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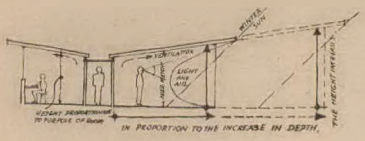
THE WINCKLEY HOUSE, VILLIERIA, PRETORIA

THE DOUBLE LEAN-TO ROOF

OR HOUSE PLANNING FROM A DIFFERENT ANGLE

AN ECONOMICAL STRUCTURAL SYSTEM WHICH ALLOWS FOR FREE PLANNING

By H. W. E. STAUCH.



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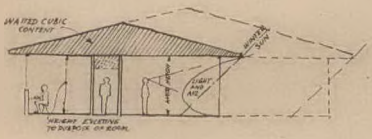

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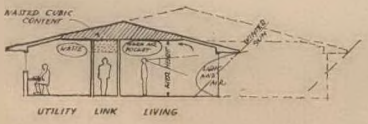

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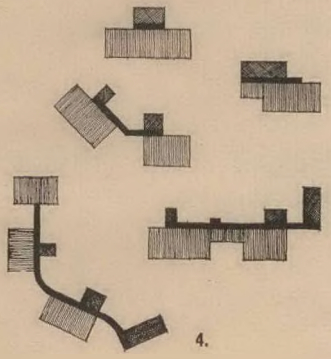


4.

Every domestic planner has experienced the constant repetition of basic elements in houses:

Living: Living rooms, bedrooms, verandahs, etc. (facing north or east).

Service and Utility: Kitchen, bathroom, storage (facing south).

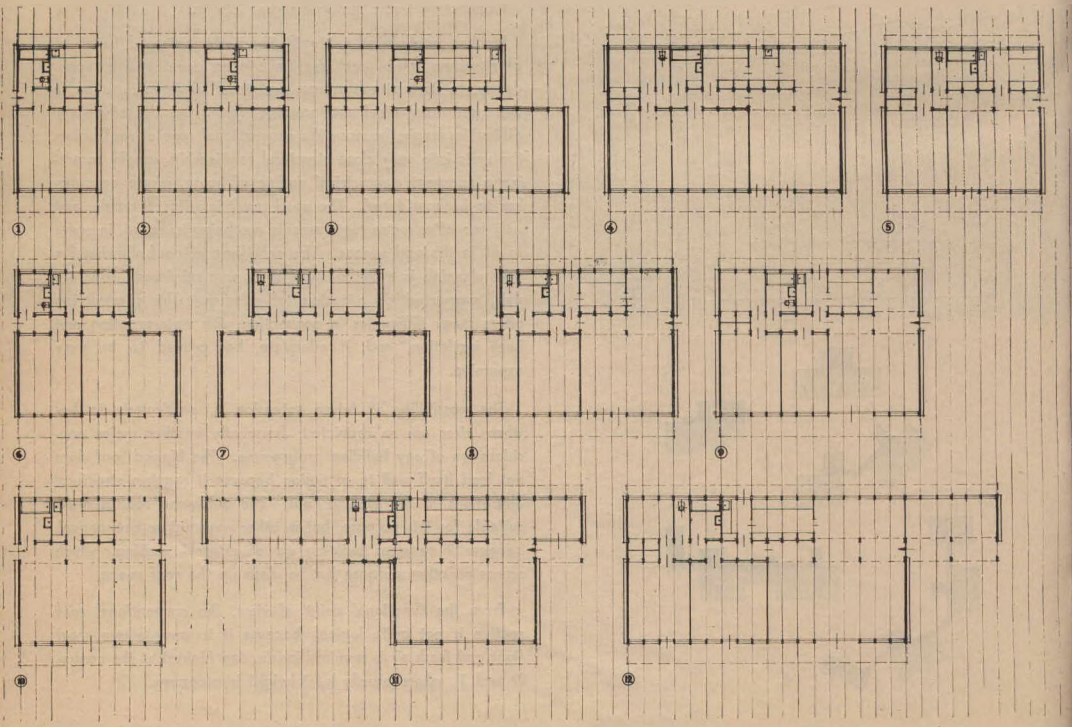
Connecting Link: Hall, passages, lobbies.

He has surely tried to typify these elements and to arrive at a system where each section can be developed independently, to its best advantage, and then link them together in the most economical and practical form. At this stage the difficulties begin, because the conventional type of roof brings the units into very close structural relationship, usually requiring a compact geometrical outline of house, where economy has to be considered. The usual result is a jigsaw puzzle, and only too often extra requirements are being invented, in order to fill in the odd spaces. The only form of roof allowing for free planning is a flat surface, such as a reinforced concrete slab, supported on a system of columns. This construction offers many difficulties in connection with waterproofing and heat insulation, and, if adequate, has proved to be very expensive.

The possibility of future extension is, particularly to-day where sizes are so restricted, frequently another major consideration of any building programme. The hipped roof does not lend itself well to extension because it requires structural alterations to the existing roof. The gable-end roof is more suitable for this purpose, but in other ways not so economical, because it requires building up of external walling, which serves no other purpose but to close up the roof space.

From the functional point of view, the conventional roof section is not quite logical, because it is lower where most light and fresh air is required inside, and highest at the centre, (2 and 3), where usually least height is necessary.

The principle of this experiment is to evolve a system whereby the linking between the separately developed sections can be achieved both economically and in an aesthetically satisfactory manner. The length of each section is determined by a repetition of equal units of width, which makes the use of prefabricated structural parts possible for walls, floors and roofs. The depth varies according to the purpose of the room which it serves, and the sloping ceiling, which follows the slope of the roof, brings the average height of the room into proportion with its depth, and also gives a strong impression of spaciousness, apart from aiding the natural ventilation (1). The same principle applies to both living and service sections. The backbone of plan and construction is the connecting link, which is simply a hood of sufficient width, supported on piers or walls, as required. It can be formed as a concrete channel, which then acts as the rain-water channel of the whole building (2), or as two parallel running channel beams, with a light covering spanned between (19). It is the most flexible of sections and allows for variation in aspect, which might be desirable in order to follow contours, or for various other reasons (4). A few examples of the great variety of plans possible with this system is shown on Illustration No. (5).

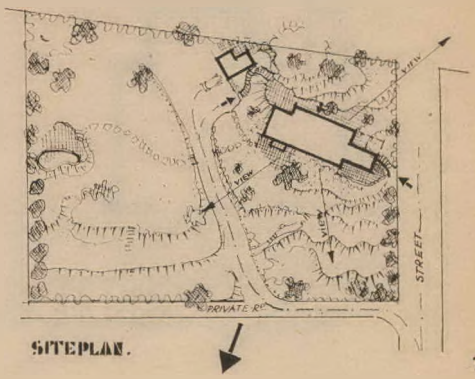


6 NORTH-EAST ASPECT. Main living area is on upper level, play room is below. At left gutter slab with down pipes is visible.

Photographs by Alan Yates.

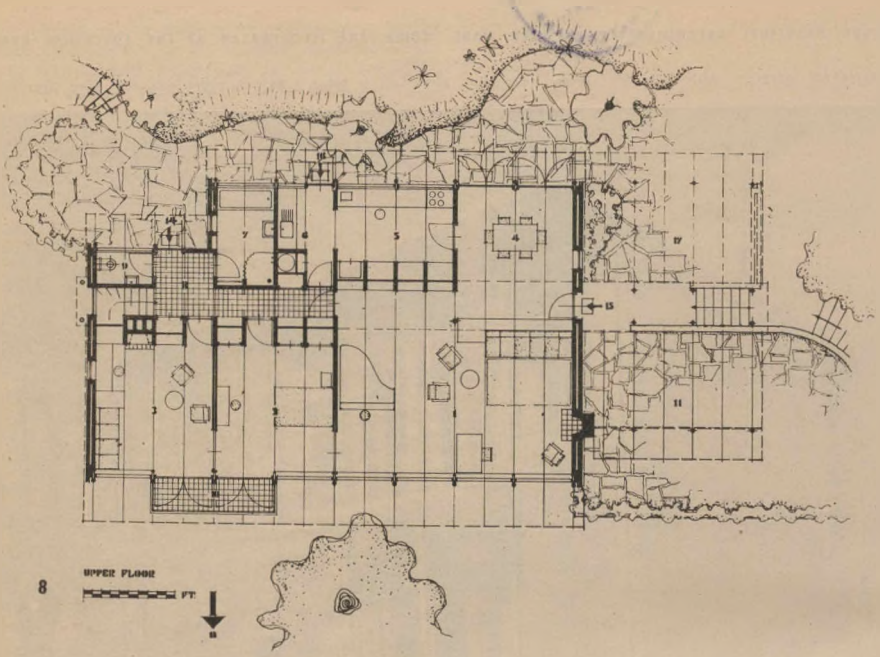
THE WINCKLEY HOUSE, PRETORIA, 1944

The house is situated on a hilltop with a lovely view over Pretoria to the south-west and an undisturbed view over the Villieria valley on the north side. The approach by road is on the west boundary of the site. The visitors' entrance is on the west side and leads directly into this portion of the house, whereas the owner's entrance is nearest to the garage on the south-east corner and leads into the private portion of the house, making the bathroom, etc., directly accessible from the outside. The service entrance is at the scullery, where all the controls for technical installations are placed.



SITEPLAN.

7



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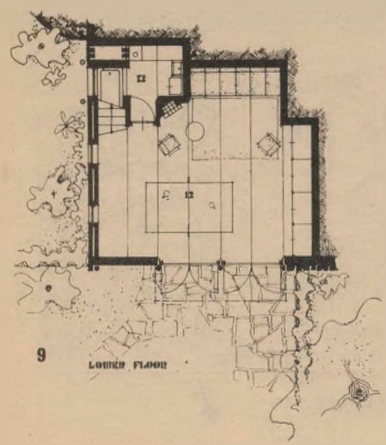


9

THE WINCKLEY HOUSE, PRETORIA

1. Living Room.
2. Bedroom.
3. Study (Bedroom).
4. Dining Room.
5. Kitchen.
6. Scullery.
7. Bathroom.
8. Lobby.
9. W.C.
10. Balcony.
11. Verandah.
12. Playroom.
13. Bathroom-kitchenette.
14. Owners' Entrance.
15. Visitors' Entrance.
16. Service Entrance.
17. Future Office.

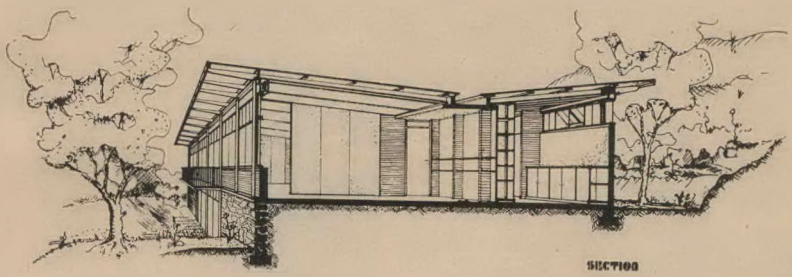
The living and sleeping units are treated as one large stoep, which is subdivided for the various functions, and this is emphasised by using tiled floors and facebrick for internal walls. The whole north front is of glass, the lower portion consisting of horizontal sliding windows, the upper portion of top-hung fanlights for cross ventilation, with removable flyscreens to all openings. Double folding glass doors allow for complete connection with the outside of certain portions of the rooms. Control of light and sunrays is obtained by venetian blinds, which can be drawn up into recesses when not in use.

Roof overhang is calculated to shade the facade in summer gradually, as the climate gets colder, to expose more wall surface to the sun, thus increasingly warming the rooms, until in winter, direct sunrays are allowed to enter the rooms. The inward sloping double lean-to roof allows a constant flow of air to pass through the space between roof and ceiling, resulting in a cool house in summer.

The space under bedroom and study, where the ground falls away steeply, is used as a play and utility room and, being fitted with a bath, sink, etc., under the stair, can be used as an independent living unit. It is directly linked with the outside by a pair of glass doors, which are protected by the balcony of the rooms above. This room is connected with the upper floor by a stair, which forms a continuation of the passage.

The construction aims at simplicity and speed of erection and the use of prefabricated structural units and fittings. Due to lack of suitable supplies, the materials used for this house had to be the same as used in a house of conventional construction, except for the purpose-made window units. By employing efficient light-weight materials, which are at present unobtainable, for roof, floor and walls units, the cost and speed of erection could be greatly minimised.

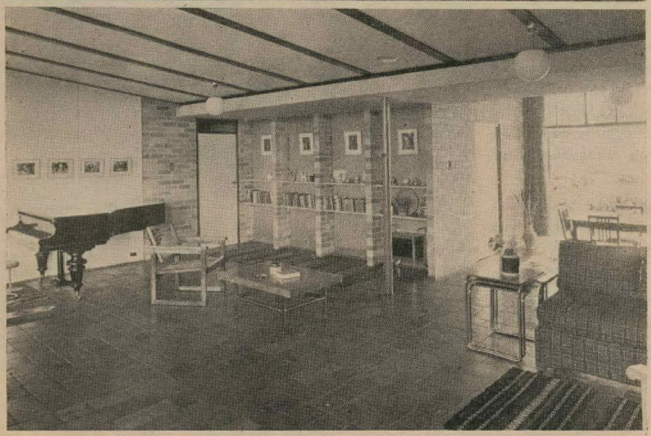
10. Detail of balcony to bedrooms, showing light supporting columns.



SECTION

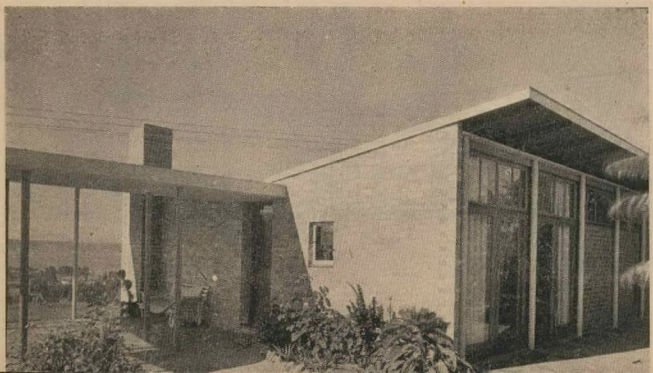
11

12



13

A view of the house from the south-west is given in 14, showing the verandar and the glass doors to dining room. Two views of the living room are illustrated in 12 and 13, the former looking towards the dining room, the latter towards the adjustable partition to the bedroom. The space between the brick supports of the channel slab is utilised for shelving and, on the kitchen side, for storage fittings.



14

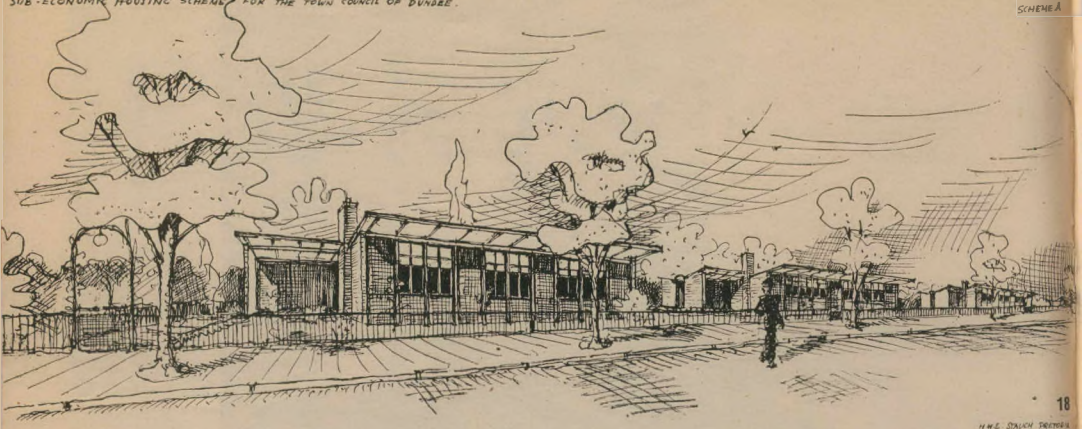
15

15 shows a corner of the study, where the spaces in between the supporting walls have been utilised for bookcases and a fireplace. The view from the bedroom over the balcony is shown in 16. At left is the typical sliding window with fanlight above, all protected by fly-screening, and at right the study with sliding door opened. 17 shows the playroom with slate floor. Door at left leads to bathroom-kitchenette.

16

17

The roof is supported by tubular steel columns, which are bolted to a wooden L-shaped beam at 6 ft. 6 in. centres. The roof rafters are spaced at 3 ft. 3in. centres and have wooden strips fixed to the underside to form a reversed T, which stiffens the beam lengthwise and allows the ceiling panels to rest on the protruding flanges. The inner ends of the rafters rest on the concrete slab, which acts as a central gutter, with downpipes and safety overflow at either end. The slab is supported by brick walls set at right-angles to the run of the slab, and partially by tubular columns. The end walls, parapet walls, and some of the partition walls are built of facebrick, whereas the partitions between living room, bedroom and study are made of composition board and plywood fixed to a light wooden frame, which makes them easily adjustable. Sliding panels close the space between partitions and windows. The roof is covered with corrugated iron on wooden purlins, and the ceiling consists of composition board fixed between the beforementioned strips, which are visible on the inside. The floors are red quarry tiles in lounge and service units, block floors in bedroom and study, and slate paving in playroom and on the stoep.



H.W.E. STALCH DELINEA

SUB-ECONOMIC HOUSES FOR DUNDEE, NATAL.

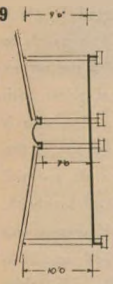
These have been designed for prefabrication in reinforced concrete. The programme asked for rooms of minimum size, a fairly large kitchen with sufficient space for eating, a pantry, bathroom and storeroom. The possibility of future extension had to be considered.

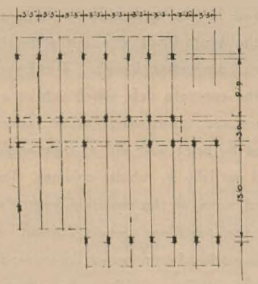
The general structure consists of supporting reinforced concrete columns spaced at equal distances, the spaces to be filled in with precast slabs, window- or door-units as required.

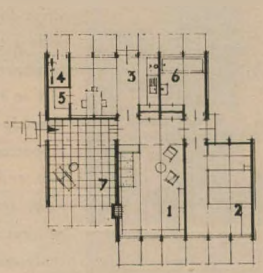
For the roof, the use of corrugated iron on a wooden structure as described before, has been suggested, or alternatively, a system of precast gutter beams spanned by prefabricated arched slabs, as illustrated in House D (20).

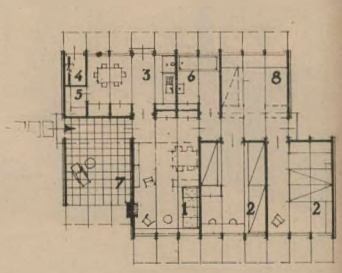
The windows slide vertically downwards in front of the parapet wall, and are equipped with sliding shutters and flyscreens where required. The upper portion consists of fanlights for night ventilation.

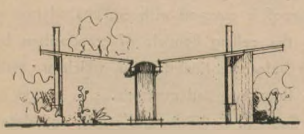
The outer lining at ends of frame structure may consist of precast slabs, bricks or local stone.

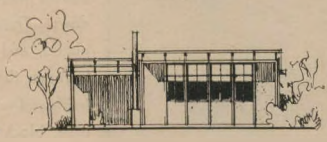


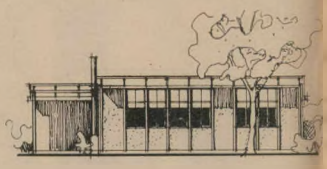






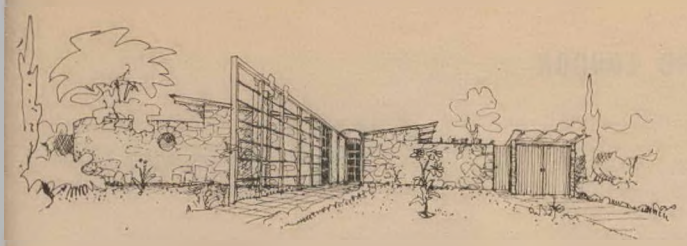


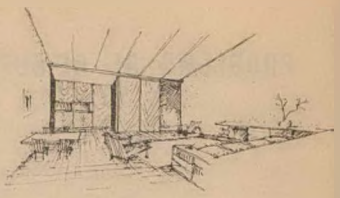


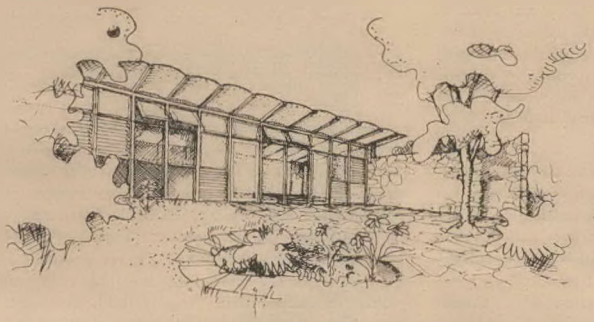


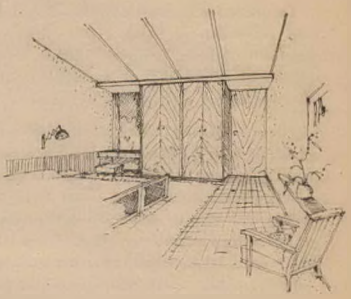
(A) HOUSE 616
STOEP 138
754 SQ. FT.

(B) HOUSE 754
STOEP 138
892 SQ. FT.





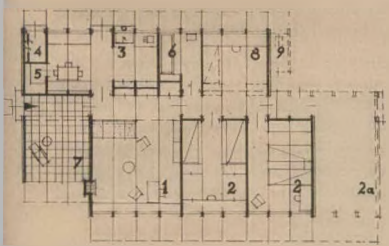




(D)

20

Four type houses for the Town Council of Dundee based on a regular system of reinforced concrete supports with prefabricated parts and the double lean-to roof are shown in the illustrations 19-21. A general perspective of the scheme is given in 18. The four types show the variety in planning which is possible and the facility with which extensions may be made. A house in Pretoria built on the principles of the Dundee scheme is illustrated in 22.



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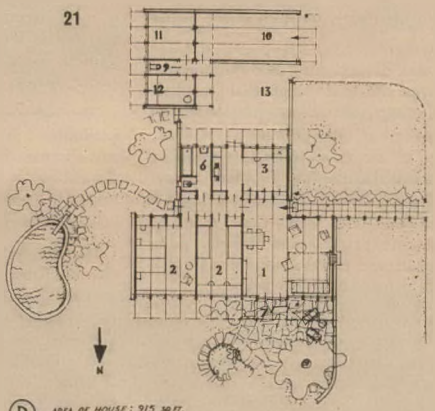
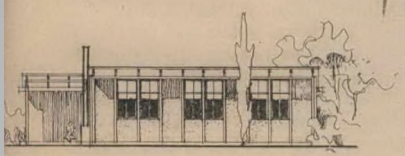


(D) AREA OF HOUSE : 915 SQ FT.

LEGEND :

1. Living Room.
2. Bedroom.
3. Kitchen.
4. Store.
5. Pantry.
6. Bathroom.
7. Verandah.
8. Utility or Spare
9. W.C.
10. Garage.
11. Servant's Room.
12. Laundry.
13. Yard.



(C) HOUSE 811
STOEP 138
949 SQ FT.

22

PROBLEMS OF RE-BUILDING LONDON

by Eric L. Bird.
Technical Editor: Journal of the R.I.B.A.
Vice President of the A A. School

To understand more fully the proposals for the replanning and rebuilding of London, it is first necessary to examine briefly the present position in Britain as a whole, specially the effects of World War II in stopping normal building and of the destruction of buildings by bombing.

Never in its long history has Britain been so short of buildings of all kinds as it is at present. Since early in 1940 there has been a complete stoppage of both private building and public building for communal use. Thus, five years of output by the million men directly employed in the national building industry in peace-time is lacking. Part of this labour force went into the Armed Services; the remainder were put to work—together with the public works industry—on the making of camps, airfields and munition plants. In addition, bombing entirely destroyed or severely damaged nearly one-fifth of the homes of Britain.

The centres of most towns, because they were the principal bombing targets, lost large areas of commercial premises. Factory buildings, while they suffered comparatively less damage, were mostly repaired as the war went on or abandoned, a general shortage of factory space being avoided by closing down many non-essential industries. A return to anything approaching normal peace-time production in Britain will require many new factories. Thus, there is an enormous demand for houses, commercial premises and factories, quite apart from schools, hospitals and churches—both new and repaired. But, above all, the demand is for houses.

Various estimates have been made of the time required to fill this demand—that is, to reach normality again. A generally-accepted figure is 20 years, some even say 50 years; a few think that five or six years should see the desired results. But all such estimates are guesswork, because no-one knows how long the Japanese war, with its demands on manpower, production and shipping, will last. The Government, however, is taking steps to raise the nation's labour force to one and a quarter million men within two years.

The Government is entirely preoccupied with the acute shortage of housing. A repair organisation is rapidly executing "first-aid" repairs to make damaged houses reasonably habitable. A scheme for providing prefabricated temporary dwellings is getting under way. Most of these are to be home produced, but some are being imported from the United States and Sweden. All other building, at the moment, is still in the plan stage.

There were two principal phases in the bombing of London, differing in their destructive effects. The first phase was from September, 1940, to May, 1941. In the first three months of this period the Luftwaffe principally used high-explosive bombs which caused local damage distributed at random over the built-up area. On the night of December 29th, 1940, however, German aircraft launched a heavy incendiary raid which burnt out some 120 acres of the down-town commercial centre, mainly the "inflammable" area of textile warehouses. Other fire-raising attacks followed, though no single attack achieved such results as the first. Nevertheless, every attack caused one or more minor conflagrations in the capital. Most of these occurred in the older, congested, commercial and shopping districts, though there were serious fires in the docks and among factory groups.

Then came a lull while the Luftwaffe concentrated its efforts on Russia. Meanwhile, the London defences in night-fighter aircraft, guns and fire services were so improved that the Germans were never afterwards able to drop a heavy concentration of incendiary bombs. Comparatively small groups of buildings continued to be burnt or blasted.

This was the position up to June 14th, 1944, when the first German flying bomb was launched from France and crashed on London. Until then the residential areas had not suffered to any great extent. Here and there houses had been demolished or gutted, but the great mass of suburban housing was habitable. The incendiary raids had failed to cause fires in many housing areas owing to the all-prevalent brick and tile construction.

Flying bombs and rockets, however, were an altogether different story. Many of them fell on the poorer areas of nineteenth century houses in East and South London. These houses, never very well built and deteriorated with age, fell easy victims to the powerful blast effects of the new missiles. On the other hand, those flying bombs and rockets which fell in central districts did relatively much less damage. The more strongly-built commercial structures resisted blast effects far better than did the lightly-built dwelling houses.

The end of the war in Europe revealed London badly "knocked about." The incendiary raids have left great gaps in London's central areas. The flying bombs have left similar but smaller gaps in the residential areas. Tens of thousands of buildings, though habitable, have been so shaken and blasted that, in expert opinion, their future uses are greatly limited. Many may have to be pulled down some time within the next 20 years or so.

It is clear that London now has an opportunity to replan and rebuild such as has not occurred since the Great Fire of 1666. Moreover, it is an opportunity to remedy the defects and clear up the urban muddles which have arisen from unregulated growth through the centuries. London suffers from acute traffic congestion, it possesses depressed housing areas (together with some of the finest examples of house grouping in the world), the open spaces—though considerable—are badly distributed, development has been indiscriminately mixed, the railroad system is complex and overburdened, and there has been a general lack of coherent architectural development. London's built-up area, in fact, is the largest in the world.

There is one outstanding feature which governs all proposals for the replanning and rebuilding of the capital: there is no single administrative body for the whole built-up area and environs. The core of London is the ancient City, about a square mile in extent, still largely of mediaeval plan and now housing the commercial heart of the Empire. It is self-governing and jealous of its ancient rights. The London County Council administers the greater part of the rest of the central mass of building. This mass building has developed during the last 250 years by haphazard increase and joining up of villages, by new areas of housing (some, like the squares, well laid out, others congested and unworthy) and by random construction of factories and groups of industries.

Round the London County Council boundary are numerous boroughs, each a self-governing township, though their built-up areas merge into each other. At varying distances outside the general built-up area are numerous small towns which have become, in effect, "dormitory" suburbs of London. Altogether eight million people who live and work in and around London are governed by no less than 143 separate local authorities (i.e., municipalities) administering a total of 2,599 square miles. This agglomeration of townships and local authorities has become known as "Greater London." The built-up area is about sixty miles across, so that it takes an hour to reach the country from the centre in an automobile.

The more responsible sections of public opinion in Britain have long been aware of the need for orderly development of urban growth. In 1933 the Town and Country Planning Act, applying to the whole country, passed into law. This gave local authorities some degree of power in determining land utilisation, together with powers of compulsory purchase. So far as private enterprise housing is concerned, they are empowered to prescribe the density of dwellings (houses or apartments), to approve layout plans and the general appearance of buildings. This is, of course, in addition to earlier powers controlling construction. Somewhat similar restrictions apply to commercial buildings.

The London County Council also possesses its own Acts of Parliament whereby it exercises control of all buildings in its area in other ways. For instance, unless the Council grants exemption—which it very rarely does—no building must exceed 80 feet in wall height, plus two storeys in the roof or set back. Thus the skyscraper is illegal in London and likely to remain so because the Council has taken warning from the rush-hour sidewalk congestion in down-town New York. It has become generally agreed that the governing principle should be density of population—an important advance. Tall buildings are only

The City of London, looking eastwards. St. Paul's Cathedral, in the centre, rises triumphantly amidst the ruins. The bridges have escaped damage. In the distance: Tower Bridge, New London Bridge, railway bridge at Cannon Street Station, and Southwark Bridge. Ludgate Circus is at the bottom of the picture.

likely to be sanctioned in London provided a prescribed overall density for a given area is not exceeded.

The Town and Country Planning Act was by no means so strong as many advance town planners would have wished. But it did serve to make the country town planning conscious. Every local authority—in some cases groups of authorities—has its town planning committee and town planning officer. Therefore, when the post-war replanning and rebuilding of Britain came to be considered, the machinery to achieve it was in existence, and there was a fairly powerful suppporting body of public opinion.

Further, since 1919, the constituted authority for providing housing for the poorer paid workers and later for the clearance of slum areas has been the local authority. Numerous Acts of Parliament have created machinery for housing. Local authorities have erected large housing estates, either in the form of small houses on the outskirts or as blocks of apartments in cleared slum areas. The London County Council has been specially active in this work. The habit, therefore, has been formed of local authorities themselves building and administering large areas of residential property.

Since World War I, there has been a spate of reports and schemes, official, semi-official and unofficial, concerned with the problem of rebuilding London. Two of the best unofficial schemes were that of the Royal Academy of Arts—largely an architectural re-dressing of the principal focal points—and of the Royal Institute of British Architects, which made a serious attempt at a regional survey of Greater London with positive proposals for replanning. Both schemes were on view in 1942 and attracted large public attendances.

Of the official schemes, three are of outstanding importance. In 1941 the London County Council, at the suggestion of the Government, commissioned Professor Sir Patrick Abercrombie and the Council's architect, Mr. J. H. Forshaw, to prepare a plan for the Council's area. The plan, published in 1943, proved to be bold and imaginative. It contained several new ideas in urban development and consequently attracted enormous public interest. Here are its principal features in some detail :—

The Corporation of the City of London instructed their Engineer to prepare a plan for the City, consulting as necessary with the L.C.C. The City plan was published in 1944. The report said that the general principles guiding the decisions were best summarised as " a lively sense of the long history and traditions embedded in the City's physical and commercial structure and of the necessity of pursuing an efficient and active reconstruction programme so as to permit it to maintain its pre-eminence as the centre of the world's commerce and communications." Critics said there was too much attention paid to the former and a lack of boldness and vision to the latter.

In 1942 the Government commissioned Professor Abercrombie to prepare a plan for the Greater London region. A " preliminary edition " of the scheme was published in 1944, and received general approval, but the Government has yet to bless it officially by creating the central controlling authority, which is an essential feature. However, no actual physical work can start for at least a year, probably longer.

Professor Abercrombie proves that London's centre is far too congested. The outward movement of industry and population had begun some years before World War II in an unregulated manner. He now proposes that movement be controlled into new groupings, some being old "satellite" townships remodelled and others being entirely new, financed and generally sponsored by Government. About one million persons will need to be moved.

This decongestion of the central mass is to be governed by a scheme of planned densities. Reduction of density will free land for green spaces reaching into the heart of the city, some of which will be occupied by parkway express roads, both radial and ring roads. Indeed, a properly planned system of road, rail and air communications is an essential feature to be imposed on the whole conception.

The scheme is general in its nature, full allowance being made for local initiative in regard to detail planning and building. Professor Abercrombie points out that the total amount of work involved will require the full mobilisation of all resources, both public and private enterprise, for many years to come. He visualises a gradual redevelopment and not a violent surgical operation.

It is Professor Abercrombie's other plan—that for the London County Council—which shows how his general principles are to be expressed in actual building. The moving of excess population from the central area will free land for wider streets and parkways. These, in turn, will allow the canalisation of the main flow of road traffic. Two great new ring arterial roads are therefore proposed, both double-tracked, together with several cross-traffic arteries; sections of the latter are to be tunelled. Entrance to the arterial roads will be as usual at relatively few points. Inside the sections so created are to be sub-arterial roads.

The centre—the metropolitan part of London—will thus find itself sub-divided into well defined sections by means of wide strips of green parkway or boulevard. The plan proposes the novel idea of treating some of these sections as "precincts." The basic idea of a precinct is that it is so planned as to be incapable of admitting through traffic by, for instance, the taxi driver in search of a short cut. Persons driving themselves to business in the precincts will thus be given parking space and quiet conditions during most of the day. Speed will be restricted to give the pedestrian a greater measure of safety. Precincts are proposed for the Houses of Parliament and

Government offices, for the University group, the law courts and legal office area, the doctors' quarter, the main theatre group, the museums' area and some of the principal shopping sections.

In the inner suburbs the precinctal idea is also followed, but with a difference. Here an attempt is to be made to recreate the ancient boroughs or townships, defining their densities and, by means of arterial roads, their boundaries. Local patriotism still exists in London in spite of the amorphous sprawl of building. This spirit is to be cultivated by the creation of focal centres of public building in properly planned communities. Each borough is to have its quota of open space in parks, gardens and playgrounds. Also it will have its own industrial area, where the borough is at present industrial in character.

The smallest grouping is the neighbourhood unit. Each borough is to be sub-divided into a number of such units. The basic size is to be determined by the school. Thus the desirable scholar-capacity and the distance that children can be expected to walk to school becomes the measure of the neighbourhood unit. Associated with the school is to be a community centre, local small shops, a clinic and other small-scale community buidings. The size of a neighbourhood unit emerges at between 6,000 and 10,000 persons.

Over-all is a system of population densities, decreasing in stages from the centre outwards. Densities in the central boroughs will require the bulk of the population to be housed in blocks of apartments. Those in the next ring will demand a mixture of houses and apartments. In the outer ring the dwelling will be the small house with garden—always the Englishman's ideal.

An important feature of the plan is the "rescue" of ill-planned areas, notably London's riverside, which is now a jumble of wharves and warehouses, much of its badly blitzed. This part of the scheme provides some magnificent sites for fine buildings, both public and private enterprise.

These are the essential elements of a fluid scheme, capable of realisation piecemeal, which fully acknowledges that London is a capital city, the largest port in the world, the centre of an Empire's commerce and that one-sixth of the population of Britain lives and works within the range of its activities.

DEVELOPMENTS AND TRENDS IN AMERICAN ARCHITECTURE, 1939 - 1944

FIRST PART

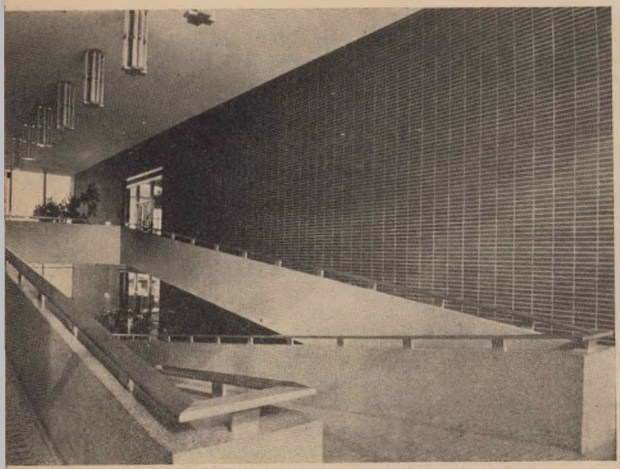
PUBLIC, INSTITUTIONAL, INDUSTRIAL AND COMMERCIAL BUILDINGS

In reviewing advances in architectural design in the United States during the years 1939-1944, it must be remembered that the needs of war production have meant a seriously curtailed list of building materials; furthermore, such new construction as has gone forward since 1941 has been solely that which U.S. Government authorities have approved as "essential." Hence, the preponderance of new building has been industrial, plus housing to serve new or expanded industrial communities. In connection with housing, there have been numerous new school buildings, shopping centres, community buildings and other necessary public-use structures.

The buildings included in this review of recent progress in United States architectural design are chosen from a selection made by the Museum of Modern Art, New York City. Among them are a few that were begun or completed before war restrictions were applied, building of a type that has not been allowed since the United States entered the war. These are purposely included to give a more rounded view of United States architectural accomplishments. In no case, however, was any of the buildings shown fully completed before 1939; and all of the most recent make use of the war-limited palette of materials.

CITY HALL, FRESNO, CALIFORNIA, 1941

Franklin & Kump & Associates, Architects.

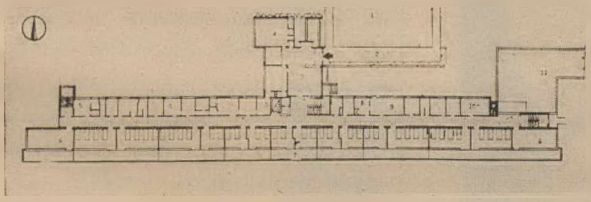


Ramps replace stairs in this unusual building. Like the exterior of the building, the side walls of the hall are surfaced with a local hard-pressed red brick, its non-structural character expressed by continuous joints. Glass encloses the two ends, but the brick walls and plaster ceiling are extended out beyond the face of the glass. The structure is of reinforced concrete, with flat slab floors. The building is entirely air-conditioned. Office windows are continuous bands behind the columns; plywood partitions between offices were installed after completion of the floors and ceilings.

The two levels of the Fresno City Hall are connected by ramp.

LAKE COUNTY TUBERCULOSIS SANATORIUM, WAUKEGAN, ILLINOIS, 1939

Arranged on two floors of the reinforced concrete structure, most of the sanatorium bedrooms face south and have full walls of windows to invite maximum sun. Broad doors allow beds to be wheeled directly out to the balconies. On the north side of the building are the administrative offices, main entrance and out-patients' clinic.



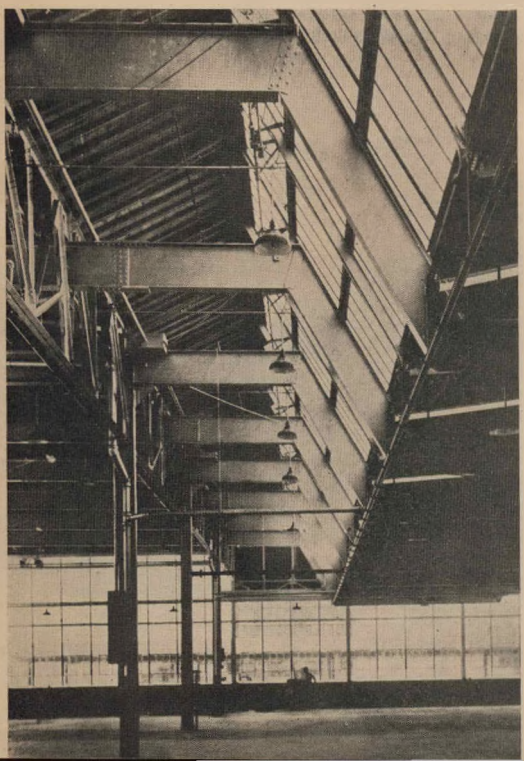
Ganster and Pereira, Architects

FIRST FLOOR PLAN :

1. Court.
2. Covered Passage.
3. Waiting Room.
4. Administration.
5. Examination and Laboratories.
6. Lounge.
7. Balcony.
8. Diet Kitchen.
9. Dining Room.
10. Occupational Therapy.
11. Service Yard.

ABOVE : General view of the Lake County Tuberculosis Sanatorium; and RIGHT : A typical bedroom in the window wall. The top portion is frosted glass to reduce glare. Below are panels of clear glass, with ventilating transoms at the bottom.

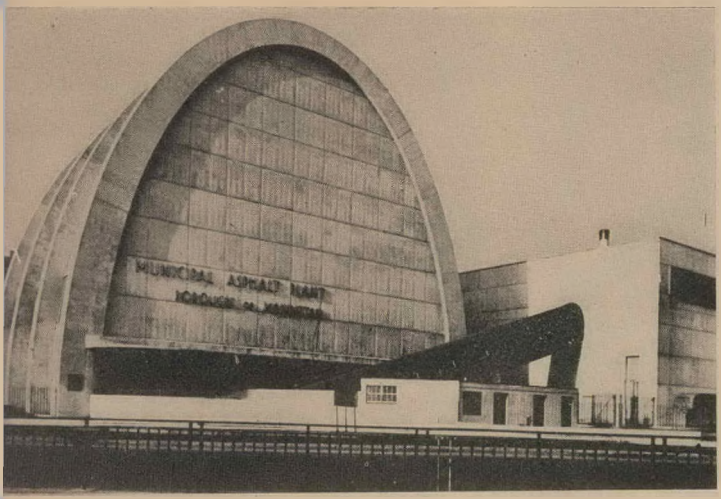
DODGE HALF-TON TRUCK PLANT, DETROIT, MICHIGAN.



Albert Kahn, Associate Architects and Engineers.

This huge plant is about a quarter-mile in length. It is in the mid-western State of Michigan. Its supporting skeleton is of steel, partly welded, partly riveted. The relation of columns, supporting girders, roof trusses and clerestory is expressed in the exterior view. Enclosing walls are of brick and glass, topped with a band of sprayed-on concrete.

ABOVE : The general view of the plant. Walls of windows and the monitor roof construction flood the work space with light. LEFT : The continuous, cantilevered roof trusses in the assembly unit.



Here, three distinct elements—conveyor belt, storage building and mixing plant—are composed in sharply differentiated architectural forms. The bold semi-ellipse of the mixing-plant structure houses the complicated machinery.

The structure is in reinforced concrete, with the thin vault strengthened by 90-foot-high ribs. Since the ribs are reinforced with self-supporting steel trusses rather than with rods, no elaborate scaffolding was required.

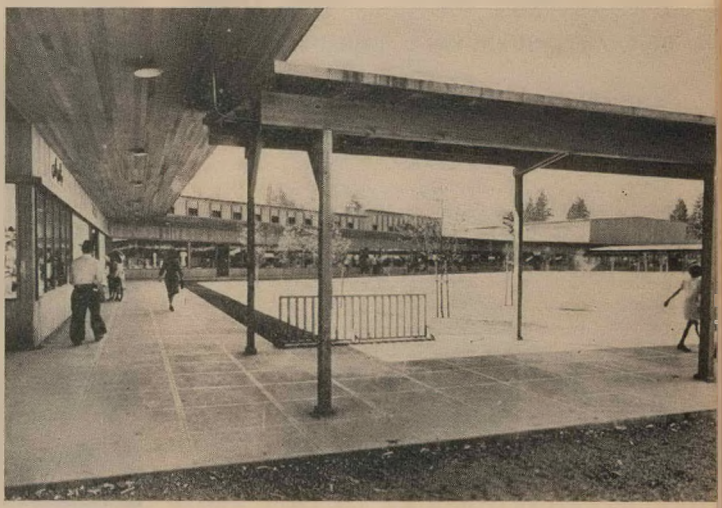
Designed by the Department of Borough Works of the Office of the Borough President of Manhattan. Exterior architectural design by Ely Jacques Kahn and Robert Allan Jacobs.

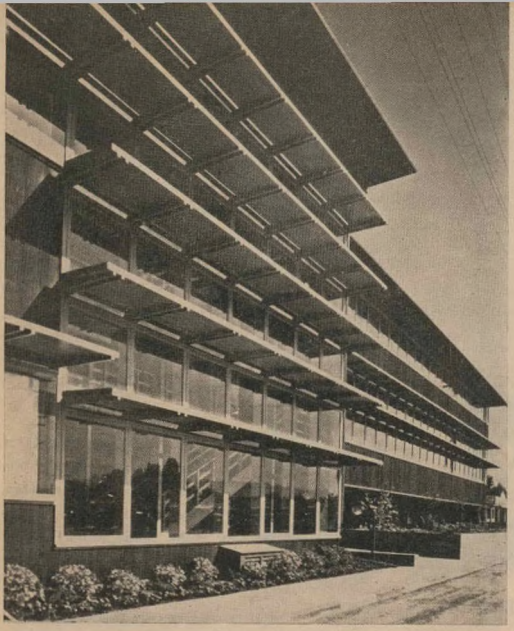
MUNICIPAL ASPHALT PLANT, NEW YORK CITY, 1944.

SHOPPING CENTRE FOR McLOUGHLIN HEIGHTS WAR HOUSING PROJECT, VANCOUVER, WASHINGTON, 1942.

Pietro Belluschi, Architect.

The shops, planned to serve the 4,500 families of this large war housing project in the U.S. north-western State of Washington, are concentrated in a central location. The group is separated from a main roadway by service drives, and ample car parking space is provided on two sides. The shops are arranged around an enclosed landscaped court, with covered passages connecting the separate units. Clerestory windows bring ample light to the interior of the building. Construction is of wood frame, with vertical pine boarding, oiled, used as a surfacing material. Doors are painted red.





William Wilson Wurster, Architect.

LEFT: General view of the office building. The vertical boarding is stained brown and the window trim is white. BELOW: The hallway.

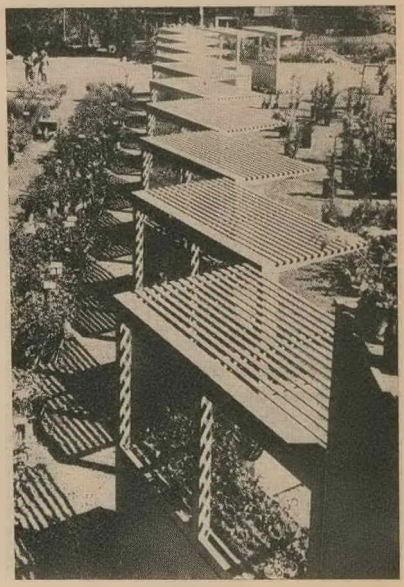
OFFICE BUILDING FOR THE SCHUCKL CANNING COMPANY, SUNNYVALE CALIFORNIA, 1942

Three chief factors conditioned the design of this business structure—available materials severely restricted because of war demands, an isolated country site, and a warm year round climate. The building has been worked out in wood (not limited at the time of construction), exterior surfaces are of dark-stained vertical boarding; the horizontal bands of window have white trim. On the south side of the building, the glass areas are protected by shallow roof projections which shield the high summer sun. Half the ground floor is devoted to offices for local operations; the remainder is simply open sheltered space where cars are parked. Executive offices occupy the upper levels; and on the roof is a cafeteria and outdoor recreation deck for the use of employees.

General view of the garden centre; houses and nursery grounds extend to the rear. BELOW: Detail of the plant-bar lath house, with the latticed roofs casting a shifting pattern of sunlight on the growing plants.

GARDEN CENTRE FOR THE HALLAWELL SEED COMPANY, SAN FRANCISCO, CALIFORNIA, 1942.

Raphael Soriano, Architect.



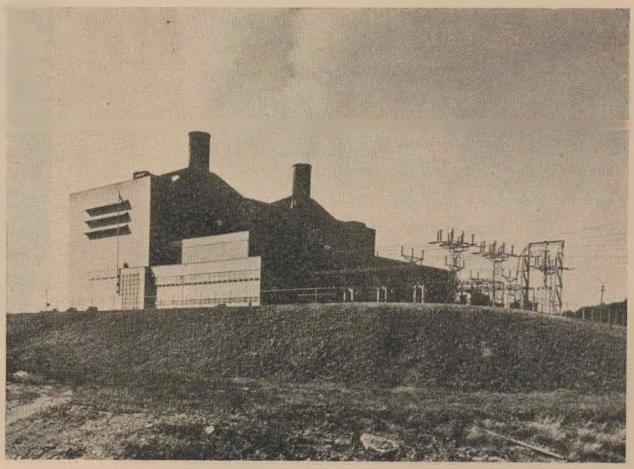
Designed for the display and sale of seeds, plants and flowers, this structure is built of steel, glass and concrete. The building extends along a major highway for more than 100 feet. Several units—a store, a greenhouse, plant bars and a huge lath house—are composed around the planted nursery grounds. The lath house, constructed with a latticed roof, is a device for protecting growing plants from too much sunlight. The light steel frame of the building is painted Chinese red; on the west and south screen walls of blue plate glass.

RIGHT: View into store from lath house.

WATTS BAR STEAM PLANT, NEAR DAYTON, TENNESSEE.

Tennessee Valley Authority

General view of the Watts Bar Steam plant, T.V.A. The furnace block is on the left, the steam electric generator building is in the foreground. The huge smoke stacks are painted black to contrast with the light buff brick of the building walls. The hooded, horizontal slits on the face of the furnace block are air-intake openings.



Coal is carried by conveyor to the top of the furnace block, which is 90 ft. from ground to coping. Windows, almost completely eliminated from this portion of the building, are replaced by air-intake openings which, with their projecting sheet-metal hoods, form severe horizontal slits on the face of the building. In the lower block, which contains the steam-electric generators, windows arranged in continuous strips are used.

CONTEMPORARY JOURNALS

THE ARCHITECTURAL REVIEW. July, 1945.

The greater part of this issue is devoted to a critical commentary by James Lees-Milne on the architectural works of Lord Burlington, who, in the words of James Payne, "studied, restored and encouraged" architecture, and was one of those who "made it their favourite study." That he achieved considerable success as an architect who, during the early part of the eighteenth century, worked in an unequivocal Palladian style, is shown by the author and supported by photographs and engravings of this aristocratic amateur architect.

There is a delightful "adventure into architectural impressionism" by Edward Lewis, who vividly describes his reactions to the "Forbidden City" of Najaf, stronghold of the terrible stoicism of the Shaiks, dominated by the great golden dome of the Shrine of Ali.

Two buildings of interest are the War-time Hospital at Bremerton, Washington, by F. A. Naramore, Grainger, Brady and Johanson, and the City Bus Garage in Stockholm by Eskil Sundahl, well known for his work for the Swedish Co-operative.

THE ARCHITECTURAL RECORD. July, 1945.

This issue presents Building Types Study 103 on Highway Hotels, in collaboration with "Hotel Management," which is an extension of that published in January, 1944. Ideas for three types of highway hotel are put forward; the first, an "out-of-town" hotel by Francis Keally, includes its own restaurante, recreation facilities and cabins. The scheme is planned for expansion and has many interesting features, including provision for overnight and long-term visitors. Extremely instructive is the inclusion of the complete plan of the kitchen, including all equipment and descriptive text, prepared by an expert, in conjunction with the architect.

The second is an imaginative scheme for a Motor Travellers' Hotel included as part of a community group with facilities which permit the traveller to step out of his parked car into his reserved room. The third is an idea for an airport hotel with special facilities, including a newsreel theatre, for "short-stay" air travellers.

A well-developed solution to classroom planning and even, regulated natural illumination is incorporated in the Lakeside Union Elementary School in California, and in the proposed building for the Delane Joint High School, both by Frank Wynkoop and Associates, who have developed a system of daylighting which eliminates direct sunlight and gives a relatively constant and even intensity of light to classrooms placed on either side of a corridor. In addition the architect discusses the subject in an illustrated article.

Three country houses and a full, well-established report on the Youltz Unit System of house prefabrication in timber—offering great flexibility and adaptability—complete the issue.

PENCIL POINTS. July, 1945.

Extending far beyond the average concept of an airport layout, is the the scheme for the Evansville Memorial Airport and Recreation Centre, envisaged for the developing town of Evansville, Indiana. Arising out of the town's needs, the scheme was developed to combine the recreational requirements with the new and improved airport facilities. The Kahn organisation, who are the architects for the project, have developed, in consultation with the various technical authorities involved, facilities for a non-terminal, non-service airport, as well as public recreational facilities which will cater for all ages and tastes. Furthermore, the project is planned for expansion to the limits of the capacity of the site. This interesting project is illustrated by plans, interior and exterior perspective drawings.

Other transportation facilities in this issue include two bus terminals; schemes for three small railway stations; a combined garage, store and office building; a project for a "Shopping Village" for the motor age; a Sanitation Department Garage for Brooklyn, New York; and lastly, a small service station.

A new feature which is initiated in this issue is a technical information section, "Materials and Methods," designed to keep the architect posted with technical advances affecting design, the development and application of new materials and equipment and new uses for familiar materials. This number contains two long, well-illustrated and well-documented articles, the one, "Advances in Hospital Lighting Design," by Isadore Rosenfeld, A.I.A., Chief Architect for Hospitals, Bureau of Architecture, Department of Public Works, City of New York, and the other on "Why Zone Heating Systems?" by W. J. Warner, Heating Engineer.

THE ARCHITECTURAL FORUM. July, 1945.

Plans and photographs of three new offices for Northwest Airlines, evidence of post-war expansion, are illustrated. These are followed by a review of the development of contemporary architecture in Sweden—well illustrated by examples of residential, recreational and cultural buildings. Swedish design has for years maintained a high standard in many fields, and the keynote of modern architecture in Sweden is a characteristic delicacy of construction and general atmosphere of lightness. This is reflected in the examples illustrated.

In Design Analysis 2, "The Vertical Style" of the American skyscraper comes under critical investigation. This covers work ranging from the early 1889 building to the present day, and

includes the contemporary developments in integrated natural and artificial lighting, air-conditioning and office space planning.

The housing section contains three houses and apartment units, and is concluded with a well-illustrated description of the system of prefabrication of the "Solar House," designed by Fred Keek. The design of this system is free of the conventional attitude and is one which "progresses to a new design level incorporating contemporary planning ideas with factory processed parts," which results in flexibility of construction and a building of positive merit.

CORRESPONDENCE

The Editors.

POST-WAR PLANNING AND THE ARCHITECT.

What architectural planning will need after the war is integral accommodation to existing functional demands. True democracy will demand a truly democratic architecture of dimensional potentialities. By the intersectional principle it should be possible to apply new dynamic harmonies to the old static dissonances of individualistic rather than communal building. For architecture must be cultural as well as structural.

Nevertheless, modern architecture must conform to certain extra-functional principles. Thus the house, as an entity in itself, must be centrifugal rather than centripetal. That is to say, it must be evolved outwards rather than inwards. Dynamic building is of its nature progressive rather than retrogressive, and to obtain a true integration the architect must be able to establish a developmental ratio between utilitarian and aesthetic building.

Architecture must be developmental in order to integrate the spirit of progress. The functional distribution of planes and masses must be subservient to the theory of freely expressed dynamism, so that a building may be said not so much to be built as to germinate like a living organism.

Thus modern architecture must be not only cultural and structional, but also professional and functional. Static consonances in the modern building is ridiculous. Expressionistic dissonance is the only real sign of structural vitality, or, if one prefers it, structional aliveness and awareness.

Yours faithfully,

W. A. RITCHIE-FALLON.

PROFESSIONAL NOTES AND NEWS

SILICOSIS MEDICAL BUREAU - NORTHERN RHODESIA.

Intimation has been received that the Director of Works, Northern Rhodesia, has invited Messrs. Fleming and Partners, Johannesburg, to undertake the design of this building on behalf of the department.