THE ARCHITECTURAL REVIEW

A Magazine of Architecture & Decoration

Incorporating
THE
CRAFTSMANSHIP
SUPPLEMENT

Two Shillings and Sixpence Net.

9 Queen Anne's Gate. Westminster. S.W.1.

Vol. LXXVI September 1934 No. 454

THE
ARCHITECTURAL REVIEW
A Magazine of Architecture & Decoration

Vol. LXXVI, No. 454 — *September* 1934

CONTENTS

Plates

Articles, photographs, or drawings sent with a view to publication will be carefully considered, but the Proprietors will not undertake responsibility or loss or damage. All photographs intended for reproduction should, preferably, be printed on albumenized silver paper.

All articles and illustrations should bear the name and address of the sender, and postage should be sent to cover their return.

The Editor disclaims responsibility for statements made or opinions expressed in any article to which the author's name is attached, the responsibility for such statements or opinions resting with the author.

All communications on Editorial matters should be addressed to the Editor, THE ARCHITECTURAL REVIEW, *9 Queen Anne's Gate, Westminster, S.W.1.*

Prepaid Subscription Rates

United Kingdom, £1 5 0 per annum, post free. U.S.A., $8.00 per annum, post free. Elsewhere Abroad, £1 5 0 per annum, post free. Cheques and Postal Orders should be made payable to THE ARCHITECTURAL PRESS, LTD., *and crossed Westminster Bank, Caxton House Branch.*

Subscribers to THE ARCHITECTURAL REVIEW *can have their volumes bound complete with Index, in cloth cases, at a cost of 10s. each, or cases can be supplied separately at 4s. 6d. each.*

An index is issued every six months, covering the months of January to June and July to December, and can be obtained, without charge, on application to the Publishers, 9 Queen Anne's Gate, Westminster, S.W.1.

THE ARCHITECTURAL PRESS, 9 Queen Anne's Gate, Westminster, S.W.1

Telephone: 9212-7 Victoria (6 lines)

Telegrams: "Buildable, Parl, London."

M. O. DELL AND H. L. WAINWRIGHT

Greek Idyll. The west loggia and south front of "Joldwynds," Holmbury St. Mary, Surrey. This house will be illustrated in the October issue of the REVIEW. *Architect:* Oliver Hill.

Thoughts on the Function of the Building Exhibition

By Ian Jeffcott

[Architect to the Ideal Home Exhibition]

During the past few years the influence of architects on all the commercial arts has become, both directly and indirectly, too obvious for comment.

The exhibition field is perhaps the most important in commercial art today, and is certainly the most potential to the architect. In addition to the very few exhibitions which are completely controlled and designed by one architect, one sees more and more, in all parts of the country, stands and displays which show the unmistakable individuality and taste of the professional designer.

The majority of exhibitors at the Building Exhibition at Olympia work every day in close touch with architects, and understand the value of the trained mind in idea and expression. These for some years have naturally employed architects to design their exhibits, and the success of this practice has caused more and more firms to follow suit; so that now one feels at Olympia in September a friendly and practical atmosphere growing between the manufacturers and the architects. What the Building Centre in Bond Street is permanently doing for the building trades, this exhibition every two years is able to do for architects. All this is as it should be, but much more remains to be done, and should be done as soon as possible. The advance as I see it should come from the organizers, for, as I have said, many of the individual exhibitors have demonstrated in their displays their willingness to co-operate with architects. It is up to the organizers to co-ordinate these live impulses, and plan for the future to give their exhibition the prestige it deserves (in fact, has earned), and to increase its power with the ultimate customer of building materials—the public.

I envision the Building Exhibition of the future as a national institution, expressing in its general and particular design the accomplished fact that Britain is not behind other countries in great designing, as she has never been in fine building. Let Olympia symbolize the building world outside its doors; let it be an expression that a new association of Building and Architecture is accomplished after the painful separation of the last 100 years.

This, I believe, can be done, and also that the time for reorganization and extension of function is set by the present revival in building, and also by the better quality of architectural design, both fine and applied.

To my mind the first step to be taken is for the organizers of the exhibition to appoint a controlling architect. In particular, his functions would be different from those of Mr. Joseph Emberton, F.R.I.B.A., in the Advertising Exhibition, or of myself for the *Daily Mail* in the Ideal Home Exhibition. In general, however, they would be the same; that is, the control of the planning, and the co-ordination of the exhibits to create an atmosphere of order, and a general expression of the aims, ideals and status of the building trades in England.

I am not sure if nowadays it is necessary to show proof that a co-ordinated exhibition is a better proposition to organizers than the haphazard bazaar, that is the British Industries Fair, or even the half and half attempt at amateur co-ordination (by means of stock motifs and one colour), that is the Radio Show; but I can assure anyone who is still in doubt that the experiment bravely tried eight years ago by the *Daily Mail* and the late Mr. Douglas Tanner, F.R.I.B.A., has proved an unqualified success to the organizers, and shown increased trade to exhibitors in giving, to mention but one point, a real instead of a false value to the goods displayed. At other places where the experiment has been tried, in small or in big ways, the result has justified continuation.

The problem of the Building Exhibition is perhaps unique, for the stands in many and important cases are themselves constructed of the materials to be shown; in other words, the exhibit is the stand; bricks, tiles, scaffolding and so on. Spreading such exhibits about the hall more or less haphazardly, sets the problem of discord in scale: for instance, an exterior design of brick next to an interior design of three-ply wood. Simple surely it would be to group the main sections and link them, almost as open-air pavilions, subdivided into stand areas more unified than they have been in the past. This would change the present plan of gangways, which I think could anyway be reconsidered with advantage; gangways between the above groups of stands could be slightly wider than others, while the heights of stands in each group or pavilion could be regulated by the controlling architect, according to the general form of his main scheme. This grouping would, of course, have to be founded on a very carefully thought out layout, based on the sum of experience of exhibitors in former years; but it could be done with much advantage to general appearance, and also, by the way, would help very much in finding the position of particular firms.

The groups of stands could be co-ordinated in themselves by using openwork frames of—shall we say—metal tubes (a growing fashion in exhibition work), coloured, perhaps, for different sections; it could be in the form of a high scaffolded pergola or unifying frame, which could be used by the controlling architect to help solve the problem of scale, always a present difficulty in Olympia—particularly so with this exhibition. It, or something of the kind, could be the foundation of the general decorations of the hall. The keynote so set, of tubes or whatever else it might be, could also be

carried to the wall stands and the under gallery stands, giving unity and rhythm, without encroaching on individuality.

To give my own reason for the necessity for some such scheme as this, I will touch on a personal criticism of certain stands in the past, designed by architects for this exhibition. The architects have been given an area, decided by the organizer and exhibitor together, and a problem set by the exhibitor. The resulting design, as a design, we will take as always being first class, but in the majority of cases it has been anything from second to fifth class in its relations to the adjoining stand, the general hall decorations, and to various limited viewpoints. These have either not been, or not been able to be considered. Hence a beautiful brick summer house designed against a background of high trees and overlooking the downs, to be seen from about a hundred yards away, cannot register against a background of gas fires overlooking the crowd round the Addison Road bar from 4 ft. 6 in. away. The bricks are the same in each case, but it would be well if this potential fallacy in the principles of display were more realized by the individual designers, under the control of the exhibiting architect, to further the commercial good of the exhibitor.

I am aware that I am suggesting theoretical principles and technical laws for exhibition work with its changing scale and restricted viewpoints, but, well applied, I see no reason why these should not be part of the architect's contribution to commerce in exchange for commerce's recognition of his own value to itself.

From these particulars, let me dare to enter the bigger field of policy. I would put in a plea to the organizers of this exhibition, and also to the building manufacturers to increase the scope of their show. There is no doubt in my mind that it can and should have the power in its own field that the Motor Show, the British Industries Fair, and the *Daily Mail* Ideal Home Exhibition have in theirs. At the moment it has not, and for two main reasons:—first, the public is not sufficiently induced to attend; the public is eventually the final customer of all branches of building material, and therefore potentially interested in all processes. Times could be set aside exclusively for the visits of trade buyers, with three hours, four hours, or however many it was decided in which the public *en masse* could be attracted to attend during the late afternoon or evening. There is intrinsically very much more interest to the general public in the Building Show than there is, let us say, in the Advertising Exhibition which does appeal to the public. Expenses for increased times of opening, and the cost of incidental matters, such as extra publicity and organization could be repaid, probably with interest, by increased gate receipts. The result would tend to raise prestige, spread knowledge, and foster interest in good building, fitting materials, and fine design in whatever sphere; so it would add to the tone and taste of life as civilization has made us live it.

The second reason, which in my opinion has prevented the Building Exhibition from becoming the institution which I foresee it could be, is its limitation in appeal to members of the trade itself.

The technical field that must be covered before a large building, factory, or a house is ready for furnishing or occupation is tremendous. In the same way that I want the work of the individual architect represented in the exhibition, I would like that of the surveyor not to be forgotten. Again, not only can paints be shown, but also the brushes and the uses of them, which give so many different effects in new schemes of decoration. I would like the chemistry of building merchandise and the physics of structural materials to be expressed practically, and at the same time decoratively (here may be an idea for the general exhibition motif). I would like extensive photographs of good and recent work in comparison, where such applies, with the historical methods of the past. I would like the present position and future of town planning, slum clearance,* both very much in the public eye at the moment, both very desirable to the architect, and most necessary to the builders, to be expressed generally and in detailed application; this last worked out from the display point of view might well give the exhibition a power resulting in much publicity prestige. In brief, I would like the Building Exhibition to express the science and art of building from the first understanding and dealing with a site to the time when the decorator has gone and the builder takes down his name board. To give in its own way in exhibition form before this point what the Ideal Home Exhibition gives after it; to make not a selective trade bazaar, but a general institution expressive of Building, the Master trade, walking hand in hand with Architecture, the Mistress Art.

In conclusion, I would repeat that the organizer having decided his idea (in this case I would like to call it an ideal), and discovered the means he has for its fulfillment, should employ an architect to coordinate the work of the specialized group of designers. Thus commercial appeal, open market virility, combined with the faith of the organizers and the influence of the Building Trade could express for their own and everyone else's good the renewed prosperity in Building, and the present healthy state of English architecture. That it pays to advertise has long been an axiom: that it pays to exhibit is now recognized as one of the most valuable ways of advertising, which leads to the platitude of what is worth doing is worth doing well. The Building Exhibition in the past has been valuable; in the future may it be beautiful as well.

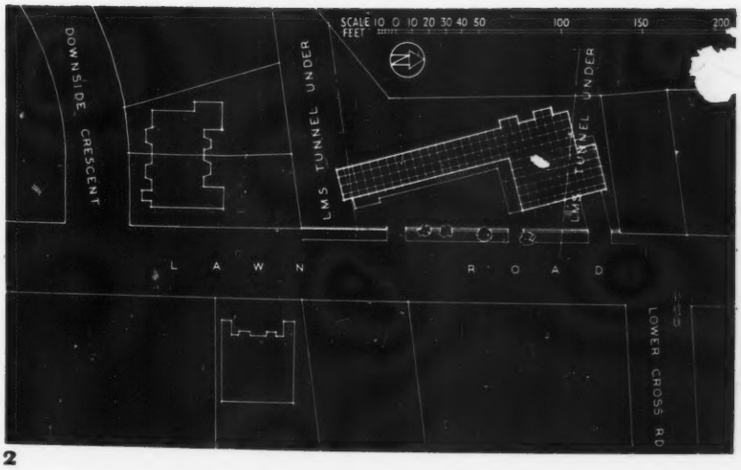
[* As we go to press the news is published that slum clearance *will* be a feature of the Exhibition. A London slum alley is to be re-erected and form the entrance to the "New Homes for Old" exhibit.—ED.]

The Building Exhibition of 1932. Reproduced by courtesy of H. R. G. Montgomery, Esq.

MODERN FLATS AT HAMPSTEAD

WELLS COATES • ARCHITECT

1 JOHN HAVINDEN

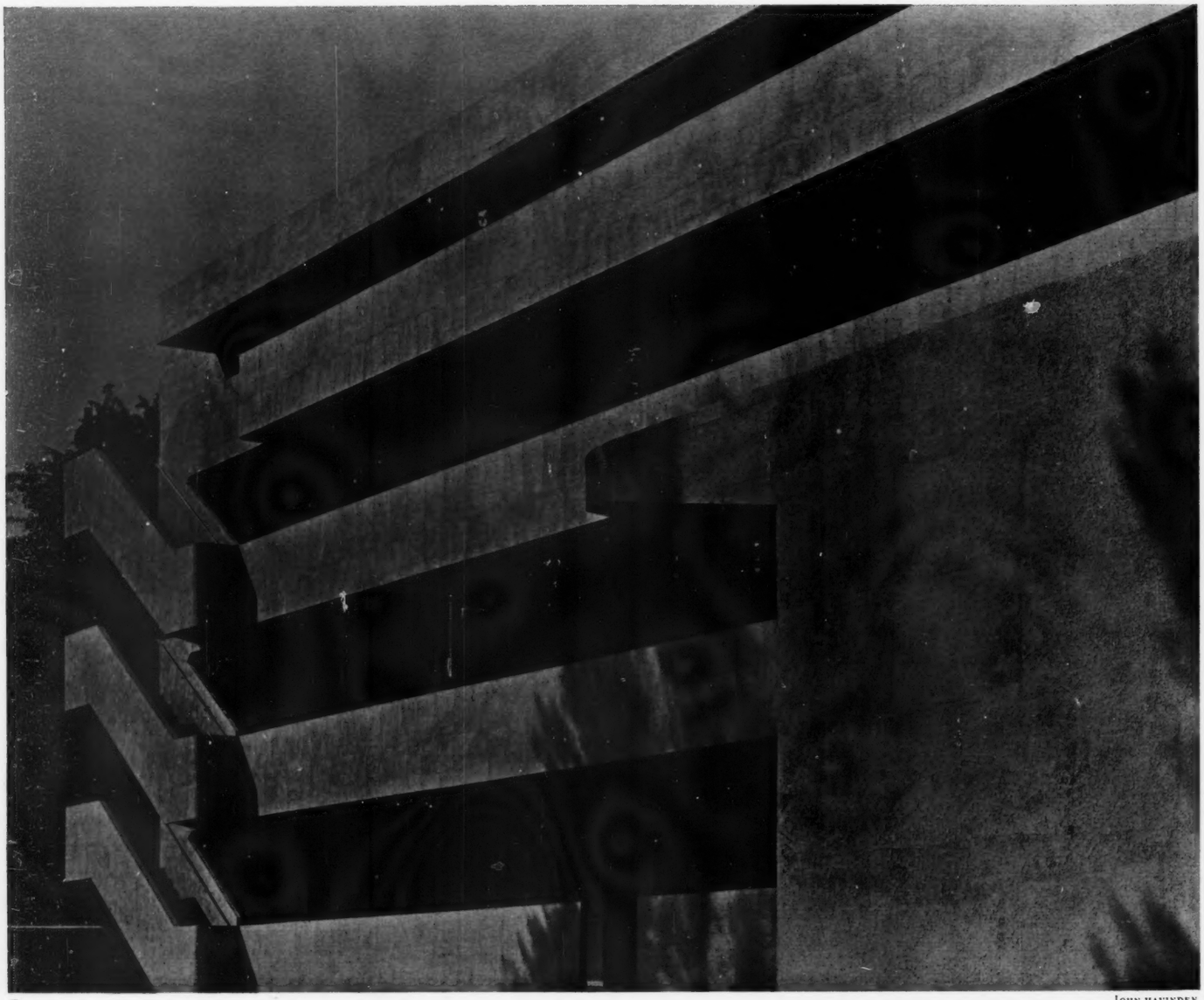


2

These flats are the first-fruits of the project of Messrs. Isokon for providing living places which will not be obsolete in 1950. They are situated in Lawn Road, Hampstead, behind Belsize Park Tube Station. The four-storey block was swung on the site for three reasons: to make a maximum use of the site between the two railway tunnels under; to give the living-rooms a south-west aspect; and to provide a drive-in for cars. The one-storey structure forming the garage for ten cars is actually built over the tunnel, further storeys on this area being restricted by the authorities. Twenty-two of the flats are of the "Minimum" type exhibited by Mr. Wells Coates at the British Industrial Art Exhibition at Dorland Hall in 1933. At the south end are four "double" flats, with rooms divided by sliding birch-plywood faced

1. The south-east front. 2. The block plan.

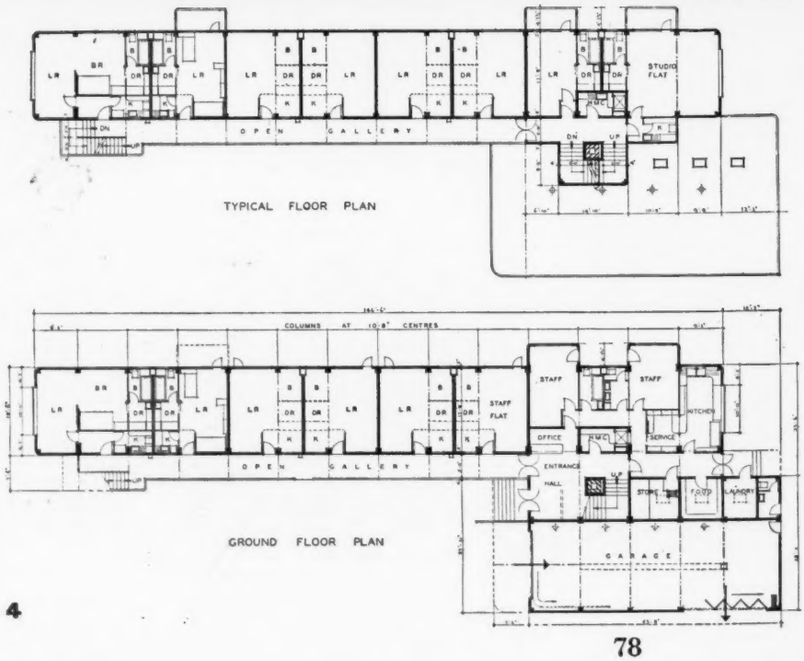
MODERN FLATS AT



3

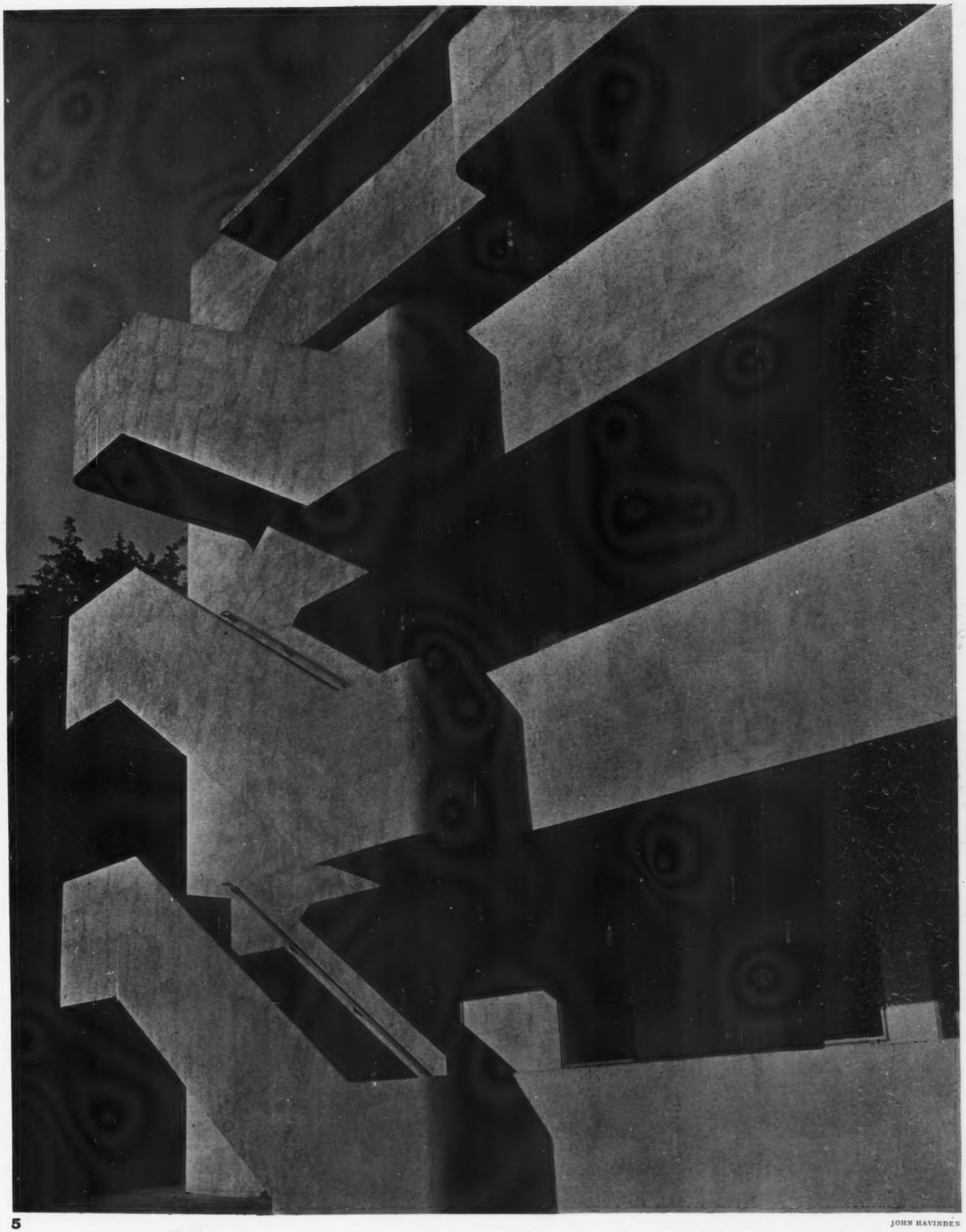
JOHN HAVINDEN

screens, and at the north end, over the main kitchen and staff quarters on the ground floor, are three studio flats, with large north windows, and also balconied windows to the south-west. On the flat roof is one large flat, with a self-contained flat for children adjoining. Constructionally, the flats were built in reinforced concrete with tile floors, the walls being 4 in. thick and insulated internally with 1 in. of compressed cork slabs cast into the wall as internal face of shuttering, and plastered internally. The external finish consists of a two-coat waterproofed and tinted cement wash applied direct to the untreated face of the concrete as left from the standard-sized metal-faced external shuttering. Partitions between flats are in two skins of pumice concrete blocks, with an air-space between and interior partitions in patent lathing plastered to a finished thickness of 2 in. The floors are covered with a pumice-aggregate screed, over which patent linolike flooring in special tints has been laid. Conducted sound has been reduced to a minimum.



4

3 and **5.** Detail views of the cantilevered open galleries and the open cantilevered "escape" staircase. **4.** Plans of the ground floor and of a typical upper floor showing the "double" flats at the south end.

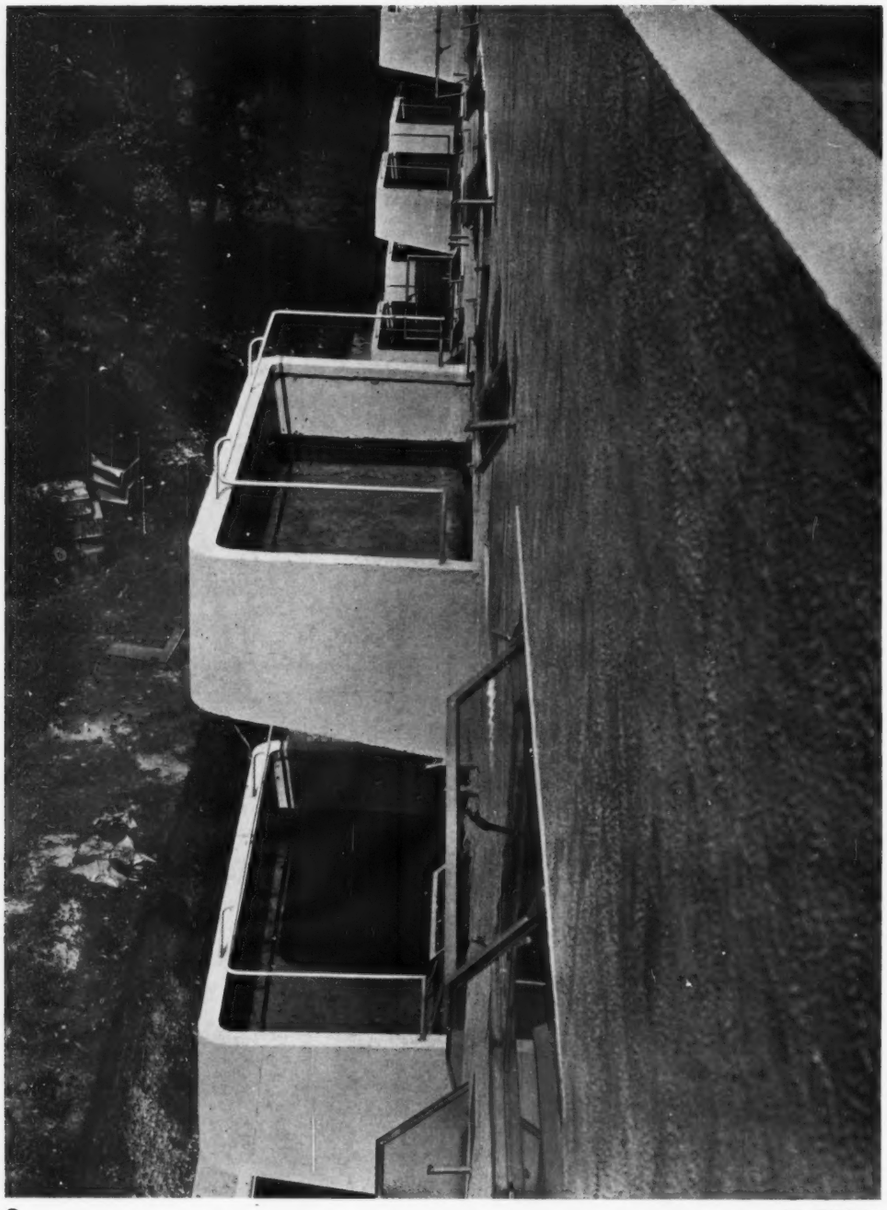


5

JOHN HAVINDEN

Most of the flats are entered from the cantilevered open galleries, which are connected by an enclosed staircase in a tower-like structure with vertical glazing at the north end, and an open cantilevered "escape" staircase at the south end, linking and terminating the horizontal effect of the galleries.

M O D E R N F L A T S A T



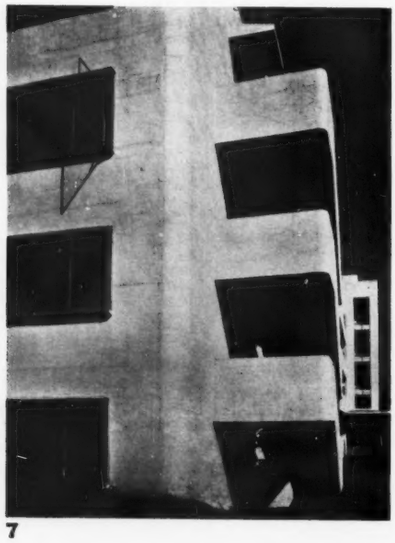
6

JOHN HAVINDEN

All essential furniture is built in, so that the tenant need take with him only his " personal " belongings. The rents are from £96 to £170, including all the equipment : sliding table, divan with spring mattress and overlay, radiator, floor covering, light fittings, wash-basin with mirror and glass shelf, hanging cupboard with long mirror ; dressing table with drawers and cupboards under ; electric cooker, refrigerator, sink and draining board, refuse bucket and ample cupboard space for a one-room flat dweller—as well as a minimum of services, including constant hot water and central heating, cleaning and dusting, bed-making, shoe-cleaning, window-cleaning and collection of refuse.

The equipment is made up of simple units of plywood and laminated board, sometimes painted, sometimes left a wood finish dull polished. The plan is externalized with directness and simplicity, showing that architecture has found an exponent not content to be influenced by modern forms and systems of construction merely, but using the logic of plan and order as a straight path to design.

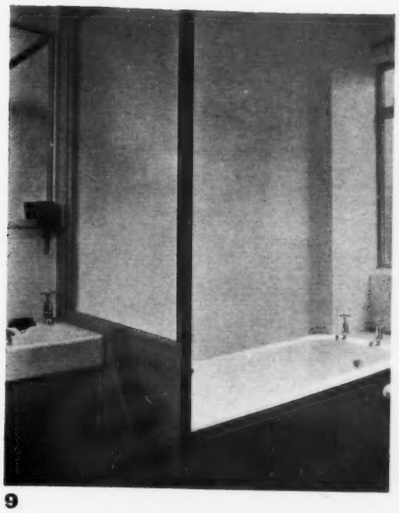
6. Looking down on the open cantilevered balconies on the south-west front. **7.** A view from the south. **8.** A view along one of the open galleries on the south-east front. **9.** A dressing room to the bathroom. **10.** A kitchenette. **11.** The " minimum " flat exhibited by Mr. Wells Coates at the British Exhibition of Industrial Art at Dorland Hall in 1933. **12.** Section and typical plan of the " minimum " flats at Lawn Road.



7

8

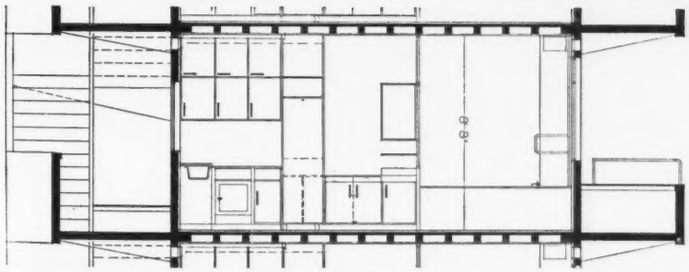
H A M P S T E A D

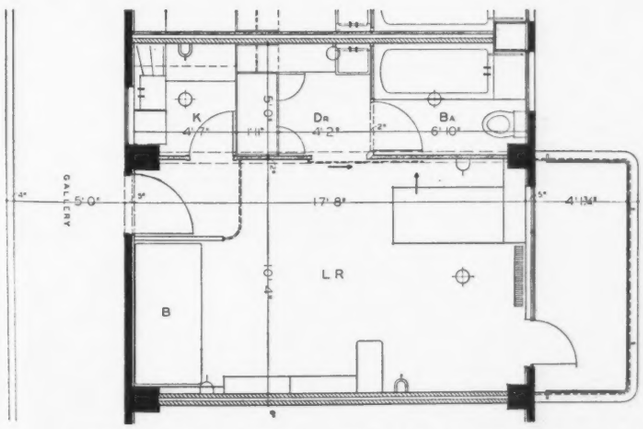


9

10

11



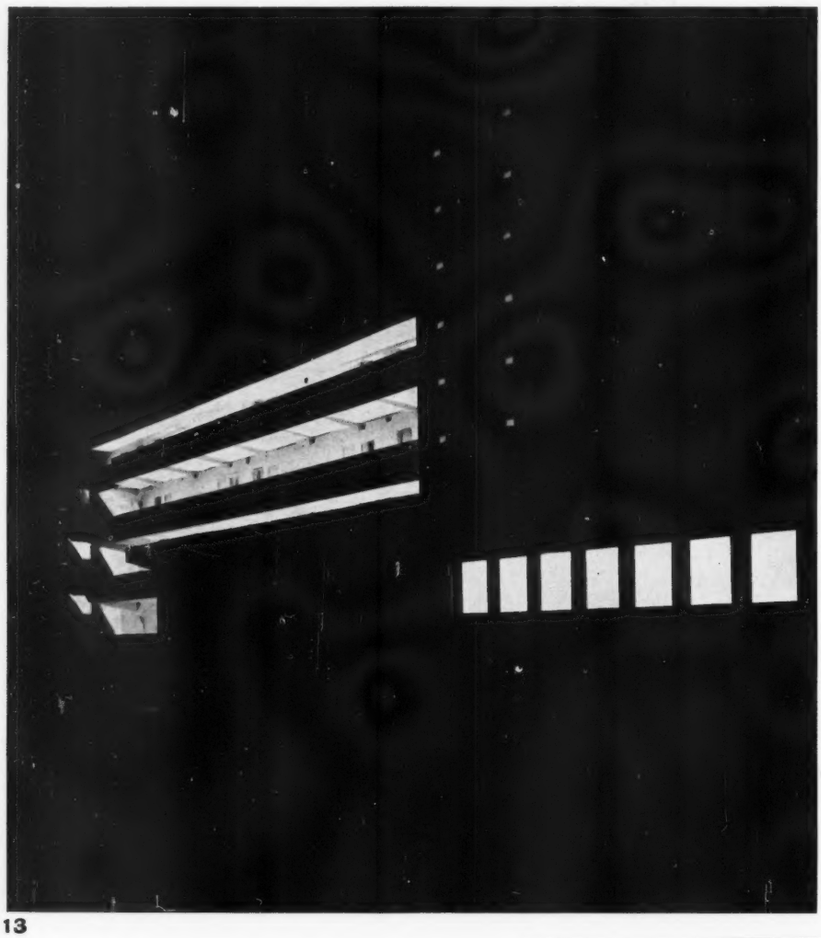


TYPICAL PLAN & SECTION ▪ MINIMUM FLAT ▪ LAWN ROAD

SCALE 1 0 1 2 3 4 5 6 7 8 9 10 FEET

REINFORCED CONCRETE PUMICE CONCRETE BRICANION

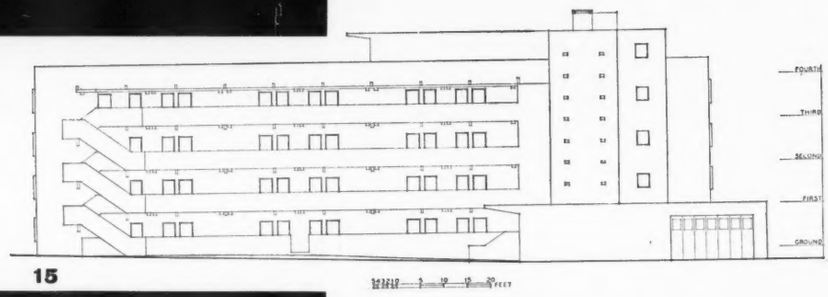
12



13

The open galleries are illuminated by bulk-head-type fittings fixed to the inside face of the parapet walls. The photographs were taken without added footlights.

13 and **14.** Night views from north and south ends of the south-east front. **15.** The elevation to Lawn Road.



15

14

HERBERT FELTON

Scenario for a Human Drama

In *A History of the English House*, the monograph by Nathaniel Lloyd, the period covered is from primitive times up to the Regency. Mr. F. R. S. Yorke's recently published book, *The Modern House*, deals entirely with the houses of today. Between the houses covered by these two books there is a gap of a century which it is the purpose of the present series of articles to bridge.

Mr. Shand who, it should be explained, is working *backwards*, has divided the century into three periods: from Gropius to Behrens, from Behrens to Ruskin, and from Ruskin to Soane. The immediate background of the first period was covered in his article last month.

The present article, though devoted entirely to the work of Professor Peter Behrens, the dominating personality of his time, also deals with the opening phase of the second period.

Peter Behrens

III* PETER BEHRENS

By P. Morton Shand

"Art ought no longer to be considered as one's own private affair, a mistress to be served as the individual artist's whim or fancy takes him. We do not want an æsthetic that derives its canons from romantic day-dreams, but one which bases its authority on the realities of life. But neither do we want a technology cultivated as an end in itself which goes its own sweet way, but one manifesting its solidarity with the artistic impulses of our age . . .

"I believe in type-art, which for me represents the highest goal in every branch of artistic activity. Type-art is the ripest and most intelligent solution of the problem presented by the design of a given object, since it is that which frees it from everything not strictly germane to its purpose. An artist's best designs will always constitute types. We see the proof of this in the standardised ground-plans and elevations which the domestic architecture of so many cities evinces."

PETER BEHRENS

One of the disadvantages of a retrospective survey is that to render the from-to aspect of a phase of development comprehensible in terms of what was only gradually, haltingly, incompletely, or half-unwittingly achieved in it, it is often necessary to march and countermarch over the same ground: a rather disorganized retreat preceding a more orderly advance. Thus it is hardly possible to avoid an outline of Behrens's career in normal chronological sequence. For this alone will enable us to understand how, by 1909, he had come to evince the eminently unacademic attitude to a still eminently academic profession that his "engineering" use of concrete, steel, and glass proclaimed; and the way in which his own progressive evolution from then onwards heralded so many of the characteristics subsequently manifested by modern architecture.

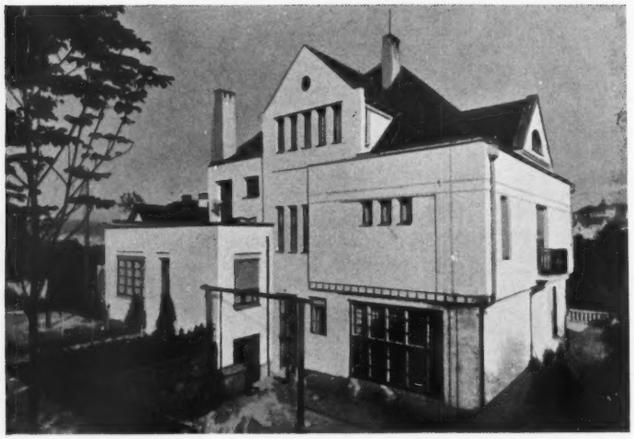
Peter Behrens was born in 1868 in the then Free Hansa Town of Hamburg, where people have always been independent enough to prefer thinking and shifting for themselves to obedience to military discipline. Like Corbusier, he started as a painter; but unlike that ascetic-visaged Swiss this towering, full-blooded North German neither passed through a school of architecture nor served an apprenticeship to a master builder. That is the first important thing about him. But if he never had what would now be called a "recognized" architectural training, he duly studied art in Karlsruhe, Düsseldorf, and Munich, the three traditional German *Kunststädte*. In 1891 he settled in Munich, where he worked and exhibited as a painter and craftsman until 1899: a period to which he probably owes much of his universality as a designer. Even since the war he has been kept busy designing things as diverse as tea-services for the Prussian State Porcelain Manufactory, letter-boxes for the German Post Office, ecclesiastical vestments, a large monastery, churches, factories, slip-ways, bridges, stations, warehouses, huge administrative buildings for large industrial concerns, town halls, buildings for exhibitions, the tomb of the first German President, the replanning of one of Berlin's most important traffic centres, villas, a number of *Siedlungen*, blocks of tenements for the municipality of Vienna, new types of communal dwellings, and Mr. Bassett-Lowke's house at Northampton. In 1919 the National Constituent Assembly of Weimar invited him to collaborate in framing certain sections of the Republican Constitution of the Reich; and in 1922 he was chosen to succeed Otto Wagner as head of the Vienna Academy of Fine Arts where he still directs his own *Meisterschule* of architecture.

This list would be quite out of place here were it not that from 1907 onwards Behrens's primary significance was as a protagonist and exemplifier of standardized design in a steadily widening field. Yet another of his activities must be mentioned—and emphasized—in this connection, because handwriting and printing are necessarily based on standard models that have to be simple enough to be easily assimilable and generally acceptable. In 1902 he took up the reform of the spidery German calligraphy, which culminated in the latinized *Behrens Kursivschrift* (1907). This stimulated his interest in type-faces, and led to the cutting of the elegant *Behrens Antiqua* fount (1908) in which the name **PETER BEHRENS** forming the title of the present article is set.

In 1899 the Grand-Duke Ernst Ludwig of Hesse, the maecenas of modern German art, invited Behrens to Darmstadt, where the Austrian architect Josef Maria Olbrich (1867–1908), the most gifted and versatile leader of the *Jugendstil*, was beginning to lay out the once famous *Künstlerkolonie* on the Mathildenhöhe, a height dominating the grand-ducal capital. Here Behrens built himself a house in 1901 (**2** in last issue). Though this was his first building, it revealed him as a master of that all but untranslatable thing the Germans call *Raumgestaltung* (the spatial design of rooms as opposed to the solid surfaces circumscribing them), of which there will be more to say when we come to Henri Van de Velde and the early English pioneers of "the dissolution of the wall." Behrens linked

*The first and second articles in this series were published in the July and August issues.

2



3

his rooms together as an organic, unstylistic unity in a far more forthright and uncompromising manner than Van de Velde had yet dared to. In some, generous and unorthodox fenestration was consciously used to produce an impression of extension into space beyond wall limits: a development he carried still further three years later in the corner living-room of a house at Wetter in the Ruhr, **2.** Though too tentative externally to rank as a landmark in domestic design, the Darmstadt house at least marks a break away from historical forms. It is more important as an attempt to use a synthesis of shapes directly dictated by comfort, convenience and function as an anticipation of a new, and more reasonable, kind of home life, at once simpler and more complex than any then existing. This design encouraged other architects to take increasing liberties with the respectable solidity of walls. Three other pre-war country houses of Behrens must be mentioned: the very English-looking Haus Obenauer at Saarbrücken (1905), with its plain whitewashed walls and almost entire elimination of detail, **3**; and two adjacent houses at Hagen (1908 and 1910) that have more hesitant, if definitely more transitional elevations (**9** in last issue).

From 1903 till 1907 Behrens was director of the Düsseldorf School of Art. To this period belong the pavilions for the Oldenburg Exhibition of 1905, and the Delstern Crematorium at Hagen (1907); both of which were based on geometric schemes of proportion. In spite of Tuscan mannerisms, these severely cubic stucco designs are of considerable importance because they accelerated the process of relieving the saving verities of structure of the furuncular rash of "appropriate" ornamentation. None of his contemporaries felt the necessity for a drastic purge nearly so strongly as Behrens, and none applied it more resolutely to his own work. In so far as Behrens was influenced at this time by any other architect it was by Carl Friedrich Schinkel, Soane's contemporary and peer, the most austere of all the early nineteenth-century classicists.

Behrens realized very early that the machine was a powerful revolutionary idea as well as an inexorable physical fact. He saw in it a new intellectual principle which had already made an irreparable breach in the millenary tradition of manual execution, and would inevitably soon begin to transform the atavistic formalism of his age. If Behrens has been called a Modernist Romantic—and his brief Expressionist phase (Höchst, 1920, and the Dombauhütte Chapel at the Munich Exhibition of 1922), lends some colour to this charge—it is because he refuses to admit that the romantic element in architecture has suffered a final eclipse. This element he defines as the expression born of a conscious struggle of the coming with the existent: or in other words an incessant readjustment of the equipoise between form and function. To him we owe the *Deutscher Werkbund's* slogan of "fitness for purpose" (*Zweckmässigkeit*). But he contemptuously rejects the dogma of *Sachlichkeit* (of which the rough and unprecise, though nearest possible, English equivalent is "functionalism as be-all and end-all") as the abasement of design from the sovereignty of a full-fledged vehicle of expression to the bare bones of the primitive grammar on which that expression is based. His ultimate philosophy is that just as nature is nothing without culture, or culture without nature, so architecture remains a negation unless it achieves a fusion of culture and construction. "Only problems interest me. I leave obvious solutions to others," is the quietly confident utterance of a man of singular personal modesty, which shows how much Behrens was inspired by the achievements of nineteenth-century engineers.

Though Friedrich Naumann was the intellectual pioneer of the Industrialization of Building, Behrens was its first practical sponsor. Naumann pointed out that the chief reason why building remained the only important decentralized industry, was that it did not rely on a centralized power supply: a reason that has lost its force since dependence on the fixity of local steam-power units has been superseded by high-tension cable networks for the transmission of electric current. It was in 1910 that Behrens first publicly advocated the Industrialization of Building, after he had previously tried to make the directors of the A.E.G. realize the significance of rationalizing construction as a first step towards a planned economy of industry. Such an idea, like Willett's contemporary campaign for daylight saving, was too much in advance of the spirit of his age. Naturally it was derided as impracticable. But if Behrens was unable to open the eyes of such a remarkable man as Rathenau to its implications, Naumann before him had encountered the same incomprehension in

2. The corner living room at a house at Wetter in the Ruhr (1904). 3. The Obenauer House at Saarbrücken (1905).

4

5

leading German industrialists like Siemens, Krupp and Ballin.

Baffled in the major field, Behrens soon succeeded triumphantly in a minor. The administrative headquarters of the Mannesmann Tube Works in Düsseldorf (1911) **4**, was far more than the European prototype of the standardized office block. It was the first practical exemplar of its kind, a model which has been followed with very slight modifications ever since. In planning it as a square steel-framed structure, Behrens used girders of standardized lengths and sections throughout, so that two or more of the normed cells into which the floors were subdivided could be easily thrown into one. The dimensions of the standard office unit were dictated by the space necessary for a team of six clerks to work in comfort at a writing-table, a typewriter stand, and a filing-cabinet. Its corners were defined by four 40 cms. deep stanchions, spaced so as to provide a 90.5 cms. breadth of window, the height of which was adjusted to light a floor area of 8 sq. metres. Externally this (then) huge building represents a rationalization of the slender verticality of alternating piers and windows first adopted by Messel in the Wertheim Store in Berlin, shorn of its Gothic reminiscences.

Behrens next turned his attention to household equipment. In 1912 he exhibited the standardized furniture he had designed for minimum working-class dwellings at the Berlin *Gewerkschaftshaus*. This was a sufficiently remarkable event in itself. It proves that his work with the A.E.G. had had the effect of turning him into what we should call a "social" architect even before he began to embark on housing schemes. The excerpt from the manifesto read at the Session of the *Deutscher Werkbund* during the Cologne Exhibition of 1914* which heads this article shows how rapidly his views on the scope of standardization crystallized in the interval. They were hotly attacked by Van de Velde, whose extreme individualism scornfully rejected the conception of the norm-type as degrading the artist to an artisan.

Even today Behrens's first housing scheme at Lichtenberg (1915), of which only a small part was realized, is still regarded as a model lay-out. In the Henningsdorf *Siedlung* (1917), built for the A.E.G.'s workmen during the war, **5** and **6**, he carried the standardization of the three-room dwelling still further in long uniform rows of three-storied tenements of a single type. Owing to the shortage of bricks, Behrens used large normed blocks of pressed refuse-destructor clinker as an *ersatz* material. Both Lichtenberg and Henningsdorf evince the same rational type of axial planning with rectilinear streets which he had originally adopted in the Eppenhaus Garden Suburb at Hagen in 1908. In this he was in diametric opposition to the most advanced contemporary school of town-planning, which based its picturesque contours on Camillo Sitte's axiom (typified by the whole of *art nouveau*) that only curved lines are beautiful.

In 1918, when a chastened and impoverished world was ready to listen to any method for saving cost and time in housing construction, even if, like "The Industrialization of Building" it had only a theoretical basis, Behrens grimly returned to the charge. His essay "On Economical Building" (*Von Sparsamen Bauen*) postulated that speed and economy could be obtained in three separate ways: by rationalization of lay-out, by modernization of the technique of construction, and by the maximum substitution of communal for individual domestic services; and more concretely through:—

(A) A harmonious combination of *Flachbau* (rows of small houses, each with its own allotment garden) and *Hochbau* (multi-storied tenement blocks)—a combination which Gropius has never ceased to advocate—that would enable urban *Siedlungen* to become self-supporting on good, and therefore relatively dear, sites; and

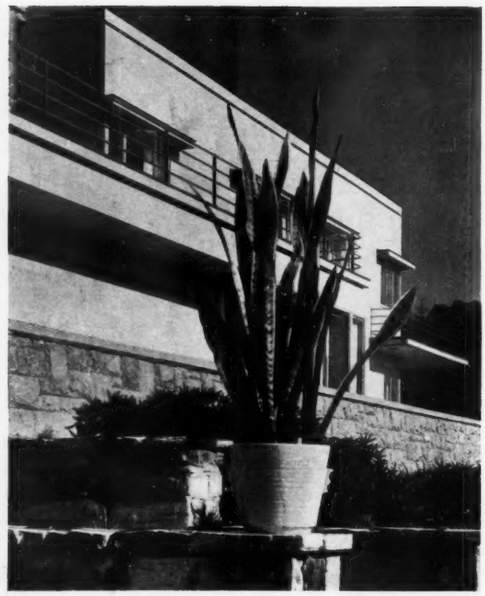
(B) The cheapening of building materials, structural parts, and fittings by far-reaching standardization and mechanical mass-production; together with the cheapening of construction by the most extensive possible use of machinery in assembly and erection.

At Praunheim, the first *Siedlung* built at Frankfort-on-Main after the war, Ernst May used precast concrete slab sections and semi-factory methods of assembly. But in the next, at Niederrad, he was obliged to revert to traditional manual brick-laying. The problem of the pre-fabricated house has preoccupied all the leaders of the new architecture, more particularly Gropius and

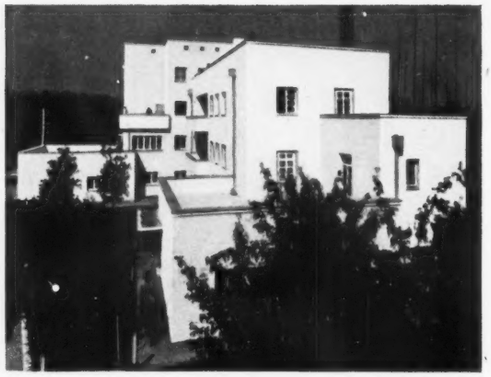
4. The first modern office building. The Administrative Headquarters of the Mannesmann Tube Company, Düsseldorf (1911). 5. The prototype of the normed minimum dwelling. Part of the Henningsdorf Siedlung, Berlin, built during the war with clinker blocks for the A. E. G.'s employees (1917).

* *Note.*—This exhibition was organized by the *Deutscher Werkbund*, formed in 1907, of which Behrens was one of the founders.

6



8



7

Corbusier; and though not yet more than half mastered it is clearly only a question of time before it will be as completely and satisfactorily solved as the mass-production of motor-cars. Meanwhile it continues to exercise a growing, almost a paramount, influence on modern architects. In America a mass-produced insulated steel house is already being advertised—though if it comes to that the Japanese standardized timber-framed, paper-walled house (unfortunately only habitable by the Japanese themselves) has anticipated it by several centuries.

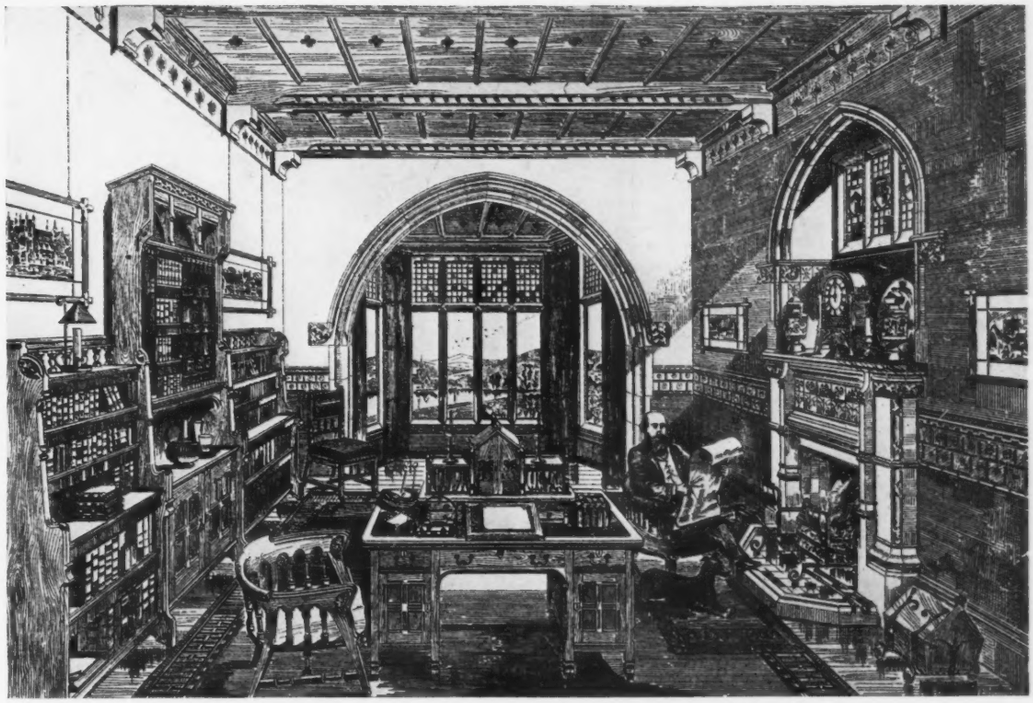
The next stage in Behrens's development as a social architect was the upshot of a project for housing industrial workers at Forst in the Lausitz. Here the problem which he set himself was to re-identify a mining population's *dopolavoro* with the husbandry it had till very recently practised. He planned this *Siedlung* as a farm suburb with communal market-gardens, tillage, pasturage, and agricultural machinery; and its own co-operative organization for selling produce. A rather similar scheme for a co-operative housing society in an industrial area of Silesia led to Behrens's "double gardens housing plan" (1920): a structural telescoping of back-to-back houses into rows of two-storied dwellings, subdivided into four flats, each of which overlooks and is entered from its own garden. This plan-form was the result of interrogating the wives of prospective tenants; and discovering that they demanded an absence of stairs within their dwellings, a minimum number to climb to them; and gardens that could be seen from their windows and reached directly from their front doors.

The same year saw the design for an urban housing solution known as the *Terrassenhaus*. In plan this is a pyramidal combination of structurally united one-, two- and three-storied buildings arranged on either side of a central four-storied block; the roof of each of the two sections of intermediate height providing a roof garden for that one step above it. The ground floor has an ordinary garden, and the top floors share a roof garden with an area of 144 sq. metres. Though never carried out, this revolutionary design exercised a radical influence on subsequent housing developments. Nor must Behrens's block of flats in the *Weissenhofsiedlung*, at Stuttgart, **7**, be forgotten: the solitary example of the work of the older generation at that 1927 exhibition of "cultural Bolshevism." The house at Schlachtensee (1929) was illustrated in **1** of the last issue. Finally, in the house on the Taunus Mountains (1931), **8**, Behrens showed—as no one else except Miës van der Rohe has been able to, and then (Haus Tugendhat) on a far smaller scale—that the normed cubic idiom he had himself been predominantly responsible for evolving could be planned on the grand scale, and informed with that austere luxury which evokes a timelessly elegant modernity. Someone has described it as the first and last large country house to be built in the new architecture. Anyhow, it already stands empty, for the opulent Jewish family it was designed for has judged it best to flee from Germany.

6. The interior courtyard of a block of tenements in the Henningsdorf Siedlung, Berlin (1917). 7. Block of flats in the Weissenhof Siedlung, built for the Stuttgart Exhibition of 1927. 8. The house on the taunus Mountains from the garden terrace (1931).

COMPLETING THE CIRCLE

The living-room reverts to the communal hall of the mediæval house.

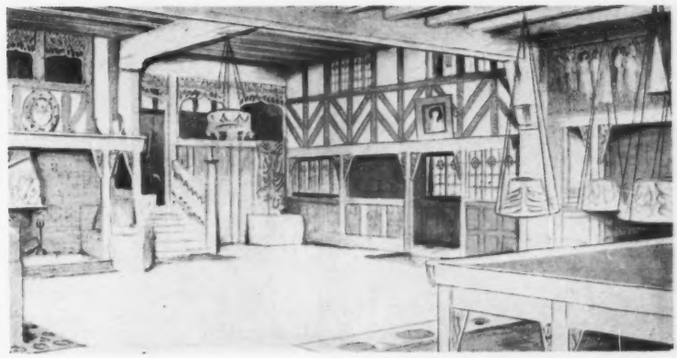


1

The fashion for having as many rooms in a house as possible has lasted for a great number of years. It has lasted from mediæval times until the present day—ever since the idea was first conceived of having a separate room for eating and a separate room for entertaining to take the place of the large communal hall of the mediæval house. It has taken a long time for the wheel to complete the circle and for the old idea to be reverted to of having one large room in place of many. Since the idea of dividing up the living space was first thought of, the number of rooms has increased until every activity has had to have its separate room at great cost to the labour of working the house. The plans of Elizabethan, Jacobean and Georgian houses show that little thought was given to the problems of service and economy of labour. The number of rooms rather than space, air, light and labour was in the mind of the planner. The system reached its worst phase in the reign of Victoria, when every house, even the smallest villa, besides having too many rooms, seems to have aimed at copying in miniature the elaborate state apartments of the Queen.

2

1, an illustration from *English Country Houses* by William Wilkinson, shows the current taste of the day for a "glittering profusion of pitch pine and mahogany" and for countless ornaments. **2** is a handsome state apartment at Buckingham Palace. To overcrowd the rooms of a palace was not so bad, but when it came to doing the same in the smallest villa, over-filled with pictures, ornaments and aspidistras, the result was ludicrous. A. W. Pugin once remarked that "a man who remains any length of time in a modern Gothic room and escapes being wounded by some if its minutiæ may consider himself extremely fortunate." A hint of the methods of today is to be found in the work of C. R. Mackintosh and M. H. Baillie Scott at the end of the last century. **3** is the hall of a house at Windermere by Baillie Scott, and although there is here a blending of Tudor and *art nouveau*, there is space and freedom. It is the first sign of open planning and the breakaway from Victorian tradition. The modern house having definitely taken this step is back where the mediæval house was, but it has the advantage over the mediæval house of having many appliances and inventions to serve it. The elasticity of the modern living-room is made possible by the working of the collapsible wall, the removable window, electricity and modern heating methods.

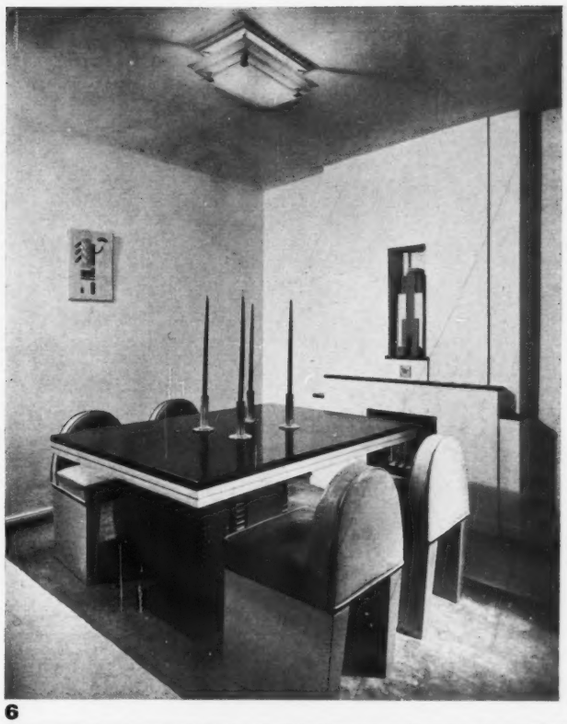


3

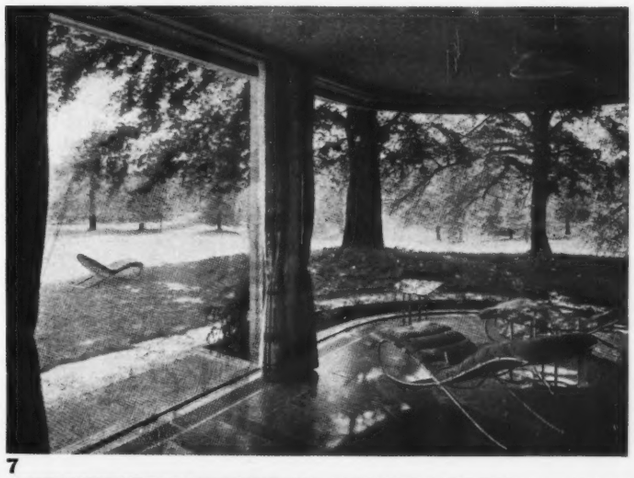
4

The gradual process of simplification affected the *decoration* as it affected the *plan*. **4**, a room in a flat at Chelsea Court, London, shows decorative simplification at work. There is space, and freedom of movement is possible. **5** shows still less regard for the conventions of the immediate past either in lay-cut or ornament. It is leading the way to a realization of the waste of keeping separated the refined drawing-room and dining-room—a room which is never used for more than two or three hours a day since the custom died out of gentlemen habitually drinking themselves under the table as they did a century ago (certainly a point in favour of having a room divided from the others). In **6**, a dining room in Chelsea, unconventional ornament is "applied" to a conventional type of lay-out which is not perhaps so satisfactory as where plan and decoration appear to serve one end, as in **7**, the living room at the house "K in O" in Germany, by Martin Elsaesser, where the living-space is extended to the garden. It is possible now to have a dining-room, drawing-room, lounge and library which can be separated or converted into one large room at will, and in the warm weather by throwing open the large window spaces, it can be still further enlarged—to infinitude, as it were.

5

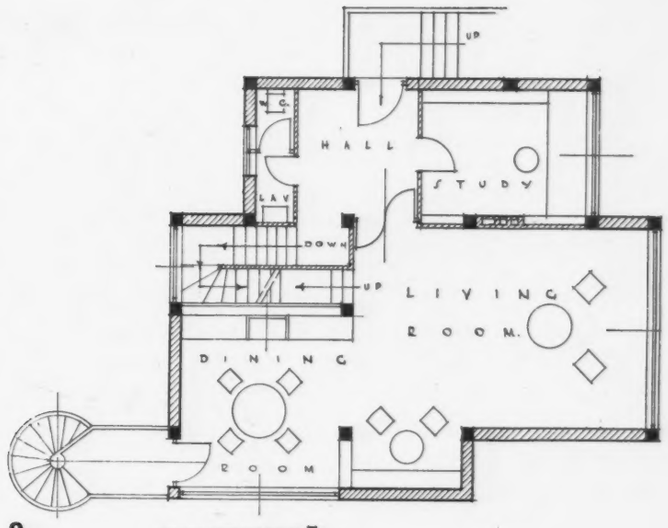


6

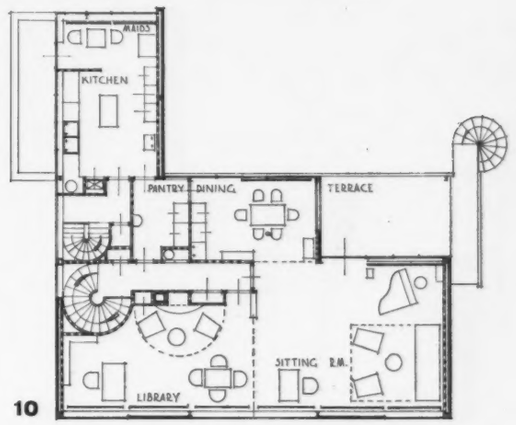


7

8

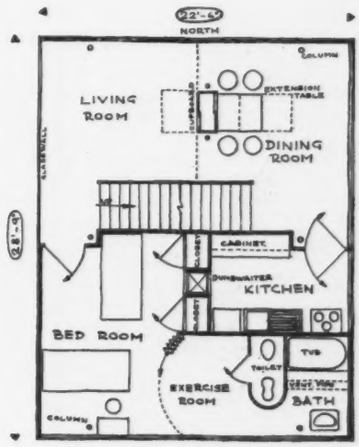


9



10

8. The living-room at Tugendhat Haus, Brünn, by Mies van der Rohe, shows a circular veneered screen forming the dining recess, and curtains are drawn across the large cantilevered glass wall. **9**, by Havlicek and Honzik, illustrates a good use of open planning. Double doors separate the hall from the living-room, beyond which is the dining recess. The living-room runs upwards through two floors. In **10**, at Sonneveld House, Rotterdam, Brinkman and Van der Vlugt have put the dining space into an arm of the living area, which can be divided into three separate rooms by collapsible rubber screens. **11**, a plan of Aluminaire House in America: the living-room takes up half of the first floor space, and one end is glazed from floor to ceiling.



11

Reclining Woman. Green Hornton Stone (92 cms.). 1930.

Henry Moore, Sculptor*

By J. M. Richards

In 1915 Gaudier-Brzeska wrote home from the trenches: "I have made an experiment. Two days ago I pinched from an enemy a Mauser rifle. Its heavy unwieldy shape swamped me with a powerful image of brutality. I was in doubt for a long time whether it pleased or displeased me. I found that I did not like it. I broke the butt off, and with my knife I carved in it a design, through which I tried to express a gentler order of feeling, which I preferred. But I will emphasize that my design *got its effect* (just as the gun had) from a very simple composition of lines and planes."

This quotation, I think, appropriately illustrates that subjective approach to sculpture which is a common quality, whatever the similarity or dissimilarity between their finished works, of both Gaudier-Brzeska and Henry Moore: it might be labelled the pragmatic approach, according to which the emotional idea that the work exists to convey has its primary source in the work's own independent existence rather than in any character induced by associated literary or organic conceptions. The finished works of Henry Moore and Gaudier-Brzeska have indeed very little in common—the former's sinuously plastic qualities are almost at the opposite pole of expression from the compact intensity of the latter, but the work of each is only a different personal expression of this same pragmatic approach: a common sense of the sculptural qualities inherent in organic objects; a common appreciation of the sculptural significance of shapes in themselves independent of their representational interest.

This severely sculptural attitude (that adjective when applied to sculpture has a pleonastic sound, but is by no means to be taken for granted) is reinforced in the case of Henry Moore by strict obedience to the material. For both of these sculptors their technique is not so much the means to an independent end as an integral part of it; but the carver finds in his material natural forms characteristic of its kind, while the modeller's material is amenable to almost any invention; so that in Henry Moore's work particularly, as a logical consequence of his philosophy, the ultimate expression not only has the material as its vehicle, but has its form always conditioned by it. The work of the artist becomes a kind of idealisation of matter in which the sculptural qualities are already inherent—an enunciation of what is relevant and elemental. Henry Moore's works, the satisfying shapes that he produces, seem consequently to have been made by a process of denudation or detrition, the selective process bearing a close relationship, improved by a more exact elimination of accidental influences, to the physical processes to which the same material is, under natural conditions, habitually subject.

This book, which is attractive in both price and format, contains thirty-six excellent photographs—excellent, that is to say, seeing the limited extent to which photographs of sculpture can be instructive—of Henry Moore's work, including some revealing pencil studies, and an introduction by Mr. Herbert Read in which he expounds in simple language the philosophy on which the works are based. It is notoriously difficult to explain the products of one art in the medium of another, even where, as in this case, the first art is illustrated by the introduction of a third—photography: the disappearance of many of the essential three-dimensional qualities (together with the oppor-

*HENRY MOORE. An appreciation by Herbert Read. With thirty-six plates. London: A. Zwemmer. Price 6s. net.

Mother and Child. Cumberland Alabaster (47cms.). 1931. In the collection of Jacob Epstein, Esq. The illustrations on pages 90 and 91, and on this plate, are reproduced from *Henry Moore.*

tunity of inspection from a mobile view-point) and of all the tactile qualities is bound to be a serious loss. Mr. Read, therefore, and the designers of the book, deserve congratulation that the works of art thus presented preserve their æsthetic appeal *as* works of art, and that his introduction does add to the actual as well as to the theoretical understanding of the sculptor's aims; and will to the enjoyment of this sculptor's achievements.

The authority of Henry Moore's work is unassailable. It speaks, even in photographs, for itself; so that Mr. Read has had no need for the rather defiant attitude he has been compelled to adopt in the past when acting as *compère* in other company. Instead, his essay is lucid and pertinent. His definition of the artist's share in the equilibrium that must be maintained between æsthetic determination and dictation by the material—so often a point of misapprehension by critics of modern sculpture—is particularly well set out. I would question his attribution of the almost exclusively anthropocentric interest of modern sculpture to our urban way of living. The work of the least urban peoples—the African negroes—concentrated equally on the human *motif*. Perhaps the explanation could be found in some more fundamental urge to formalize and idealize our own kind, that would naturally be common, as is for instance the conception of an anthropomorphic god, to all degrees of civilization. However, that is of minor importance to his argument. Other remarks of his, notably those on the present position of sculpture in general—or rather on its lack of position in active (as opposed to dilettante) society—are well worth repeating:

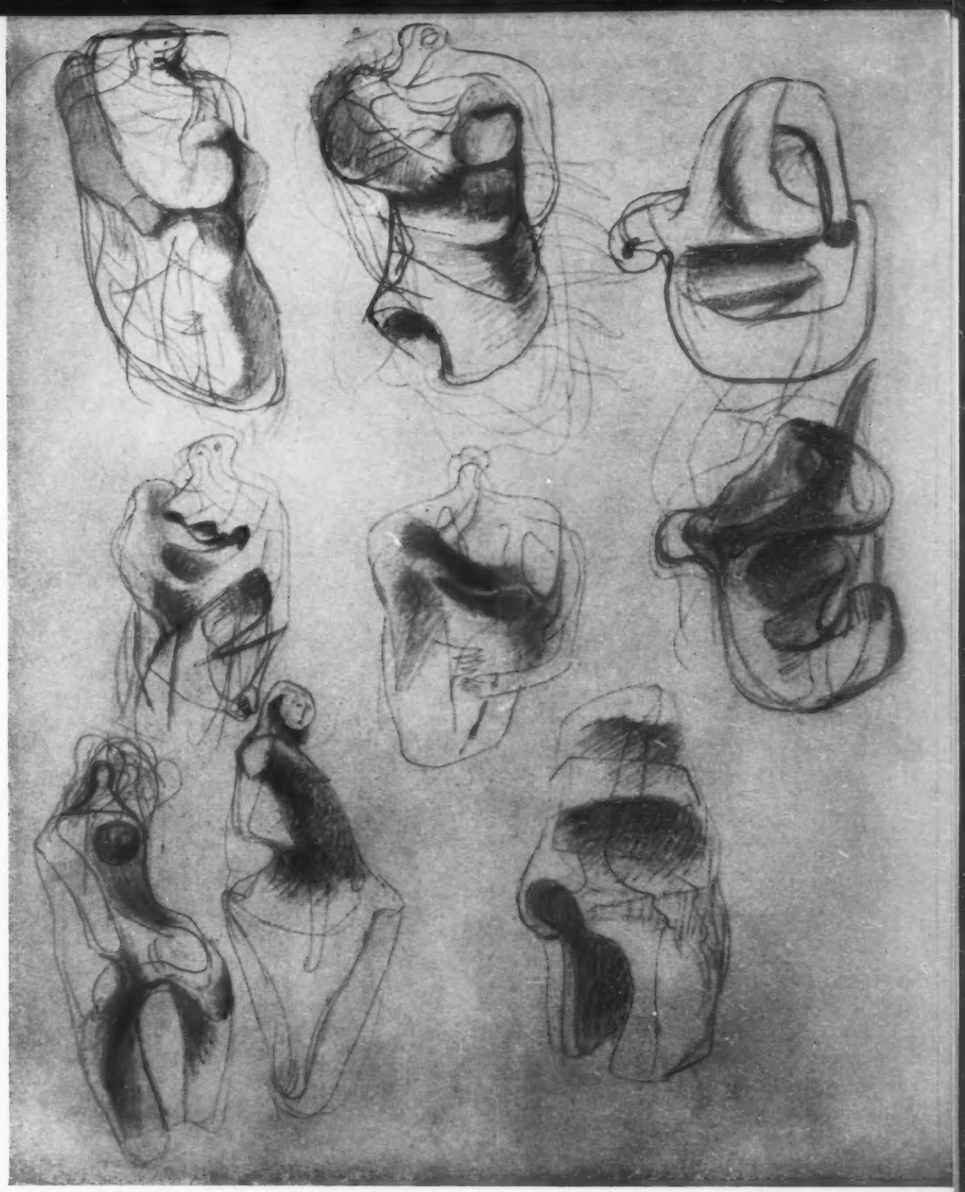
> A communal art can only thrive if there is a communal consciousness of it, and a communal demand for it; and actually there has been no communal demand for sculpture in this country for many centuries. There has, it is true, been a trade in tombstones and sepulchres, and these have sometimes, notably in the seventeenth and eighteenth centuries, been given monumental proportions. But though in rare cases such monuments have architectural dignity, they rarely possess any sculptural significance. The practice and appreciation of sculpture in England has been virtually dormant, if not dead, since the Middle Ages.
>
> Two assumptions underlie such a statement: the first is, that the dilettante craze for antique sculpture, which flourished from the Renaissance until modern times, had rarely, if ever, any æsthetic basis. It was partly a cultural snobbism, partly a genuine historical or archæological interest, the by-product of the classical bias in education . . . .
>
> The second assumption is more fundamental: it is the distinction between carving and modelling.

(I do not understand how this assumption can be coupled with the first; nor indeed what connection it has with the social position of modern sculpture; but his analysis of this general distinction is interesting—is in fact the basis of his argument, and leads directly to his analysis of Henry Moore's own æsthetic. So, *non sequitur* notwithstanding, it deserves further quotation):

> First let me say that it is not a distinction between a good technique and a bad one. I am inclined to think that carving has produced greater works of art in the past than has modelling, but that may be a prejudice of my particular kind of sensibility. The distinction, that is to say, is not one of æsthetic values, but of æsthetic categories—a distinction of kind, not of degree.
>
> Further, I do not think it is a distinction between two methods of arriving at the same result—in that case it would be merely a difference of methods, not of kinds. But the distinction is often explained as one between adding and subtracting, between "putting on" and "taking off." Actually, carving *can* be as plastic as modelling if the carver is actuated by a modelling conception; and clay could conceivably be carved by some sculptor with a low blood-pressure. The real distinction is one of conception, of psychological attitude . . . .
>
> The parting of ways would seem to come when the conception impinges on the material. Then a different degree of resistance is encountered, and the result, when the material is stone, is a tension altogether greater than meets the artist in clay. Every work of art is a coalition of idea and material; success depends on finding a perfect balance. If the idea demands compactness, the greatest possible degree of centripetal coherence, then stone will be the appropriate material, and carving the appropriate technique; if, on the other hand, the idea demands the greatest degree of centrifugal expansion, an open form, then the appropriate material will be clay, and modelling the appropriate technique. Bernini is the exception that proves the rule; only the colossal insolence of his baroque genius could achieve the paradox of adapting marble to the plastic formulas, not merely of clay, but even of paint.
>
> In the end, therefore, this distinction between carving and modelling is seen to depend on an almost ethical injunction, which might be expressed in three words: truth to material.

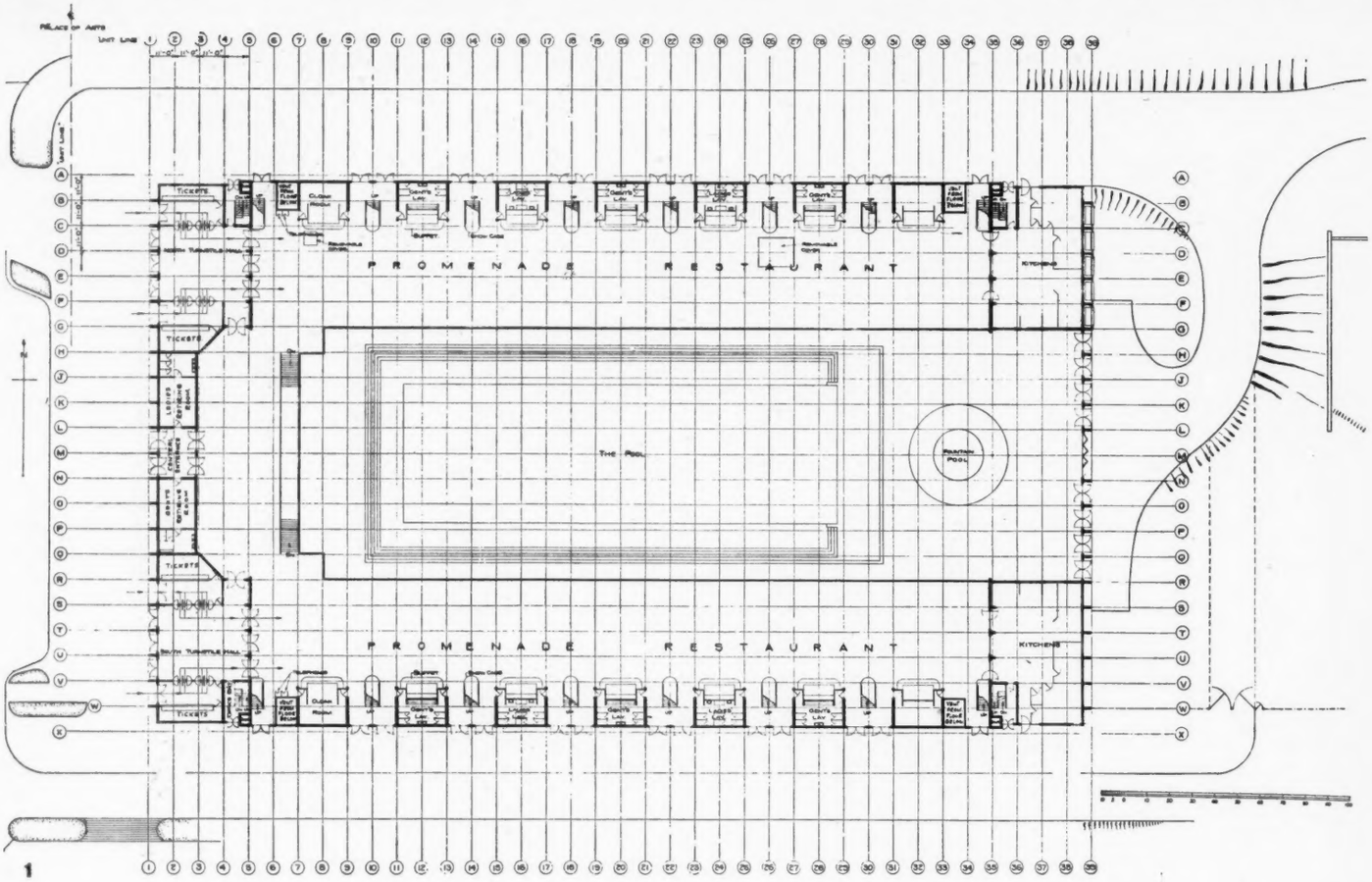
I have mentioned the inclusion in the book of some of the sculptor's pencil studies. A sculptor's drawings for his own use are often most revealing, because of their carelessness of the technical demands of a finished work of art. They represent his own search for fundamental form, being records of the progress of the search rather than the proclamation of its satisfactory end. As such, those here reproduced form an interesting complement to the photographs.

In this country we are usually compelled to refer to our artists a little apologetically when considering art in a world-wide sense—to balance their virtues rather carefully against their defects. It is roughly true to say that artistically we are a nation that produces in remarkably large quantities the good second-rate. In Henry Moore, we have an artist who is first-rate. His importance is due, I think, to his absolute integrity. His work is direct and alive, as it were, with its own and not with extraneous vitality. Above all, he is completely free from the congenital dilettantism which is the chronic obstacle to English artistic achievement.



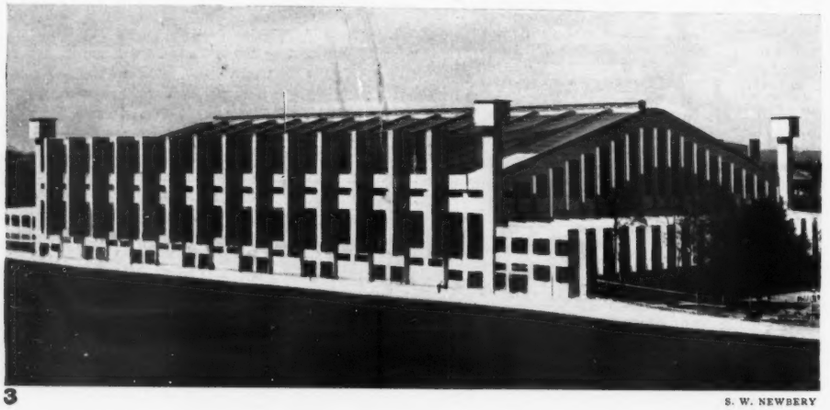
Drawings for Sculpture, 1932.

THE WORLD'S LARGEST



1

2



3

S. W. NEWBERY

The Wembley swimming pool is a covered arena of approximately two acres in extent situated adjacent to the Empire Stadium at Wembley. The new building contains a swimming bath 200 ft. by 60 ft. with a capacity of 650,000 gallons, which is capable of being decked over to take an ice skating rink 200 ft. by 85 ft. and also a tournament arena of 300 ft. by 85 ft. It stands on the site of a lake 300 ft. back from the public road, the frontage being occupied by car parks and gardens, and on each side there is a 40 ft. roadway for exits. The whole of the lake was not built on, a portion being left at the back or east end of the building which is enclosed as a garden to be used for sunbathing and outdoor recreation. **1** shows the plan at the entrance level. The whole building is planned and built to a unit of 2 ft. 9 in., this being the width of the spectators' terraces. This unit (and multiples of it) is carried throughout for widths of lavatories, dressing boxes, doors and windows. Vertically the unit of construction is 3 ft. 0 in.

The building itself is 420 ft. by 240 ft. wide including the annexes back and front. The annexes were necessary constructional bases to give stability to the end gable walls. In the annexes are accommodated, at the front, the turnstile halls, ceremonial retiring rooms and offices, and, at the back, kitchens and staff quarters. **2** is the main entrance front, and **3** shows the south and the back elevations.

COVERED BATH

DESIGNED BY SIR OWEN WILLIAMS

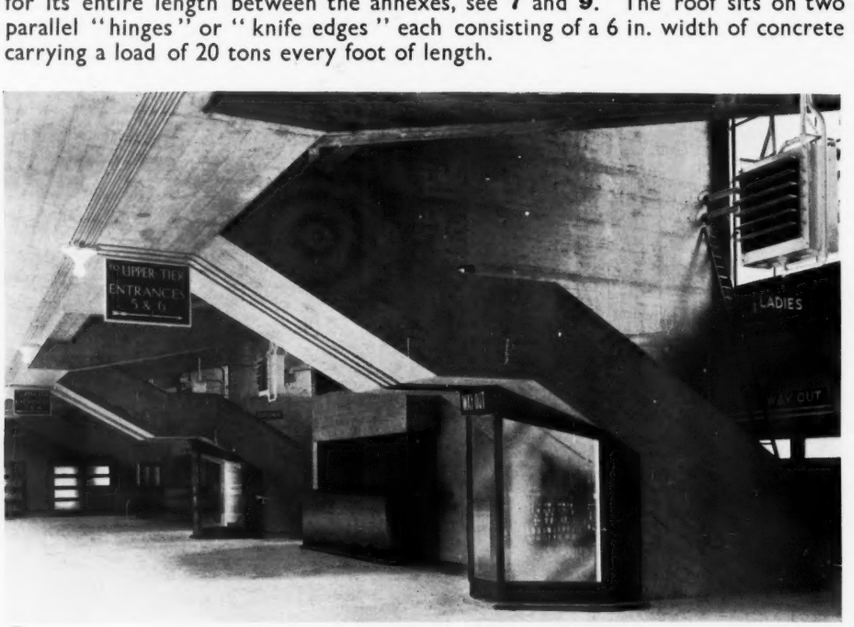
4

M. O. DELL AND H. L. WAINWRIGHT

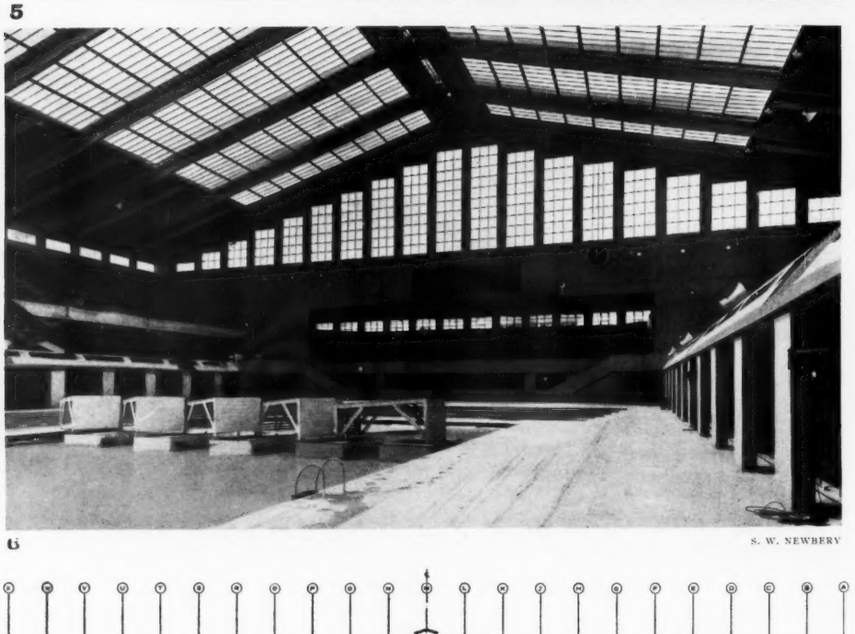
The construction of the building is entirely in reinforced concrete. Floor slabs are of standard thickness of 6 in. over spans of 22 ft. without beams, and walls have a standard thickness of 9 in. The construction of the main building is a three hinged arch of 236 ft. 6 in. span, the necessary stiffening of the roof being effected by planes of concrete intersecting at right angles producing fin-like effects on the exterior. **4** is a detail view of these fins. Mr. H. Ivory Hughes was the assistant engineer of the building, and Mr. A. H. Clark was the resident engineer.

THE WORLD'S LARGEST

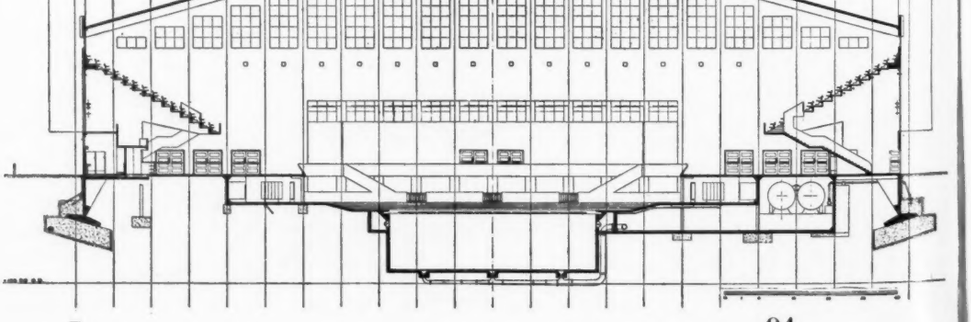
Every 44 ft. in length of the main hall is a complete entity, having within that length the appropriate exits, buffet bars, lavatories, etc., to satisfy the licensing authorities. This is shown in **5,** a view along the promenade restaurant. **6** is the main hall looking towards the main entrance: it is of uniform cross section for its entire length between the annexes, see **7** and **9**. The roof sits on two parallel "hinges" or "knife edges" each consisting of a 6 in. width of concrete carrying a load of 20 tons every foot of length.



5



6 S. W. NEWBERY



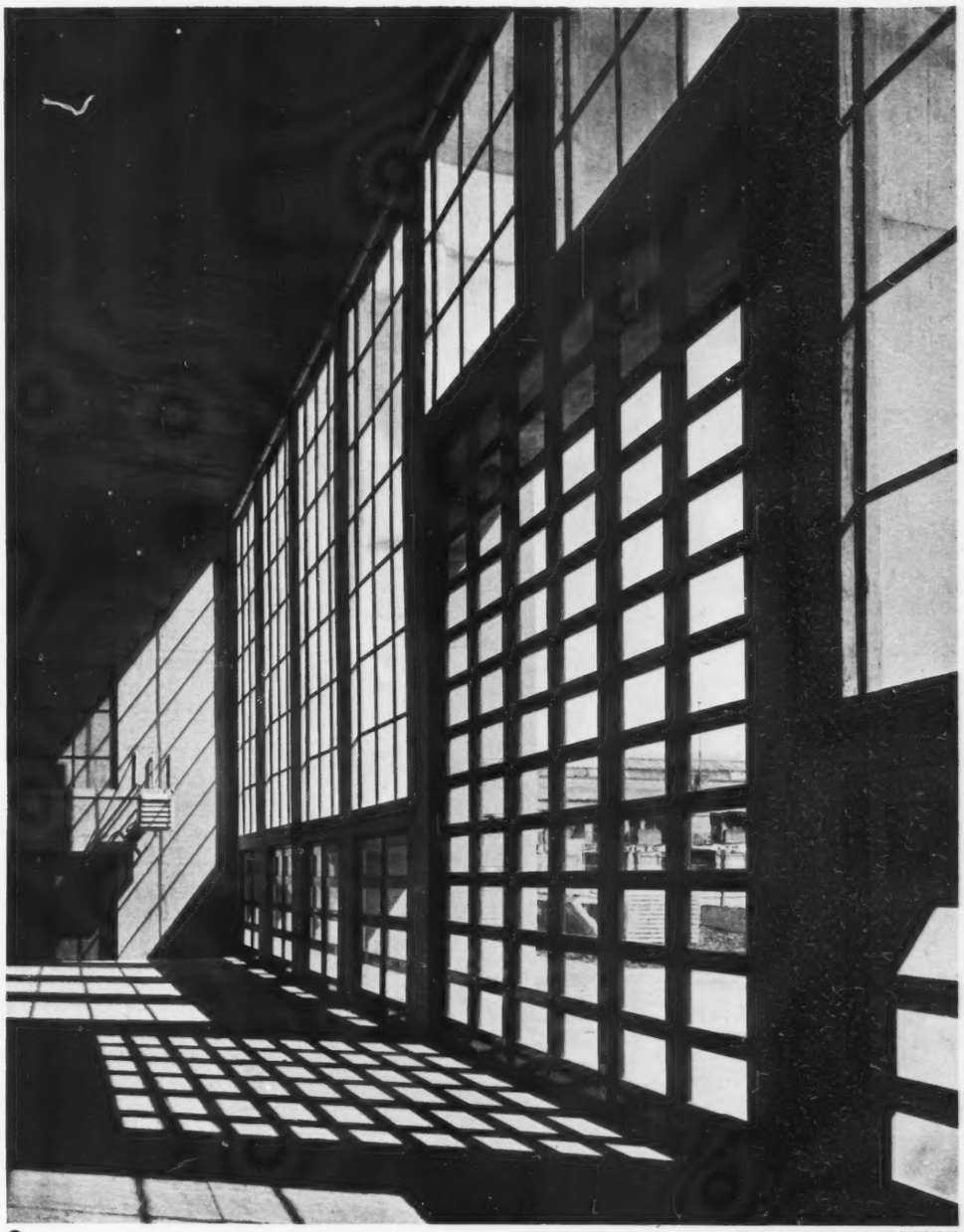
7

COVERED BATH

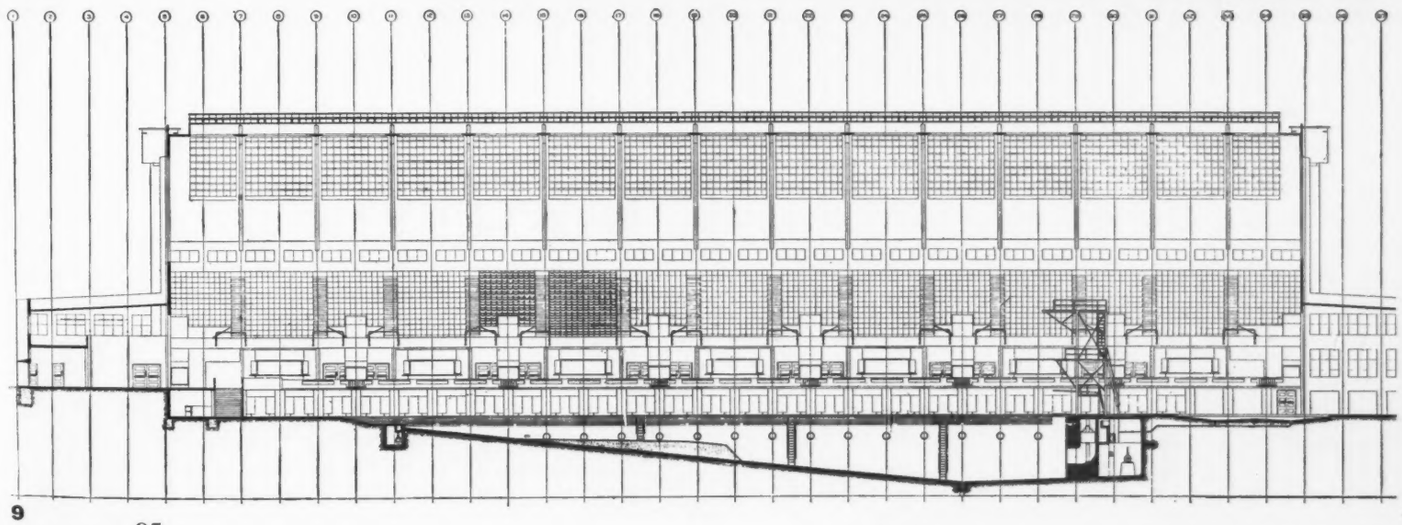
The ventilation of the building is natural, its height being sufficient by "stack" action to give the necessary changes of air to the spectators. Heating is generally by unit heaters under the main galleries. The swimming pool is to Olympic specification, the maximum depth being 16 ft. It is surrounded by a subway in which are accommodated lights projecting under water lighting through port holes. Behind the deep end of the pool is a chamber accommodating the wave-making machinery, consisting of four hydraulic plungers in reinforced concrete boxes. The machinery is of British design and manufacture. Behind the deep end is an additional paddling and fountain pool 40 ft. diameter in which can also be inserted when required a circular revolving stage. A detail of the exit to the gardens, which is beyond this fountain at the east end of the building, is shown in **8.**

As regards the colour scheme of the building the concrete is only painted where increased lighting reflection is required, such as in the bathers' colonnades. All wood and metal has been painted for preservation, green being the predominating colour. The other colours used are as follows :—doors to which public attention is required —orange, and likewise edges of shelves, etc. All parts of doors, hand railing, etc., liable to be touched and likely to require more frequent repainting—grey. All emergency objects—vermilion.

The drawings of the building were commenced on October 3, 1933. Work was commenced on the site during that month and emerged above ground level last February, the constructional work being completed by the end of May.



8 M. O. DELL AND H. L. WAINWRIGHT



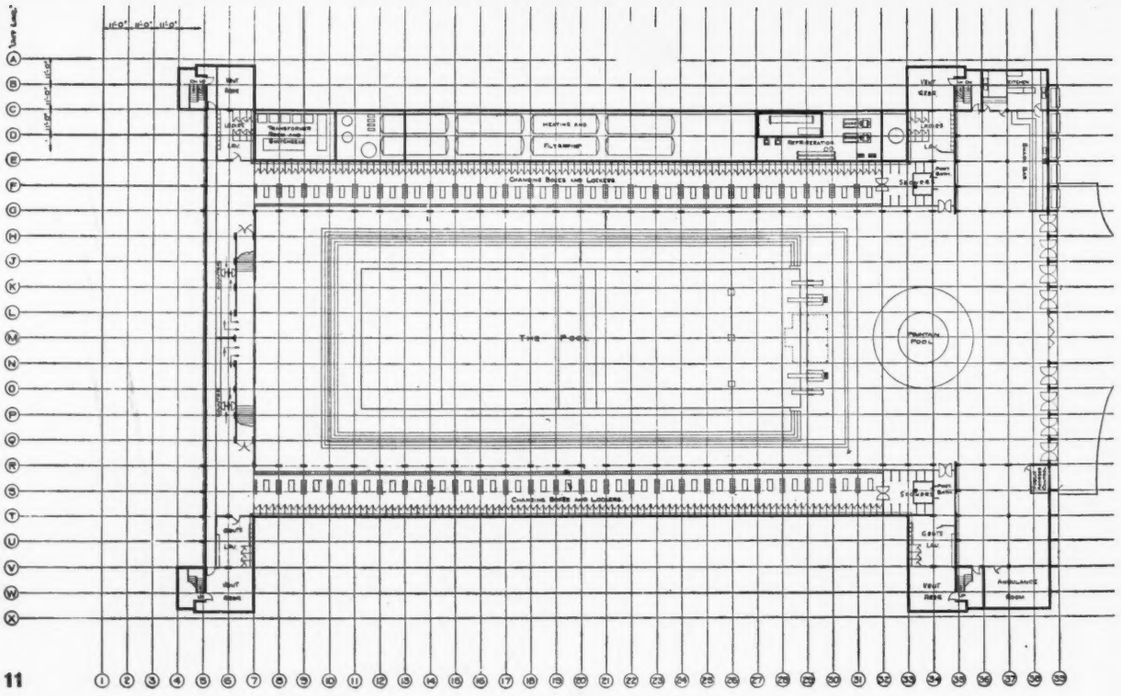
9

THE WORLD'S LARGEST COVERED BATH

10

S. W. NEWBERY

10. The arena looking towards the east end. The dressing accommodation is in two colonnades on each side of the bath. There is a spectators' terrace on each side of the building for its full length which can also be used for restaurants and dancing. It is possible to cover these terraces and the bathers' terraces with removable steel staging giving additional seating. The fixed seating capacity, approximately 4,500, can be increased to the maximum accommodation of 12,500 seats. The cost of the entire project was £150,000; the building and its equipment inside worked out at approximately 4½d. per ft. cube. **11** is the plan at basement level.



11

Living for Design

By Anthony Bertram

DESIGN IN MODERN LIFE. Edited by John Gloag. London: George Allen and Unwin. Price 10s. 6d. net.

THE recent extension of the word "design" is one of the most interesting and significant indications of the whole trend of good modern thought. It is fast becoming one of the most inclusive words in the vocabulary, the symbol of a noble abstract conception: and yet in the popular mind it has still a strictly limited meaning; this new extension, although it is spreading so rapidly, is far from being generally understood. A dear lady to whom design was mentioned recently was convinced that one was talking about patterns for embroidery and until that difficulty was cleared up the conversation was a little at cross purposes. Another said she thought design meant "wallpapers and things" and had nothing to do with art. And so on and so on.

The beauty and value of our new extended meaning is just precisely that it can include art and non-art, that it can span that weary gulf which the industrial revolution dug between art and life. Not until that is spanned can we hope for a healthy civilization. Art as the plaything of the rich, an expensive and unnecessary product made by eccentric individuals in peculiar clothes in peculiar—and tantalizingly immoral—places called studios; and life as a dreary and sordid complex of factories, offices, income taxes, Zola, births, deaths and marriages—this is the opposition which was false and must be broken down. The long divorce must be healed by a new marriage. Design seems to be qualifying for the parson's part.

Take this book under review. Is it an "art book"? But there's that excellent stuff by Elizabeth Denby on kitchens. Is it a domestic economy book? But there's that chapter by James Laver on clothes. Is it then social history? But Gordon Russell writes about furniture. Can't you imagine the troubles of the neat minded librarian? What is he to call a book that cuts right across all his sacred pigeon-holes; and if he can't call it anything specific how can he place it either mentally or physically? Will he, in short, have to paste up a new label, establish a new section, and call it design? That, one hopes, is what we are coming to—design as a recognized department of human knowledge, perhaps the most important of all departments since it will correlate all the rest. Let us have Chairs of Design in the universities, design taught in the schools, preached from the pulpits, shouted from the house tops. Only through the recognition of design and the passionate will to impose it on everything can we escape from the chaos and degradation of contemporary life. Think what the world today would be if this book had been a bible for the last hundred years, if Gloag and his like had been Ministers of Design with autocratic powers. There would be no slums, no shoddy Tudoresque villas, no ribbon development, no devastated countryside, no silk hats and morning coats during a heat wave, no streets like the Strand, no façades like the Bile Beans corner in Trafalgar Square. How many lives and limbs would have been saved in the regulated streets, how much less time wasted, how many builders and architects in comfortable concentration camps, how many letters to *The Times* avoided.

But it is not too late. Because the immediate past has been an abomination is no reason to fold our stupid hands and say "What has been, must be and ever will be. Allah is great." In the remoter past we know there were order and beauty and discipline, a civic life that was fit for a small class and not so bad for all. What the eighteenth century achieved for that small class we must achieve for all. And we can. We are wealthier, we have far greater command of materials, easier transport, all kinds of new devices. Indeed the whole trouble is that we let the new materials and the new transport and the new devices have their head and run away with us. Uncontrolled, they created chaos like the horses that dragged Hippolytus to death; but we must give the reins into the hands of design and then we shall drive faster and farther than ever in the world before.

All idealism — phrases — the adolescent dream of socialist rentiers in the late 'nineties? Not at all. One has written in this general way because the book under notice is by many hands and covers many subjects and to review it in practical detail would command a deal of space and a wider knowledge than one man is likely to have. The functions of the Professors of Design will be, as that of editors like Gloag or reviewers like oneself are at the moment, to co-ordinate the knowledge of specialists, to seek for the general design into which their particular designs fit. There must be in the end a philosophy of design.

Apart, then, from the writers and subjects already mentioned, one must be content with indicating what else comes into this book. The editor himself writes on "Who Knows what the Public Wants?" E. Maxwell Fry on "The Design of Dwellings" and "Design in the Countryside and Town," Frank Pick on "The Design of the Street" and "The Meaning and Purpose of Design," A. B. Read on "The Design of Illumination" and Robert Atkinson on

THE TENNIS COSTUME. 21 5s. 6d.

1886-1934. Clothes—and Design. Towards functionalism in dress. Reproduced by courtesy of Messrs. Lillywhite's. From "Design in Modern Life."

"Design in Public Buildings." All these articles are excellent and, for the money and as a beginning, there can be no important complaint against the book—except perhaps that the illustrations might be better—but what is wanted, of course, is an Encyclopedia of Design, something that normal men can only buy on the instalment system, something the very items of which it would take many more words than this review contains even to indicate. It is not enough that people should realize that design is not only a matter of wallpapers, or even of town planning and architecture, or even of all the subjects in this book: they must realize that there is hardly any human function that does not require design for its satisfactory fulfilment.

A brief reference must be made to the excellent historical charts drawn for this book by Raymond McGrath in which the growth of design is shown in many different objects, their very divergence being a recognition of the point of view one has advanced here and a breaking down of the old art and non-art distinction. We see side by side furniture, gramophones, table ware, cooking utensils, clothes and means of transport. These charts might well be indefinitely extended—it's a pity anyhow that they didn't include architecture—to serve as a basis for teaching the practical history of design as well as inculcating the philosophy of design, the approach to history and sociology on the basis of design. By their design can we most truly recognize the characters of past epochs, as by the absence of it, alas, we recognize the character of the epoch from which one hopes we are emerging.

Beauty in the Machine.

MACHINE ART. By Philip Johnson. With a Foreword by Alfred H. Barr, Jr. George Allen and Unwin, Ltd. Price 15s. net.

GOD'S Own Country has discovered beauty in the machine. This book on machine art is one of the publications of the Museum of Modern Art in New York, and its illustrations were drawn from an exhibition which was staged there. In the foreword by Mr. Alfred H. Barr, Jr., there is much common sense of the kind often lacked by the earnest people in this country who are occasionally overcome by their discovery of alleged beauty in some simple object, and who insist on telling us what a graceful thing a needle is.

Mr. Barr points out that "the beauty in machine art as in all art varies in relation, but not in proportion, to its complexity. A watch crystal, perfect though it may be, is too simple a form to hold our visual interest long." The foreword also refers to the "naive and dreary functionalism" derived from the ideas which inspired that barbaric cliché "the house is a machine for living in." We also learn that "the leaders of modern architecture today are united in restoring the artistic function of the architect to its place beside his technical function." The book is divided into six parts for the illustration section: 1. Industrial units; 2. Household furniture and office equipment; 3. Kitchen ware; 4. House furnishings and accessories; 5. Scientific instruments; and, 6. Laboratory glass and porcelain.

As usual when dealing with certain aspects of industrial design, photography often supplies with its lights and shadows the deficiency of merit apparent to any critical eye in the object photographed. This may explain the inclusion of some pieces of apparatus which seem to perform their job with the maximum of complication and ugliness, although they shine nicely before the camera. "Look pleasant please," says the photographer swinging his arcs to contrive kindly shadows and gleaming high lights. The fact that the camera can and does lie by suggesting superficial attraction is demonstrated by 25 per cent. of the plates in this copiously illustrated volume. One or two designs of real merit, especially those in the house furnishings and accessory section, have unfortunately been rather badly photographed, but on the whole the book does represent a not unstimulating collection of plates. Several of the subjects illustrated are European in origin, and one of the early tubular chairs designed by M. le Corbusier finds a place in this latest adventure of American taste.

Designers who are interested in mechanistic baroque will find some appetisers in this book.

Design in the countryside and the town. The top illustration shows the strangulation of the town—industry and housing in an unholy alliance that is usually shrouded in a smoke pall. The centre picture illustrates the defence against industrialism—garden city development, or informality run riot, and still no town to live in, and less country to enjoy. At the bottom is an air view of the Hampstead Garden Suburb, the first completely realized garden city project. The two upper photographs are reproduced by permission of the B.B.C. The bottom one is by "Aerofilms." From "Design in Modern Life."

The Spread Eagle Inn, Witham, Essex, from a water-colour drawing by Randolph Schwabe. Reproduced from *The Old Inns of England*, which is reviewed on page 99.

There are over a hundred illustrations and sixteen pages of text. For some reason the book, which is printed in America, has no page numbers; an infuriating omission in a work of reference and inconsistent with the ideals of a nation that claims to lead the world in efficiency.

JOHN GLOAG.

Time, Gentlemen Please

THE OLD INNS OF ENGLAND. By Professor A. E. Richardson, F.S.A., F.R.I.B.A. London: B. T. Batsford, Ltd. Price 7s. 6d. net.

A TRAVELLER in England in the seventeenth century, by name Fynes Moryson, had occasion to be pleased with the provisions made for him during his journey, and immortalized his satisfaction in the charming phrase:

The World affoords not such Innes as England Hath.

Moryson's praise was, however, not given in as expansive a spirit as that in which it is commonly accepted, for when he wrote these words he was thinking only of the "good and cheape entertainement after the Guests own pleasure" and the "variety of meates" with which he was served. His encomium can still be justified in the twentieth century, but only on different grounds, for it is hard to believe that anyone who has experienced full board and lodgings in any of the smaller taverns of this country, or even in the more pretentious village hotels, would be prepared to give the Nobel prize for cooking or "variety of meates" to the British Isles; and no keepers of inns or alehouses are likely to worry much about it as long as they must concentrate solely upon the sale of drinks in the few odd hours in which they are legal. They are bound to keep their doors barred during the heat of the afternoon, and when the conversation is making throats thirsty about ten o'clock, the landlord must herd us out as if he were turning cattle out of a field. These discomforts and degradations can hardly allow us to accept Moryson's dictum unconditionally. Yet we must admit that his words are true to this day, though the glories of the English inns have little to do with the food and drink they provide. It is to the eye and mind that they, more than any others, can minister. Their architectural features are the most worthy of praise. Even a glance at any of the one hundred and thirty-two excellent illustrations to Professor Richardson's book is enough to prove that.

Architecturally speaking, inns are as conservative as cathedrals, and curiously enough the association is not as fantastic as it may seem, for it was nearly always the Church which provided inns to accommodate travellers. The roads developed as rapidly as the influence of the church declined, and taverns were established at cross-roads and ferries and similar strategic points. It would be interesting to read more about the construction of the early inns, but in his present book the author has had to confine himself to naming existing architectural "treasures" such as the oriel window of the *Angel* at Grantham, where Richard III once lodged.

For centuries the old buildings were undisturbed by the changes going on around them, and the hand of Cromwell which defaced so many churches left the inns unmolested. Under any political power or flag hospitality was respected, and the inns were the exchange of all social currency. They figure in every human activity, and still stand matured by their experience of lords and ladies, of orange-sellers, of famous wits or judges, of poets, saltimbanks and popinjays.

Byfel that, in that seson on a day,
In Southwerk at the Tabbard as I lay.

Such was the start of English literature, and the characters that Chaucer brings to life are typical of any English hostelry of any date.

The inns were diehards, but like all other institutions, were severely eclipsed by the mockery of the nineteenth century. The novelty of the railways took traffic off the roads and commercial interests turned the pubs into tiles-and-sawdust gin-palaces. Lovely inns became useless and were dismantled or converted, and under the direction of breweries their walls were plastered with hideous painted advertisements and vulgar invitations. The inns are still conservative, and it will be some time before these outward signs of decadence will be removed. But that time is coming. The roads are more frequented than ever, and as long as the neo-Tudor road-houses satisfy the needs of the "by-pass," there will always be the cool paving stones and clean white benches of the riverside pub, or the thatched roof at the side of a dusty road and the muffled impact of dart on board.

The subject has no limits, and Professor Richardson quite frankly confines himself in the main to the larger inns, his survey ranging splendidly over the timbered galleries of the Borough, the old Courtyards of Gloucester, the lovely half-timbered taverns of Cheshire and the Welsh border, and the fine stone buildings along the Great North Road. The latter are worthy of greater study for the dignity and elegance of their architecture, and they will reveal beauties that live for ever in the mind and are not forgotten. The English inns are a vital part of the heritage of England that is nearest to our hearts, and this book goes a long way in helping us to realize their true value as a heritage.

P. J. DUFF.

Top. The Inn and the road. A Georgian roadside Inn at Denham, Buckinghamshire. Right. The Haycock, Wansford. By-passed by the Great North Road in Northamptonshire. A seventeenth-century inn which has escaped external defacement through being a private house until recently. From "The Old Inns of England."

A Formidable Task

THE LITERARY GHOSTS OF LONDON. By E. Beresford Chancellor, M.A. (Oxon.), F.S.A. London: The Richards Press. Price 12s. 6d. net.

THE author of this volume should require no introduction to those who are interested in the architecture and topography of London, nor should he require any introduction to the

general reader: he has written a score of books about London—its squares, its palaces, its streets, its pictures—and half a dozen volumes of belles-lettres.

In the present volume Mr. Chancellor has "attempted (he tells us) two main things: to show how London gradually became a literary city and where those engaged in the pursuit of letters lived and visited; and also, incidentally, to outline the literary history of the country, so far as its exponents were associated with the metropolis during the course of half a dozen centuries." Considering the formidable proportions of this task, it may be said at once that the author has acquitted himself very creditably. He displays a knowledge of the haunts of literary men in London that must be unique, while his acquaintance with English literary history is far from slight. It must be said, however, that this book is not likely to arouse enthusiasm in anyone who is not already interested in the subject. The student of literature, apart from London, will find nothing new in these pages, nor anything old arrestingly expressed. But to those who are curious to know where So-and-so, the author of such-and-such, lived, this book may be confidently recommended.

There must be a number of people, lovers of London, who have been waiting for just such a book as this; having read it, every walk abroad in London will be charged for them with fresh interest.

The book contains sixteen interesting illustrations, is nicely bound and, except for a few misprints, well printed—on the whole, good value for its price.

G. GREER.

A Free Commentary

By Junius

I AM awfully sorry to be a bore again about this business of the 24-hour clock, but it does seem to me very significant, illuminating, and—indefinitely discouraging. As far as I can gather the Government has definitely decided that the mental effort necessary to master the profound arithmetical intricacies of this subtle system is beyond the capacity of British citizens, and the B.B.C. will now be able to escape the obloquy of being held to be the interfering villain of the piece anxious to exert its monopolistic and semi-bureaucratic power in order to impose upon the free-born Briton a foolish foreign technique and actually force him to *think* for a minute and alter a fixed habit. Still, I hold that the august and presumably modern-minded Corporation is as unwise to abandon the *printing* of the 24-hour time (for one thing it manifestly clarifies its rather confusing programme and the awful tension in the public brain could still be relieved by adding the domestic time), as it was unwise to put the 24-hour time into *speech*. It is designed for documentary use and "19.45 hours" is, we may agree, a chilling time to assemble for sherry before dinner.

* * *

A comment in a leading article of a distinguished daily rather surprisingly accepts as natural the lazy operation of the national mind. After noting that "nine out of ten of (the B.B.C.) listeners who are told that the hour is 17.15, translate it, quickly or laboriously as a quarter past five," adds: "For railway time-tables especially, where long journeys are involved, the twenty-four hour system is a simplification, but the Englishman is content in the main to grope his way through his 'a.m.'s' and his 'p.m.'s' and feels more assured with them before his eyes." And finally: "He (the same Englishman) has remained content to rise at eight o'clock and have dinner at eight o'clock."

* * *

The Englishman is content . . . . to grope . . . feels more assured.

But, in a world placed as the world is now placed, it is clear that "being content to grope" is not the helpful attitude. It is this kind of thing that gives (if you go into the matter far enough) excuses for the impatience of active-minded people in coloured shirts, does not it?

* * *

We know quite well enough by now that it is dangerous to pass to the right on pavements, but, after the merest half-hearted attempt to alter our habit, or at any rate, to define a settled and uniform practice or custom, we leave the matter in the air, having achieved merely a greater confusion. If such small adjustments where there are no vested interests involved, and nothing but inertia to be overcome, cannot be made, what hope is there of making the larger adjustments necessary to render civilization tolerable?

* * *

These little things, in fact, are not really little things. It is not a little thing that streets are so often not labelled, houses not numbered—not little and negligible, but really big and important, because the *aggregate* inconvenience caused by the omissions is immense if compared with the effort and expense of remedying them. Which, translated into common terms, means because there is gross stupidity. And that manifestly is a very big and sinister and dangerous thing.

* * *

One would have thought it self-evident that in a world shrinking at an unbelievable or at least ungraspable pace, and becoming for each one of us more complicated, making us in a given time do (or appear or attempt to do) so much more, move so much more quickly, see so many more of our fellows, our own countrymen and foreigners—that in such a world, attention to the smallest details making for order and aggregate convenience and safety would be the concern of all authorities blessed with any faint sense of proportion or responsibility. The excuse that they are "small" things, isn't an excuse. It's a complete condemnation. If the easily doable things were done, we might have some hope of accomplishing the difficult ones. And doing things for the sake of public order and convenience will help to form the habit of "not being content to grope."

* * *

As a modest achievement in little things in a forward direction, may I mention the device invented or adopted by a famous firm of caterers—the putting of the cash column on the left-hand side of the pad, so that the waitresses' right hand can rest on the pad and do its work quicker and more steadily and legibly. In a hundred-and-fifty years or so, this will quite likely be a common practice in catering establishments. The queer thing about such tremendous trifles is, first, that all of us should be blind to a self-evident thing like that before a genius in small things arises to point it out; and, second, the slowness of most of us in uptaking this kind of improvement when the essential good sense of it is demonstrated.

* * *

Spitting lightly upon the old school tie has spread from the casual novel and the burlesque music-hall turn to the edited symposium. Those interested in education (the few who should be the many) will get entertainment from *The Old School*, edited by Graham Greene—in the spirit of "Why . . . one should feel more loyal to a school which is paid to teach him than to a butcher who is paid to feed him, I cannot understand." Perhaps that's going a little far in not understanding! But it is all to the good that the young and the clever should have their say on the ordeals they have passed through; and schoolmasters are in the gross such a stodgy, inhibited, pontifical, haranguing lot, that these belated answers-back and summary of emotions recollected in perversity, should make wholesome reading for them at least. The studied ineverence of many of the essayists will offer them great opportunities of self-control. The younger men are the more bitter; and one is reminded by the editor that for them their schools were not normal but disturbed and disintegrated by war.

* * *

Mr. Greene has collected a clever team (perhaps a little too clever to be fair), but even when his contributors have written least judicially as Mr. Calder Marshall about St. Paul's and Miss Arnot Robertson about Sherborne School for Girls, they write with point and wit. This is a book well worth editing; with a distinct hyper-critical bias (and perhaps in the circumstances—"being content to grope," etc.—none the worse for that). Mr. L. P. Hartley goes nearest to affectionate praise in his recollections of Harrow and Mr. Harold Nicholson is not too severe on Wellington. As in accounts of war, the personal make-up dictates the view quite as much as the objective facts and so there is more entertainment than steadfast guidance towards a sound theory in this miscellany.

* * *

Of course, we older men are under a disadvantage in this controversy. If, ignoring the little things that must go wrong in the microcosm of school as in the macrocosm of life for which it is a rehearsal, we speak with affection of our Alma Mater, youth can obviously curl the lip and say (or think) "Quite so, and look at you!"

THE MODEL KITCHEN

Although the flats in Lawn Road, Hampstead, are not strictly service flats, a kitchen and service pantry is provided by the architect, Mr. Wells Coates, so that tenants may have breakfast and dinner, with luncheon on Sundays. The photograph shows one side of the kitchen with a glimpse of the service pantry on the left.

The cupboards are of enamelled plywood and have flush doors. The handles to these cupboards and those used throughout the flats, designed by the architect, are covered with baked synthetic resin.

The bench tops are of cellulin.

The service opening from the kitchen to the service pantry can be seen on the left under a glass screen which serves to restrict the passage of cooking smells.

On the extreme left is the telephone by means of which meals are summoned to the flats.

The Paris Exhibition of 1889 for which the Eiffel Tower was erected. Here already, as at the Crystal Palace Exhibition of 1851, the general exhibition architecture was well ahead of the display arrangement and the merchandise shown. Reproduced by courtesy of *Design for Today*.

EXHIBITION PLANNING

DECORATION & CRAFTSMANSHIP

SUPPLEMENT • SEPTEMBER 1934

Exhibition Planning

By Misha Black

THE opening of the Building Exhibition this month, finds the controversy between the partisans of the almost completely unified exhibition such as the Ideal Homes, and those favouring the irrational chaos of, for instance, the Olympia section of the British Industries Fair, very little nearer to being settled than it was two years ago.

The advantages of the unified exhibition seem obvious enough. If an exhibition can be planned so that the effect on the visitor is one of ordered arrangement and efficiency, giving confidence in all the merchandise shown, it seems naturally preferable to an exhibition where even the best individual stand is swamped by a surround of unplanned mediocrity and conflicting stands, resulting in the visitors' lack of interest and confidence in the exhibition as a whole. If this is true, and it seems at least superficially to be fairly so, it would, perhaps, be interesting to investigate the reasons for the continued lack of planning at even some of the most important exhibitions of the year.

The Exhibitors' Opposition

Planning and co-ordinated design are ignored, I think, not only because of conservatism and lack of enterprise on the part of the organizers, but also on account of the difficulty of relating the wishes of individual exhibitors to the needs of the exhibition as a whole. These should, of course, be identical, but when considered in actual practice, the problem, under present conditions, is rather complex. To take an extreme case, I have been criticized for supporting the unified exhibition on the grounds of the failure of the planning of last year's Radio Exhibition where, my correspondent remarked :—

. . . . . all the stands were designed in a uniform style and supreme efforts were made to get each exhibitor to keep in line with the general scheme of arrangement, but it is a known fact that exhibitors paid large sums of money to obtain distinctive stands, which altered out of all recognition the stands originally designed for their requirements, and for which incidentally they paid in addition to the re-designed schemes.

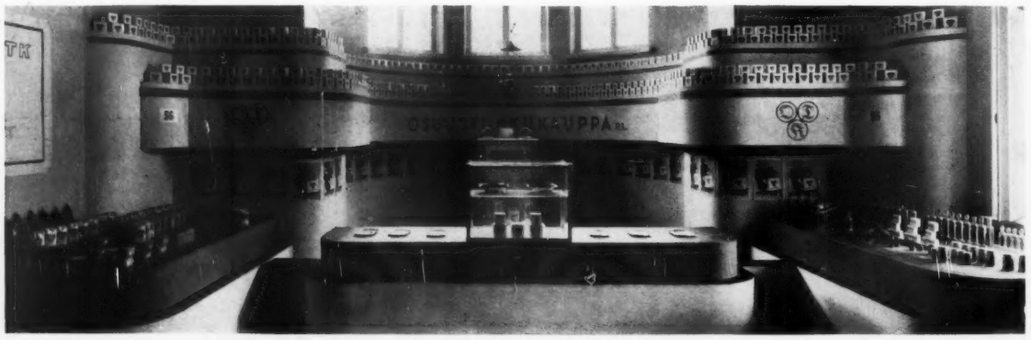
The problem takes on various aspects for different exhibitions, but, in general, the exhibitor's complaint is that the unified exhibition at the moment leaves him too little scope for efficient and original display. At the Building Exhibition the problem is particularly difficult as most exhibitors, justifiably, want their stands constructed from the materials they are marketing; nevertheless, reasonable unifying restrictions are by no means impossible to formulate. This particular problem is dealt with on page 75 of this issue, but the difficulties are very similar, although admittedly accentuated, to those existing at most exhibitions, and the following remarks are therefore equally applicable, at least in a general degree.

At the Exhibition of British Industrial Art at Dorland Hall, the problems I am discussing did not arise to any great extent, as the exhibitors were content, for the most part, simply to have their goods well displayed, the fact of their being shown at that exhibition giving them sufficient prestige. At most exhibitions, however, the exhibitor is anxious that the stand itself shall be an important part of the sales campaign, and give to his goods a higher prestige than his competitor's adjoining stand gives to his merchandise. This is a shortsighted point of view as, carried to extremes, it may result in exhibitions becoming so unattractive that eventually very few people will visit them. Such an attitude of mind has been especially evident at the Radio Exhibition where a very large section of the exhibitors are direct competitors.

At the British Industries Fair, the position is made particularly clear. The aim of the organizers is that the exhibition shall inspire confidence in the efficiency of British manufacturers and impress the visiting buyer with a feeling of security and reliability in the display. The aim of the individual exhibitor is to make his stand and particular brand of merchandise seem superior to that of any other exhibitor, even if this is done at the expense of the exhibition as a whole. The work of the exhibition architect should be to relate these two aims which are obviously not opposed to each other, so that the one is not sacrificed to the other, and the individual exhibitor's exuberance is not allowed to destroy the general effect of the exhibition, and finally affect adversely his own sales.

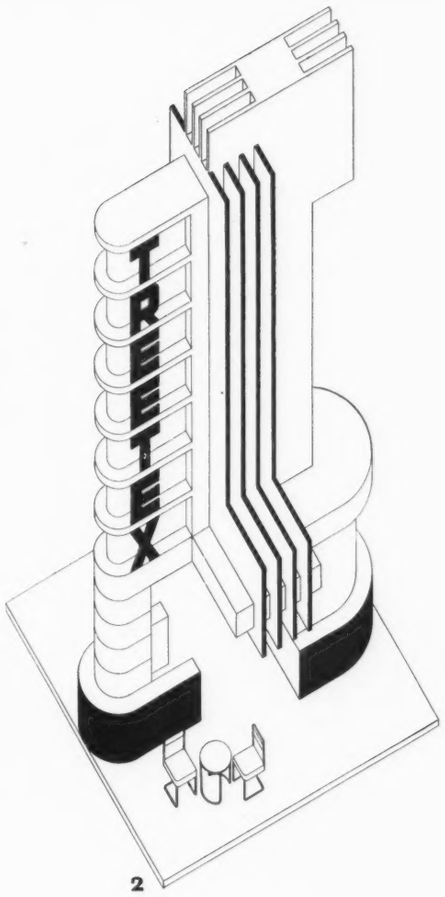
The Facia Type Shell Stand

Such a situation would not be impossible to cope with, were it not for the still very low general standard of exhibition design. The desire of the exhibitor to have as good a stand as possible might be admirable, if the stand he erected was progressively more efficient than that of his competitors, but, unfortunately, the more energy and effort he expends to obtain a "stupendous" design, the worse it usually becomes. Consequently, when an architect is commissioned to design a complete exhibition, he is justifiably afraid that unless the individual stands are very rigorously controlled, their inefficiency will completely ruin the ensemble. Knowing the superhuman efforts that would be required to control each



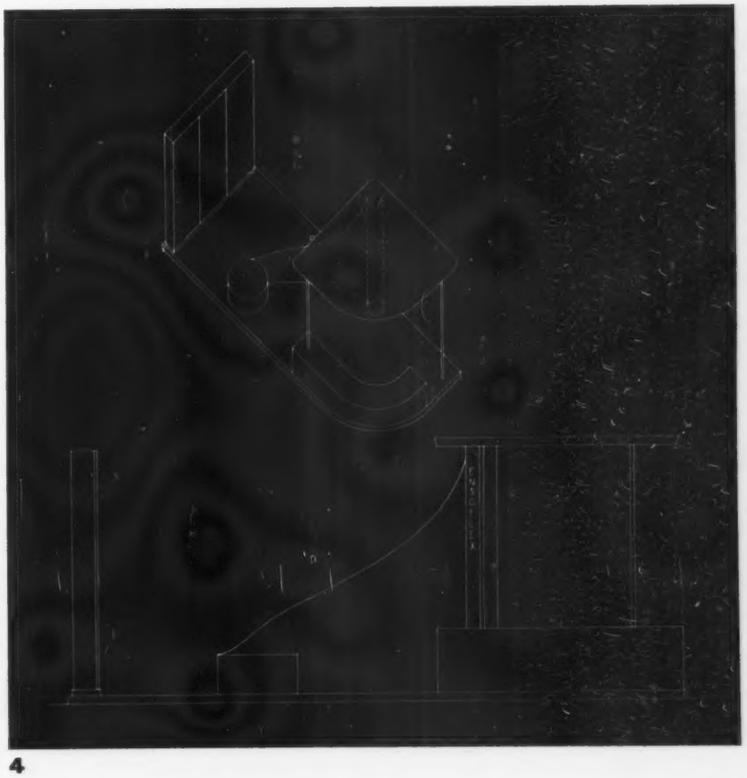
1. A Finnish display successfully related to the stand design.

[Continued on p. 107]



2

3

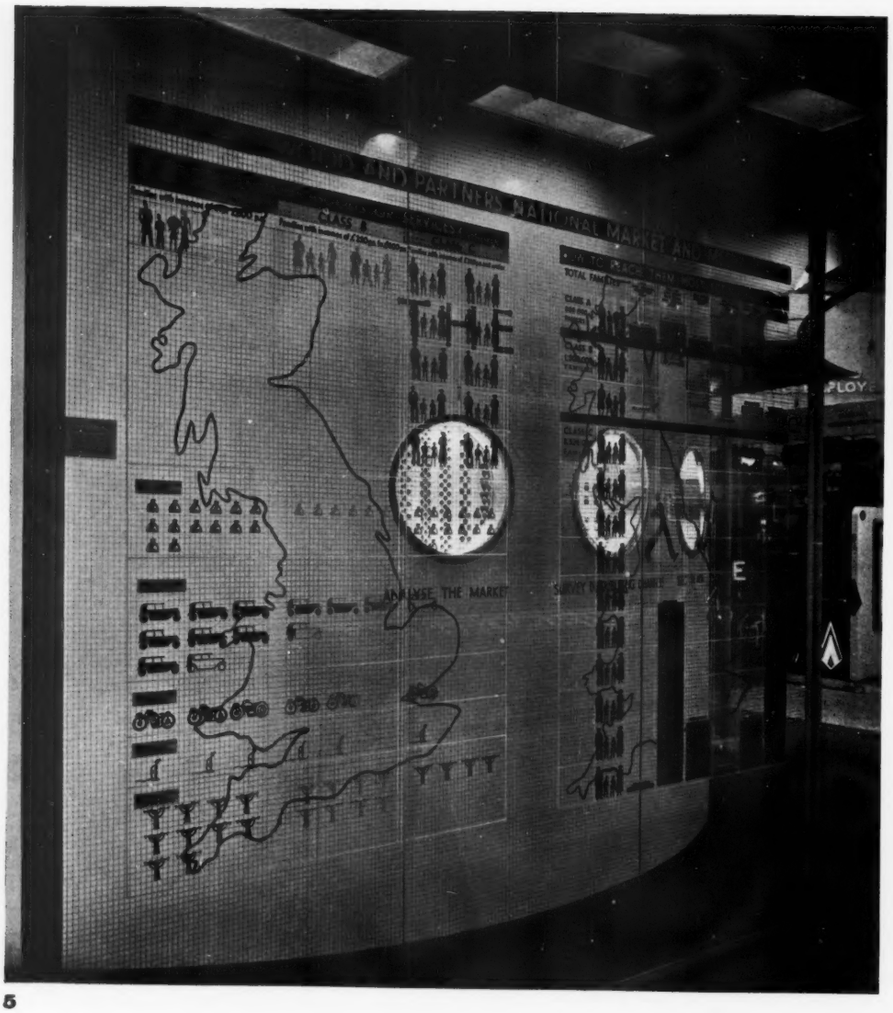


4

2. An interesting use of a vertical motif. In exhibition halls such as the main hall at Olympia a greater height of certain sections of stands might be employed to good effect if carefully related to the exhibition as a whole. The Treetex Stand at the 1934 Building Exhibition at Olympia. Its central feature, a flood-lit Tower, over thirty feet in height, is completely covered with this building board nailed on stout studding. The vanes extending over the Tower are built of 2 in. by 2 in. studding, covered with 20 ft. lengths of the same board, which has been used throughout the stand. Arranged about the sides of the curved office is a composite picture of many types of buildings, not only in this country, but all over the world, which are insulated with this material.
Designer and Craftsman: John Edginton.

3. Efficient planning of a comparatively small area. The Stand for *The Architectural Press* at the 1934 Building Exhibition at Olympia is 16 ft. by 20 ft. by 9 ft. high, and is built in fireproof plywood on a wood framing. The inside of the office is faced with stretched fabric, and the outside is "papered" with pages from THE ARCHITECTURAL REVIEW and *The Architects' Journal*. The bookcase is designed to take the books and portfolios published by *The Architectural Press*. The rear of the bookcase is "papered" with "Information Sheets," one of the firm's publications. The floor of the "public space" is covered with squares of polished brick plywood. Architect: F. R. S. Yorke. Craftsmen: A. Elmes and Company.

4. The sales story illustrated by the stand design. The Stand for Messrs. Wood Products at the 1934 Building Exhibition at Olympia. The stand is 20 ft. by 10 ft. by 10 ft. high, and has been designed to show flexible wallboard cut and curved. The standard size roll of this flexible wallboard has been used upended, extended and cut on the curve. The counter and canopy are of insulating board. The rear wall is brick, to show the method of applying flexible wallboard to cement screed on brickwork. The stand face of the wall shows the method of applying insulating board to battens. The joints are covered with anodized aluminium strips. Architect: F. R. S. Yorke. Craftsmen: A. Elmes and Company.



5

7

6

5. This form of statistical information was employed to a great extent throughout instance shown particularly well on sheets of Georgian Wired Glass.

Statistics graphically displayed by Messrs. Pritchard Wood and Partners at the 1933 Adve
Designers: John Gloag in collaboration with Joseph Emberton.

6. The design of the stands at this exhibition was much more successful than the di information used as a decorative motif at the end of the hall was, to the lay pul informative. A general view of the 1933 Advertising Exhibition.

Architect: Joseph Emberton.

7. A show of implements finally refuting the exhibitor's excuse for bad display material he is showing is not "artistic."

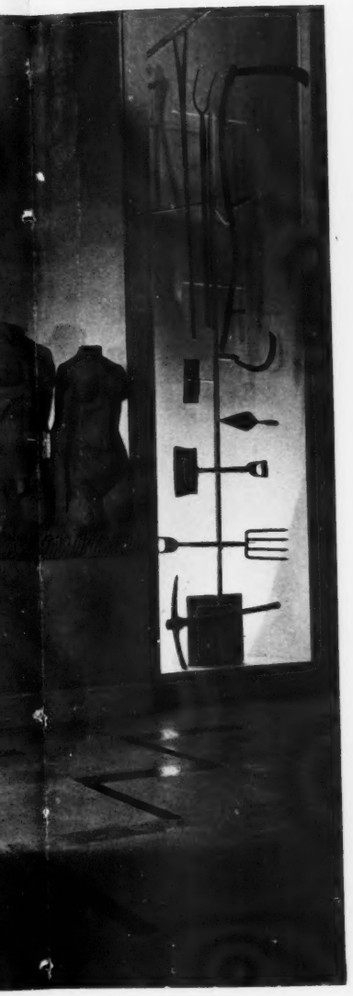
Everyday implements at the 1933 Dorland Hall Exhibition of British Indu
Architect: Oliver Hill.

8. Careful attention to proportion has here achieved a grandeur of scale very the enormously larger area of Olympia.

The Main Hall at the 1933 Dorland Hall Exhibition of British Industria
Architect: Oliver Hill.

9. An exhibition consisting of a number of sections labelled alphabetically a from floor and wall finishes, through the various stages of furnishing and equipme decoration.

The 1933 Exhibition of Modern Living at Messrs. Whiteley's. Architect: Serg



8

9

xtent throughout the exhibition, and in this
ıss.

at the 1933 Advertising Exhibition, Olympia.
Joseph Emberton.

ssful than the display. Even the statistical
s. to the lay public. more impressive than

n.

e for bad display on the grounds that the

tion of British Industrial Art.

ur of scale very rarely equalled even in

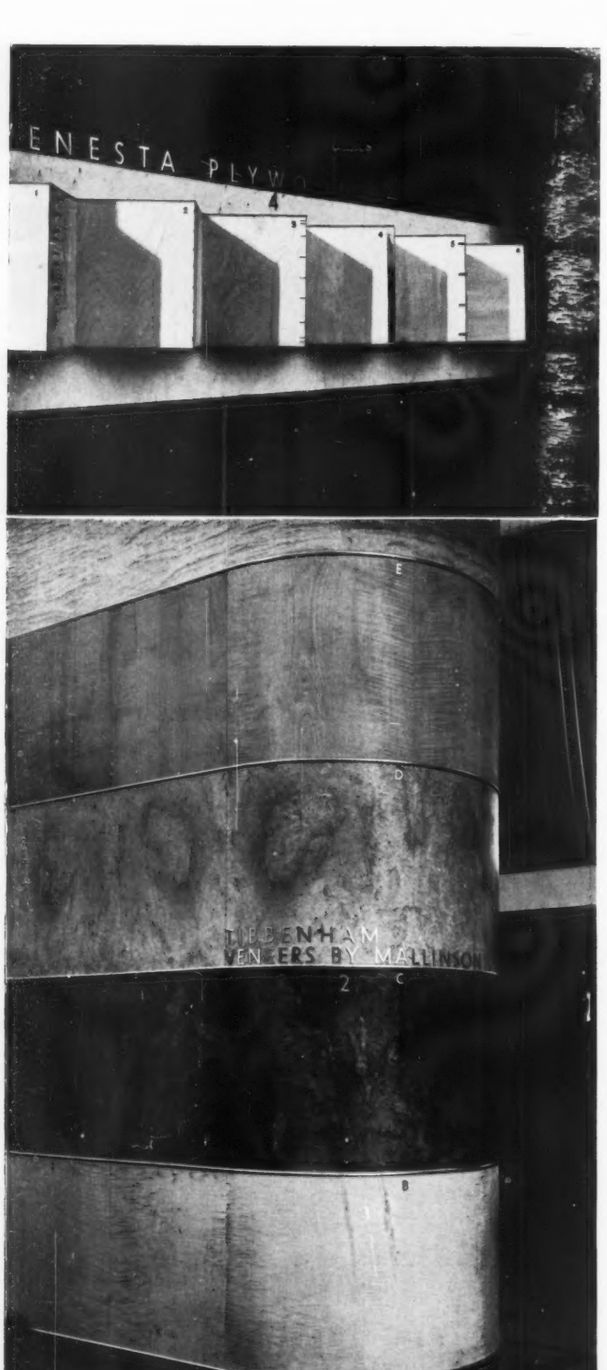
of British Industrial Art.

alphabetically and leading progressively
ng and equipment to the final details of

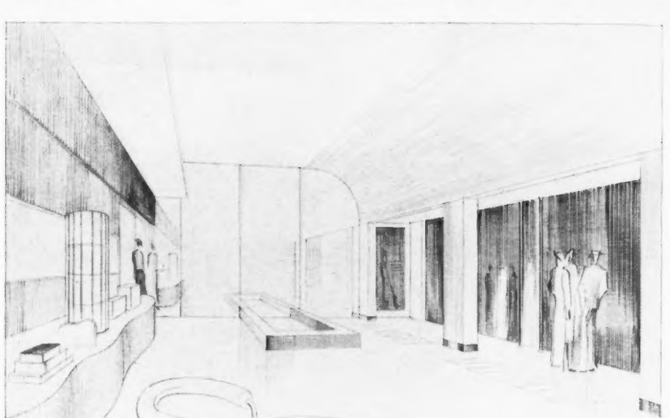
-. Architect: Serge Chermayeff.

10. Plywood and veneers intelligently displayed at the 1933 Dorland Hall Exhibition of British Industrial Art. The plywood was arranged to demonstrate the various methods of joining, and the veneered panelling was curved by a special process. The metal letters by Eric Munday were standard throughout the exhibition. Architect: Oliver Hill. Craftsmen: Harvey Display Company.

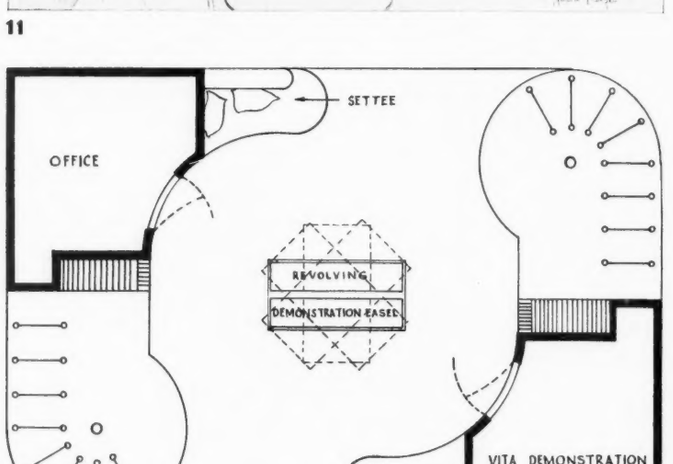
11 and **12**. A comprehensive display of structural glass assembled in a stand architecturally designed to illustrate the possible use of the more recently produced glasses, with special treatment given to the decorative use of a modern, coloured, wall lining material. Messrs.



10



11

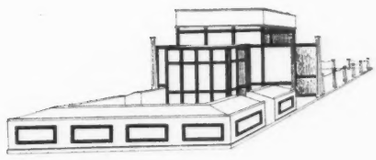


12

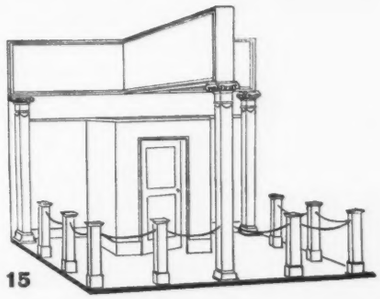
13

Pilkington Brothers' stand at the 1934 Building Exhibition. Architect: Kenneth Cheesman. Craftsmen: Beck and Pollitzer.

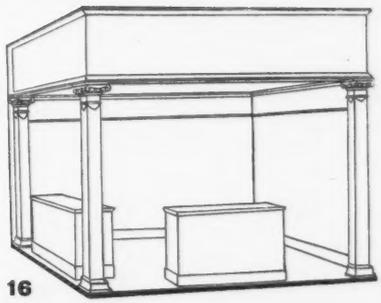
13 This stand was faced with plywood covered with various fabrics, natural coloured and brown hessian being employed to a great extent. The platform was covered with coconut matting, and the shelves on the side walls at the front held lubrication charts. The Stand for Messrs. C. C. Wakefield and Company at the 1933 Motor Show. Designer: Richard Levin. Craftsmen: Beck and Pollitzer.



14



15



16

14. Simple in design, very economical and will give full expression to goods exhibited thereon. Careful lay-out of exhibits completes the picture. **15.** Clean design and economical as No. 14. This is an excellent stand for displaying machinery and products that have the floor as their base. **16.** This stand is more costly than Nos. 14 and 15, but could be used when showing hanging fittings, or goods with which an " indoor " impression must be created. Suggested designs of stands for the British Industries Fair at Birmingham in 1932, with descriptions of each reproduced from the circular issued by the Birmingham Chamber of Commerce.

exhibitor's display, the architect usually favours, when the type of exhibition makes it possible, the facia type of shell stand. Within the hollow box shape formed by the facia, walls, and roof, the exhibitor can be left to do almost anything he pleases and still not, to any great extent, disturb the general scheme and effect of the exhibition. This has given many excellent results, particularly at the Ideal Home Exhibition where, viewed from the balcony, for instance, a very complete unity of planning is achieved.

The only unfortunate effect is that this closed-in type of stand presents a very awkward space in which to construct an effective display. The problem has been overcome with some degree of success, but any three-dimensional display construction tends to look out of place and cumbersome behind the comparatively frail facia and under the usually employed muslin roof.

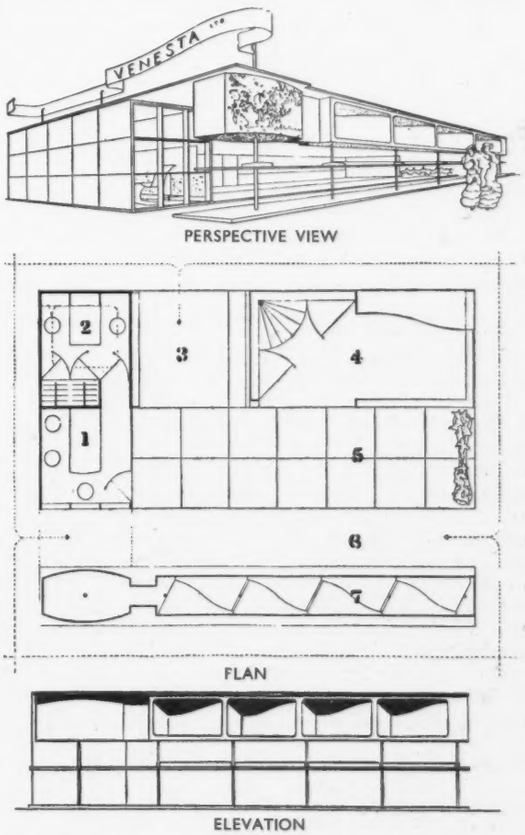
Alternative Shell Stands

Attempts have, therefore, been made to get away from this type of shell stand, noticeably at the Advertising and Radio Exhibitions. The latter was very unsatisfactory indeed, and the continued use of shell stands of the type employed, which are so obviously unsuitable from every point of view, can only be explained by the organizers' reluctance to scrap a comparatively expensive amount of stock material. At the Advertising Exhibition, the problem was more simple than usual; the number of exhibitors was not unmanageably large, the material to be displayed fairly constant throughout most of the main hall, and the exhibitors were willing to collaborate with the exhibition architect over the design of a large proportion of the stands and display. At most exhibitions, however, the exhibitors insist on their stands being " individual," and would not agree to their being designed by an architect who was commissioned by their competitors as well; consequently, until the *general* standard of design is improved at these shows, it is difficult to attempt any form of planning other than one which separates as much as possible the exhibition architect's structure from the individual exhibits.

I would like, therefore, to examine briefly the situation which has led the exhibition architect, on the one hand, to despair of persuading the exhibitor to have a logical display and has forced him to be content with attempting to alleviate as much as possible the ill effects of the individual exhibitor's creation, and on the other hand has given the conservative organizer a good excuse for allowing his exhibitions to continue almost as inefficient and unattractive as they were twenty or more years ago, and to appear even worse today when contrasted with the advance made in other forms of publicity.

The Contractors and Bad Design

Apart from architects who plan complete exhibitions, the number of competent designers employed on exhibition work in Great Britain is very low indeed compared to the number of exhibitions held every year. By far the greater percentage of the exhibitors have their stand design (or the design of the stand interior in the case of unified exhibitions) "thrown in" with the estimate. At the approach of every exhibition, each potential exhibitor receives circular letters from four to twelve (or more) contractors asking to be allowed to submit a design and estimate *free*. The usual procedure is for the exhibitor to ask a number of these contractors to submit designs, and then to make his final choice. I do not suggest that the designers in the contractors' studios are incapable, but they are, in my opinion, working under conditions which make good work almost impossible. For instance, they are for the most part completely out of touch with the client and with the job during construction; they very seldom prepare more than perspective drawings and a sketchy ground plan from which the factory foreman works, with little, if any, responsibility to the designer, who, as often as not, does not even see the stand when constructed. What is even more important, they have to work at speeds making thought and considered planning almost impossible, and often have to make use of entirely unsuitable stock materials.



17 The gangway through the stand itself is an interesting breakaway from the more traditional planning method considering the platform as an indivisible unit. The winning design, by F. Skinner, in the competition for a stand for Messrs. Venesta, at the 1934 Building Exhibition. Key to the plan: 1—Reception; 2—Office; 3—Introduction; 4—Display; 5—Floor; 6—Passage; 7—Display.

18. A well-organized display of models and drawings arranged so that each exhibit can be seen and studied by the visitor in comparative isolation without being confused by the surrounding display. From the 1932 Exhibition at the Berlin Building Centre.

During the last few years an increasing number of exhibitors have had their stands designed outside the contractor's office, estimates afterwards being obtained from the contractors on the approved design, but a visit to any London exhibition is sufficient proof of the still appallingly low general standard of design. This being so, when architects have been commissioned to plan an entire exhibition, their only solution has been, as I have already said, to try to hide the efforts of the individual exhibitors as much as possible.

The Architect and Exhibitions

It is obvious that little can be done until the exhibitor has been persuaded to see the advantages of using a designer outside the contractor's office; advantages similar to those gained by using an architect to design a house rather than a jerry builder; but there is obviously no need to discuss these advantages here. Better designers inside the contractors' offices would not solve the problem as their responsibility would be to the contractors' accountants and not to the exhibitors. The higher class contractors would, in fact, be in favour of the exhibitor employing outside designers, as this would make it possible for them to influence the trade to adopt a more reasonable basis for quoting on specification.

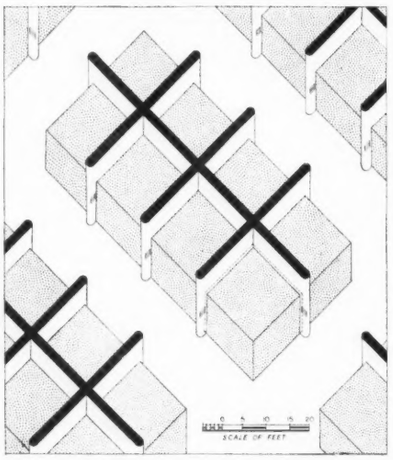
The Exhibition Organizers Could Help

It is now fairly common practice for the exhibition organizers to recommend a number of official contractors to their exhibitors. I would suggest that instead of this procedure they consider the wisdom of advising their exhibitors to employ architects and designers, and of emphasizing the advantages of such a recommendation. It seems impossible to believe that this method of working, which would be beneficial not only to the exhibitors, but also to contractors, organizers, designers and public, in fact everyone excepting a few cut-price jerry builders, should still have only been adopted by a very few of the more intelligent exhibitors.

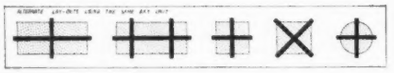
New Planning Methods

If the general level of design can be raised, perhaps partly by some such scheme, many new methods of exhibition immediately become possible which would co-ordinate in a more satisfactory way than hitherto the needs of exhibitors and organizers. I cannot attempt to discuss these methods in detail, as they will of necessity be different for almost every exhibition, but in order to indicate the lines upon which they might work, I have illustrated a suggested method of planning for a section of an exhibition requiring stands of the bay type in the centre aisles, **19.** This is based on the assumption that recommended architects would be used for the actual stand design. The restrictions on design would only be those of predominating colour, material to be used, height, etc., the unifying structure being so designed as to leave as much freedom as possible to the individual designer without spoiling the unity of the exhibition. If within this scheme all the designs were of a sufficiently high level and were passed by the general exhibition architect, who would consider them in relation to the adjacent stands, the problem of freedom with unification would be solved to a certain extent. The general exhibition architect would, of course, plan the exhibition lay-out, design the unifying structure, etc., as is, even now, the case in unified exhibitions.

This is only an indication of procedure which might be adopted in a specific instance, and leaves out many important considerations, but I have tried to show that any antagonism engendered by the unified system of exhibition planning is a short-sighted one and comes chiefly from the exhibitors who are, however, generally in favour of some kind of planning, the point at issue being the lines along which the problem should be approached. The present methods of planning are conditioned to a great extent by the very low general standard of design. This problem has been discussed often enough in regard to design and industry, and perhaps the gradual spread of enlightenment on the question, together with the taking of definite steps by the exhibition organizer, possibly on the lines I have indicated, may eventually raise the standard of exhibition design sufficiently to enable still more rational and efficient methods of planning and unification to be put into operation.



19. An alternative suggestion to the exhibition planning method of employing facia type shell stands. The shaded portion indicates the area available for the exhibitors' stands, and not their shape. Unifying structures on these lines would allow the designer of the individual stands much more scope than is the case when the facia type shell stand is employed, but would necessitate a very high general level of design. See the text for details of the restrictions which would have to be imposed on the individual stand designs under such a scheme. The building area extends into the thicknesses of the unifying walls. The name and address of the exhibitor is lettered on the unifying walls at about 6 ft. 6 in. high, immediately visible by visitors walking along the gangways. The type of lettering would be constant throughout each section of the exhibition.



20. Other possible arrangements of the bay unit.

ANTHOLOGY

An Eighteenth-Century Analysis of Taste

All the different bodies which constitute the mineral kingdom are distinguished by a greater degree of hardness and solidity than is to be found in any other of the productions of nature. Such bodies, however, by different exertions of art, may be moulded into any form we please ; but the beauty of the serpentine form, in such cases, is lost, from our consciousness of the absence of that delicacy which in general accompanies such forms. It is possible, for instance, to imitate the winding of the ivy, the tendrils of the vine, or the beautiful curves of the rose tree, in iron or in any other metal. It is possible, also, to colour such imitations in so perfect a manner as at first deceive the spectator. If I am not mistaken, however, the moment we are undeceived, the moment we know that the subject is so different from that which characterizes such forms in real nature, the beauty of the forms is destroyed ; and, instead of that pleasing sentiment of tenderness which the delicacy of the vegetables excites, a sentiment of disappointment and uneasiness succeeds ; of disappointment, from the absence of that delicacy which we generally infer from the appearance of such forms ; and of uneasiness from the conviction of force having been applied to twist the subject into so unnatural directions. If the same observation is further pursued, I think it will be found, in general, that wherever the delicate forms of the vegetable world are imitated in metal, or any other hard and durable substance, the character of the form is lost ; and that, instead of that lively emotion of beauty which we receive from the original forms, we are conscious of a feeling of discontent, from the seeming impropriety of giving to such durable substances a character which does not belong to them.

There are, however, undoubtedly, cases in which curvilinear forms in such subjects are beautiful. I apprehend, however, that this takes place only when a kind of adventitious delicacy is given to such substances, and of consequence the same character is retained by the form which we have generally associated with it in real nature. This effect is in general produced by the following causes : first, when the quantity of matter is so small as to overcome our sense of its strength or durability ; and, secondly, when the workmanship is so excellent as to produce an opinion of fineness or delicacy, independent of the nature of the subject upon which it is employed. In either of these cases such forms may be beautiful, though assumed by the hardest or most durable substances.

A bar of iron, for instance, or of any other metal, may be twisted by force into the most perfect spiral form ; but, in such a case, the conviction of force and labour destroys altogether the beauty of the general form. Suppose this bar lengthened, until it becomes as slender as the wires which are made use of in musical instruments, and as delicate as such wires are, and the forms become immediately beautiful. The same bar may be bent by force into the form of any given curve. In such a case the curve is not beautiful. Make the same experiment with a chain of iron, or of any other metal which in some respects is yielding and pliant, and where we know that no force is requisite to make it assume such forms, and the curves which it produces will be found very different in point of beauty. The imitation of any vegetable form, in the same manner, as the vine or the rose, in any kind of metal, and as large as it is found in nature, would be very far from being beautiful. The imitation of such forms in miniature, and in relief, when the character of the substance is in some measure forgot in the diminution of its quantity, may be, and very often is, extremely beautiful. The embellishments of a vase, or of an urn, which in general consist in the imitation of vegetable forms, are beautiful, both from the diminution of their size and from the delicacy of their workmanship. If either of these circumstances were wanting, if they were massy in their substance, or imperfect in their execution, I apprehend a proportionable degree of their beauty would be lost. In the same manner, although none of the forms of the greater vegetables are beautiful, when imitated in their full size, many of the smaller and more delicate plants may be imitated with propriety, because such imitations suppose not only small quantities of matter, but great accuracy and perfection of art.

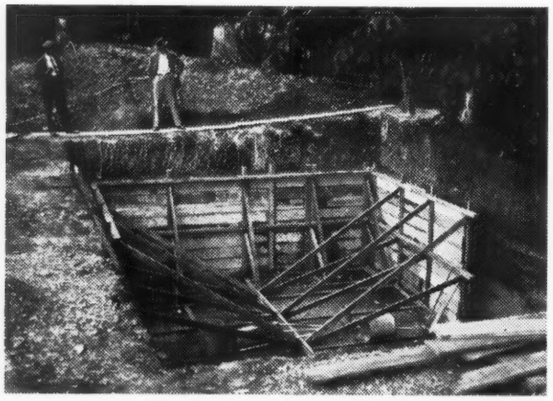
The same observation may be extended to the ornaments of architecture. These ornaments being executed in a very hard and durable substance, are in fact only beautiful when they appear but as minute parts of the whole. The great constituent parts of every building require direct and angular lines, because in such parts we require the expression of stability and strength. It is only in the minute and delicate parts of the work that any kind of ornament is attempted with propriety ; and whenever such ornaments exceed in size, in their quantity of matter, or in the prominence of their relief, that proportion which in point of likeness or delicacy we expect them to hold with respect to the whole of the building, the imitation of the most beautiful vegetable forms does not preserve them from the censure of clumsiness and deformity. A balustrade might with equal propriety be finished in waving lines, but certainly would not be beautiful. A twisted column, though affording very pleasing curves to the eye, is acknowledged to be less beautiful than the common and regular one. In short, if the serpentine form were the only form of beauty, it might with sufficient propriety be introduced into a great number of the ornamental parts of architecture. The fact, of which every person may assure himself, that such forms are beautiful only in those parts where the quantity of matter is minute, the relief small and the workmanship more exquisite, affords a strong presumption that such forms cease to be beautiful when the general association we have with them is destroyed.

It is the same limit which seems to determine the beauty of those forms which are executed either in wood or plaster, for the ornament of our houses. Every person must have observed in old houses the absolute deformity of those figures with which the roofs were decorated ; and, in comparing them with those of

modern times, will perceive that the great superiority of the latter consists in the great delicacy of the forms, as well as in the greater perfection of the execution. In both, flowers and foliage are imitated ; but in the one in full relief, and upon a scale sometimes greater than that of nature ; in the other, with the simplest relief, and the finest lines, that are consistent with the preparation of the subject. The terms, accordingly, by which we express our contempt or our admiration of them, are those of heaviness or lightness : terms which in this subject are synonymous with massiness and delicacy. The subjects, however, are the same ; and no other circumstances intervene but the superior delicacy of the forms, and the greater accuracy of the workmanship.

ESSAYS ON BEAUTY AND TASTE, by Dr. Archibald Allison, LL.D., F.R S. First Edition, 1790.

MARGINALIA



AIR-RAID ARCHITECTURE

To the left is a gas-proof and bomb-proof dug-out in a new housing estate at Ashford, Middlesex. The walls will be of concrete, two feet thick, and the roof is to be of steel and concrete. The dug-out will be reached by a sloping tunnel and a steel door. Already the popular press is talking about secret experiments by the authorities in making dwelling-houses proof against gas. We shall soon be brought round to the happy prepared state of mind when practice gas attacks, such as that shown below, will be accepted as a normal state of affairs. Meanwhile the architecture of funk evolves. That's Progress, that was !

Fourteen years ago H. G. Wells wrote : " The Great War of 1914-18 was the culmination of the military energy of the Western populations, and they fought and fought well because they believed that they were fighting ' the war to end war.' " *Sancta simplicitas !*

Warsaw recently endured a practice gas attack — just to get the post-war generation used to the idea of scientific civilization.

AN EXAMPLE OF NORTHERN ENTERPRIZE. (From a recent issue of "The Frazerburgh Herald and Northern Counties' Advertiser.")

111

"THE FIRS" AYLSHAM ROAD

From the *Eastern Daily Press*, Norwich, we reproduce this study in contemporary architecture, described as: "Messrs. Bullard and Sons' new house opposite the Firs Stadium. An artistic elevation by Messrs. Buckingham and Berry, architects." The following information is also given by the paper quoted: "This charming licensed house, Messrs. Bullard and Sons' latest, is situated opposite the Firs Stadium at the junction of Aylsham and Holt Roads and will serve the needs of a rapidly growing district which contains houses well above the average quality for a new suburb. The house has a large car and cycle park, and the gardens, which have been beautifully designed and laid out by Mr. R. C. Notcutt, of Woodbridge, will surely become the popular rendezvous of the evening tourists. Flowers, shrubs, smooth, well-kept lawns and paths, completely shut off from the public gaze, combine to make this a sylvan retreat.

"The public rooms, centrally heated throughout, are panelled and half-

timbered in an artistic manner, with beamed ceilings and quaint lead-glazed lattice windows, with the electric lanterns designed to fit in with the general scheme of decoration. The beer, perhaps the most important item in the building, is drawn from the barrels in the cool cellar by the latest type of beer engine on the Hygex Sillerite system to ensure perfect cleanliness and condition."

TOLPUDDLE'S MARTYRS' MEMORIAL

Nobody can now say that the Tolpuddle Martyrs suffered in vain. The Trades Union Congress are erecting six cottages, which will be officially handed over to aged residents during the centenary celebration. (The illustration is reproduced by courtesy of the *Daily Herald*.)

ENGLAND FROM THE GUIDE BOOK

Those disgruntled people who say that the beauties of England are not appreciated by their appointed guardians should study the guide books that are issued by local authorities. There is no lack of appreciation in their pages: they burn with an ardour that gives new life to the English tongue. For example, the Stratton and Bude Urban District Council publish an official guide to this delectable part of North Cornwall, and from it we extract the following glowing praises of the beauty spot under the Council's care :—

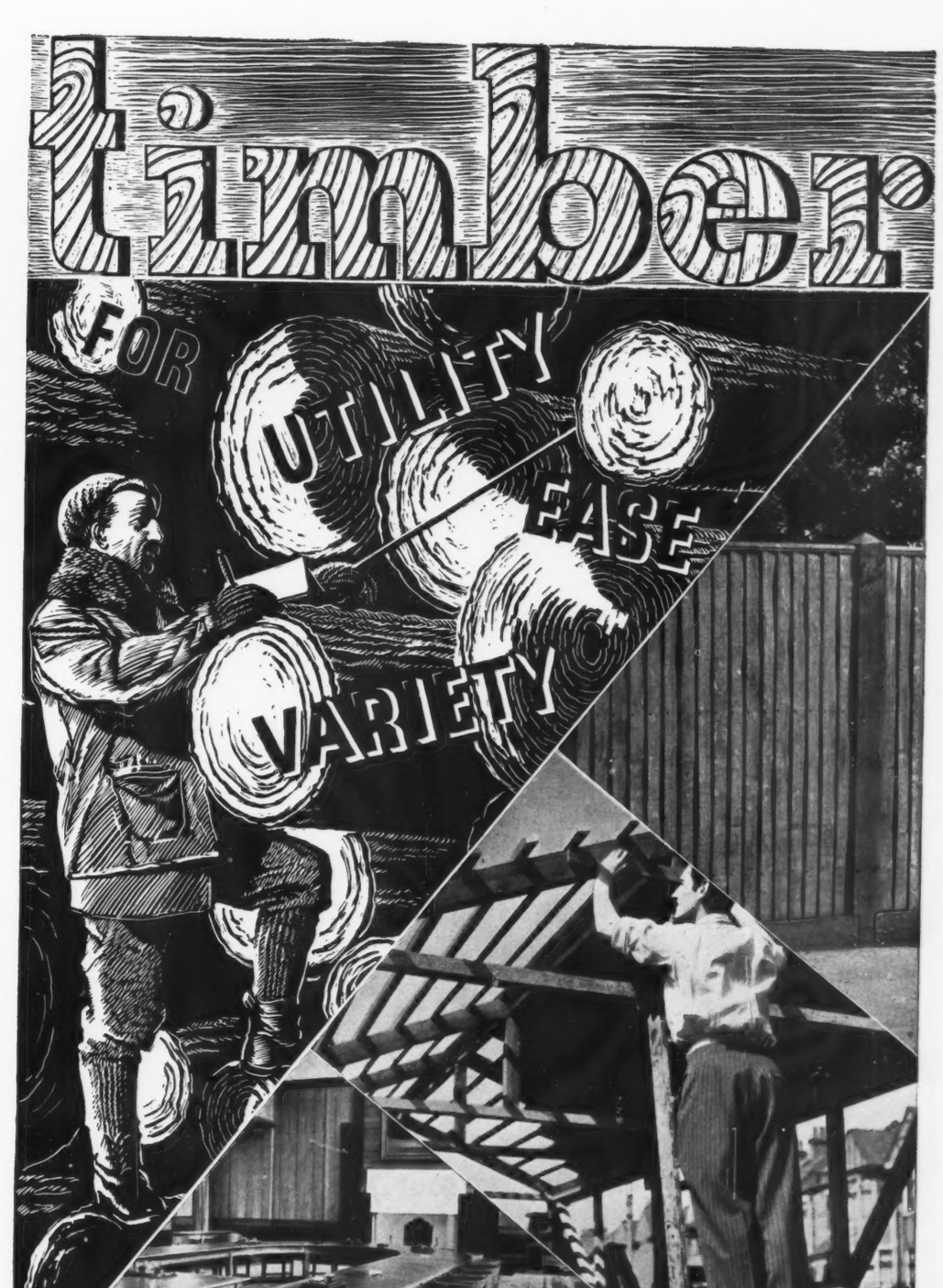
> The peculiar geographical disposition and arrangement of the town itself—even the Canal and the miniature River Strat which run through the town, favourite haunts of the stately swan and impertinent duck, add to this sense of the unusual—and the fine expanses of sandy beaches, the rugged rocks, undulating downs and protected valleys, which, to the average man and woman, visualize Bude, defy the canons of adequate verbal description. "Bude the elusive, the charming, the Will-o'-the-Wisp Cornish Town that breathes the breath of the open Atlantic, has no rival," wrote a visiting journalist, aptly describing his inability to put into words the charm of the Town. . . .
>
> This faculty of being "different" is so outstanding a feature of Bude, that few there are who visit it who do not succumb to the natural charm and appeal of a locality which breathes the spirit of untamed wildness, breadth of vision, spaciousness, and the joys of the open places. Bude, indeed, is the spirit, incarnate, of the open, free, and healthy existence which gave to Britain in the ages that are gone, the age which included the days of the Armada, those strong, raw-boned, upstanding men of brawn and daring that manned the ships from the Northern Ports and assisted in the epic rout of the Armada. . . .

EXHIBITIONISM

As it used to be done. The British Industries Fair, 1920—

Four years later—at the British Empire Exhibition, Wembley

Do we realize today how much we owe to the British Empire Exhibition? Wembley had a civilizing effect upon all subsequent exhibitions; and even the British Industries Fair, after a time-lag of six or seven years, is influenced by its lucidity and the decent orderliness of its exhibits. But Wembley owed much of that orderliness to architects; and it is difficult to assess just how much the architectural profession were indebted to the late Sir Lawrence Weaver for creating opportunities for the display of well-designed exhibits. Without the influence of Sir Lawrence, Wembley and many subsequent exhibitions might have repeated the incoherence of the British Industries Fair in 1920. Indeed, the Building Exhibition is a case in point. Although it should be the essence of orderliness, it looks today just as it did before the war.


timber
FOR UTILITY
EASE
VARIETY
ISSUED BY THE TIMBER DEVELOPMENT ASSOCIATION

Trade News and Reviews

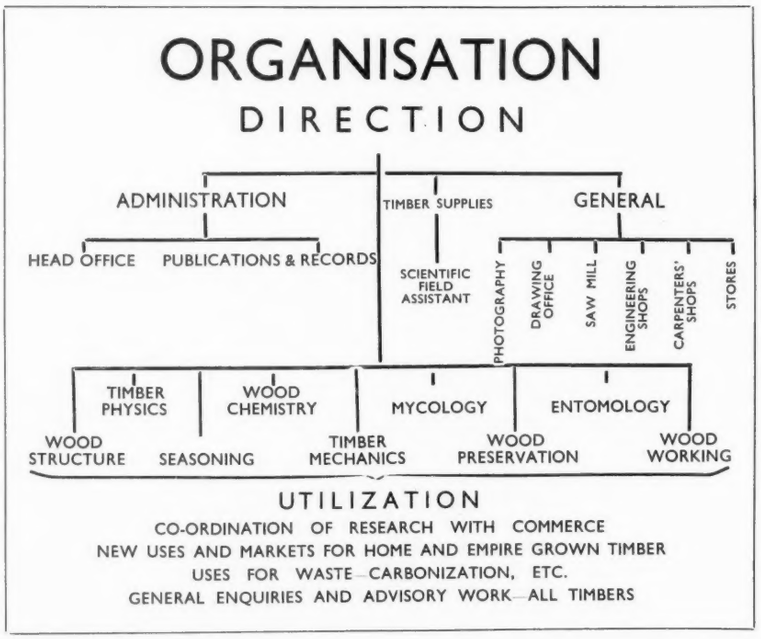
By Brian Grant

If you are under the impression that Quercus Robur Q.* was one of the more obscure Roman consuls, if you believe Lovoa Klaineana to be the name of Hollywood's latest and most exotic platinum blonde, then you have not been to Princes Risborough.

I paid my first visit to the Forest Products Research Laboratory at Princes Risborough a few weeks ago; I spent approximately four hours there, and came away believing that I had acquired a knowledge of timber verging on the profound—such a belief has since been cruelly dispelled by Mr. E. H. Boulton, manager of the recently formed Timber Development Association. Certainly a visit to P.R. awakens quite a new kind of interest in wood and woodwork. As one is taken round from department to department learning something of wood structure and timber physics, of mycology and entomology, one is tremendously impressed by the very real importance of such research work.

The Forest Products Research Board was first established by the Government in 1920, following a recommendation by the Imperial Forestry Conference, with duties of organizing and carrying on research into the utiliza-

* *English Oak—Botanical name, Quercus Robur Q. Nigerian Walnut—Botanical name, Lovoa Klaineana.*

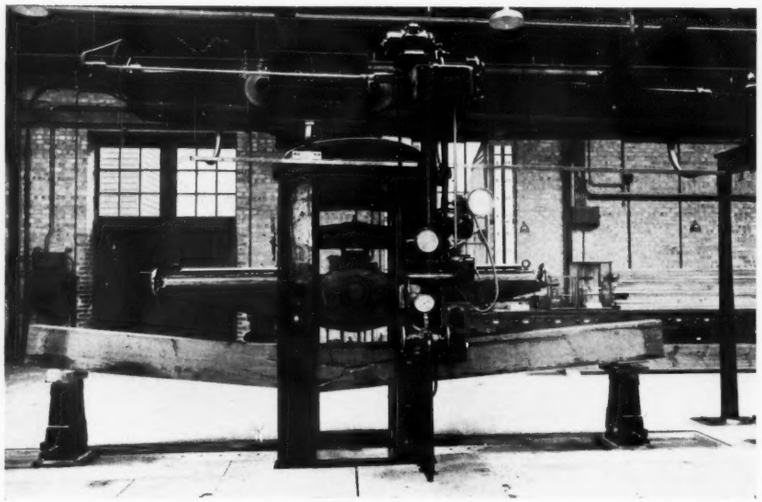


tion of timber and other forest products. A review of circumstances and needs as disclosed by a survey made by this Board led the Government in 1925 to set up a research laboratory, which was at first accommodated in temporary quarters until such time as a permanent and well-equipped laboratory could be erected. The move to Princes Risborough took place in 1927 and the chart which I reproduce on the previous page gives some idea of the Laboratory's organization and activities.

In the Timber Mechanics section there is some very ingenious machinery for testing the comparative strength and other properties of different timbers. There is one device for testing the wearing qualities of flooring timbers; there is a strange Heath-Robinsonish contraption for testing the strength of chairs constructed of different timbers. In the photograph reproduced opposite, a beam of European whitewood has been subjected to a breaking test in a hydraulic universal testing machine of 100,000 lb. capacity, and loaded to destruction; thus is data collected showing the maximum loads that can be safely carried by different timbers.

In the Wood Preservation laboratory, chemists are constantly testing and issuing reports as to the comparative values of different wood preservatives and recording the durability of timbers in their untreated and treated states.

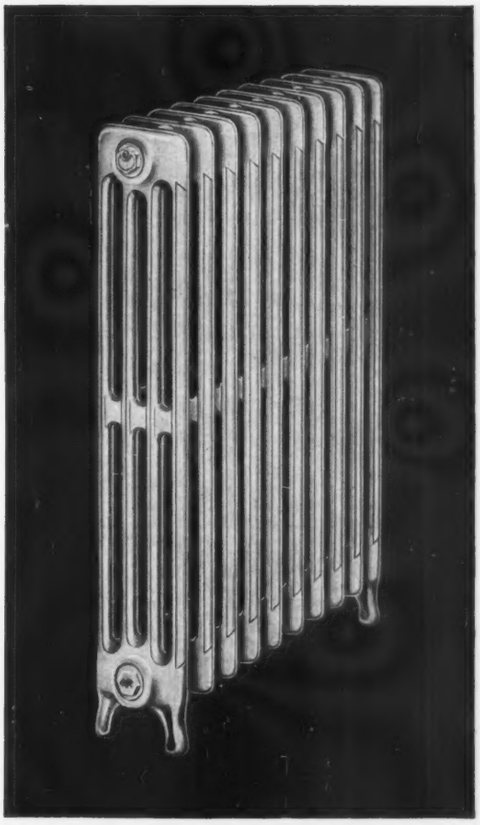
A most useful experiment was started about two years ago when the Laboratory erected a house for tests on dry-rot. This house was constructed in such a way that varying ventilation and humidity were capable of being controlled in each room; various types of flooring and panelling were laid and fitted, and the whole of the woodwork was inoculated with the dry-rot fungus. In every case where proper ventilation was provided the fungus refused to attack the wood; in cases where there was no proper provision for ventilation the fungus made a rapid attack upon the woodwork. I am told that timber must have a moisture content of 18 per cent. or over for the growth of dry-rot fungus, and that the experiments so far carried out do definitely show that wood structures properly designed will not be attacked.



One can better appreciate the real usefulness of this research work when one realizes that there are more than 3,000 different kinds of commercial timbers, and that the Laboratory will be happy to answer professional enquiries about the qualities of any particular wood for any particular use.

What does this service mean to the

IDEAL



Ideal Neo-Classic Radiator

The name IDEAL has always represented the best in radiator design, and the high standard of quality maintained by fully equipped laboratories and modern manufacturing methods is exemplified in the Ideal Neo-Classic.

This development of the column radiator gives higher transmission and more effective heat distribution, combined with small space occupied and neat appearance.

IDEAL BOILERS & RADIATORS LIMITED

Ideal Works, HULL, Yorks.

SHOWROOMS: LONDON BIRMINGHAM HULL

architect? During the past ten years some scores of new timbers have been placed at his disposal; he can know very little of their qualities, except that they do or do not appeal to him æsthetically, and he must exercise more than ordinary caution in experimenting with them. In the Publications and Records Office at Princes Risborough ready, reliable and completely unbiased information is available. All communications to the Laboratory should be addressed to The Director, who, I am sure, would be delighted to arrange for parties of architects to visit and see the work that is being carried out.

Through the Letter Box

I asked an architect recently what percentage of the catalogues sent to him by manufacturers he considered to be useful, technically informative and typographically well presented. His reply was illuminating. "Catalogues," he said, "are not what they used to be. The old-fashioned catalogue was just facts and figures and data. Typographically they were, for the most part, rather deplorable, but they did give plain, unadorned statements of fact regarding prices, dimensions and other specification details. Today," he went on, "I receive ten brochures to one catalogue, and whilst some of the brochures I receive are so well presented and well illustrated that I thoroughly enjoy looking through them, they are not of the same real usefulness to me as an 'honest-to-goodness' catalogue."

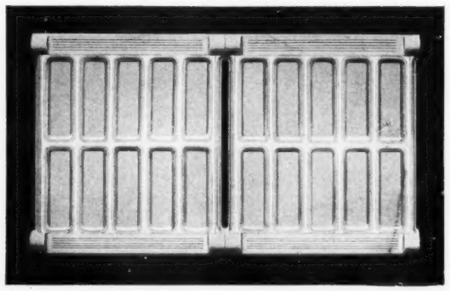
Is the brochure taking the place of the catalogue? Or is the manufacturer still publishing catalogues but only sending them to architects "upon request"? I notice that the majority of brochures terminate with the offer—"Illustrated catalogue gladly sent upon request," so it would seem that the latter is the case. Are architects generally receiving too many brochures and too few catalogues?—it would interest me to know.

The Architects' Book of Painting Specifications

Here is a book (it is a catalogue and more than a catalogue) deserving high praise—it is well printed, intelligently presented and contains information of definite service to the architect; it has been issued recently by Messrs. Nobel Chemical Industries, Ltd., of Slough. Architects are probably familiar with this publication, for no fewer than three editions have already been printed. This, the fourth, is even better than its predecessors. Information given in the previous editions has been condensed and the space thus saved has been devoted to additional chapters on subjects not before dealt with—notably, primers, Dulux white enamel and aluminium. The firm's recommendations for varnish and paint have also been condensed considerably in order to simplify specifying, and the recommendations now made are those which are generally required by architects. It is a volume that will be well thumb-marked in many an architect's office.

The National Radiator Company

From the National Radiator Company I receive a copy of their new catalogue containing particulars and illustrations of all current Ideal radiators and boilers and, in addition, certain new designs which have been introduced since the previous edition of their catalogue was published. It is a small, compact volume but thoroughly comprehensive and satisfactorily illustrated. The illustration reproduced below shows two sections of the new pattern 18-inch Ideal Classic wall radiator. The sections of these radiators are connected together with 1-inch right and left hand threaded internal nipples and, unless other-



wise ordered, are despatched assembled; the heating surface of each section is 5 square feet, and this type of radiator can be utilized for water or steam heating. The same type of radiator is manufactured also 24 inches and 30 inches in height; the length of each section is 16 inches, and the width 2 inches. Copies of this catalogue may be obtained from the National Radiator Company's head office at Hull or from any of their branch offices.

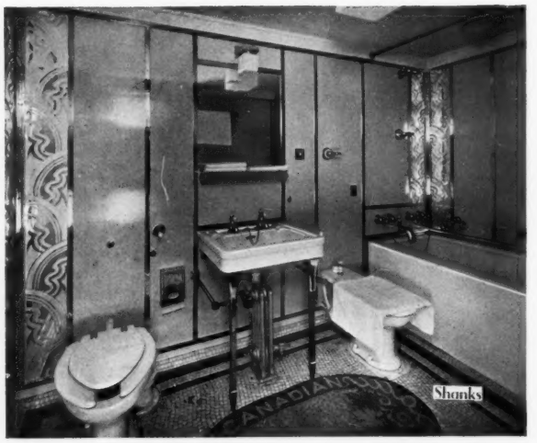
Bathroom Fittings in Nickel Silver

The Mond Nickel Company send me a copy of their publication No. Q.5, which illustrates a selection of standard bathroom fittings available in nickel silver. The publication has, apparently, been compiled in collaboration with the actual manufacturers of the fittings; if it is proposed to issue further such publications it is to be hoped that The Mond Nickel Company and the different manufacturing firms will agree to include PRICES. The cost of an article is, after all, a matter of some importance. One illustration, which I reproduce on this page, shows one of the bathrooms on the *Empress of Britain*. The fittings, manufactured by Shanks and Company, Ltd., are in "Aconite" nickel silver.

A Synchronous Master Clock System

Messrs. Smith's English Clocks, Ltd., of Cricklewood Works, N.W.2, have introduced the Smith Synchronous Master Clock System which consists of a synchronous master clock controlling a number of slave dials by half minute impulse. These dials derive their motive power from a set of accumulators trickle charged from the electric mains, and their timekeeping from the master synchronous clock, which is kept true to Greenwich through the medium of time controlled alternating current supply from the generating system.

In the event of a current failure, the master clock will continue to work, deriving its power from a set of accumulators provided for the slave dials also. The timekeeping is controlled through the medium of a very carefully calibrated vibrating reed. With a system of this sort, correct time is recorded throughout a building and the question of stoppage through current failures entirely eliminated.



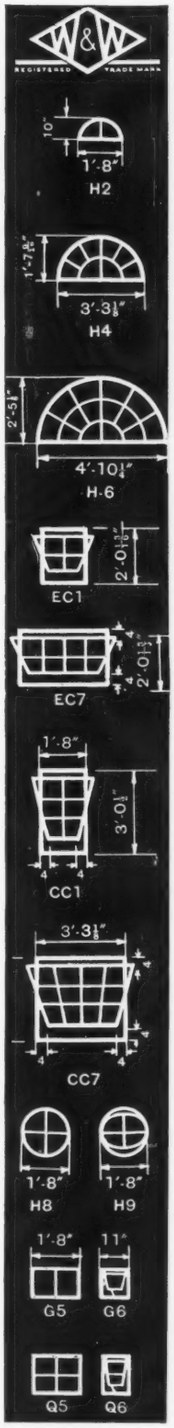
1874-1934

One man, an old converted forge his workshop, and one boy assistant—that was in 1874. A great factory extending over 28 acres of ground, and 2,000 employees—this is the picture in 1934, after sixty years of industrial progress.

These few words tell the story of the birth and growth of G. A. Harvey and Company (London), Ltd., of Greenwich. Undoubtedly, the early history of the firm was shaped by the personality, character and driving energy of Mr. G. A. Harvey, its founder and present chairman—he started with one machine supplying zinc products to a few local builders. Today "Harco" products are known to architects, engineers, builders and builders'

FACTS ABOUT METAL WINDOWS

★ *Discussed by Mr. B. A. Williams, Managing Director of Messrs. WILLIAMS & WILLIAMS LTD., Chester, Pioneer Manufacturers of Metal Windows* ★



"I can assist you to create distinctive designs at an economical cost.

From the many hundreds of standard units in stock you can fill any opening required.

From the largest building to the smallest cottage Williams & Williams Metal Windows will help to finish your design to your satisfaction.

William & Williams Windows are British Made, from British Steel, by British Labour; have two point weathering, solid bronze fittings, are electrically welded and stove painted.

Where the type of Architecture demands purpose made windows, Williams & Williams 400 series sections give all the advantages of mass production methods while retaining your individuality of design.

I therefore suggest that you cannot afford to neglect Williams & Williams Metal Windows when preparing your specification."

WILLIAMS & WILLIAMS *Reliance* LTD.

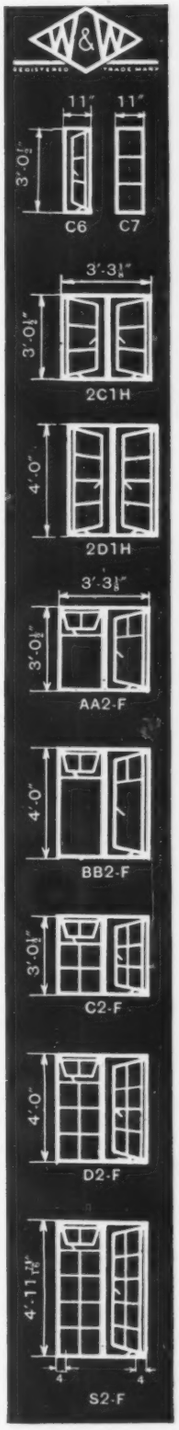
METAL WINDOWS

British throughout.. and *GUARANTEED*

★ *Architects are invited to write to Williams & Williams Ltd., Reliance Works, Chester, for complete plans, suggestions and quotations for any contract, large or small.*

WILLIAMS & WILLIAMS LTD., Reliance Works, CHESTER

Phone: Chester 765-767. Grams: Reliance, Chester. London: Sardinia House, Kingsway, W.C.2



merchants from Lands End to John o'Groats. Truly a splendid achievement!

Messrs. J. and H. Patteson

Messrs. J. and H. Patteson, Ltd., the marble craftsmen, of 96, Oxford Road, Manchester, ask me to announce that they have recently appointed Mr. F. W. Holloway as their London manager. Mr. Holloway, who was previously their representative in the London area, will take charge of the Company's interests at the London office—28, Victoria Street, S.W.1. (Telephone: Victoria 9433.)

The Buildings Illustrated

The general contractors for the block of flats in Lawn Road, Hampstead, designed by Wells Coates, were Messrs. George Barker, Ltd. Among the artists, sub-contractors and craftsmen were the following: J. E. Billings & Co., Ltd. (reinforced concrete foundations), A. A. Byrd & Co., Ltd. (external waterproof finish), Helical Bar and Engineering Co., Ltd. (steel reinforcements and fireproof floors), Bitumen Cold Process Co., Ltd. (asphalte roofing and paving), Adamite Co., Ltd., and F. McNeill & Co., Ltd. (partitions), Joseph F. Ebner, Ltd., and Cellulin Flooring Co. (patent flooring), James Combe and Sons, Ltd. (central heating), General Electric Co., Ltd. (electric stoves), White Bayes and White, Ltd. (electric wiring), Troughton and Young, Ltd., and Best and Lloyd, Ltd. (electric light fixtures), Berry's Electric, Ltd. (electric heating), Greenwood's Ventilating Co., Ltd. (roof ventilators), Twyfords, Ltd., and John Bolding and Sons, Ltd. (sanitary fittings), Crittall Manufacturing Co., Ltd. (casements), Haywards, Ltd. (fireproof doors and iron staircases), Imperial Chemical Industries, Ltd. (plaster), J. H. Hawes, Ltd. (metalwork, handrails, etc.), Waygood-Otis, Ltd. (lifts), British Water Conditioners, Ltd. (water-softening plant), William Harland and Sons, Ltd. (paint and distemper).

* * *

The general contractors for the Empire Swimming Pool, Wembley, designed by Sir Owen Williams, were Messrs. Holloway Bros. (London), Ltd. Among the craftsmen and sub-contractors were the following: Alfred Bagnall and Sons, and Vigor & Co. (Poplar), Ltd., painting; Benham and Sons, Ltd., kitchen equipment; John Bolding and Sons, Ltd., plumbing and sanitary work; J. B. Brooks & Co., Ltd., dressing boxes; James Combe and Son, Ltd., heating; Crittall Manufacturing Co., Ltd., sashes; Walter Dix & Co., swimming equipment; W. T. Ellison & Co., Ltd., turnstiles; H. J. Ford, wooden fencing; Ham, Baker & Co., Ltd., manholes, grilles, etc.; John Hawley & Co., Ltd., rubber mats; Maple & Co., Ltd., seating; Mellowes & Co., Ltd., roof glazing; John M. Newton and Sons, Ltd., glazing; Paterson Engineering Co., Ltd., filtration and wave making machinery; Penfold Fencing Co., Ltd., wire screens; Pilkington Bros., Ltd., glass discs for under-water illumination; Smith's English Clocks, Ltd., electric clock; L. Sterne & Co., Ltd., refrigeration; Adrian Stokes & Co., metal work; Troughton & Young, Ltd., electric lighting and power wiring installations; Joseph Westwood & Co., Ltd., lockers; Phillips, sound amplifiers; Guest, Keen and Nettlefolds, Ltd., steel; Cement Marketing Co., Ltd., cement; Stone Court Sand and Ballast Co., aggregates; Joseph Westwood & Co., Ltd., staging for seats; Joseph Freeman, Sons & Co., Ltd., "Cementone" No. 7 for interior decoration of Pool; Horseley Smith & Co. (London), Ltd., timber work; Bastian and Allen, Ltd., the electrode boilers and controls together with the electric water heating equipment.

● ● ●

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE

BARTLETT SCHOOL OF ARCHITECTURE

DIVISION OF DECORATION

Professor of Architecture: A. E. RICHARDSON, F.S.A., F.R.I.B.A.
Lecturer in Decoration: H. WARREN WILSON, A.R.C.A.

THE Division of Decoration has been instituted with the co-operation of the Incorporated Institute of British Decorators. It aims at stimulating and promoting a knowledge of Decoration generally, and provides a three years' course of training, leading to the Certificate in Decoration, for those who wish to make the profession of Decoration their calling in life.

The Division of Decoration forms part of the Bartlett School of Architecture, and is carried on in close co-operation with the Slade School of Fine Art. Studio work forms an important part of the course.

The Prospectus, giving particulars of the course leading to the Certificate in Decoration, is now ready.

C. O. G. DOUIE, *Secretary.*
University College, London (Gower Street, W.C.1).