction
the features of these towns, centuries, but also follows he painted in his youth, of the State . . .
purged and chastened of the execution with expert breathe this spirit. They "The Führer is the
those false characteristics minuteness" down to the are worked out to the last sworn foe of dilettantism;

A WEDGWOOD BOWL BY ERIC RAVILIOUS



Three views of a bowl designed by Eric Ravilious for Wedgwoods, with the Oxford and Cambridge boat-race as its theme. On the outside are a series of illustrations of the race itself and on the inside (partly shown in the bottom illustration) a view of Piccadilly Circus on Boat Race Night.

he upholds the proud works ten times over, belief that it is more than ten alternative average worth while to read, see or minor attempts. If or hear great and good he is shown a film of artistic

merit, he takes the opportunity of seeing it again on another occasion. But a mediocre film is stopped after five or ten minutes.

Is it any wonder that all genuine artists love and honour him with all their heart? For he is their friend and, where necessary, their generous protector. He cannot imagine life without art. No royal patron ever had a readier understanding for the arts than he; wherever art is truly great and worthy of the future, he lends a helping hand. But nothing is further from his desire than to adopt the rôle of learned mentor. He who had to fight his way to art as a penniless workman at great material sacrifice, opens his heart and his hand most readily when it means bringing art to the people and the people to art. Ideas such as the 'People's Theatre' have become reality under his guidance. The great German cultural organization 'Kraft durch Freude' finds in him a warm-hearted friend, advisor and protector. His taste for beauty does not reveal that unpleasant æsthetic trait of selfish enjoyment; it is at the same time directed towards practical and general things.

"And his feeling of union with art and artists, his untiring care for their welfare is no less than the payment of a debt and the fulfilment of a duty towards art, such as the poet had in mind when he wrote: 'Oh gentle art, to thee my thanks are due!'"

DR. GOEBBELS

(DER FÜHRER UND DIE KUNST).

Grande Soirée de Gala

By the time these lines are published His Majesty's visit to Paris will we trust have

MARGINALIA

passed off successfully, but at the time of writing the French capital is in that slightly *decolleté* condition which is familiar to all those who were in London during the weeks immediately preceding the Coronation. The *Champs Elysées* are strewn with large masts around which highly conversational workmen are busy twining bunting, on every skyline appear gigantic representations of the Royal Arms of varying degrees of accuracy and completion and every other step one takes one trips over spare wreaths, pots of gild paint, and an assorted variety of dismantled scaffolding. In the papers a storm of controversy is raging, for it must be confessed that the decorations have on the whole had a singularly bad press, and already the authorities, who appear to be rather more ready to heed public opinion than their brethren on this side of the channel, have profited by the delay caused by the postponement of the arrival of the King and Queen to remove the more offensive specimens. For an Englishman who has always been led to believe the old chestnut about "the French always do these things so much better" it is pleasant to be able to record that on the whole there seems little to choose between the taste in decoration displayed by the Parisians in 1938 and by the Londoners in 1937. The masts in the *Champs Elysées* resemble nothing so much as badly furled red, white and blue umbrellas; the severely classical façade of the *Madeleine* is not improved by the addition of a solitary red, white and blue cockade of gigantic dimensions (this, however, one gathers has subsequently been removed); and one has the gravest doubt about the sort of effect likely to be created by the enormous royal arms and two vast rustic pillars of solid gold at the moment waiting to be assembled at the entrance to *Les Invalides*. However it must be admitted that the *Place Vendôme*, draped in red velvet hanging in formal folds from the windows, with the columns swathed in the same material, is a far better sight than anything we produced in London, while the pyramids of mirror glass at the *Rond Point* strike a pleasant and original note of fantasy.



Sidmouth is a town full of good early nineteenth century architecture, and its small main street has hitherto preserved its personal character as a street of small retail shops. But the above view, taken some weeks ago, shows, in the foreground, a building which is soon to be replaced by the red and gold shop front of a sixpenny store. It is too late now to protest—the demolition contractors have already done their work—but there is one aspect of this case which it is worth mentioning. The house was sold without the knowledge of the local council who, if they had known what was intended, would in all probability have bought it and resold subject to conditions which would have preserved the character of the street—a fact which might well be taken to heart by property owners in Sidmouth and other similarly situated towns.

In some respects Paris is far more fortunate in its old monuments than London, for while here so much of the best eighteenth century architecture is located in districts where it presents a standing temptation to the land speculators and luxury flat kings, in Paris many of the most notable houses and palaces dating from past ages are situated in the present-day semi-slum district of the *Marais* where they are threatened by no dangers save those that arise from almost total neglect. The *Hotel de Sully* (dating from early in the seventeenth century) and the *Hotel de l'Archeveque* in the *Rue Vieille de Temple* are now both tenements, and the enormous rooms long since cut up, but they retain, in the case of the latter at any rate, a magnificent staircase down which the grubby offspring

of the tenants push their little brothers and sisters. However, another splendid specimen of eighteenth century French architecture at its best, the *Hotel de Rohan*, which until recently was cluttered up with sheds and outhouses erected during their long tenancy by the *Imprimerie Nationale*, has now been taken over by the city, admirably restored and housing at the moment an excellently arranged exhibition of plans and elevations for *Versailles*, the *Tuileries*, the *Place de la Concorde* and numerous great building schemes of the past taken from the national archives. Furthermore, the municipality has also acquired the *Hotel de Lauzun* on the *Ile St. Louis* which contains some of the finest existing decorations dating from the late seventeenth century with

splendid ceilings by Lebrun. It is not yet however open to the public as there exists some difference of opinion on the council whether it is to be devoted to a museum of Louis XIV or, in view of the fact that Daumier, Victor Hugo and Baudelaire all at various times lodged there, a museum of the Romantics; a dispute, despite its possible ideological significance, that seems strangely far removed from any that would, one imagines, be likely to trouble the peace at the County Hall.

Another Aspect of Glasgow

"What is ugly in Glasgow is the poverty not only of money but of mind—for the poor, miles of houses, new or old, but all alike; for

the middle class, miles of one-gabled stone cottages with delphiniums in the front yard; for the well-to-do, miles of stone manses with two gables, and delphiniums and antirrhinums in the front yard. England has produced fine domestic architecture for centuries. Here is a British city, second in size only to London, where the architects have worked not as men but as rubber stamps. Glasgow is the perfect example of what all city-planners and, indeed, all rich landlords everywhere should beware of."

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