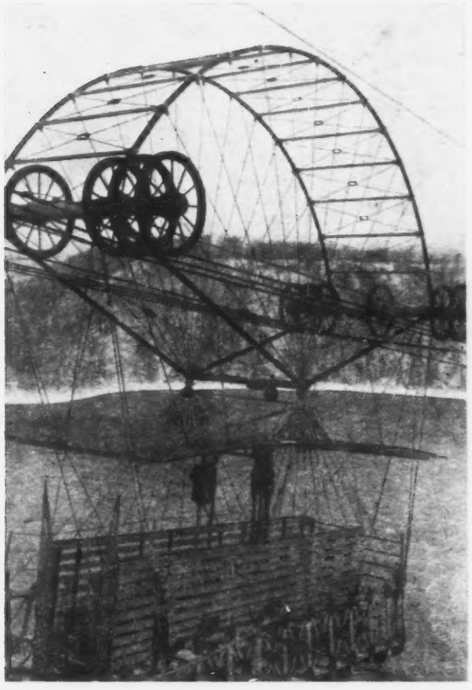
THE ARCHITECTURAL REVIEW

A Magazine of Architecture & Decoration



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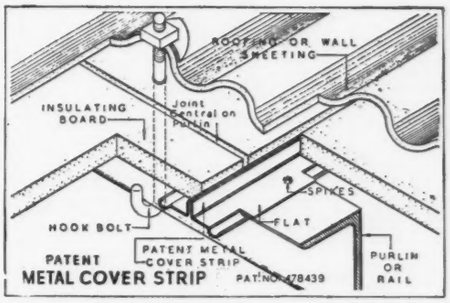

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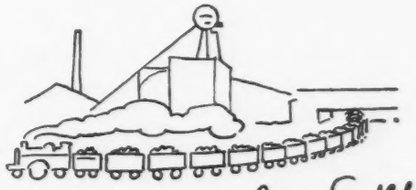

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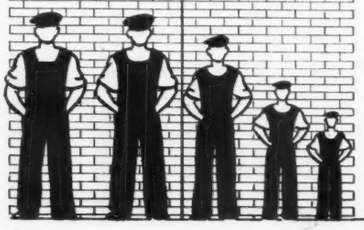

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The Architectural Review

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FRONTISPIECE
THE COLOURFUL FACADE OF EDWARDIAN LONDON

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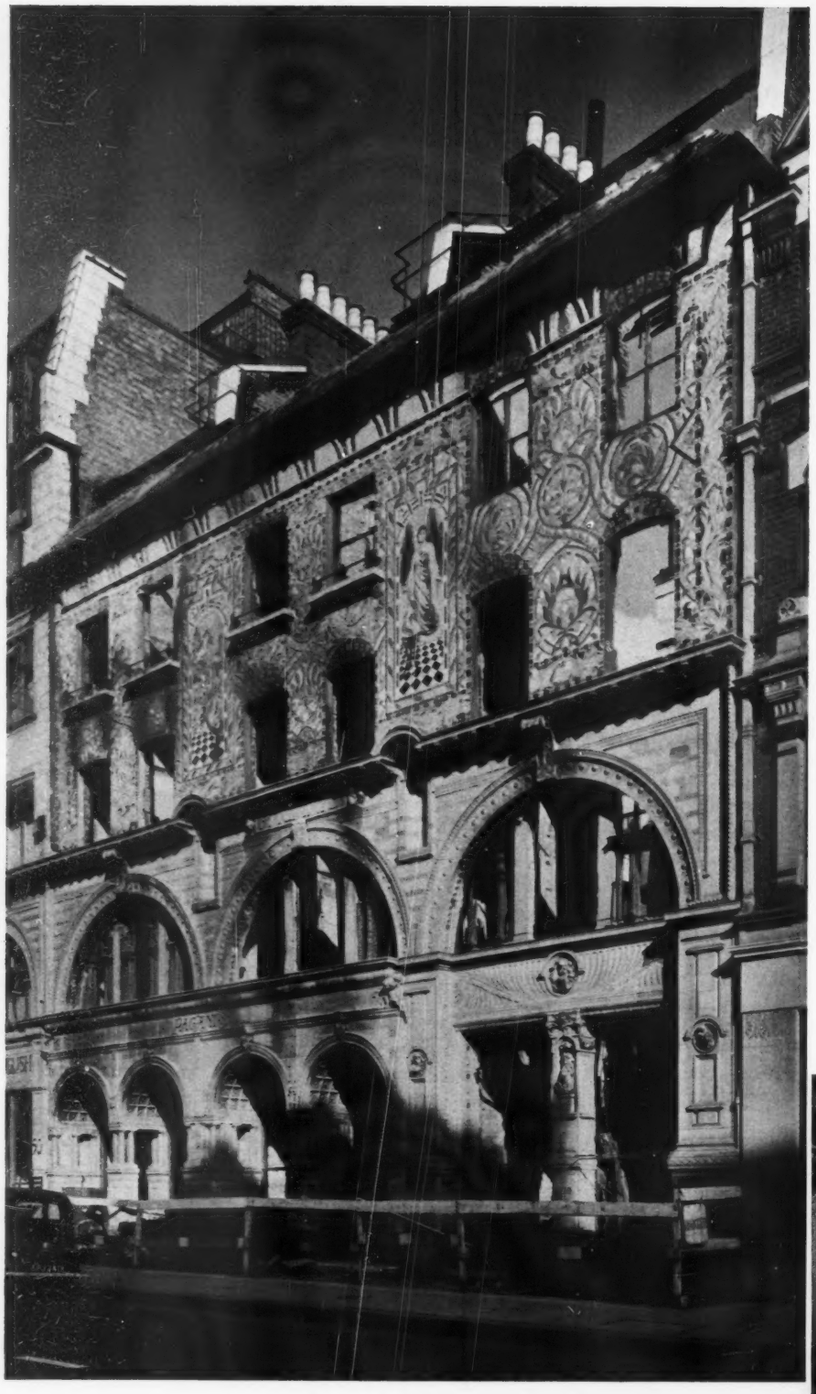


THE COLOURFUL FACADE OF EDWARDIAN LONDON

Pagani's Restaurant, in Great Portland Street, London, was gutted by a bomb early last year. Buildings of the Edwardian period are not usually regarded as architectural losses that matter. But this façade is included in THE ARCHITECTURAL REVIEW'S survey of air-raid casualties because it is somewhat of a curiosity and at the same time one of the most significant specimens of colour in London architecture. The restaurant originally consisted of the two houses on the left only, which had been provided with an arcade on short columns by C. Wortley. Then the house on the right was added and Beresford Pite was asked to design a new unified front for the three houses. A preliminary study for this was exhibited at the Royal Academy in 1900 (illustrated in THE ARCHITECTURAL REVIEW, Vol. vii, page 205). Pite's are the mezzanine arcades and the whole arcade with the main entrance on the right. His lively, somewhat bulging, style is unmistakable. The niche with the baroque figure is just as characteristic as the details of the cornices. The very simple concave top cornice, on the other hand, is a typical motif of advanced English architecture about 1890-1900. The use of coloured faience was probably meant to conjure up Italian reminiscences. It was, however, not Pite who introduced this material into the pattern of London. Halsey Ricardo had used it in his house for Sir Ernest Debenham in Addison Road, and Knightley earlier still in such buildings as the Birkbeck Bank off Chancery Lane which air-raid damage has now exposed to public view. Previously it had been used almost exclusively for interior work as in the Refreshment Room of the Victoria and Albert Museum, the Holborn Restaurant and other restaurants. The far projecting eaves of Pagani's Restaurant add to the Italian flavour, as does above all the mosaic decoration of the first and second floor walls. Two Italian girls in niches of exaggerated perspective are the chief motif.

Frank Pick

By Christian Barman

Frank Pick, who died on November 7, 1941, was born in November, 1878. Though he began his career as a Yorkshire solicitor, the whole of his subsequent life, with the exception of a short period during the present war, was closely concerned with the London Underground and General Omnibus companies, and, afterwards, the London Passenger Transport Board, of which he became Vice-Chairman on its constitution in 1933. His influence on standards of design was not, however, confined to his transport activities. He was an early member of the Design and Industries Association and a very active chairman of the Council for Art in Industry when it was founded in 1934. He was made an honorary A.R.I.B.A. in 1932. He left London Transport in 1939 after having been responsible for organizing the transport side of the evacuation of school children from London at the outbreak of war. After a short period at the Ministry of Information as Director-General, he was occupied in preparing a report on the British canal system and its war-time utilization.

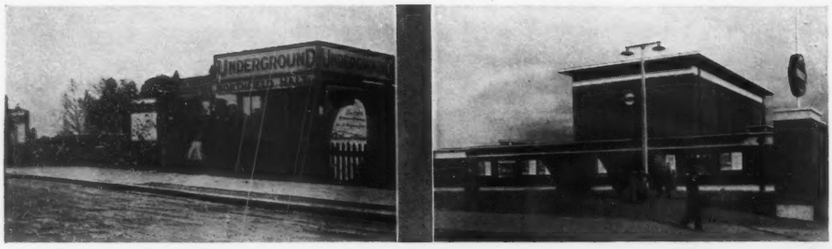
TO judge by the obituaries, some people will remember Frank Pick mainly as the Ministry of Information chief who wanted war aims declared; others as the advocate of a new Christian spirit in international politics. A few days after *The Times* had printed a tribute from Pick's lifelong employer praising his loyalty and his capacity for hard work, someone wrote describing him as a modern counterpart of Lorenzo the Magnificent. There is some little truth in all these pictures; but only a very little. None of them describe the governing purpose that animated Pick's whole career. It is not everybody who can understand this purpose or sympathise with it; but one could probably say that architects and people with a strong architectural bias are better fitted to do so than almost anyone else. The public that knew best what he was trying to do is, roughly, the public that reads the review in which these words are printed.

Certainly Frank Pick was a patron of modern architects and painters. Charles Holden and McKnight Kauffer are only two among the many who owe him as much as a good artist can ever owe to someone else. But the novel and remarkable thing about him is just that he was the very opposite of a Lorenzo. You could apply the term "Lorenzo" very aptly to Mr. Jack Beddington, for example, or to Sir Kenneth Clark. To both these men the art they serve is the main thing. They work for art as a gardener prunes and tends his favourite roses. To Pick, art was always a means to an end. He held the still somewhat *démodé* view that the art of painting should be the handmaid of architecture, and the art of architecture a way of making towns. He knew that while towns are made by many different sorts and conditions of people, among these people the urban transport manager has an important place. Pick was a transport manager who was conscious of his responsibilities as a town-maker in the widest sense. All that he did for art—and he did more than any man of his generation—he did not do to advance art in general, but to purify and elevate the practical business to which early in his life he had irrevocably set his hand.

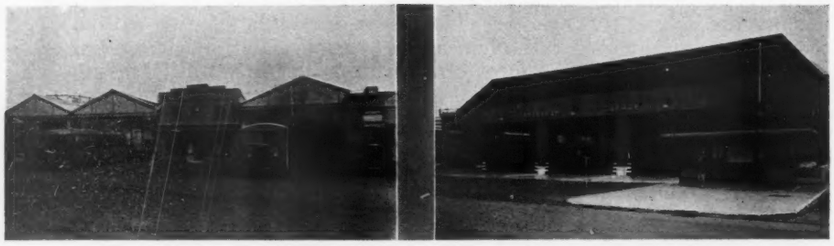
When, some four or five years ago, a *Times* leading article described London Transport as a "civilising agency," it summed up Pick's achievement in two words. All over the world, from Shanghai to Montreal, from Moscow to Buenos Ayres, London Transport has its friends and admirers; and in this context London Transport is synonymous with Pick. If anyone before the last War had been bold enough to suggest that a bankrupt tube railway and a company operating a fleet of omnibuses might one day be referred to as a "civilising agency," his words would have met with a stare of incomprehension. To Pick it seemed the most obvious thing in the world. Having the eye of an artist and craftsman, he saw clearly that London's Underground must choose between being an eyesore and being a work of art. Having also (paradoxically) the social conscience of an East Anglian puritan, he believed it was the duty of the management to give that work of art to London. With incredible energy and determination he set about to make the Underground a clean, orderly and harmonious environment for its travellers, to impart to all its physical aspects what may be described as a decent, gracious and even an aristocratic personality, or what for want of a better term has sometimes been called a "soul." And so, over a period of twenty years, the Underground at his hands became a possession that London regards with a good deal more pride than it does most of its recent acquisitions.

Did Pick start out with a clear picture of what he wanted to do? The facts suggest that, on the contrary, the picture developed gradually, year by year, in his mind. He was 30 years old when he became a Traffic Development Officer of the Metropolitan District and London Electric Railways. His work in this department fell mainly under two heads. One part was to plan extensions and improvements to omnibus routes. The newspapers have told us of the long solitary tramps to whieh at that time he gave all his week-ends, in winter as well as in summer. His other task was to develop poster advertising at Underground stations. Here he began by producing better posters and went on (for Pick never stood still) to produce a better arrangement of the posters.

The difference between the old and the new London bus sums up the changes in design that took place throughout the London transport system during the Pick regime. On the left is a B-type bus, brought into service in October, 1910. On the right is an RT-type, introduced in January, 1940.



STATIONS *Under Pick's influence the mean and shabby stations of London's suburbs were transformed into a series of buildings that have acquired a world-wide reputation for dignified but appropriate design. On the left, Northfields station in 1906 ; on the right, the new Northfields station, built in 1932. The architects with whom Pick worked to produce this inspiring series of buildings were Messrs. Adams, Holden and Pearson, but this station, like many of the later ones, was actually designed by S. A. Heaps, the L.P.T.B. architect.*



GARAGES *Left, the Amersham garage of the L.P.T.B. in 1934. Right, the same garage rebuilt in 1935 to the designs of Messrs. Wallis, Gilbert and Partners. In front of it can be seen one of the very neatly designed glass and steel-tube shelters, produced as a standard piece of equipment in 1934.*

CANTEENS *Left, the Cricklewood garage canteen in 1912. Right, an example of the modern type of canteen, that at Turnpike Lane, designed by Adams, Holden and Pearson in 1932.*

EQUIPMENT *A typical instance of the "tidying-up" process initiated by Pick in the London Underground system. Left, free-standing automatic machines, clumsy in design and unrelated to their setting, which itself suffers from confusion of motifs. Right, the machines re-designed and grouped in a specially designed recess in the station wall. A standardized litter-basket and letter-box are also shown. This newly designed equipment was introduced in 1932.*

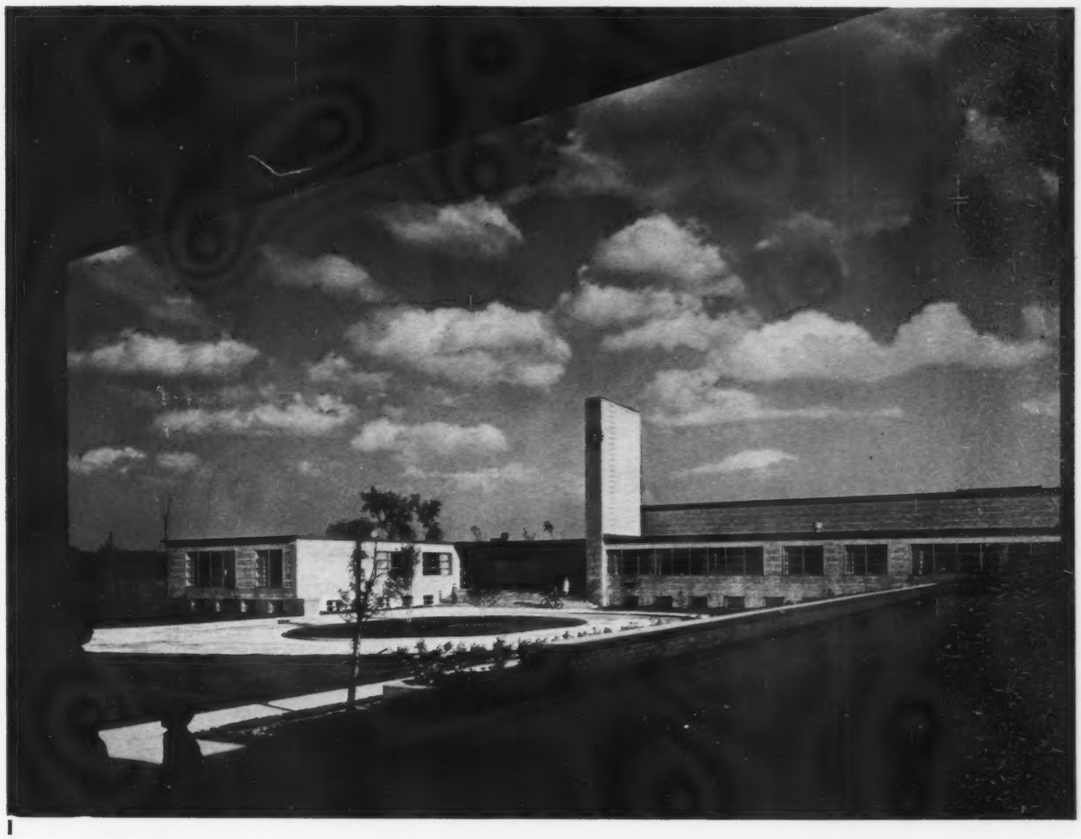
The above group of photographs summarize the civilizing influence on the design of London's transport system, which Frank Pick exercised in collaboration with his architect, Charles Holden. The photographs are reproduced by courtesy of the London Passenger Transport Board.

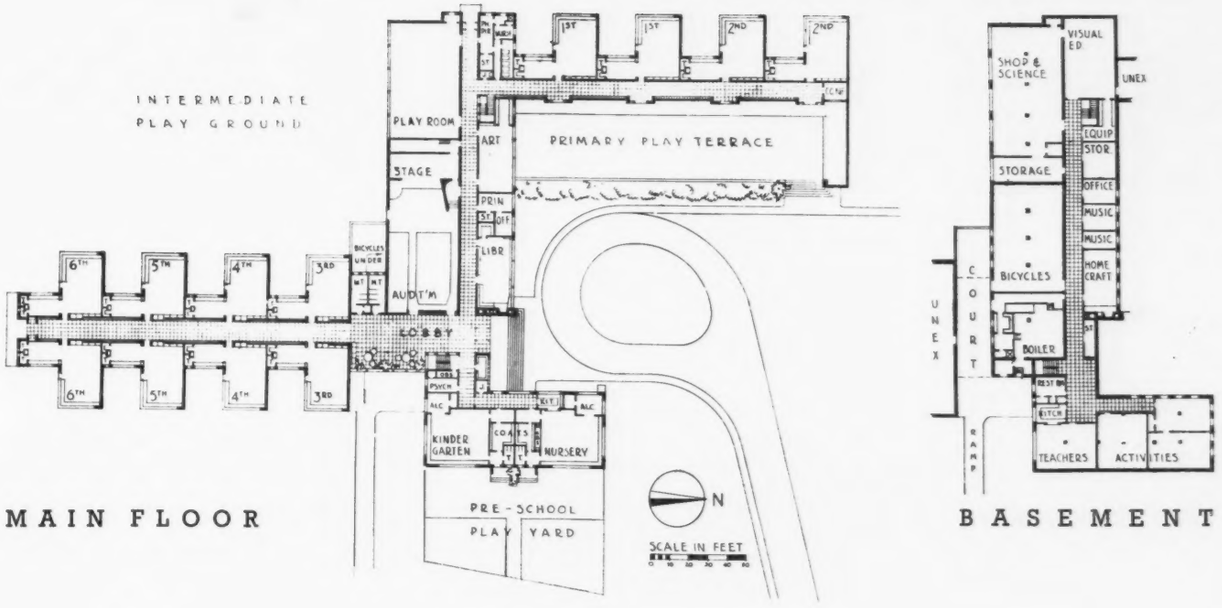
From that point it was only a short step to "station tidying," to borrow Lethaby's phrase. The lettering and the signs must be perfected : Pick studied lettering and, together with Edward Johnston, gave the world sanserif type. The stations must be improved : Pick studied architecture, and largely inspired by Dudok gave us a kind of station the world had never seen before. The buildings must be equipped and furnished, rolling stock re-designed : Pick joined the D.I.A. and became an expert on design for industry. It is fairly certain that by such easy and gradual stages did the final conception clarify and evolve.

If this account is correct, no wonder Pick's idea of management was, as is often maintained, centralised and dictatorial. It could not very well be anything else. The question whether he was a good administrator depends on your definition of that term. If being an administrator means collecting a wonderful staff and sitting back to watch it working, it is very doubtful whether he was one. But there is another type of administrator, the type Lord Rosebery gives us in his description of Napoleon. "He controlled," says Rosebery, "every spring, large or small, of his vast machinery. . . . It was, as it were, his plaything. He was his own War Office, his own Foreign Office, his own Admiralty and his own Ministry of every kind . . . In all the offices of state he knew everything, guided everything, inspired everything. . . . His inexhaustible memory made him familiar with all the men and all the details." Pick was no Napoleon ; indeed, Napoleon is the sort of person he would have put in the same class as Al Capone and Adolf Hitler and regarded with pity and contempt. But he had the same gift for immense, continuous, effortless activity. He knew every corner of his great undertaking as he knew the arrangement of books and furniture in his study at home. It is doubtful whether any person in his position has ever carried on a routine of inspection as close and systematic as his. By day and by night he would watch over his stations, depots, garages, and repair works like a captain watching over the condition of his ship. He could go into a distant station after an interval of twelve months to see if his instructions about a dustbin were being attended to. Thus his artistic conscience rode him always and, as he sat in the centre of the web of his organisation, gave neither his own highly perceptive mind nor the least of his executive officers a single moment's rest.

Artists like Keats and Mozart have given themselves to their art, and reformers like Shaftesbury and Granville Sharp to good works of a different kind. Rarely has a tradesman been moved to follow their high example. Pick was one of the great exceptions. Not since Wedgwood has an English tradesman done so much to make his trade a spiritual asset to the society on which it feeds. *Si monumentum requiris*—well, a sixpenny ticket will show you quite a few. But, even then, Pick will be remembered less for his physical works than for his shining personal example. His chief merit was this, that he showed us a new type of business executive, cultured, sensitive, and creative in the highest sense, which modern business will have somehow to produce if our material civilization is to keep what little of humanity still clings about it.

SCHOOL AT WINNETKA, ILLINOIS





I, north side of central block, the nursery wing on the left, the chimney tower in the centre. The ground plans show that the central block has a basement, while the wings are single-storeyed.

ARCHITECTS:
ELIEL AND EERO SAARINEN AND PERKINS, WHEELER AND WILL

This school for children of kindergarten and elementary school age is situated at Winnetka, a suburb of Chicago. It is a single storey building consisting of a centre block and three wings. The centre block is somewhat higher than the wings, as it houses the assembly hall, playroom or gymnasium, library, arts room and offices. Underneath in a basement, but not below ground, are the science workshop, teachers' common rooms, and rooms for some special subjects such as music, crafts and visual education. A slab-like tower for the main chimney flues is placed immediately

to the right of the main entrance, accentuating the focal point of the composition.

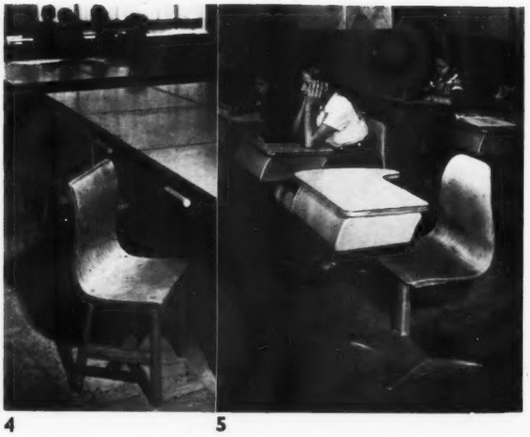
The three wings project to the north and south, one from the west end of the centre block, the others from the east end. The short north-east wing contains the nursery and kindergarten with their separate cloaks and play-yard, the north-west wing the first and second forms along a corridor which divides them from their play terrace. The south-east wing has classrooms for the third to sixth forms on both sides of a corridor. To gain a south aspect for all classrooms (except one) most of them have been given an L shape with the longer and wider arm jutting out and provided with a large corner window facing south-west in eight and south-east in four classrooms.

The shorter arms of the classrooms are used as workshops with benches equipped with gas and electricity. Each class has its own lavatory, sink and drinking fountain. The walls of all the rooms are faced with white pine boarding, floors are tiled with mottled asphalte, ceilings are of a height of only nine feet. All the lighting is of a non-glare, non-shadow type. All the installation work is done to the size of the children.

The furniture was specially designed by Eero Saarinen. The smallest children have bent plywood chairs, and tables with bakelite tops, the others have combined desk and chair units also of bent birch ply.

2

3



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5

2, entrance hall with furniture to the scale of adults. The corridor at the back serves the third to sixth form classrooms. **3**, Kindergarten with south and east windows and specially designed furniture. **4** and **5**, Eero Saarinen's special bent birch ply chairs and desks. The photographs are by Hedrich Blessing.

SCHOOL AT WINNETKA, ILLINOIS

In the last of a series of three articles the author, having discussed the general nature of architecture as the enclosure of space and having examined town design from the same point of view, now turns his attention to the actual elements with which the various effects of enclosure are contrived, and shows how they can be classified according to their emotional effect. In the aerial view of an Egyptian temple above, a number of these elements are presented in the same picture. The sequence of narrow and dark gateways and wide sun-baked courts surrounded by colonnades, leads up, in crescendo, to the holy of holies in the mysterious darkness and coolness of a forest of columns. In fact the whole bag of tricks of spatial enclosure has been used here, three or four thousand years ago : light and dark spaces, cool galleries and bright courtyards, narrow and wide, high and low, in measured spatial rhythm.

The Elements of Enclosed Space

By Ernö Goldfinger

IN two previous articles I defined the object of architecture as that of enclosing space in order to fulfil the biological needs of the user. These needs are two-fold : physiological and psychological. The physiological needs (from an architectural point of view) are those which are satisfied by a classification of space for convenience of use, i.e. a broad classification first into covered and uncovered spaces (for instance houses and streets), and secondly the subdivision of these spaces (for instance into rooms for different functions in the case of the covered spaces, sidewalks and carriage ways in the case of the open spaces). The psychological requirements fulfilled by architecture are those concerned with spatial emotion.

I have already discussed how this second effect is brought about and made a rough sketch of its architectural and urban implications. But theoretical considerations of this kind only come to life if their implications take a practical shape, so it is my aim in this concluding article to examine the elements which define and differentiate enclosed space in its architectural and urban sense.

To do this, and in order not to fall into abstract speculations, it is important to realize the historic and social background of spatial enclosure. The social conditions of a given period determine the size and shape of enclosed space at that period. It is of course theoretically possible to envisage an infinite variety of shapes and sizes of enclosed space, but this, from the point of view of our purpose, would be irrelevant. We are concerned solely with such spaces as are enclosed for the purpose of human convenience—in the widest sense of the word ; and thus with the technical possibilities of, and the biological needs for, space enclosure : in fact with *Architecture* and *Urbanism*.

Not only the making but also the using of enclosed spaces is determined by technics. Developments in locomotion, such as the invention of the modern method of harnessing horses in the tenth century, and the use of the steam engine in the early nineteenth century, the safety lift in the middle, and the internal combustion engine at the end of the same century, revolutionized architecture and town building in their respective periods to a degree that is generally vastly underestimated. And as architecture can be realized only by the use of technics, the size and shape of enclosed spaces is determined by the state of technology at a given period.

On the other hand the state of technology is intimately bound up with the social pattern of a given period. The social pattern is produced by political, economic and technological conditions, and the dialectic changes of these three determine not only their own state but also the biological requirements of man at a certain time in history. Technical advances produce economic and political changes, while political conditions may favour technical advances and economic changes. The enclosure of space does not take place in a vacuum; it is geographically and historically fixed ; it only happens as determined by social conditions and its shape and size is determined by these.

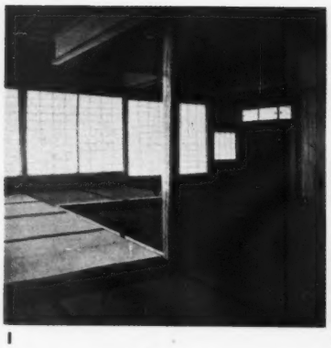
The same is true of the biological needs of man ; and also of the æsthetic effect of architecture, the sensation of space. For although it might be argued that there is very little difference in the functioning of the organs of perception of man throughout historic times, this does not mean that the perception of enclosed space has remained constant. As has already been explained, one of the characteristics of spatial perception is that it is kinetic ; that is, the person experiencing it is in movement.*

When examining the circumstances in which enclosure may be experienced we find first of all that the person who is to experience it must penetrate the enclosure. This mere fact of penetration brings in the time factor. If we further investigate the normal behaviour of a person once inside an enclosed space, we find that while experiencing enclosure he continues to be in motion long enough to accumulate a subconscious store of impressions and to permit the creation of a spatial sensation or emotion, and the extent to which he is affected by the enclosed space will

* Exceptions to this rule can be imagined, as for instance if a person were transported when asleep and woke up in a certain enclosure, but such extreme cases have no bearing on our examination of everyday circumstances. Also I think it is true to say that space is properly appreciated only by a person himself moving in it.

DENSITY

Three degrees of enclosure shown in : 1, solid and transparent paper walls (traditional Japanese). 2, solid and transparent glass with the view beyond (modern European) and 3, purely imaginary enclosure of a frame and, beyond it, trees and bushes forming spatial barriers (traditional Japanese).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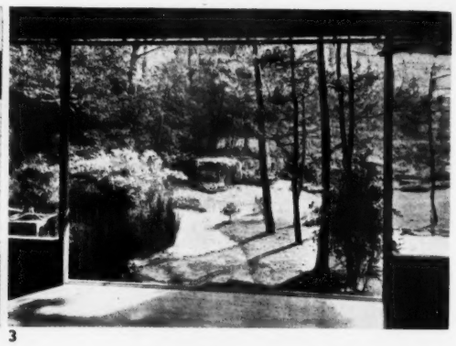
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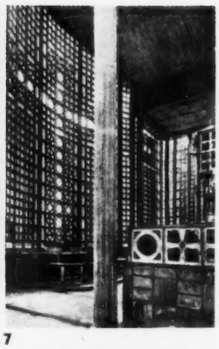
CONTINUITY

4 and 5, two colonnades to a different scale : domestic and monumental. Bernini's colonnade of St. Peter's, Rome, 5, has the effect of a solid screen ; only when you are near do the columns open. 6, at Nancy, the Louis XV grilles partially close the space left open in the corners of the Place Stanislas. 7, Perret's church at Le Raincy is an example of the use for purposes of partial enclosure of typical materials of to-day.


4


5


6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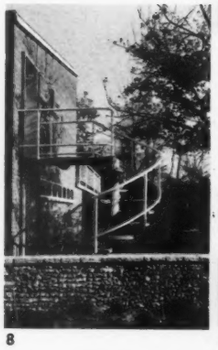
TEXTURE

8, effects of enclosure obtained by contrast of texture : rough and smooth : brick, concrete, flint and trees. 9, mirror walls produce disconcerting effects of spatial enclosure. 10, the rhythm of architectural modulation is enhanced by the deep shadows of the plastically treated façade of Tarragona cathedral. 11, mural paintings totally breaking down the solidity of a wall surface : decorations by Diego Rivera.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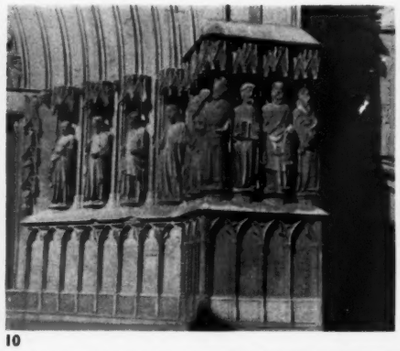
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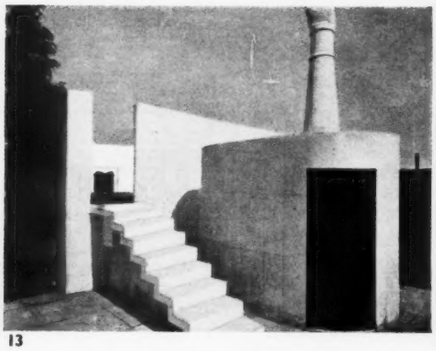
11

PLASTIC SHAPE

The plastic effect of simple geometrical enclosure : 12, the flat wall with its rhythmic windows is enhanced by the concave screen of the staircase wall (Le Corbusier : Pavilion Suisse, Paris). 13, complete confusion of convex elements disrupting space (Le Corbusier). 14, the simple rhythm of geometrical shapes.


12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14

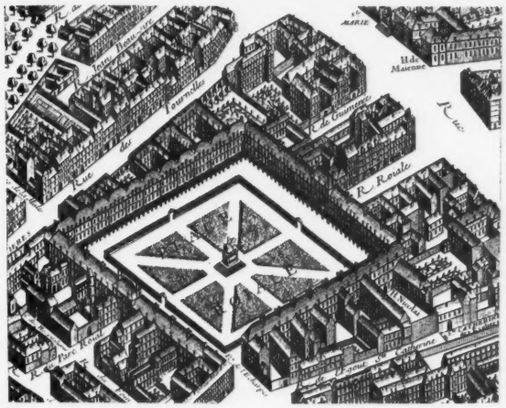
Some typical elements, employed by architects in various periods and contexts to achieve effects of enclosure of different kinds.

depend on how long he is in it. Thus it becomes obvious that *speed of displacement* is an essential factor. Man moves faster to-day than in the past ; the whole rhythm of his life is accelerated. But more important than the increase of speed of man himself is the increase of speed of the conveyances used in urban spaces in recent times. This was discussed in the preceding article. But it is not the only difference ; the *direction* of penetration has also altered. In the case of urban agglomerations the approach is no longer restricted to a single plane but has become three-dimensional. In the case of buildings the age-old method of ascending them by means of stairways has been supplemented by mechanical devices which alter completely the speed and effort involved in displacement and the direction of penetration.

The enclosure, in the architectural sense, consists of three differentiated elements : the floor, the horizontal base ; the walls, the vertical screens ; and the ceiling, the covering member. There are a variety of combinations of the latter two elements, and any part of them can be entirely missing and a sensation of space still be created. The floor, however, must always be present in some form or other, so that the enclosed space may be utilized. The vertical screens or walls and their size are governed by the statical exigencies, by their ability to stand erect, and in some cases to carry weight. The ceiling presents the real constructional problem and the state of technics is reflected in the maximum spans achieved in various periods.

The size of urban spaces, on the other hand, is not defined by constructional limitations of spans and is in the main determined by social conditions and conditions of transport, and in some cases by reasons of defence and other indirect conditions of function rather than construction.

Urban spaces as they have been understood up till now, and still are, are enclosed by the horizontal surface of the street and the vertical screens bordering them ; that is, the bordering buildings. In some exceptional cases the spaces are roofed over. But as the segregation of traffic becomes



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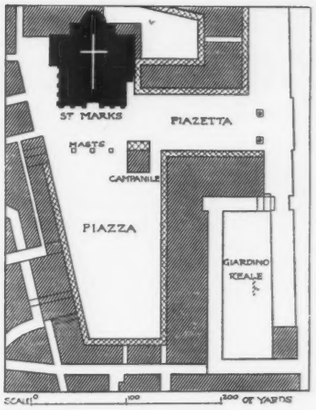

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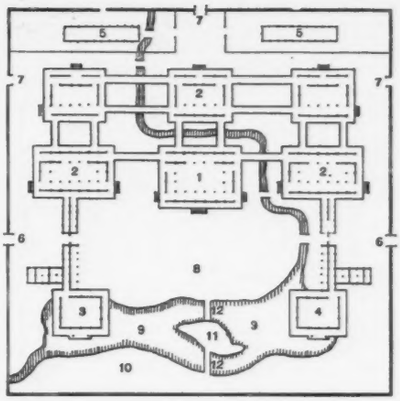


17

Types of spatial enclosure in urban planning. 15, *regular and totally enclosed. Like the London squares of the* 18*th century, the Place Royale (now the Place des Vosges), Paris, was a simple rectangle without obstructions from bushes and shrubs. All the grandeur of its simple majesty could be comprehended after penetrating through the arcades under the central pavilion.* 16, *irregular, but producing a balanced composition. One of the grandest spatial rhythms in the world : the Piazetta, Piazza, the arcades and court of the Palazzo Ducale at Venice, incorporating Sansovino's library and St. Mark's. Inside and outside spaces are completely balanced in scale and size.* 17, *combination of regular and irregular shapes. The Japanese were masters of informal formality. Water, grass, sand and trees join the severe regularity of the buildings in this classical example of a princely dwelling.*

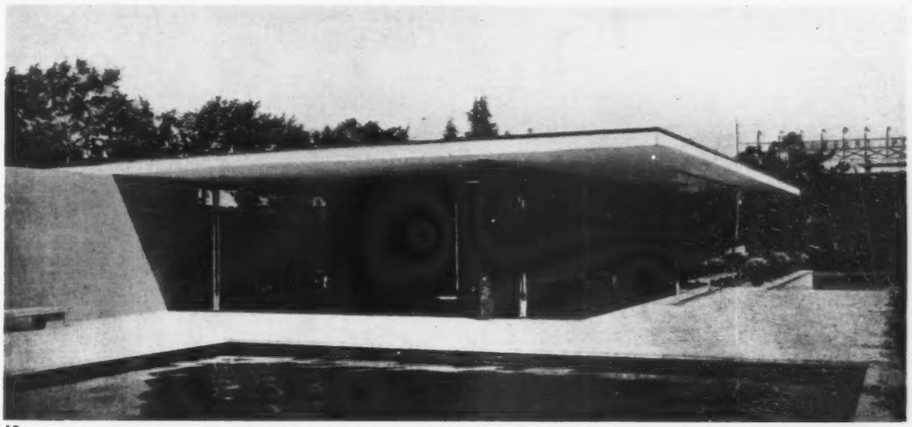
more and more a practical necessity, conditions change. The approach to buildings and the channels of traffic were, in urban agglomerations, synonymous ; but it is clear from what we can see to-day, that this is no longer so. The high-speed underground traffic in large towns, for instance, is already completely segregated from the rest of the traffic, and the channels provided for it have nothing to do with buildings bordering streets ; the space provided in them is a self-contained and specialized entity.

The æsthetic consequences of this must be made clear. The segregation of rail traffic from the inter-urban road system took place in the nineteenth century. This was a relatively easy process because of the complete unsuitability of the roads for carrying even a rudimentary railway system. In towns, however, railways were and still are run on the streets, for reasons of technics and economics. Nevertheless most of the larger towns are abandoning railways in the streets and have relegated them into underground tunnels or on to overhead bridges. I have already described how the internal combustion engine vehicle found a complete network of streets at its disposal when it first made its appearance at the beginning of this century, and how it seemed as though, by reason of its lightness and mobility, it could appropriately make use of the streets provided for horse-drawn traffic, and I have pointed out the error of this conception and the need under modern conditions for the complete segregation of traffic according to speed. But the æsthetic consequences of this new state of affairs must also be considered. Two entirely different categories of experiencing the new spatial order will now appear. The one of persons moving up to, say, three miles an hour, i.e. walking ; the other of persons moving at a rate of 80 and more miles an hour. If we consider that a normal person can register about 12 separate images in a second, the fundamental difference between the two sensations becomes clear : solid screens become transparent, far-spaced objects come into spatial relationship, etc. A complete æsthetic revolution follows ; the enclosure will no longer be the street and its bordering buildings (i.e. the urban "ribbon-development"), the two will be divorced from each other : the street will be at the time-space scale of the new speed, and the buildings and their approaches at the scale of human beings.

If we turn our attention to the buildings themselves we find that conditions differing from those of urban spaces determine their enclosure. Building technics condition the size of buildings far more than that of spaces outside. On the other hand, conditions of locomotion alter much less the circumstances of experiencing a spatial sensation within than without, this by reason of the simple facts of their size and purpose. Nevertheless the means and direction of access to buildings has undergone in the last century a fundamental change by the invention of satisfactory vertical transport : the safety lift. This invention has also an indirect bearing on the size of buildings, by the fact that it gives a possibility to use buildings of greater height than hitherto. The use of enclosed space, and in consequence its size and shape, is furthermore, to a very large extent influenced by equipment, i.e. lighting, ventilation, heating, the provision of water, etc. Economic factors play a determining part, too, as well as considerations of hygiene, etc.

Based on these elementary facts, I have here

The elementary simplicity of Mies van der Rohe's pavilion at the Barcelona exhibition shows a masterly use of materials : steel stanchions, marble and glass screens, water and stone surfaces : all of which in his hands become exquisite regulators of spatial rhythms. 18, *the exterior view ;* 19, *the plan, clearly expressing its character of partially delimited spaces. Only concave shapes can produce a satisfactory sensation of space in urban planning. Convex volumes are, in general, repellent and disruptive.* 20, *the classical example of architectural enclosure that achieves both a domestic and monumental scale : the Royal Crescent at Bath.*



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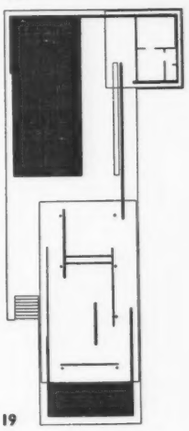

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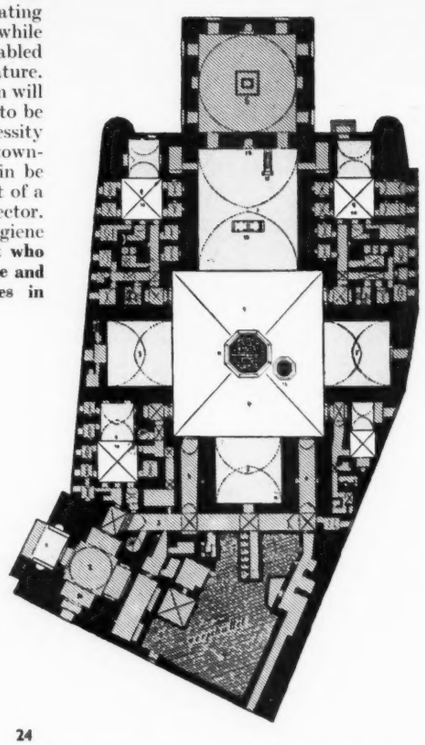
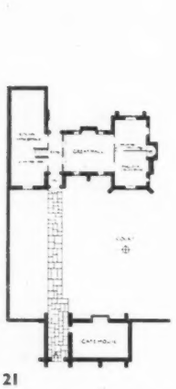
attempted a rudimentary analysis of the elements of enclosure and enclosed space. It is far from being an exhaustive list and was drawn up mainly to demonstrate that a dispassionate and scientific study of the material causes of "spatial emotion" is possible and may be desirable. Examples have been chosen indiscriminately from buildings and urban spaces whenever they seem to demonstrate the point most effectively. It should be pointed out that while it is my firm belief that the analysis as well as the synthesis of spatial enclosure can and must be approached in a scientific manner, this does not mean that artistic emotion does not play an essential role either in the appreciation or the creation of it. It must be realized that when a work of art is created the emotional effect must always be anticipated and for that reason comprehended. On the other hand it seems to be a constant coincident that only if persons creating a work of art experience an artistic emotion while doing so, are those undergoing its effects enabled to experience an emotion of a similar nature. Whenever space is enclosed a spatial sensation will automatically result for persons who happen to be within it; it is therefore a fundamental necessity that this should be done by artists and that town-planning and town-building should once again be regarded as an artist's job and not merely that of a drain specialist, a statistician or a health inspector. Sanitation and economics, transport and hygiene have all their part to play, **but it is the artist who comprehends the social requirements of his time and is able to integrate the technical potentialities in order to shape the spaces of the future.**





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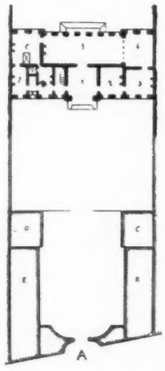

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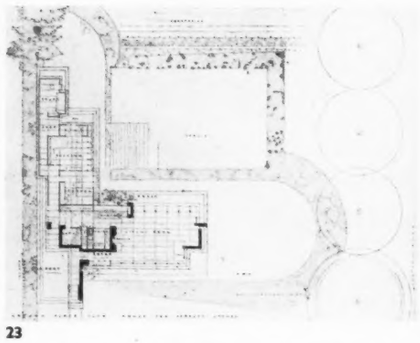

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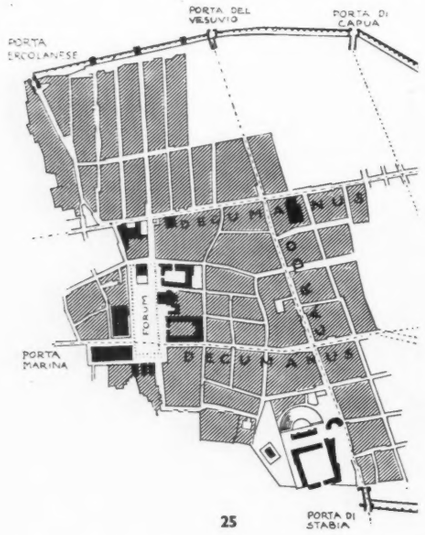
24

Sequences of space varying in plan according to social and technical conditions that influenced planning. 21, *an English manor house (Cathay Manor, Somerset), a sequence of enclosures on a domestic scale. In the* 15*th century in England, defence was no longer a preoccupation even in the country. From the open country, through the archway of the gatehouse, the way leads into the walled court (an enclosure, although covered by the sky) before one penetrates into the main building. This plan shows remarkable axial asymmetric treatment. In contrast to this, the "Roi Soleil" at Versailles and every French noble in his "Hotel" followed a strict ceremonial ritual. The "Roi" centralized feudal France and the nobles ruined themselves in the process. The numbers on the plan,* 22, *denote the sequence followed by the retainers before penetrating into the State Chamber* (6) *to attend the levée.* (*A*) *is the gate on to the street followed by an outer court and services and then the inner court giving access to the first ante-chamber. Coaches were used at this time, which determined the size of the courtyard.* 23, *spatial relationship in a Frank Lloyd Wright plan. He was the first in the western world to design a really free plan.* 24, *on a more ambitious scale, the Sultan Hassan Mosque in Cairo, an example of a closed composition, a fortified building within the town. It is through the arches (at the bottom left of the plan) that one penetrates into the building; darker and narrower become the maze of passages till suddenly, at the end of one, appears the central court, a hundred feet square, with its four colossal niches covered with an ogival vault of single span, their side towards the central court being completely open. Through relatively low doors one penetrates into the mosque itself (top centre). The simplicity of shapes is remarkable; nearly all the elements in plan are squares, the effect being obtained by the extreme subtlety of the variations of internal and external spaces.*



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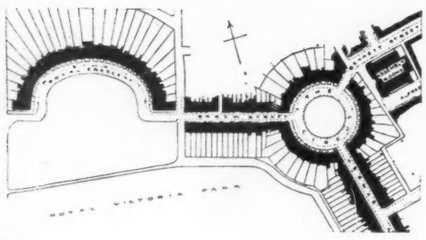

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Sequences of space in urban planning. 25, *clear classification of urban elements in antique Pompeii. The Cardo and Decumani form the main traffic arteries. The Forum is the centre of public life. In* 18*th century Bath,* 26, *a single standardized unit, the town house, is the basic element from which the town planner created a great variety of urban spaces. The variations of the rhythm of movement will determine the spatial enclosure of the cities of the future. Spatial emotion experienced by the user of the arterial road moving at* 80 *to* 100 *m.p.h. will not be the same as that of the citizens strolling in the open spaces between buildings or looking out on to them from the privacy of their homes. Classification of urban spaces must be the aim of the town-planner.* 27, *a typical modern type of urban enclosure, sequences of open spaces delimited by the imaginative grouping of free-standing buildings. For further details about the illustrations to this article* *see page* xxx.

BOMB DAMAGE TO NOTABLE BUILDINGS

Except for an instalment in the November issue on country churches, THE ARCHITECTURAL REVIEW'S survey of buildings of architectural note that have been damaged in air raids has hitherto been confined to London. It is now time to extend it to the provinces, and on the following four pages the principal casualties in Coventry are illustrated, together with some typical examples of the first-rate domestic architecture of that city, whose quality was very little known and which has inevitably suffered considerable damage. The Coventry pages are followed by a further instalment on London. Other provincial cities will be dealt with in future instalments.

COVENTRY

Five great industries have made the history of Coventry. First came the trade in woollen goods, starting in the 14th and declining in the 17th century; then the manufacture of ribbons, flourishing from Queen Anne's time till 1860, and, over exactly the same period, the manufacture of watches. Finally, bicycles (beginning 1863) and motor cars (beginning 1894). Nearly every building in Coventry, from the 14th to the 20th century, is the product and symbol of industrial wealth. Until recent times no industrial town in Britain had retained so much of its past architecture or displayed such a spectacular interpenetration of modernity and antiquity. It was this close interpenetration which drew down the full fury of enemy attack on the centre of the city last November. See also Nathaniel Hawthorne's notes about the impression it made on him when he visited Coventry in 1855 (page xxvii of this issue).

CHRIST CHURCH, apart from its beautiful octagon steeple, is a "Commissioner's Church," dating from 1829–32, and designed by Thomas Rickman, the pioneer exegetist of the Gothic styles, with his partner Hutchinson. The steeple is much older. Built by the Grey Friars in the 14th century, it was the only part of their buildings not demolished or quarried away after the Reformation. For centuries it stood alone in the fields outside the town until, when the land was threatened with building development, it was rescued to form the eastern termination of the new Christ Church. Rickman's work, though hard and thin, is in point of scholarship far in advance of other churches of the period. The safety of the tower has been in doubt, but it is hoped to secure its preservation.

Coventry Cathedral

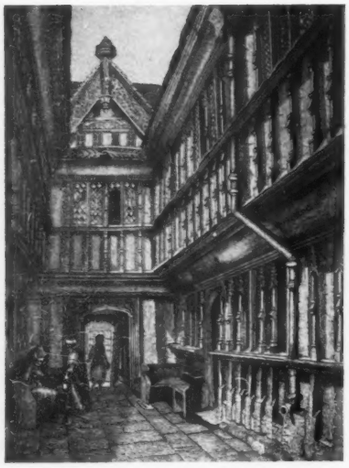
ST. MICHAEL'S, THE CATHEDRAL Church of Coventry since 1918, was wholly rebuilt in the 14th and 15th centuries at the expense of a single family of Coventry merchants, the Botoners. The magnificent tower, with its octagon and spire, was the first part to be built. It dates from 1373–94 and is the work of the Warwickshire school of masons whose "Perpendicular" was so accomplished and sensitive and so unlike the routine products of the style, which the Victorians very properly labelled "debased." Though St. Michael's had not the decorative qualities of the adjoining (unburnt) church of Holy Trinity, the tower of which appears in the small illustration on the right, it was impressively vast, with very broad nave and aisles, and additional aisles at the west end, giving, from some points of view, a seemingly interminable perspective of arches and columns. It was a real merchants' church—huge, monotonous, generously windowed, with provision for many chantries and chapels for the merchant guilds. The destruction of the interior has been complete, even more devastating than the vigorous scraping and refurbishing which the building underwent at the hands of a local architect in 1851.

Domestic

Though great engineering industries penetrated to the heart of the city, Coventry retained—and still retains—dozens of houses built for spinners, weavers and knitters in the hey-day of the English cloth-trade. Of these three wrecked houses, the two on the right (in Cox Street and Cook Street) appear to date from the early 17th century. That on the left (in Greyfriars Lane) belongs to the 18th century and is the type of house which would be occupied by an "undertaker" in the thriving silk ribbon industry of the period.

No. 11, PRIORY ROW, a grand specimen of vernacular Palladianism of the second quarter of the 18th century, stands on the north side of the Cathedral, and belongs to the era when the dignitaries of Coventry were almost invariably mercers, drapers, silkmen or watchmakers. Priory Row makes an admirable "close" for the Cathedral and contains a number of fine houses, not all of which have been destroyed.

Ford's Hospital



FORD'S HOSPITAL, one of the most famous timber buildings in the country, was built between 1509 and 1529, and originally housed single men and married couples—17 people in all. Latterly, it was occupied only by women. Few buildings of the kind have served their purpose so consistently and with so little alteration—and this in a great centre of modern industry. The architecture is remarkable, being the richest kind of domestic work done on a miniature scale. Though erected under the will of William Ford, the building of the hospital was the personal care of his executor, William Pisford, who considerably expanded its accommodation and endowment ; and it is evidently to Pisford that the hospital owes its architectural elaboration. The hospital received a direct hit but escaped annihilation by fire, and can certainly be reconstructed, perhaps on a less inconvenient site. The pictures show the façade to Greyfriars Lane (top), the wrecked portion from the rear (centre) and the famous courtyard (below).

Domestic

No. 16, LITTLE PARK STREET appears to have been built towards the beginning and dramatically "modernized" towards the end of the 18th century. The combination of coarse Palladian door and window dressings, with exaggerated "Adam" pilasters makes a highly unusual composition which would be found nowhere but in a centre of provincial wealth and provincial disregard for the rules of taste. The house illustrates the curious fact that the industrial towns of the 18th century far outstripped London in the externals of domestic architecture.

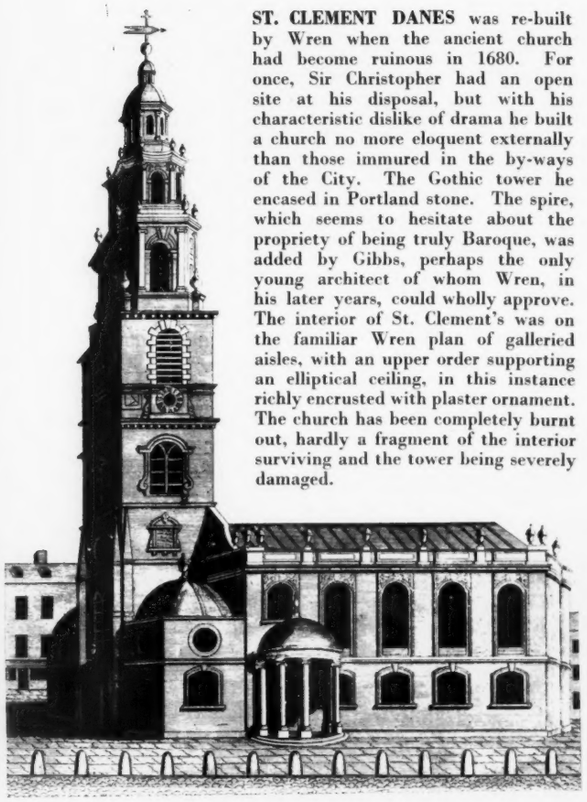
STONE BUILDINGS, LINCOLN'S INN, built by Sir Robert Taylor in 1774-8 and comprising sets of chambers as well as the principal offices of the Inn, represent part of an ambitious scheme of rebuilding, only half realized. Taylor was chosen for this work after Adam, Paine and Brettingham had submitted drawings, his drawings and theirs being still in existence. Like all Taylor's work, Stone Buildings are proportioned and detailed in such a way as to give a weighty, imposing effect. Carefully considered profiles and a liberal introduction of string-courses are responsible for this, and it is interesting to compare this building with Taylor's house in Lincoln's Inn Fields, also an air-raid casualty.

Lincoln's Inn

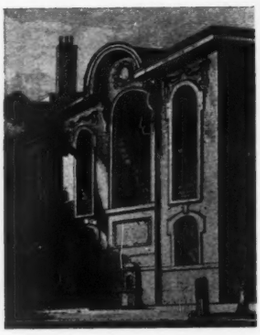
Lambeth Palace

LAMBETH PALACE LIBRARY, originally the Great Hall where the Archbishops dined, is a curious specimen of Gothic built out of its time. It was in progress in 1663, the year in which Archbishop Juxon died. Juxon, nearly 80 when he became Primate, was a link with the "Gothic Revival" of Laud's day and his distinctly Laudian taste in architecture is represented in this last flourish of hammer-beams, spandrils and pendents. It is clear that Juxon's carpenter, perhaps not too familiar with this kind of work, took Westminster Hall as his model, building on a smaller scale and adorning his structure with classical mouldings. The book-cases date from modern times and were inserted when the Hall was converted to the purposes of a library.

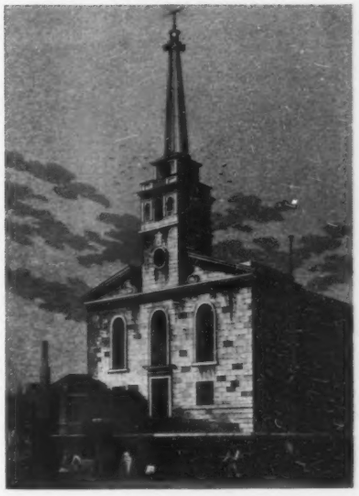
Churches



ST. CLEMENT DANES was re-built by Wren when the ancient church had become ruinous in 1680. For once, Sir Christopher had an open site at his disposal, but with his characteristic dislike of drama he built a church no more eloquent externally than those immured in the by-ways of the City. The Gothic tower he encased in Portland stone. The spire, which seems to hesitate about the propriety of being truly Baroque, was added by Gibbs, perhaps the only young architect of whom Wren, in his later years, could wholly approve. The interior of St. Clement's was on the familiar Wren plan of galleried aisles, with an upper order supporting an elliptical ceiling, in this instance richly encrusted with plaster ornament. The church has been completely burnt out, hardly a fragment of the interior surviving and the tower being severely damaged.



ST. SWITHIN'S, CANNON STREET, with the alleged "milliarium" of the Roman roads recessed in its street front, was built by Wren between 1677 and 1687. The mason, as in the case of so many other City churches, was Joshua Marshall. Its interior was most interesting, with an eight-sided dome placed over a square and pierced by lunettes. The church had suffered from the absurd habit of Victorian restorers (in this case Woodthorpe) of inserting Florentine tracery in Wren's admittedly rather soulless round-headed windows. The tower had a very plain lead spire.



ST. JOHN'S, HORSLEYDOWN, is in Bermondsey. Its east front stands towards Tower Bridge Road and the name "Horsleydown" is a designation surviving from the time when the church stood among fields. The most conspicuous thing about it, in every sense, is the steeple. There is an excellent view of it from the train, a few hundred yards out of London Bridge Station, and probably every architect has, at some time or another, found his gaze riveted to the broad-bottomed Ionic column which serves as a spire. This wild vagary, attached to a church of supreme dullness, is the most improper thing in the whole of English architecture. Very little is known about the church, except that it was built in 1727. The architect is said to have been John James of Greenwich, but this may be a libel on that reasonably competent official architect. Quite apart from the "spire," nothing could be clumsier than the way the steeple juts up between the two halves of a broken pediment. The rest of the church suggests a passing acquaintance with the work of Hawksmore, but the relationship of the several types of window is maladroit, and altogether the building is a pretty exemplar of what happens to Palladian architects who do not go by the rules.

Churches

ST. CLEMENT'S, CITY ROAD, was one of William Butterfield's most memorable churches. W. R. Lethaby used to draw a line between the "hard" and the "soft" Gothic Revivalists. Butterfield was as hard as nails. With merciless consistency he used the vernacular materials of his time—pit-sawn timbers, harsh red and brown bricks, shiny tiles—and out of these he made a rugged poetry, more energetic and moving than any that the Gothic Revival produced. The photograph shows the wreck of St. Clement's before the "west" wall (it stood, actually, north and south) was demolished. Built in 1874, some years after St. Alban's, Holborn, and nearly thirty years after All Saints, Margaret Street, St. Clement's was lofty and severe, with a single aisle and a high lancet-pierced clerestory. The bell-turret, with its original and exciting pattern of brick and stone, the high-pitched east window and the angular waggon roof were all typically Butterfieldian. The tracery and mouldings were, as usual, strictly according to medieval precedent; it was the disposition and proportioning of the church which gave it its strong appeal. Its loss, together with the loss of St. Alban's, Holborn, is all the more unfortunate, in that the work of Butterfield has still not had the study and recognition it deserves.

The Church of **OUR LADY OF VICTORIES, KENSINGTON,** was built in 1867 by George Goldie, the Roman Catholic architect, whose chief work is St. James's, Spanish Place. The Kensington church, which became the "pro-Cathedral" of London, was a very high building, richly carved in the "early French" taste. It represented, to some extent, the influence of Cardinal Manning in overcoming Catholic prejudice against the Gothic Revival, with its decidedly Anglican associations. The church was entirely burnt out, and only a very badly-damaged shell remains.

LONDON FOURTH INSTALMENT

THE ARCHITECTURAL REVIEW SUPPLEMENT: JANUARY 1942

Three-Dimensional Town Planning

By Aileen and William Tatton Brown

"It is the duty of the planner to tabulate resources and requirements, and then to formulate a programme in abstract quantitative terms, leaving to Architects the greatest possible freedom of choice consistent with efficiency. It is the job of the Architect working within these regulations to achieve quality."

"Statistics are the raw materials of the Town-planner. Bricks, steel and concrete are the raw materials of the Designer."

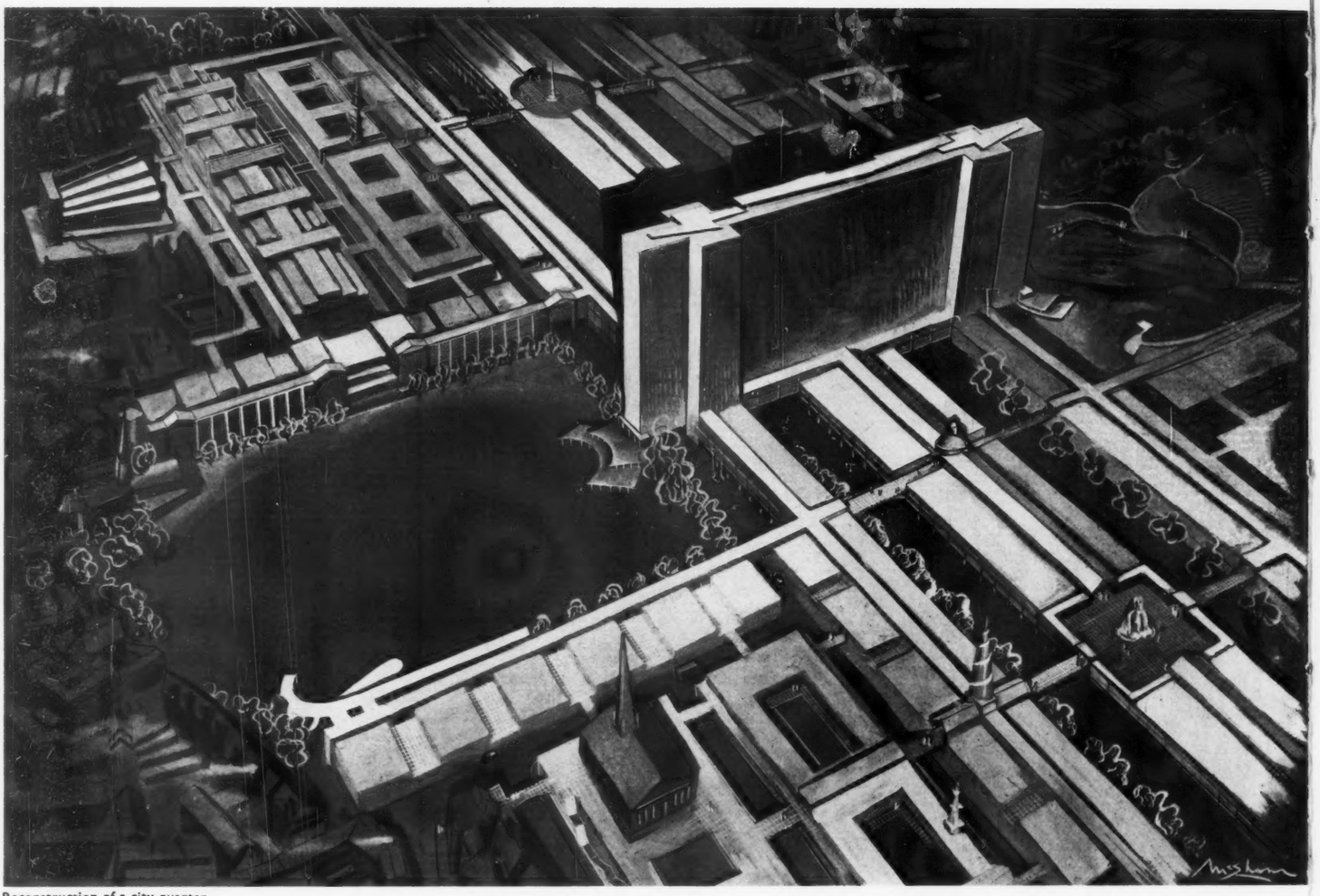
PART TWO: APPLICATION

Part One, Theory and Principle, appeared in September, 1941

WITHIN limits, the architecture of a town is determined by its by-laws. The density restrictions of twelve houses to the acre produce one characteristic type of development. The height restrictions of a London Building Act street produce another. In this article is illustrated a section of a town designed in accordance with the three-dimensional town planning principles described in the September issue of THE ARCHITECTURAL REVIEW.

A central area has been selected for two reasons. First, because in commercial and industrial districts the conflict between the claims of the motorist and the pedestrian is most acute. Secondly, because there is as yet no satisfactory solution for the design of a modern city quarter. Central areas have been neglected in the past because there have been few opportunities for designing them as a whole. Any plans which have been made have been entirely theoretical and of only academic interest. But now the number of bombed sites in close proximity makes the re-planning of whole districts a practical proposition. The re-planning of one such district in three-dimensional terms illustrated here, is not presented as a cut-and-dried scheme ready for instant application, but simply as a test of the validity of the principles involved.

Nor is three-dimensional town planning a rival to the systems already worked out for residential areas. It is complementary not antagonistic to these conceptions. The Neighbourhood Unit composed of terrace houses and communal flats, and the Garden City, each in their different ways provide a satisfactory form of development. But they do not cater for the particular problems which arise in central areas. Here new principles come into play and new patterns must be evolved. Their value can only

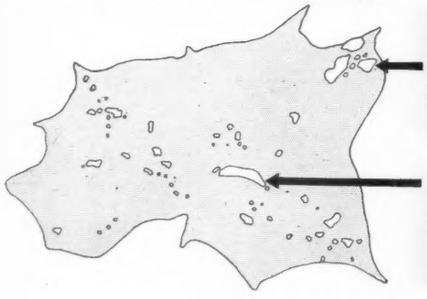


Reconstruction of a city quarter
Drawn by McShane

[continued from page 17]

be gauged by selecting a hypothetical site, designing a city quarter, and then imagining the life of a citizen and analysing his reactions. It is necessary, in fact, to leave the realm of town-planning and step into the domain of architecture—for the quality of architecture is, in the last resort, the test of any system of town-planning.

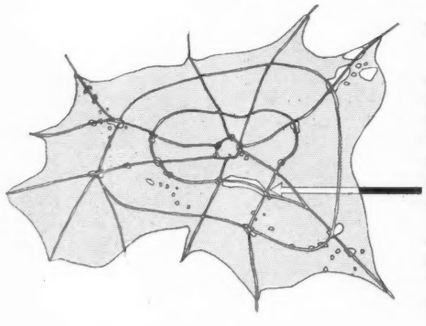
1. Assumptions



THE SITE

It is not possible to reproduce the plan of an actual town. Nor can one disclose the location of bombed sites. But the diagram is typical of any of the large cities which have been blitzed at one time or another. Enemy action can be represented as a series of holes eaten out in a haphazard pattern. The smaller ones consist only of single blocks of buildings or houses destroyed in isolation. But two larger areas can be picked out where the extent of the damage is considerable. One of these, near the outskirts of the town, is a residential area, and is not discussed here. But the other forms the subject of this article.

It used to be a flourishing city quarter. Its central position compensated for the out-of-date character of its buildings. These were crowded on the old street pattern of a former residential district of terraced houses and small shops. During the nineteenth century, flourishing businesses rebuilt their premises one by one. Small workshops were placed in the back gardens. And all the time the traffic in the streets grew until they were totally inadequate for the load they had to bear.

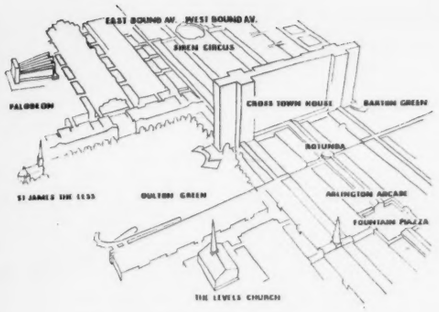


THE ROADS

Most cities had already prepared before the war a scheme of road improvements. The Bressey report, in the London area, envisaged the construction of new roads and the widening of others, in order to link up the new arteries which had been built in the previous twenty years, and to relieve the congestion in the centre. It is reasonable to assume that they will be modified and extended to take advantage of ground that has now been cleared.

The importance of these road plans can scarcely be exaggerated. They determine the whole scale and character of post-war reconstruction. Without them, nothing more can be done than to reproduce the old street pattern of the pre-motor age. For it is clearly impossible to ease the flow of traffic in one area if it is given no outlet in another.

In the diagram alongside, a new road plan is superimposed over the plan of bombed sites. It will be noticed how the smaller areas have been used to form roundabouts or fly-overs at important junctions. In other cases the road runs right through the derelict area and connects it with the main arteries of the city. This enables the whole area to be re-planned on modern lines; for if these large bombed sites are rightly developed, and connected one with another by a rational road system, they will become nuclei of good design round which the whole agglomeration of the rest of the town can gradually crystallize into an ordered and harmonious pattern.



2. Architecture

A DAY IN THE LIFE OF JOHN CITIZEN

My office is on the eighteenth floor of Cross Town House. It is in the south wing and looks over Barton Green to the Gasworks. I arrive every morning by bus along East-bound Avenue. There is a bus landing-stage under the building. I always travel "on top," walk over the bridge, past the display windows of Cross Town Department Store and take the lift up to my office.

At twelve to-day my wife called for me and told me there was a lunch-hour organ recital at the Levels Church. We strolled across to the other side of the building, from whence there was a magnificent view over the Levels which lay stretched out before us like a map.

"The car is below," she said, "but let's walk. Look, we can go across Oulton Green."

So we strolled across the grass to the Ramps, went along the colonnade and across the bridge over Long Wall. The floor of the Levels Church is sunk down to street level, so the entrance here is direct on to the gallery. It is slightly reminiscent of the Royal Chapel at Versailles. After the recital we had lunch in one of the little courts off Oulton colonnade.

"I've had a very successful morning," Claire said. "I drove up this morning on the new road and got straight through to East-bound Avenue. I had a date at the showrooms in Arlington Arcade, so I drove along the side lane and left the car outside. They told me I must go and see their stuff in the workshops by the Palodeon, so I went straight off. There is a garage under the workshops, which are mostly on the ground floor, top lit. The manager's office is on the top floor above pavement level, and he has a little garden and terrace of his own. I went down to the car in the lift and drove straight round to the Palodeon to get the tickets for this evening. Then I went on past the next green to the round-about and back by West-bound Avenue, down the ramp to Cross Town House garage, parked the car and came up to you by the express lift. Not bad, considering I only left home at ten o'clock!"

After lunch we went along the promenade to see my solicitor at Court Cloisters and then on through the Arcade to East-bound Terrace. I had just reached Arlington Arcade on the way back when I ran into one of my Directors choosing cigars for the Board meeting. I told him of a little shop in Siren Circus, so he insisted on my accompanying him downstairs to the side lane where he had left his car, and we drove off together. I returned to the office by Barton Walk.

In the evening I took the car across to the Palodeon and parked it in their garage. There was a big crowd of cars down in the street, and the Levels were packed with people who had come on foot. I met Claire at the upper Foyer and strolled out on to the terrace. Little tables were set out with lanterns and they made a romantic picture against the lowering background of the old town's chimney pots. While in front, the lights of Cross Town House were visible between the panorama of penthouses and pergolas of the Levels.

3. Reactions

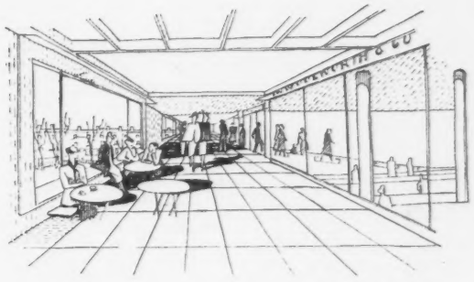
Principles which command acquiescence in theory, often meet with disagreement when they are translated into practice. In this section answers are given to some of the questions which may be raised. For the sake of simplicity they are grouped under three headings and voiced by three imaginary characters—the Architect, the Client, and the Man in the Street.

THE ARCHITECT. How does the new join on to the old? This question must be answered from two points of view—the functional and the æsthetic. From the traffic point of view the site is self-contained. It is designed around east- and west-bound avenues which form part of the city network and have an outlet at either end into the main exits from the town. Although the side streets run into the minor roads on the periphery, the whole area is, so to speak, drained into these two main central avenues. Any existing underground railways and services would naturally influence the location of the high buildings which form the links between opposite sides of the road.

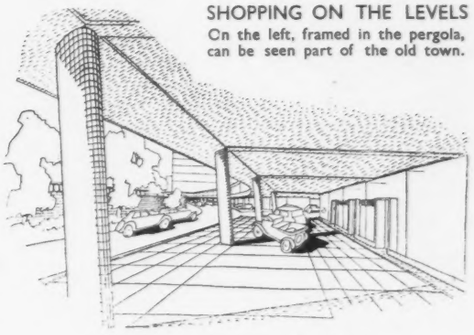
Aesthetically the main problem in joining old with new, is the question of scale. The old is so often dwarfed by the mere bulk of the new. But in this case the Levels, which are the buildings adjacent to those already existing, are only two to three storeys in height. They would, therefore, be *lower* than the majority of the old town, which would gain rather than suffer by comparison. High buildings occur only in the centre of the site and have a large open space on either side. They would be seen always over the tops of trees, or framed in a perspective of penthouses.

Is there room for more than one architect in such a scheme? It might appear from the perspective that the plans for the site were fully worked out, ready to be handed over to the appropriate authority complete to the smallest standard unit. This is not the case. Not only is the layout of streets not definitive, but the whole traffic system of circulation is liable to revision. A great deal more criticism and research is necessary before even the main lines can be laid down. When that has been established and the by-laws fixed *in three dimensions* determining the heights of the tall buildings, the levels, the street and the sub-ground parking space, then the individual architect will start work.

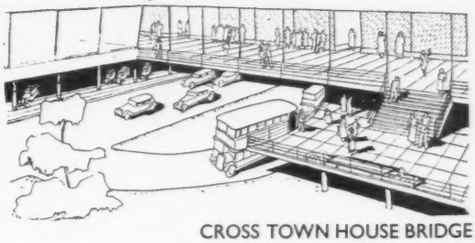
It is to be hoped that different sections of the site will be handed to designers of the same school. The frontages of east- and west-bound avenues will attain a natural harmony, phrased and punctuated by the high buildings which bridge them. Behind these façades there will be room for all the variety of accommodation and treatment that the client requires. As for the levels, within the limits of angles of light and space to be set aside on the roof for public use, there is room for the greatest diversity of design that human ingenuity can devise. Here then is no case for uniformity: the viewpoint is too restricted. All styles, all materials, even slight changes of level, would be permitted so long as they contribute to a feeling of intimacy and "close up" architecture. The motor cars are down in the street. This is a pedestrians' paradise.



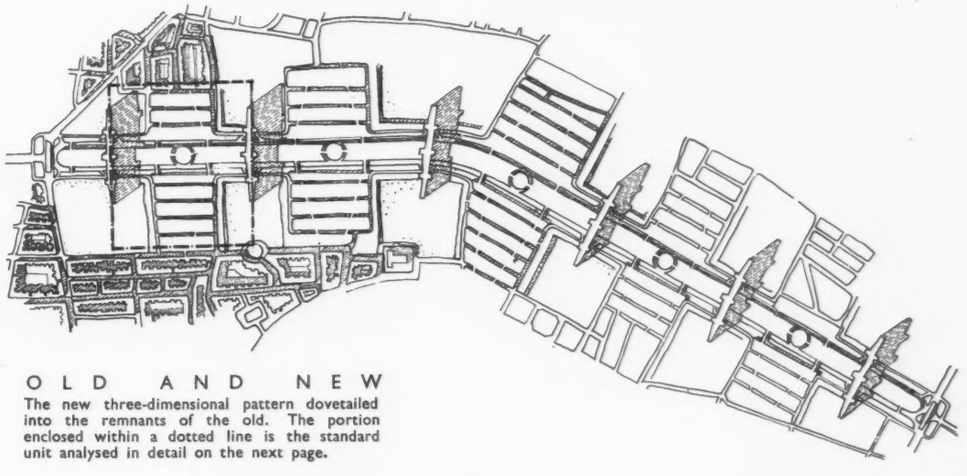
SHOPPING ON THE LEVELS
On the left, framed in the pergola, can be seen part of the old town.



ARLINGTON ARCADE
The side lane where cars can be parked for short periods.



CROSS TOWN HOUSE BRIDGE
The bus landing stage and the shop windows of the Department Store.



OLD AND NEW
The new three-dimensional pattern dovetailed into the remnants of the old. The portion enclosed within a dotted line is the standard unit analysed in detail on the next page.

THE CLIENT. I am the owner of important premises that have been destroyed. How do I stand? The complications of civilization tend to obscure the basic facts of economics. Realities are lost sight of under the piles of war-damage claims, compensation forms and income-tax returns. What is it that the Client really wants when Reconstruction begins? He wants *space*. Floor space for his staff and to display his goods; space for his customers to reach him, on foot or by car; space for them to park their cars; and above all open-space for them to breathe and walk about in, to see and be seen.

If the town-planner and the architect can provide this space, and can provide it in better quality and more generously than it was before, then the actual machinery of ownership, development, exploitation and maintenance can be left to the politicians. The Client can take his compensation in shares or in kind. The essential thing is the space.

How does the new density compare with the old? The method of measuring density in the past was exceedingly crude—so many houses to the acre, or so many storeys to the building. Here space is provided at different and often superimposed levels. A more accurate system of comparison is required, in order to assess the virtues of one type of development against another. For this purpose the total area of the site, inclusive of roads, has been adopted as the standard, and the space allotted for different purposes is expressed as a percentage of this area.

In the diagrams on the right a typical central area of London is taken as representative of the accommodation formerly provided on the bombed site. The area of roads and pavements covers 28 % of the site. Of the remaining 72 % about half is built over, i.e. 36 %. The buildings average four storeys in height so that the floor space is $36 \times 4 = 144$ %. About half the buildings have basements giving a basement area of $36 \times \frac{1}{2} = 18$ %. The total accommodation is $144 + 18 = 162$ %. There is no public open space.

The table below is an analysis of two types of accommodation provided by the Levels. Only those areas within 30 ft. of a direct source of light are included under floor space. Accommodation less well lit than this comes under the heading of "storage."

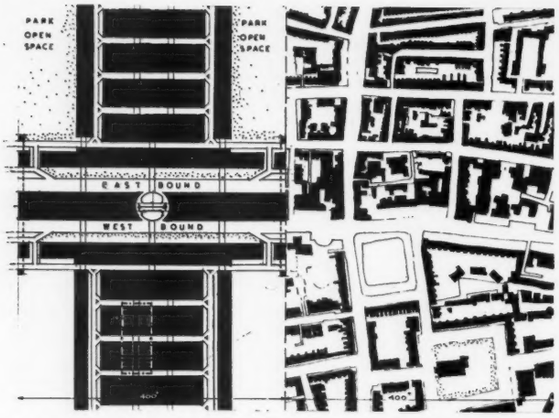
COMPARISON OF ACCOMMODATION.

	THE NEW				THE OLD
	Case I		Case II		
Total Area of Land (including Roads) ...	18,000	100	18,000	100	100
Roads	3,600	20	3,600	20	20
Pedestrians	4,320	24	6,750	37.5	8
Total Traffic Area ...	7,920	44	10,350	57.5	28
Floor Space	40,520	225	33,200	185	144
Storage	10,700	59	6,400	35.5	—
Garage or Basement	18,000	100	18,000	100	18
Total Accommodation	69,220	384	57,600	320.5	162

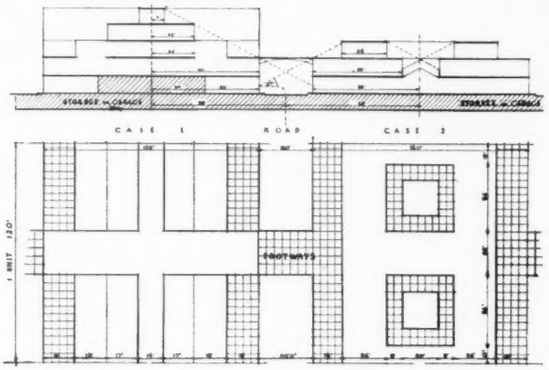
Comparing the site as a whole with that which it replaces, we have to take into consideration the accommodation provided by the tall buildings, the terraces and the arcades as well as the area devoted to public open space. The latter has been designed as one-third of the whole site. This is an entirely arbitrary figure and could be increased or decreased at will. The next table gives the comparative areas.

COMPARISON OF THREE-DIMENSIONAL TOWN PLANNING WITH EXISTING STREET PATTERN.

—	THE NEW	THE OLD	GAIN
Total Area of Land (including Roads) ...	100	100	0
Total Traffic Area (Roads and Pedestrians)	52	28	24
Total Accommodation (Floor Space, Storage and Garage) ...	235	162	73
Public Open Space ...	33	0	33



Left, typical unit of the new street pattern. Right, as it was before, drawn to the same scale.



Close-up of the Levels, showing alternative types of accommodation in plan and section.

It should be noted that a variation in the area of open space or in the height of the tall buildings would alter the figures considerably. The concentration could easily be made less, with the Levels smaller and further apart and with minor open spaces—squares—in the middle of them. The *over-all* density of a town can be anything anybody likes. Three-dimensional town-planning demands only that what buildings there are, should be concentrated and not scattered all over the site. It provides public open space on the ground, extra space on the roof and better organization of space for different purposes.

THE MAN IN THE STREET. He is, in practice, two people, the man-in-the-motor-car and the man-on-the-pavement. From the motorist's point of view, the advantages of a town free from congestion, traffic cops, parking restrictions *and* pedestrians needs no further comment. The man-on-the-pavement's wants are more complex. He longs for the lights, the movement and bustle of urban life. He wants the familiar landmarks, the pub-on-the-corner. He wants room to stand and gaze into the shop windows without being pushed off the pavement and at the same time he wants to be made aware that every inch of the town is throbbing with life and activity.

The new town would present, first of all, the impression of a big exhibition, a vast area of display free from the perils of the motor car. The novelty of the promenades and bridges would excite his curiosity and stimulate his desire to explore: not only the main routes, but small courts off the beaten track, raised terraces, cloisters and colonnades, places where he could sit and rest and watch the world go by. There would be room for him to come into contact with architecture on a more human and intimate scale than has ever been possible before in the centre of any great city.

STAGES IN RECONSTRUCTION—It is essential that the new shall play up to, and not destroy, what remains of the old. The success or failure of a reconstructed site-plan partly depends, from the point of view of the Man in the Street, on the respect paid to ancient landmarks and points of character with which he is familiar.

A Taste for Sideshows

1, *columns of spray from Niagara Falls freezing as they rise into the air.*

By Lance Sieveking

I SHARE the eighteenth century passion for forlorn and overgrown places. I like to imagine the jostling noisy crowd and have the place to myself, not always, but now and then. For when one is the only person present it is possible really to see the place. Monte Carlo out of the season is much stranger than when it is full. I and one companion were, one winter's day, the only visitors in Blackpool. The Crystal Palace used from time to time to echo vacantly, across vast glass-enclosed spaces, the sound of my thoughtful footsteps. And when I arrived at Niagara one icy day in mid-winter, I and the man with me seemed to be the only people there.

It was splendid. I don't mean the falls, but being the only people there. The falls do not give a very " splendid " impression because their setting is not sufficiently dramatic. I recalled the Falls of the Rhine at Schaffhausen, which must be small by comparison—but which *look* far bigger and more impressive, because the shape and proportion of their setting of rocks and trees creates an illusion of size, whereas at Niagara the surroundings have combined to give an illusion of smallness. And the falls of the White Nile at Entebbe in Uganda seem far more stupendous as they crash far below upon those sharp and crocodile-infested boulders. I felt that I had the right to compare the actual *falls* with other

2, *the liner stranded on the river bank.*

falls I knew, and to be disappointed if I would, since innocent young brides, it is said, who have never seen any falls but their own, are disappointed in Niagara when, on the first morning of their honeymoon trip, they stand surveying the famous spectacle from the balcony of their hotel room. At risk of the readers' displeasure I would remind her of the classic American witticism about Niagara being the second great disappointment of married life. Be that as it may, the two falls—one had ignorantly not realised that there are two—the American Falls and the Canadian Falls—did their best on the day of my arrival to put on an act. The foam which rises unceasingly from these two terrific splashes was ascending into the air in two great columns like columns of smoke, and *freezing* as it rose, 1. A slight wind blew the icy foam towards me and the bare trees, and, as it enveloped us, it stuck to our hats, ears, noses, trunks and branches, like a kind of brittle glassy cellophane, almost ringing like a million Japanese wind bells. . . .

One of the falls is in the United States, the other in Canada, and both are derived from the same river. The thrum and boom of the falling water, tens of thousands of tons of falling water, falling, falling, drumming, splashing and booming, fills the air for miles around with sound that never ceases for an instant, and, like all sounds, it *does* " fill " the air, so that it is the most inconceivable thing in the world that a moment's silence should happen there, that suddenly there might be a break in the immense flow of sound. If that *could* happen the air would indeed be *empty*. I think people's hearts would stop. . . .

And on fine evenings they play a shifting rainbow of coloured lights on the falls.

But it was the extraordinary things which have assembled on the banks that attracted my attention away from Niagara itself. For instance there was a titanic ship, an Atlantic liner of obsolete type, with four vast funnels and two strangely solid wireless masts, apparently high and dry. It had sailed down the river, dashed over the falls, and been thrown up on the bank, intact and upright. After which, the tidal wave had subsided. Needless to say, I photographed it, and here it is, 2.

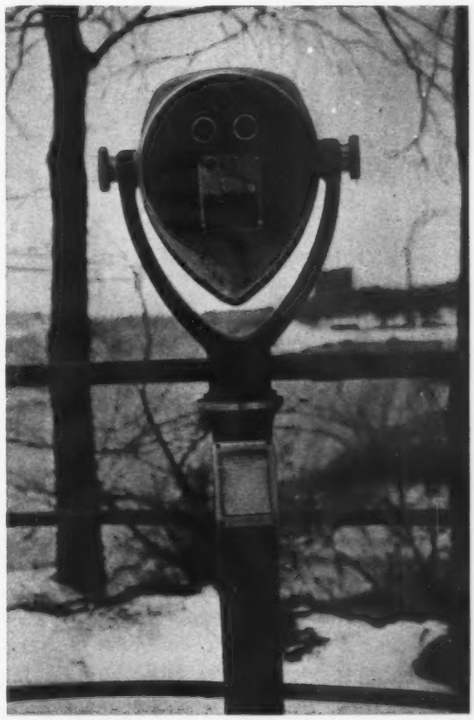
It was a very exciting morning for me when I walked over the bridge. I had always wanted to see Goat Island, because it was there that the flagship of the German Fleet of giant dirigibles crashed, in 1905, after bombing New York, in H. G. Wells' *The War in the Air*, the reading of which was one of my boyhood's most vivid memories. The island is not large. One first crosses the main bridge from Canada to the States, and then, further on, the small bridge to the island.

It was not difficult to decide which were the bushes behind which Bert Smallways had hidden, regarding with a mixture of wonder, sympathy, fear and hatred, the German Prince and horrible German officer who had survived the crash, when the Zeppelin flagship had carried away the bridge which connected the island to the mainland. And after walking for five minutes I located the wooden refreshment hut where he found the friendly starving kitten, and the stale biscuits. It was deserted, just as it had been then.

I walked about almost holding my breath, experiencing at every turn the authentic pilgrim's thrill : " It was here he crouched, here he sat resting in a shaft of sunlight, his gun across his knees, weary but wary. From here he shot the German Prince. (I always found that shooting a very satisfying affair). And from this grassy, open space he took off in the extraordinary Japanese aeroplane whose wings flapped jerkily with a mechanical whizz like a pheasant's . . . "

I got quite a shock when I came upon the Face. Up to that moment the morning had been friendly and charming to me. I had succeeded with practically no effort in penetrating into that fourth dimension, the world of imagination, wherein all one's five senses are conditioned by the sixth, the ability to see through what have previously been solid objects, to perceive that which previously had been invisible. I had been in that mood in which ideas at other times elusive take shape, where passages of forgotten history become known to one. A state familiar to me, and one which is haunted by an extraordinarily interesting piece of the unchronicled past : a lost piece of time which existed between midnight, May the 4th, 1907, and the first second on May the 5th, 1907. I am in a carriage on a new stretch of line on the London Underground Tube railway, and I am talking to a young man. He tells me of social and political events which have never found their way into history. On the walls of the carriage are certain brightly printed advertisements that I have never seen anywhere else. Goat Island was like that to me. The Germans had bombarded New York from the air and I had crashed at Niagara. I was altogether absorbed by my game when I found the Face within a foot or two of my own. You may imagine that I caught my breath. I have seen some faces in my time, but this outdid them all. Its fearful serrated brows. The tiny eyes, so close together. The huge, square, uncompromising mouth.

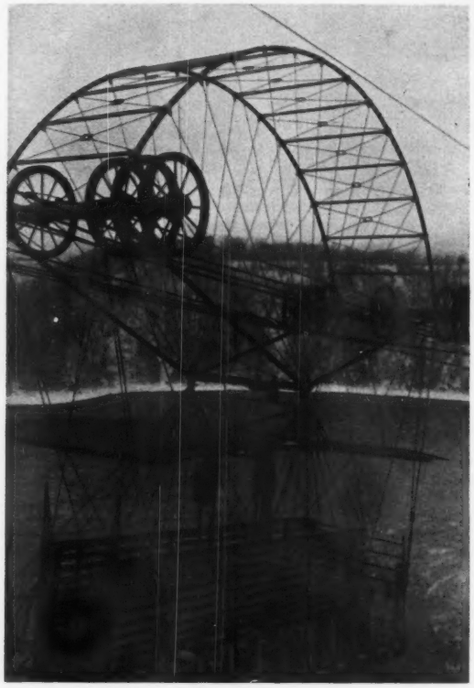
Instinctively, and quick as thought, I drew my camera, and shot the dreadful creature. Then full of revulsion I examined the carcase. Here it is, at the bottom of the page, 3. You dropped in a



3, *the Face, shot by the author on Goat Island, Niagara Falls, in mid-winter.*

dime and the sinister eyes changed their expression of nameless hostility and menace to one of utter vacancy, by the movement of some little shutters. Then by placing one's own eyes upon its eyes, one could gaze upon all manner of things: namely, two girls walking quickly along a path on the other side of the river, carrying armfuls of parcels; three dogs occupied in one of the six activities to which an all-merciful Providence has limited dogs; a very smart new automobile, parked; a close-up of a tree covered with frozen foam; or the Canadian Falls.

You can qualify as a Side-show for the rest of your life by Going Over the Falls. You can go over in a barrel, a rubber ball, a diving suit, a coffin, an automobile, a canoe, or anything else which may occur to you. If you survive you may hang out a sign and continue to recite an account of your feat to anyone who will pay you to do so. At least twenty elderly men and women earn their living in this peculiar way, receiving day by day members of the public in parlours on one side of which is a small platform, where stands the sacred barrel, ball, or whatnot in which, years before, they "went over the Falls." A man called Red Hill is the most celebrated of these practitioners in Munchausenism. I recommend you to spend your quarter with him. He has developed, with the passage of years, an idiosyncrasy of manner that once heard is never forgotten. If you should enter this strange profession, the only risk you run, after the initial risk of Going Over the Falls, is that of Sticking. Having become, to all intents and purposes, a gramophone record, one day you may get stuck, as a worn record does, in the middle of a sentence, and repeat the same word over and over again, to your own confusion and embarrassment, and the dismay of all beholders. The experiences of these men and women have all been very similar, as might be expected. And, not surprisingly, their reactions, as described by them, are curiously alike also. I listened, fascinated, to several of these human gramophones, longing for the moment when one of them should say: "I see you are about to ask the purpose of these rubber notches fixed along the side of this coffin, in which I plunged over Horseshoe Falls. Waal, sir, these rubber coffin-notches, rubber coffin-notches, rubber coffin-notches, rubber coffin-notches" . . .



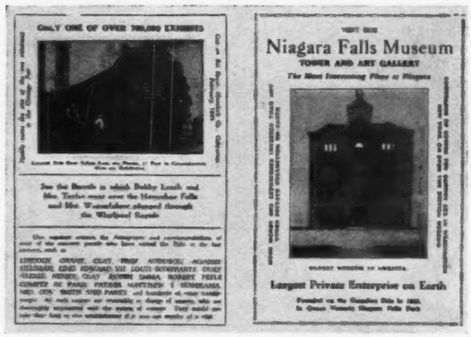
Turning the binocular about half a mile along the bank on the Canadian side brought a curious object into my vision. It was a plan of the universe in the manner of the plan of the underground railway in London, which takes no notice of actual directions or distances, but arranges all its stations at equal intervals, with information in little boxes beneath them. The plan, 7, was on the end of a negro church. A notice on the door said "For Sale."

Though I admire and understand and occasionally fly the most modern aeroplanes, the one which for some queer reason gives me most pleasure is that divinely clumsy, incalculably heavy contraption designed by Sir Hiram Maxim, which used to roll along a length of rails, from which, as far as I remember, it was never able to raise itself into the air.

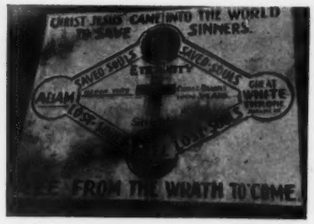
It is the *beginnings* of invented things which appeal to me. For it is at their beginnings that we may detect their true natures, and feel the impact of Man's imagination, which created them. A. V. Roe's tri-plane, which I found early in 1915 in a potting shed on Chingford aerodrome at the Royal Naval Air Station, had a magic which seemed to put one in direct contact with Leonardo da Vinci, and transplant one with a backward-bending sweep of time to Icarus himself. I remember my feelings as I pushed open the rickety door of that shed, and saw the tiny, deserted, forlorn, delicately tattered machine. Its little wings were perhaps six feet long, and two feet wide. They were constructed of one thickness of some semi-transparent fabric, bound over a bamboo framework. There were six of them. The engine was a twin-cylinder affair out of a motor-cycle. I can't remember at this distance if there was one propeller or two. But I have an impression of blades also made of stretched fabric.

I felt myself to be in the presence of the creative imagination of mankind. I touched the dusty little machine with curiosity, and reverence. This thing *did* fly. What flying machine has since been made that can compare with this as an *original* expression of man's will to conquer the obstacles which separate him from his God? The huge things that dash about the sky to-day are simply the grand-children of one or two old machines like this one, and have unmistakable family likenesses. . . .

There are quite a number of things around Niagara Falls which remind one of Sir Hiram Maxim's flying machine—(have I done it injustice? Did it perhaps fly a few yards? I forget)—For instance there is the aerial ferry-bus in which, for a trifle, you may go gingerly across to the American side of the river, pause, stare down, and return. You cannot descend on the other side. The contraption—for contraption it is, as you will see by the picture, 4—is suspended on a number of wires, and, by means of a gracefully curved framework and certain groups of small pulleys, makes its dizzy journeys to and fro above the Rapids. The detail of this delightful vehicle is reminiscent of the Eiffel Tower, though I'm inclined to think it is a decade earlier. At any rate, it has the authentic mid-nineteenth century quality, a "hand-made" strength, a thing of *individuality*, made by an artist expressly for the purpose it has fulfilled for scores of years; an original contribution to the age of machinery; a thing of beauty. I went to and fro in it, alone, several times, and blessed it.



4, the aerial ferry-bus, reminiscent of early flying-machines, in which visitors to Niagara Falls can travel across from the Canadian side and view the rapids from above. 5 and 6, specimen pages from the handbill of the Niagara Falls Museum.



7, the plan of the universe on the end of a negro church on the Canadian side. 8, the unexplained presence in the Niagara Falls Museum.

In its handbill, 5 and 6, the Niagara Falls Museum claims to be the "*Largest Private Enterprise on Earth*," and the "*Oldest Museum in America*." It also says: "*More Money and Experience invested than any other Private Collection on Earth*." These claims you may accept or not according to your mood. But the statement at the top of page one, just above the picture of its depressing façade, is incontestable. The Niagara Falls Museum, Tower, and Art Gallery is, without a shadow of doubt, "*The Most Interesting Place at Niagara*." It was so interesting that my Canadian companion who was waiting for me in the hotel, gave me up for lost. I couldn't tear myself away from it. I should like to have spent several days strolling about its crazy galleries. My passion for forlorn, deserted, overgrown places was able to spread itself and have an orgy.

I cannot hope to convey the profusion of the disorder. There are six floors, and every one is crowded with a strange miscellany of exhibits, most of them beneath a pall of cobwebs and dust, their cases broken or cracked, their labels illegible with age, or not there at all. Some of the cases had been robbed, the label alone remaining. "*Every exhibit has its name*

and description. This enables you to do this exhibition quickly and avoid the annoyance of looking thru a catalog," says the handbill. As far as I was concerned, they made a mistake there. I like looking thru a catalog.

On the whole I think the handbill's author reaches his most sublime heights with "*General Ossipumphnoferu, The Most Wonderful and Valuable Curio in the World.*" As an Egyptologist I hardly count, but I somehow feel that all is not well with the name "Ossipumphnoferu." The syllable "*pumph*" doesn't seem to ring absolutely true. In fact it sounds as if someone had made it up himself.

There was an unexplained presence close to the General, which was, I thought, more than likely, the remains of the last "escort," who was "thoroughly acquainted with the points of interest," probably the one who had shewn Lincoln round. There he sat, as you will see in my photograph, 8, an expression of patience and kindly informativeness fixed on his face. But this is only a guess.

I had no difficulty in finding the barrels in which Bobby Leach and Mrs. Taylor had gone over Horseshoe Falls, and as for Mrs. Wagenfuhrer, I could see her, in my mind's eye, plunging through the Whirlpool Rapids. A tremendous she-dare-devil, Mrs. Wagenfuhrer. An awfully gallant little lady-in-a-barrel. I observed, too, that King Edward VII, Henry Clay, Queen Emma, Robert Peele and Mrs. Gov. Smith and Party had got in ahead of me. And I hoped that future generations would not confuse "Lance Sieveking" with "Agassiz Silliman," whoever he may have been. As names go, I prefer my own.

If you are going to Niagara, "do not fail," as they say, to visit the museum. I have never known a building whose exterior belies its interior so completely.

CRITICISM

272 270 268 266 264 262

Treasure Hunt

Critical Notes by Peter F. R. Donner

NINETY-NINE out of a hundred people nowadays do not look at buildings at all unless by special effort. Whether this is due to the comparative æsthetic insignificance of architecture in the nineteenth century as against music or easel painting, or whether architecture declined because even the most sensitive did not follow its progress with the interest they took in music, we cannot know. To-day, at any rate, while people admire a cathedral or a country house, as they go to a concert, there is nothing in their relations to buildings that could be compared with the unreflective, matter-of-course acceptance of everyday music.

How many of the houses that a business man or a professional man—even an architect—passes on the way from where he lives to his tube station and from his tube station to where he works, does he take in? How many could he describe? Yet by walking so blindly he deprives himself of much that would be enjoyable—æsthetically and intellectually. Most of what lines his daily route is, of course, of the nineteenth century, and the nineteenth century is the obscurest age since 1066, so far as common knowledge of its style goes. In opening his eyes to every one of the buildings on his right and his left, the workaday passer-by would discover something of dignified proportions here, of bold treatment there, of blatant prosperity at the next corner, and of fanciful decoration further on. And he would discover much that is curious, and much that is topical in unexpected ways. He would also discover that the interpretation of motifs changed from generation to generation in Victorian days, just as it had changed in the thirteenth century, and that it changed not according to the choice of Gothic or Renaissance examples, but according to the spirit of the moment that chose them.

But to get all this out of seemingly humdrum city and suburban architecture, one needs clues. The series of articles of which the first appears here, is to supply some of them. Those who care to embark on expeditions of their own will find that looking at houses can be entertainment as well as an object lesson, a family game (Date your District) as well as a treasure hunt.

1

2

ARRIVING at Liverpool Street Station you turn left to get into Bishopsgate. Supposing your bus northward does not come at once, walk on for a couple of hundred yards and have a look at the houses opposite. They evidently belong to two different periods in the life of the street, the pattern of the one overlaying that of the other. The first is the pattern of the pre-Victorian suburban street in close proximity to the city, but still with houses lived in; in the second, Bishopsgate is a city street with office buildings exclusively. Of the third, the city pattern of the Windsor Style, you see no example where you stand.

The unit of the first pattern is the terrace house, one to three windows wide and three to four stories high, such as No. 272 above. The so-called Palladio motif, **4** (picked out overleaf), dates one of them, No. 250, as Georgian. Others may be older still under their plaster. Somewhat puzzling is the appearance of the two houses 252 and 254 with their far recessed upper floors, overshadowed by a double house, 256-58, in fact two usual ones turned into one when the façade was remodelled in a typical 1930-Modernistic. The pilasters are eminently characteristic of this fashion, with their pointed angles and graded uprights at the foot and their Egyptianizing capitals, **2**.

Now as for the two recessed houses, they are of a type especially familiar in the Euston Road, the type that resulted when old houses with front gardens were converted to commercial use by building shops over the gardens. But Bishopsgate was apparently not a street of that kind. Perhaps the provision of a front garden had something to do with a Palladian front of some dignity behind 254 and 252, probably one belonging to some semi-public or religious building, but now used as their workshops by the builders with the enlightened commercial signboard of a design even more recent than the decoration of the Radio house.

The metropolization of Bishopsgate is marked by the coming of

264 262 260 256-258 254 252 250 248 246 244 242 240

Treasure Hunt—continued

taller and wider buildings. The terrace units are replaced by five-storied houses of double width at least and of individual composition. The most significant fact is the turning of the roof by 90 degrees. Office buildings of the second half of the nineteenth century are usually gabled or, if not, provided with dormer windows.

Nos. 264-270 are a curious group. 264-268 are a symmetrical composition, but 268 has the same gable with a little Jacobean obelisk, **1**. Now this motif and especially the fenestration of 264 and 268 seem to date these houses into the sixties or seventies. The group of three round-headed windows especially is a typical motif. It is a debased version of an arcading, originally sometimes Norman or rather Transitional and sometimes of the semi-Gothic, semi-Renaissance Italian fifteenth century style (cf., e.g., the parts of the Victoria and Albert Museum of 1862). You find

The Victoria and Albert Museum, 1862

Norman, Gothic and Renaissance detail used indiscriminately. For detail mattered little as against the chief purpose of the motif, namely that of lighting offices in almost as straightforward a way as by the unadorned window strips below. Now 268, a house of such typical say 1870 appearance, is dated on the gable 1901. Can this refer to a re-modelling, e.g., of the centre house 266, which in fact does look later than the wings? It has two features that seem to date it conclusively, the Dutch gable, **3**, and the Ipswich bay, **6**. Both come from Norman Shaw. The Dutch gable he used, e.g. at Cadogan Square (1878), the Ips-

Norman Shaw, Cadogan Square, 1878

wich bay (i.e., the type of bay window which he copied from Sparrowe's House in Ipswich), e.g., at his own house in Ellerdale Road (1875). But even considering the

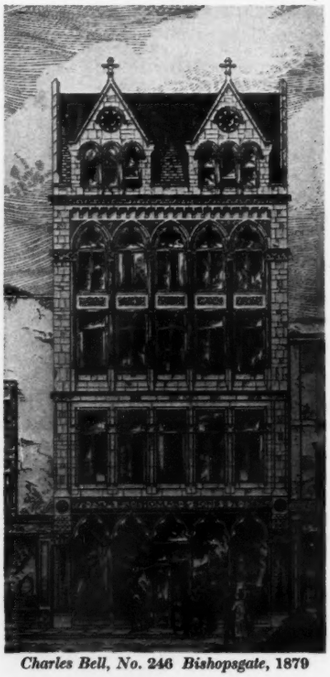
Norman Shaw, Ellerdale Road, 1875

fact that the architect of No. 266 has rather bluntly mixed up the graceful Norman Shaw bay with a Jacobean depressed arch, and that his hand-writing looks that of an unimaginative and, perhaps, belated imitator, 1901 seems very late for such motifs of the seventies.

The next-door neighbour of this group, No. 262, is stucco-fronted Gothic, i.e., of a type earlier than the time when the use of Gothic became tantamount to honesty in the treatment of materials. This change, of course, was due to Ruskin, Butterfield and men of similar views. But if Nos. 264-268 are really of 1901, No. 262 may well be a late specimen of its type too. What there is of period forms is chiefly Early English. But more important than these imitations is the fact how little is actually imitative in the strict meaning of the word. Neither the amusing cinque-foiled tracery in the straightforward tripartite Victorian windows on the first floor, **5**, nor the details of the cornice above, nor the bishop looking out of his bull's eye in the stepped gable are features that mediæval masons would have used. The nineteenth century copies much less than we assume. You will realize that whenever you try to trace sources. What we find in No. 262 instead, is that, under the Gothic veil, the grouping and the proportions of the windows and the steep gable with the circular ornament, have just the same meaning as the corresponding motifs in No. 264 under their vaguely Italianate veil.

And again, if we now pass on to No. 246, leaving out a house of no special character, we have the window strips overlaid with an Early English arcading. Only what was done insignificantly at No. 262 is here done by a competent and sensitive architect. The centre of his composition is the group of five second and third floor windows connected by slender shafts and pointed arches. The group rests on a sturdier first floor with characteristic semi-Gothic piers of a general Renaissance appearance **7**, and is stretched across a rectangular frame with which the arches and spandrels at the tops are happily brought into line. Wide pilasters form the side rails of the frame, supported by short and solid ground floor pillars.

As the building seemed to me remarkable enough to find out more about it, I traced a contemporary illustration in *The Builder* of 1879.

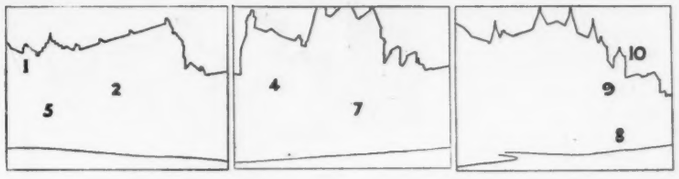


Charles Bell, No. 246 Bishopsgate, 1879

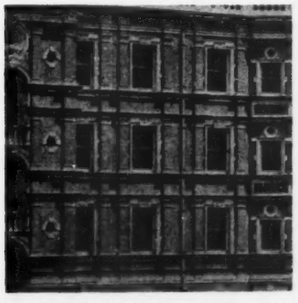
So here it is and I was pleased to find that the architect, Charles Bell, had inserted between the ground floor pillars instead of the rather clumsy present entrance a delicately Gothic shop window.

While in the Provident House the period style is in opposition to the function of the building, the next house of interest, Nos. 232-238 of

240 240 232-238 230



1894, is of a stylistic character by which much more easily some harmony could be achieved between forms and function. It is the French Château style of the sixteenth century with its typical orders of pilasters accompanying all the windows, a style used in the most swaggering way at the Royal Holloway



Crossland, Royal Holloway College, 1886.

College of 1886, and after that every now and then in London streets too. The architect has enriched its effect by adding purely decorative steep Jacobean gables, thus creating a general impression superficially Webbian. Barclays Bank later on converted the ground floor into something vaguely Renaissance, an unfortunate move because the house as it was before had an unusual sobriety and formed an excellent neighbour to Harrison Townsend's phantastic Bishopsgate Institute of 1893.

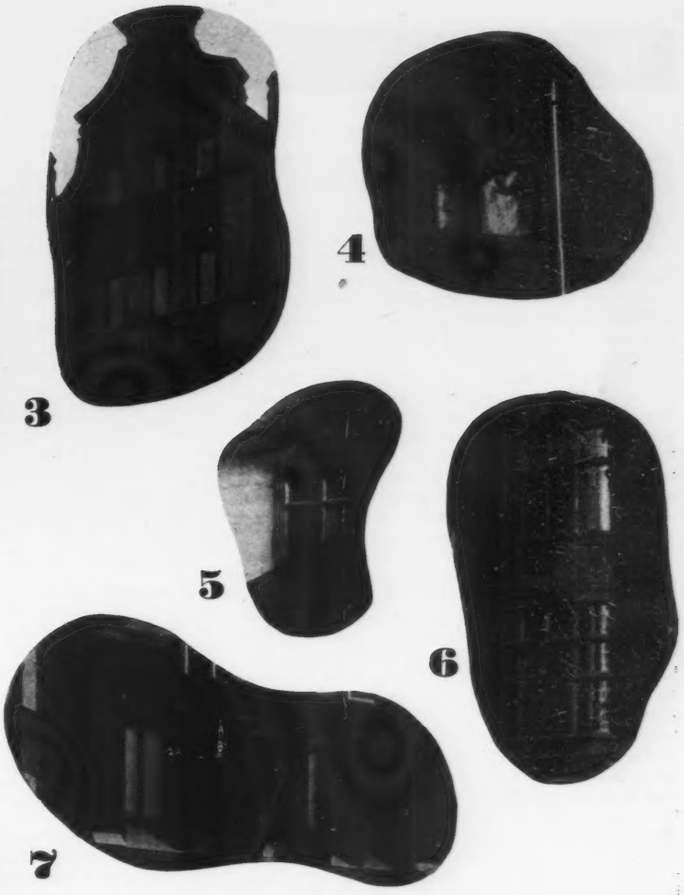
Now here the attitude to the past is different from that of all the other houses we have examined. All that is left of period motifs is the mullioned and transomed central window and the two turrets reminiscent of Tudor gatehouses, **10**. But even there the mouldings of the window and the details of the turrets are original. As for the rest of the façade it is most deliberately novel. The entrance, **8**, a massive arch on excessively short columns, is inspired by H. H. Richardson, the most modern American architect then known in Europe.

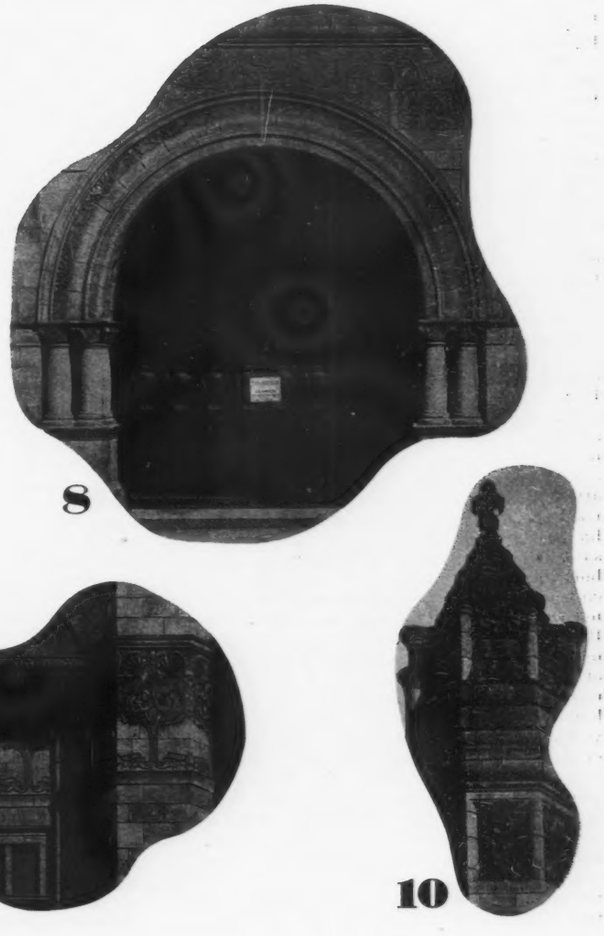
H. H. Richardson, Trinity Church Rectory, Boston, 1879-81.

Such entrances are one of the hallmarks of his style. The friezes above the entrance and the main floor, **9**, with their freely drawn trees and their luxuriantly spreading leaves are typical of the English version of *Art Nouveau*. They soon became widely popular among the modern-minded, especially after Mr. Baillie Scott had taken them up. But that was a few years later. In fact the

M. H. Baillie Scott, frieze.

Bishopsgate Institute strikes one in every respect as about the most advanced building of its date in London. In going through the architectural magazines of the early nineties the gulf between Townsend's façade and all other public buildings illustrated appears just as wide as that between, say, the Piccadilly Line Underground Stations of 1932-33 and other stations of the same date.





BOOKS

Housing and Living

WHEN WE BUILD AGAIN : A study based on research into conditions of living and working in Birmingham. By the Bournville Village Trust. Allen and Unwin. Price 8s. 6d.

A SURVEY of Birmingham's housing shows some favourable effects of the sustained prosperity felt by this British city between the two wars. Birmingham, like greater London, has a large amount of up-to-date industry, which includes no depressed industry, and its population has grown by 38 per cent. in this period. Unlike London, it has a population which is still within reasonable limits. It has to deal with none of the worst effects of unplanned industrial changes—the Welsh miners' houses which were at first squalid, now derelict ; the East End slums now fifteen miles from open country. Yet new building, municipal and private, formed an unchecked expansion. At the outbreak of this war the central wards were rather less lived-in than at the end of the last but otherwise unchanged, while over a third of the population were in new suburban houses.

This much must have been obvious to any Birminghamian, but the survey under review was begun in 1935 to find out more exactly how people were living and what the future housing policy ought to be. Where people live, and how long they have lived there, their rent, their fares to work, and where they work—why they think they live where they do, and where they think they'd like to live—what people think of suburban houses, and how much more it costs to live in a suburb—any efficient local authority needs this information, and it is very valuable to have collected it. At that time, indeed from the time of the 1930 Slum Clearance Act onwards, the impossibility of ending slums solely by building suburbs was generally obvious, and where central rehousing had been begun in the same carefree piecemeal way as the cottage estates, the unpleasant results made many people want to stop and think these problems out.

The survey shows that in spite of rent rebates and cheap workers' fares it costs 10-15 per cent. more to live, if a family moves out from the central district. The rent of the most popular type of house is about one-third more ; fares may be doubled. 40 per cent. of suburban rents are over 16s. per week instead of being 6s. to 8s., as in the central wards. Suburban estates, municipal and private, are, sociologically, doing the same job.

The most interesting planning question considered in this book is the extent to which people in Birmingham are already segregated into districts containing both work and housing. Apparently 40-45 per cent. of principal wage-earners now live and work in one district. This information is shown for each district of the city in a series of diagrams, three of which are reproduced here. In human terms, it means that over a third of the workpeople go home to midday dinner. It shows the advantages of the newer peripheral industries.

The least conclusive part of the book is its attempt to found a housing policy on the survey's results. The method does not work. This may be because the housing policy itself has been so conservative—up to 7,000 houses a year were built both by the city and private builders without either undertaking any experiments or collaborating with the tenants in any way. In a city like Birmingham especially, which is prosperous, has mobile industry, and has almost no natural pattern of plan, there must be many quite different methods of sound development. But the people have only experienced the single type of individualistic, nicely-spaced-out cottages. They undoubtedly do appreciate the advantages of those. One wonders what effect the unusually bad transport and absence of a civic, social or recreational centre have had on the standards of social and cultural life. Compared, for instance, with the equally new and prosperous area round Los Angeles and Hollywood in the United States, where a far more gregarious population of about two millions is spread over an area up to 30 miles across, interspaced with mountain parks, Birmingham is very compact and stick-in-the-mud. If it cannot have almost universal private cars, it could have an efficient system of express buses on 2-level roads. If it wants its cottages, physically, it could have them. Actually, as was found by the Co-operative Societies in Sweden, the people might find quite different, compact, housing types which suited them far better, if they had sufficient information. But the boldness of high but open and homelike urban building is seldom used for housing those who cannot even afford cottages. The survey finds " very few people want to exchange house for flat . . . Birmingham is not at all flat-minded." But, it timidly concludes, " The plain truth of the matter is this : there is no solution for our 130,000 people in the Inner Wards without a considerable transfer from small house to modern flat." So the tenants' wishes do not guide the policy.

This has been the basic position for 50 years. In 1887 Engels wrote : " It is true that the cottage system is said to be the only correct one . . . but unfortunately it is not realisable just in the centre of the housing shortage, and one should therefore be glad if houses were built containing from four to six dwellings instead of big barracks, or at least the disadvantages of the big tenement system made up for by various building refinements." It is important to inform and consult the tenants about the housing types which *are* to be built—to build experimentally with their collaboration—and then to take their preferences seriously.

M. J. BLANCO WHITE

SHORTER NOTICES

CANTEENS AT WORK. By C. G. Gardiner. Oxford : The University Press ; London : Sir Humphrey Milford. Price 4s. 6d.

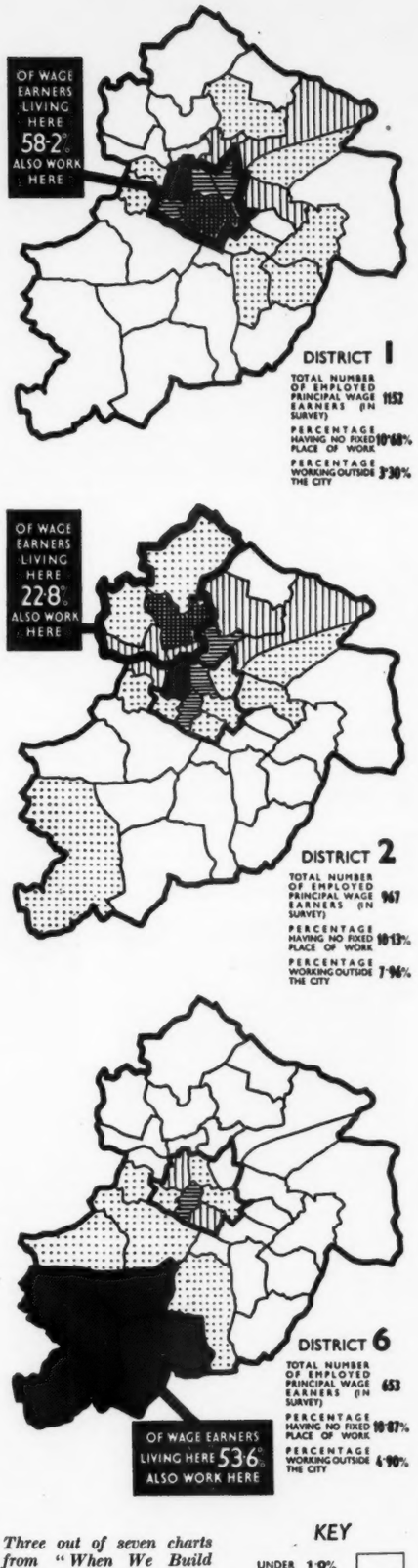
The author of this book is managing director of the National Catering Service, London, and his aim has been to write a practical handbook on the design, equipment and operation of canteens, based on his own experience and that of other specialists. There is no need to enlarge on the topicality of the subject and the importance of proper study of the planning problems a large-scale works canteen presents, as a preliminary to its incorporation in all industrial lay-outs. But Mr. Gardiner pays least attention to the strictly architectural aspect of the subject. His chapters on planning are sketchy until he comes to such details as technical schedules for the lay-out of store and preparation rooms. He has little to say about the possibilities of standardizing plan units for centralized production of canteens in war factories, and in his introductory chapter, " The Case for the Canteen," he does not interest himself deeply in the social or planning implications of canteen feeding except to make the alarming statement that " nearly 70 per cent. of the working population of England goes to work to-day either without any breakfast at all or with only a light or insufficient meal."

However, his later chapters, on equipment, management, staffing, catering, etc., are thorough and are accompanied by numerous schedules of equipment for canteens of different sizes, specimen stock lists, return sheets and so on.

ARCHITECTURE. By R. M. Fanstone. London : The Focal Press. Price 1s. 6d.

The addition of a volume on how to photograph architecture to this excellent series of photographer's handbooks is fully justified. Architectural photography is a specialized branch of the art, and good photographers are all too rare who fall neither into the commercial photographer's dull correctness, which gives a flat equality of emphasis to each carefully recorded detail, nor into the enthusiastic amateur's fondness for drama and atmosphere. This little book is full of useful technical tips and aptly introduces itself by referring to the present-day need for detailed records of all buildings of value.

It is entertaining, even if not very relevant, to note that even when the subject is photographic technique, the antiquarian predilection for Gothic crops up in the familiar way. Old buildings are identified as a matter of course with abbeys, priories and minsters, and the section on details begins by saying that careful architectural photography will record " such things as window tracery, metal work, locks and hinges, and sanctuary knockers, consecration and churchyard crosses, sundials and mass clocks, low side windows and tombstones with quaint inscriptions of curious carving." That is still, perhaps, what architecture means to the amateur photographer.



Three out of seven charts from " When We Build Again," reviewed on this page, showing where the principal wage-earners living in three districts of Birmingham go to work. On the whole, few travel across the city, but many travel to the central wards and a surprising number work outside the city boundaries. In the book these charts are reproduced in two colours.

Coventry in 1855

Coventry is some nine or ten miles from Leamington. The approach to it from the railway presents nothing very striking—a few church towers and one or two tall steeples ; and the houses first seen are of modern and unnoticeable aspect. Getting into the interior of the town, however, you find the streets very crooked, and some of them very narrow. I saw one place where it seemed possible to shake hands from one jutting, storied old house to another. There were whole streets of the same kind of houses, one story impending over another, such as used to be familiar to me in Salem, and in some streets of Boston. In fact, the whole aspect of the town — its irregularity and continual indirectness—reminded me very much of Boston, as I used to see it, in rare visits thither, when a child.

These Coventry houses, however, many of them, are much larger than any of similar style that I have seen elsewhere, and they spread into greater bulk as they ascend, by means of one story jutting over the other. Probably the New-Englanders continued to follow this fashion of architecture after it had been abandoned in the mother-country. The old house built by Philip English, in Salem, dated about 1692, was in this style—many gabled, and impending. Here the edifices of such architecture seem to be Elizabethan, and of earlier date. A woman in Stratford told us that the rooms, very low on the ground floor, grew loftier from story to story to the attic. The fashion of windows, in Coventry, is such as I have not hitherto seen. In the highest story, a window of the ordinary height extends along the whole breadth of the house, ten, fifteen, perhaps twenty feet, just like any other window of a commonplace house, except for this inordinate width. One does not easily see what the inhabitants want of so much window-light ; but the fashion is very general, and in modern houses, or houses that have been modernized, this style of window is retained. Thus young people who grow up amidst old people contract quaint and old-fashioned manners and aspect.

I imagine that these ancient towns—such as Chester and Stratford, Warwick and Coventry —contain even a great deal more antiquity than meets the eye. You see many modern fronts, but if you peep or penetrate inside, you find an antique arrangement—old rafters, intricate passages, and ancient staircases, which have put on merely a new outside, and are likely still to prove good for the usual date of a new house. They put such an immense and stalwart ponderosity into their frameworks, that I suppose a house of Elizabeth's time, if renewed, has at least an equal chance of durability with one that is new in every part. . . .

It was fair-day at Coventry, and this gave what no doubt is an unusual bustle to the streets. In fact, I have not seen such crowded and busy streets in any English town ; various kinds of merchandise being for sale in the open air, and auctioneers disposing of miscellaneous wares, pretty much as they do at musters and other gatherings in the United States. The oratory of the American auctioneer, however, greatly surpasses that of the Englishman in vivacity and fun. But this movement and throng, together with the white glow of the sun on the pavements, make the scene, in my recollection, assume an American aspect, and this is strange in so antique and quaint a town as Coventry.

We rambled about without any definite aim, but found our way, I believe, to most of the objects that are worth seeing. St. Michael's Church was most magnificent—so old, yet enduring ; so huge, so rich ; with such intricate minuteness in its finish that, look as long as you will at it, you can always discover something new directly before your eyes. I admire this in Gothic architecture—that you cannot master it all at once, that it is not a naked outline ; but, as deep and rich as human nature itself, always revealing new ideas. It is as if the builder had built himself and his age up into it, and as if the edifice had life. Grecian temples are less interesting to me, being so cold and crystalline. I think this is the only church I have seen where there are any statues still left standing in the niches of the exterior walls. We did not go inside. The steeple of St. Michael's is three hundred and three feet high, and no doubt the clouds often envelop the tip of the spire. Trinity, another church, with a tall spire, stands near St. Michael's, but did not attract me so much ; though I, perhaps, might have admired it equally, had I seen it first or alone. We certainly know nothing of church-building in America, and of all English things that I have seen, methinks the churches disappoint me least. I feel, too, that there is something much more wonderful in them than I have yet had time to know and experience.

In the course of the forenoon, searching about everywhere in quest of Gothic architecture, we found our way into St. Mary's Hall. An old woman, and afterwards an old man, both of whom seemed to be at home on the premises, told us that we might enter, and troubled neither themselves nor us any further.

St. Mary's Hall is now the property of the Corporation of Coventry, and seems to be the place where the Mayor and Council hold their meetings. It was built by one of the guilds or fraternities of merchants and tradesmen. . . .

We went to the Red Lion, and had a luncheon of cold lamb and cold pigeon-pie. This is the best way of dining at English hotels—to call the meal a luncheon, in which case you will get as good or better a variety than if it were a dinner, and at less than half the cost. Having lunched, we again wandered about town, and entered a quadrangle of gabled houses, with a church

[Continued on page xxviii

Waste Paper

There is still need—urgent need—for many tons of waste paper for munition-making and other war purposes. Architects are in an especially good position to provide waste paper, having whole offices full of obsolete plans, unwanted sketches, old specifications and the like. They have a duty at this moment to sort out every piece they can. The need is urgent and THE ARCHITECTURAL REVIEW appeals to all its readers—architects and others—to undertake this duty without delay.

English Art and the Mediterranean

This exhibition arranged by the Warburg Institute on its premises at the Imperial Institute is the most illuminating held in London for several years.

The Warburg Institute was founded by Aby Warburg in Hamburg some twenty years ago. Warburg was an art historian and a wealthy man. His chief interest was in one problem, but a problem of first magnitude : the survival and revival of Antiquity in Western civilization. He researched into the problem primarily but not exclusively from the visual angle. Art stood in the centre of his work. But science, astronomy, astrology, mythology, allegory, all came within his orbit. To establish a solid foundation for such research he collected a large library, staffed it with excellent scholars and finally allowed it to be affiliated to the University of Hamburg. When Hitler came, the Institute managed to get out of Germany with all its belongings. England, because of her tradition of humanism, attracted it, and it settled down here. Its lectures have made it fairly widely known. Now this exhibition will, it is to be hoped, act on a wider public and convince it of the immense value of the Institute's work.

The exhibition consists of photographs arranged historically in sixty-five panels. On each panel one or two important examples of British art and architecture are shown surrounded by comparisons with such works of Mediterranean art (or Northern art under Southern influence) as may have inspired them. One sees, e.g., St. Paul's together with Bramante's dome for St. Peter's in Serlio's engraving, the Dôme des Invalides, the towers of S. Agnese, the portico of S. Maria della Pace and the top floor windows of the Palazzo Barberini. One sees attitudes in Reynolds that come from Michelangelo, St. Martin-in-the-Fields and the interior of S. Maria dei Miracoli, the Reform Club and the Palazzo Farnese.

And every comparison is neat and convincing—thanks to the fabulous amount of team research that has preceded the opening of the exhibition and the writing of the catalogue.

The Arts and Crafts Exhibition

It is gratifying to see that in spite of war and rationing this exhibition could be staged on such an ambitious scale. It contains much endeavour and quite a number of achievements although the majority of the exhibits still suffer from that wretched old-world or rather second-hand Morris and Gimson attitude into which the society had fallen during recent years. The exhibition is held at the Wallace Collection.

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and its churchyard on one side. This proved to be St. John's Church, and a part of the houses were the locality of Bond's Hospital, for the reception of ten poor men. . . . There is something altogether strange to an American in these charitable institutions—in the preservation of antique modes and customs which is effected by them, insomuch that, doubtless without at all intending it, the founders have succeeded in preserving a model of their own long-past age down into the midst of ours, and how much later nobody can know.

We were now rather tired, and went to the railroad, intending to go home ; but we got into the wrong train, and were carried by express, with hurricane speed, to Brandon, where we alighted, and waited a good while for the return train to Coventry. At Coventry again we had more than an hour to wait, and therefore wandered wearily up into the city, and took another look at its bustling streets, in which there seemed to be a good emblem of what England itself really is—with a great deal of antiquity in it, and which is now chiefly a modification of the old. The new things are based and supported on the sturdy old things, and often limited and impeded by them ; but this antiquity is so massive that there seems to be no means of getting rid of it without tearing society to pieces.

NATHANIEL HAWTHORNE
(*Passages from the English Note-Books*)

The Preservation of Iron Railings

The Panels of architects appointed by the Ministry of Works and Buildings to " advise in regard to damage caused, or likely to be caused, by enemy action to buildings of architectural or historic interest " have also been asked to undertake the work of checking schedules of unnecessary railings to assure the preservation of those of special merit or historic interest. The Panels will also deal with appeals for the retention of railings which have been scheduled by local authorities under direction of the Ministry of Supply.

To advise in cases of doubt or of special importance which cannot be settled locally, the Minister has appointed a Committee of Appeal consisting of Major C. T. P. Bailey, Keeper of the Iron Work at the Victoria and Albert Museum ; Professor A. E. Richardson, A.R.A., F.R.I.B.A., F.S.A. ; Mr. H. M. Fletcher, F.R.I.B.A. ; and Mr. G. H. Chettle, F.S.A.

CORRESPONDENCE

The Editor,
THE ARCHITECTURAL REVIEW.

Sir,—The vigorous article entitled " Wanted an Hypothesis " in your November number, suggests to us that we should invite your criticism, and that of your readers, on an hypothesis upon which we propose to build a programme of research, an organization to carry it out, and another to implement the results. Enough research has been done, and an adequate conjectural background exists, for us to claim that it is possible to design, manufacture and erect a prefabricated house (we object to the word and are seeking a new one) of a type socially, æsthetically and economically desirable.

We know that much research has been done into specific materials, and designs arising directly from their use. Little consideration has been given to the problem from the point of view of the production-engineer and assembly-line controller and there has been no attempt to co-ordinate, either by a systematic division of activities or a pooling of results or any effort co-operatively to plan a future research programme based on conclusions already reached. Again, we are unacquainted with any effort in this country to consider, on a broad basis, the social, æsthetic and economic results of the successful production of a prefabricated house.

If such research and co-ordination as we are planning should be successful, we feel that we must take the responsibility of its consequences in broader fields and here conjecture—to return to your article—is even more important.

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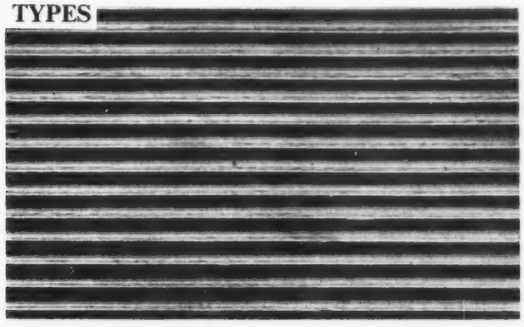
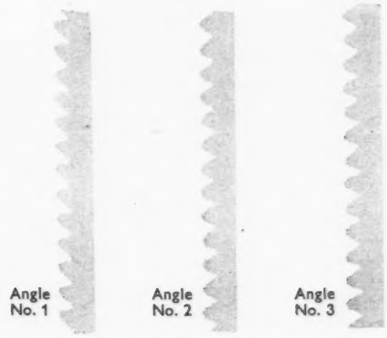
FACTS ABOUT GLASS FOR ARCHITECTURAL STUDENTS

No. 7—Prismatic Glass

A translucent rolled glass, one surface of which consists of parallel prisms arranged in such a manner that light passing through the glass is refracted in a certain direction according to the incidence of the light and the angle of the prism; the other surface is smooth.

TYPES



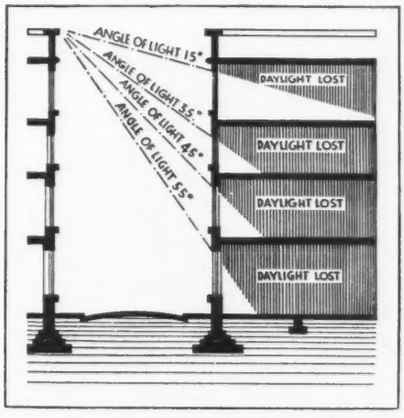


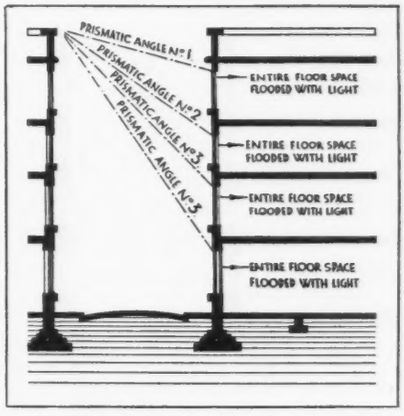
Quality: *Made in one quality only.*

Manufacturing Sizes: *60" high by 100" wide, the prisms running with the width of the sheet.*

Thickness and Weight: *Nominal thickness: ¼". Approximate weight: 3 lbs. per sq. ft.*

Light Transmission: *50% to 90% according to the direction in which the transmission is measured.*





NOTE: *The glass should always be fixed with the prisms running horizontally and on the inside of the window.*

USES: For glazing windows which are overshadowed by neighbouring buildings; to transmit light into dark places; and to ensure maximum use of available daylight.

Angle No. 1: For situations where the angle of the light's incidence taken from the horizontal is up to 30°.

Angle No. 2: For situations where the angle of the light's incidence taken from the horizontal is between 30° and 40°.

Angle No. 3: For situations where the angle of the light's incidence taken from the horizontal is over 40°.

SPECIFICATIONS: In preparing specifications, the following clauses should be included for glazing:—

(1) General Clause: All glass to be of the type, quality and substance specified, and to be of British manufacture. The glazier must be prepared to produce at the completion of the job invoice or voucher from the manufacturer to show that the glass supplied is of the specified standard.

(2) Glasses should be described by the recognised trade terms, thicknesses and qualities.

This is published by PILKINGTON BROTHERS LIMITED, of St. Helens, Lancashire, whose Technical Department is always available for consultation regarding the properties and uses of glass in architecture.

LONDON OFFICE AND SHOWROOMS AT 63 PICCADILLY, W.1. TELEPHONE: REGENT 4281

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With these considerations in view a committee has been formed to study a sequence of proposals arising from our above-stated hypothesis and, if desirable, to take steps to bring a research body into existence. Briefly these proposals suggest the formation of a Prefabrication Research Council which would co-ordinate as much private and public research as possible. It would further investigate undeveloped patents and inventions to ascertain if discovery and development in other fields would render them practicable. Research suggested by these inquiries would be instituted always with the main objective in view of a final design, utilizing the maximum possible degree of factory-production. Parallel with this technical research it would be necessary to co-ordinate existing research into housing requirements and possibly to extend it upon the bases of "wants" rather than "needs."

Clearly the points uncovered in both these lines of research would suggest a codification of building regulation revision, and it would be the duty of the Research Council to develop principles upon which this could take place.

Prefabrication would seem to raise, with increasing urgency, the question of limiting by licence the life of houses, so that the social and economic implications of such a step call for enquiry. A further important point demanding research is the fairly high degree of standardization probably entailed by prefabrication: considerable enquiry into the æsthetic aspects of town and country planning will be necessary from this new angle.

The function of the Prefabrication Research Council may thus be summed up as enquiry into the technical, architectural (and æsthetic), governmental and economic implications of the factory production of houses. Clearly such an enquiry is fruitless without the creation of a form of industrial organization to implement its results. It is therefore proposed that the Research Council should give birth to a Building Council which, in substance, would be a Trade Association having power to form the commercial organizations necessary to co-ordinate the activities of firms manufacturing component parts.

Various attempts have been made without very much success to produce organizations such as are here envisaged. They have failed, in all probability, because they lacked a definite objective of the type provided by this conjoint proposal. It may therefore be helpful if in addition to the "objective" a very brief outline of the constitution of these bodies be given. The Research Council would be a representative body drawn from the architectural profession, Trade Associations and Unions, public men, and the various bodies concerned with town planning and other activities bearing upon the preservation and extension of the national amenities. This council would have a small executive committee which would control a management panel of paid experts.

The Building Council would be governed by a selection from members of the Research Council, strengthened by representatives of subscribing firms, and its function would be the creation and guidance of a number of non-profit-making "control" companies linking the activities of firms manufacturing components on a normal profit basis.

Such a parallel constitution as is here suggested would, it is thought, facilitate the raising of funds, as most if not all the constituent members of the Research Council would be in a position to subscribe, whilst the Building Council, being a trade association, would be an attractive proposition commercially.

It is impossible to give full details in a comparatively short letter, but the committee believe that they have satisfactory answers to points of difficulty which may arise in the minds of your readers and would welcome the opportunity of dealing with them at greater length to any interested persons.

Yours, etc.,

R. PERRY,

Secretary, Committee for Industrial and Scientific Provision of Housing.

13, Suffolk Street, S.W.1.

Acknowledgments

With the exception of those of the Cathedral, all the photographs of air-raid damage at Coventry on pages 9-12 of this issue were taken by Mr. G. B. Mason, for the National Buildings Record, by whose kind permission they are reproduced.

The following are the sources of some of the illustrations to the article entitled "The Elements of Enclosed Space" on pages 5 to 8. Acknowledgments are due to the authors and publishers concerned.

Das Japanische Wohnhaus, by Tetsuro Yoshida: Nos. 1, 3 and 17. *Wasmuth's Lexikon der Baukunst*: Nos. 5, 18 and 19. *Town Planning*, by Raymond Unwin: No. 6. *Auguste Perret*, by P. Jamot: No. 7. *Portrait of America*, by Diego Rivera: No. 11. *Le Corbusier et Pierre Jeanneret*: *Oeuvres Complètes*: Nos. 12 and 13. *Town Planning, Past, Present and Possible*, by Inigo Triggs: Nos. 15, 20, 25 and 26. *History of the English House*, by Nathaniel Lloyd: No. 21. *L'Hôtel Particulier*, by Auguste Choisy: No. 22. *The Architecture Record*: No. 23. *Kultbauten des Islams*, by Höver: No. 24.

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