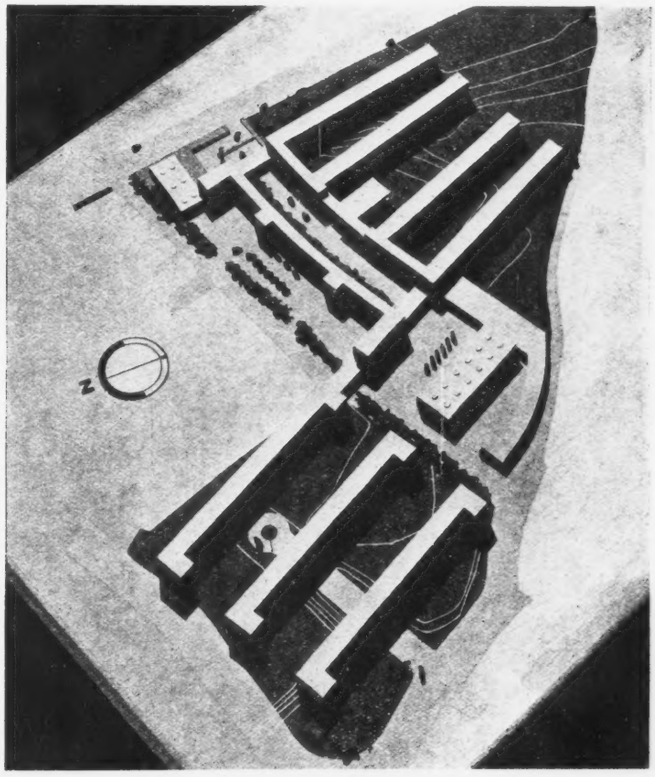
THE ARCHITECTURAL REVIEW

A Magazine of Architecture & Decoration



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Vol. LXXXIII March 1938 No. 496

THE
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Vol. LXXXIII, No. 496 March 1938

CONTENTS

Plate

Christopher Wood, the talented painter who died in 1930 at the age of only 29 years, spent the last months of his life in Brittany. Here he painted what are considered his most mature pictures, among which is that reproduced above. It is entitled "Decorating the Sanctuary, Treboul." The painting is included in a definitive exhibition of Christopher Wood's work which has been organized by the Redfern Gallery. The exhibition is to be held at the New Burlington Galleries, Burlington Gardens, London, and will open on March 3rd.

Building Follows the Road

THE MINISTRY'S ROAD IMPROVEMENTS POLICY: SOME PRESENT AND PROBABLE RESULTS

THE first and the last people to lay down a clearly devised road system in this country were the Romans. A map of Roman Britain makes this evident.

Since then their system has been overlaid by one civilization after another, until Chesterton's jolly but misleading description of the "drunken English road" bears a semblance of truth.

Through a tangled network of mediæval tracks and coaching highways the long ruled Roman communications show upon the Ordnance map, and motorists rejoice that military precision of centuries ago should still cleave them a straight path to the north and to the west. It is a temptation to overvalue the *ligne directe*.

Actually the road of the Roman province was a direct response to its military economy. It would not be difficult to justify the mediæval complex of track-way and field-way. Both existed to serve a need, and both were superseded when the peculiar need vanished.

The first question for any roadmaker whatsoever is whether his road system is adjusted to the economy of the people it serves. The spectacle of one peasant and a donkey moving slowly down the centre of a sixty-foot wide concrete highway across a desert is no more ridiculous than that of a fleet of motor lorries bogged in the mud of an inadequate track-way. Neither way is adjusted to its load.

Are the English roads adjusted to their varied loading? Do they subserve the economies of our times?

We are in this small island the inheritors of half a dozen road systems from the Roman onward. And to these systems of open roads time has added further systems of closed roads: canals and railways. The Romans drove through virgin country which now is enclosed and lies secured with every precaution of the law within the ownership of countless estates, both large and small. We are a capitalist nation, and live and work subject to the let and hindrance of private ownership. That is a part of our national economy: a waning part, for, on the other hand, new necessities arise to modify law and turn private rights into public wrongs. We move gradually towards the acceptance of a new economy in which public authority controls and the State directs. The "rolling English drunkard" becomes the Whitehall bureaucrat.

But whereas the "English drunkard" had some sense of what was good for him, for God is said to look after drunkards and little children, the bureaucrat is a man very much directed by events. Not a politician who, like a drunkard, picks a miraculous course through obstacles, but a man constantly subject to pressures from every angle, yet determined always to make his rules and regulations a straight and inflexible rod.

And it is just this straight and inflexible rod that threatens at the present moment not only the virtue but the very sanity of our road economy. It delights in the rule-of-thumb application of road-planning legislation; applying it, that is to say, as though the very act of regulation had some virtue of its own, irrespective of the realistic purpose legislation is meant to serve. The fact that a deplorable condition of affairs is the outcome of legislation that was passed with all brave intentions—when the most far-sighted planners were crying out for legislation—only makes the condition sadder.

The actual state of affairs to which we would draw attention is this. In the Restriction of Ribbon Development Act, which became law in 1935, the Ministry of Transport laid down certain standard widths for different classes of road, and the Act at the same time empowered local authorities to acquire land compulsorily in order to bring the roads under their charge up to these standard widths. Having done so they are further empowered to impose various restrictions on the development of the roads, for the purpose indicated in the Act's title. Now road improvement costs money, and road-widening costs a great deal of money when compulsory land-purchase is involved; so the Ministry of Transport gives grants out of the Road Fund to enable local authorities to proceed with road-improvement schemes, and it is only natural that roads that are to be improved with the aid of this grant should be expected to conform to the standard widths that the Ministry has laid down.

But no one seems to have foreseen an inevitable result of this otherwise constructive legislation. Local authorities, eager to take advantage of the financial help this arrangement offers them (and by so doing relieve their own ratepayers of some of the burdens of the roads), have been only too anxious to bring the roads under their charge within the scope of this legislation; and in the framing of the latter no provision was made, no plan of road-requirements was envisaged, to ensure that any particular road merited this attention. So road-widening programmes were industriously begun in all parts of the country, and now we find ourselves in the ridiculous position of being involved in a nation-wide activity of road-widening—entirely regardless of whether any road concerned is adequate at its present width or not. Puzzled landowners find themselves served with notices intimating the approaching compulsory purchase of roadside strips of their property—probably valued agricultural property, perhaps containing ancient belts of roadside trees—solely in order that a road already wide enough can be made still wider so as to qualify for a monetary grant from the nation. For the same causes the amazed rustic finds his local half-deserted by-road converted suddenly, for no reason connected with its function as a road, into a tar-macadamed highway of standard width (the smallest of the Ministry's standard widths is no less than sixty feet) complete

RESTRICTION OF RIBBON DEVELOPMENT ACT, 1935 (25 & 26 GEO. 5, CH. 47)

"1.—(1) Power to adopt standard widths for roads. The highway authority may by resolution adopt as respects any road any of the standard widths specified in the First Schedule to this Act, and if the resolution is approved by the Minister . . . ."

ROADS ACT, 1920 (10 & 11 GEO. 5. CH. 72)

"3.—(4) (e) . . . . subject to payment of the sums aforesaid and of any sums to be repaid to a local or police authority out of the Road Fund under any other provision of this Act, the moneys standing to the credit of the Road Fund shall be applied by the Minister for the purposes of Part II of the Development and Road Improvement Funds Act, 1909 . . . ."

REPORT ON THE ADMINISTRATION OF THE ROAD FUND FOR THE YEAR 1936–1937.

" Grants made during 1936–37 . . . .

"(iv) Other Road Purposes. Improvement works (widenings, reconstructions, etc.) on classified and unclassified roads and bridges . . . . Total: £8,488,174."

with all modern appurtenances except the traffic.

Cases, indeed, have been brought to our notice where the County Surveyor has admitted that a road-widening proposal is entirely unnecessary, but has had to insist on its being carried out (even up to the point of compulsory purchase of land) in order to obtain a grant for the repair of an unclassified road: that is, a road not classified as a major road under the Ministry of Transport Act. The position of a Surveyor in a case like this is that he must obtain as many grants for the improvement of unclassified roads as possible; otherwise the grants would go to other counties and the unclassified roads in his own county would have to be made up at the expense of the ratepayers only. The position we have arrived at, therefore, is that of a scramble among the authorities for grants from the Ministry for the carrying out of entirely unnecessary work.

We have already said that a road too grand for its load is as absurd as one too primitive. Besides being absurd as a piece of machinery, it is ruinous to the taxpayer's pocket and sadly wasteful of the planning energy that we have been at such pains to instil into our local authorities. It has often been shown in the past that the technique of producing good roads by systematically widening poor roads along their whole length is the most expensive of all techniques. This is inevitable seeing that land has to be acquired from (and compensation paid to) innumerable owners along frontages of already recognized value; whereas a new road cut through virgin country would mean less negotiation over less costly land. However, we are not concerned here with how best to provide the arterial motor roads that this country undoubtedly needs: that problem has already been discussed on these pages. We are only concerned with the madness of "improving" all our roads by this widening technique whether they need to be wider or not. Though it is by the local authorities that this madness is being perpetrated, it may be against their own wish and judgment. They may even be conscious that the undertaking of it is preventing them from getting on with far more necesssary work; but they are compelled to do it in their own ratepayers' interest for the sake of the grant.

Even regarded as a means of providing employment this practice has no more to recommend it than the proverbial one of setting the unemployed to digging holes and then to filling them up again. Indeed, it has less to recommend it. A hole once filled up does not involve further expense: a road once widened does. Digging holes is at least harmless, whereas the expenditure of cash and man-power on widening roads that are wide enough already has results outside itself which are harmful in the extreme.

For this state of affairs is disturbing enough on obvious grounds of waste, muddle and unnecessary destruction, but it is when we consider its town-planning and architectural implications that its seriousness becomes apparent. It is a truism, or should be, that the planning unit is not the road, *but the road plus the house.* The disposition, of our roads only acquires a meaning if we study at the same time the disposition of the dwellings the roads serve. At one time the road could be said to follow the house: it came into being as the beaten track linking house to house. But with the advent of the motor-car the position was reversed. Roads were built for the service of this new gift of science to civilization, and only later did houses spring up along them. Today we know so well that the process by which our towns enlarge themselves—the process by which the country gets swallowed up by the town—is one of a gradual accretion of building along the existing highways of the town's environs, preparatory to the filling in of the interstices to complete the urbanization. Nowadays, that is to say, the house follows the road: even, with the modern development of the motor-car, the rural road as much as that on the outskirts of the town. The existence of a civilized made-up road, of standard width and complete with the appurtenances that the Ministry of Transport now demands, is an invitation to build a house alongside it—or many houses; and, before we know where we are, a suburb.

So the inevitable result of this present programme that we have referred to, of widening, paving and otherwise "improving" harmless country roads for the mere sake of conformity with regulations and the grant this brings with it, is an immediate diffusion of building activity over a far wider area of country: leading towards an eventual suburbanization of the whole countryside, when every country road has received the attention of the wideners and improvers.

If there is one contemporary evil that all parties agree in deploring, it is the unchecked growth of suburban building. The necessity of legislation before all rural England is swallowed up by suburbs, before every hedgerow becomes a strangling ribbon of development, has become more and more evident. The enlightened student of the problem insists on the necessity of constructive legislation, in preference to enforced preservation; that is to say, legislation that encourages, but wisely controls, necessary development. But that the most important piece of town-planning legislation of recent years should not only prove unable to check the evil it was launched against, but should actually be the cause of more widely spreading a similar evil, is poor reward for years of planning propaganda.

We can therefore condemn the present policy of indiscriminate road widening on two counts: on the count of its failure to provide better communications, because it substitutes a vague and expensive policy of "improvement" for a vigorous one of road construction *according to road-traffic needs;* and on the count of its probable planning repercussions, because it spreads even more widely the evil of low-density development and piles up for the future probably insoluble problems of town planning and administration.

That these two questions, road-transport and suburban building, are indeed so closely linked is borne out by the example of the Continent. There, in France particularly, the practice is that principal roads only are improved to keep pace with the growth of motor traffic. They only are provided with an up-to-date speed surface. Minor roads are left in the comparatively primitive state their primitive local use demands. The result is that motor traffic is automatically canalized along certain recognized routes, *and building development, following suit, is automatically restricted for reasons of accessibility, to the same tracts of country.* The control of building development is thus made easy and the preservation of rural character is automatic. Even if at the moment control is negative, or even non-existent, the result is not affected: the result being that France, without legislation to that end, merely on account of her road-planning policy (or lack of it) has achieved some degree of restriction of indiscriminate suburban development; development that we, with all our Acts, have so far only succeeded in encouraging.

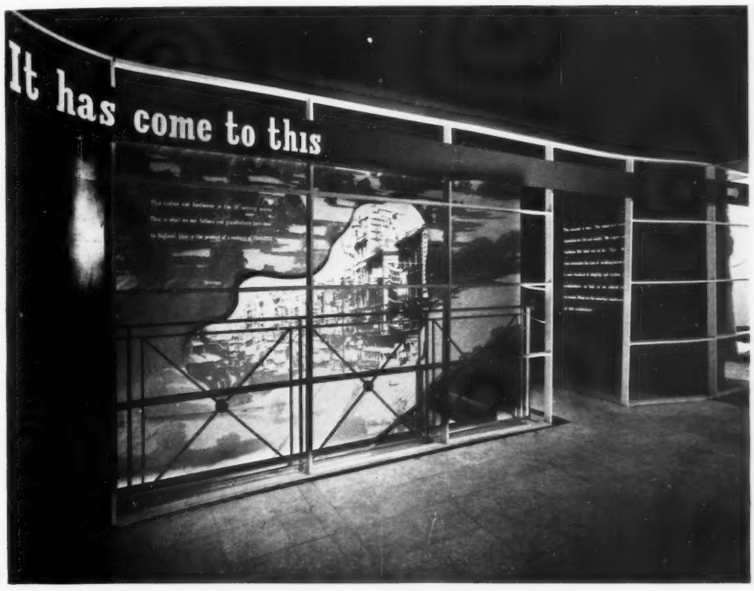
It is clear now, even if it was not clear when our experimental road legislation was initiated, that the road problem and the building problem are one—the eternal town and country planning problem. In essence the road problem can be partitioned between the satisfaction of long distance and local needs, but so rapid has been the development of the motor car, and so great the demand for houses that the direction of affairs has gone to the centre. Direction has proceeded by regulation, and locality has lost much of its meaning. Town planning is a matter of administration, and road planning toes the line to apply for the necessary — and the unnecessary — money.

The price at which it can get the money is its willingness to conform to a standard process of widening, straightening and hardening, irrespective of actual requirements, which means its condemnation to an inevitable suburban end. Which is worse, absence of control of any sort, or rule-of-thumb economic control with results exactly opposite to our legislators' intentions?

THE MARS GROUP EXHIBITION

OF THE ELEMENTS OF MODERN ARCHITECTURE

A PICTORIAL RECORD



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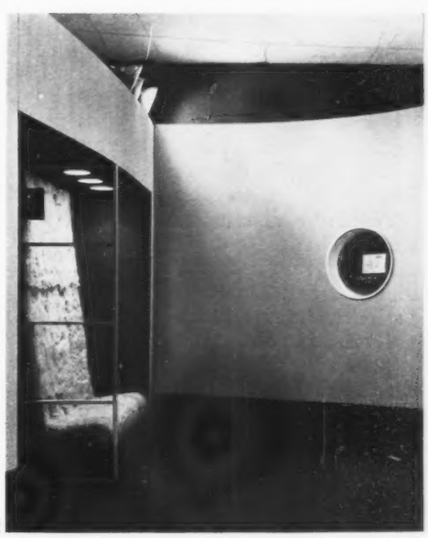
The exhibition was organized by the MARS (Modern Architectural Research) Group and held from January 11th until January 29th in the New Burlington Galleries, London.

The exhibition begins, in the entrance hall, by indicating the problem with which the modern architect and town-planner are faced. The light is concentrated on a large screen, 1, which occupies the whole of one wall—on the far side of the existing staircase, whose conventional balustrade is disguised with a white painted trellis. The screen bears a huge photograph of a tract of park-like English landscape, on which is superimposed a contrasting photograph of a section of Oxford Street, typifying our chaotic unplanned urbanism at its worst. Turning immediately from the critical to the constructive, a legend on the right of this screen reads :

" The mischief is done. The monstrous town enmeshes our life and wealth. We regret. We condemn. But what can we do ? This : we can reconsider the aims of building ; establish a new standard of integrity and realism in architecture, so that as we rebuild we recreate. What are the essential conditions of this architecture ? "

And the visitor proceeds, following the arrow on the plywood title-ribbon above, into the first room of the exhibition proper, brightly lit in contrast to the sombre entrance. Here, adjoining a seat set in an embrasure, upholstered in woolly sheepskin and thus reassuring the visitor that modern architects are not intent on using none but synthetic materials, is a glazed porthole, 2, displaying a first edition of Sir Henry Wotton's celebrated paraphrase of Vitruvius, composed in 1624. It is open at the page bearing the text on which the arrangement of the exhibition is founded :

" The end of architecture is to build well. Well building hath three conditions : commoditie, firmenes and delight."



2

By Le Corbusier

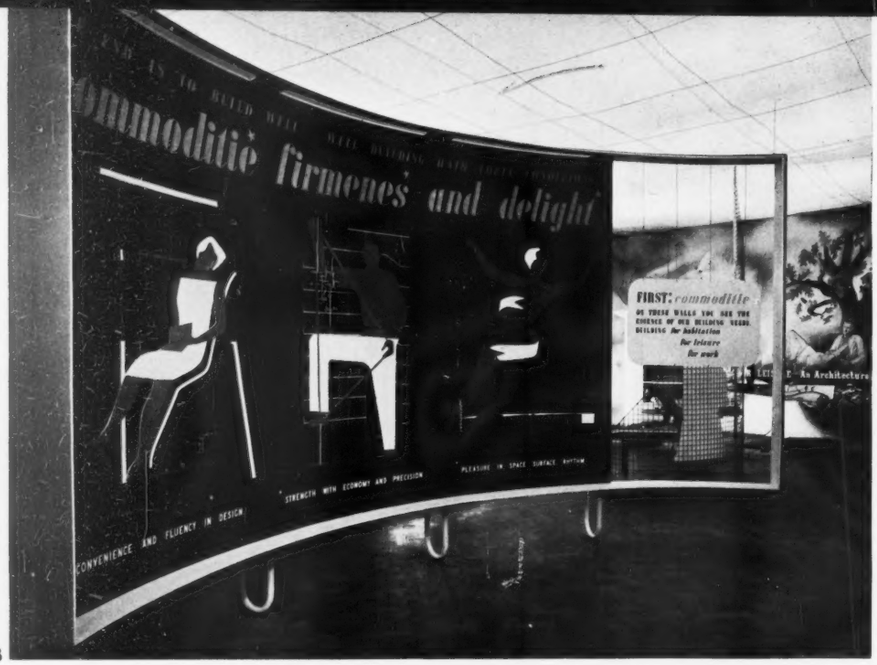
On January 19th I dropped out of an airplane into the midst of a charming demonstration of youth, which revealed the architecture of tomorrow to be as smiling as it is self-reliant. Much has certainly been accomplished. It is no longer a case of fighting a battle all over the world, but of a victory already won in every part of it.

The characteristic quality of the New Architecture—and therefore of this MARS Exhibition—is that it anticipates the needs of mankind. Consequently, it substitutes dwellings which vouchsafe their inmates all the essential joys of life for the gloomy dens built during the last century. The New Architecture springs from the depths of the human heart. That is why it has launched a deliberate crusade against brutality, indifference, selfishness, and stupidity. This generous sentiment has prevailed because it knew how to dispose of the marvellous resources which the Mechanical Age has put into our hands. Those constructive weapons were the fruit of a *Technical Revolution*. Thanks to it, the sensibility of our generation has been able to discover or create those new forms which the modern dwelling embodies.

These have been perceived more or less clearly, though often intuitively. That MARS, the British national group of the international federal organization known as " *Les Congrès Internationaux d'Architecture Moderne*," has been able to plan and produce this magnificent exhibition in London is sufficient proof of this. C.I.A.M., as the parent body is usually called, was founded in 1928 at the Château de La Sarraz, in Switzerland—not to solve the general economic problems of modern architecture, but to affirm its moral principles which had been outraged by the jury's verdict on the competition for the Palace of the League of Nations at Geneva. Though that conference awoke vital echoes in a score of different countries, it was as much the quality of heart as that of mind of the enlightened men who took part in it which brought into being these various national groups.

In this London exhibition you are confronted by men of good faith and good-will, men with the enthusiasm and sensitiveness of artists, who found their architectural faith on the heart of man, imbued with the tender aspiration to shape a home for it that shall be truly such on every day in the year. But to do so they have to face the gravest problems of planning, sociology, and economics—problems which raise the question of *action* as the only answer to *inertia* and *routine*.

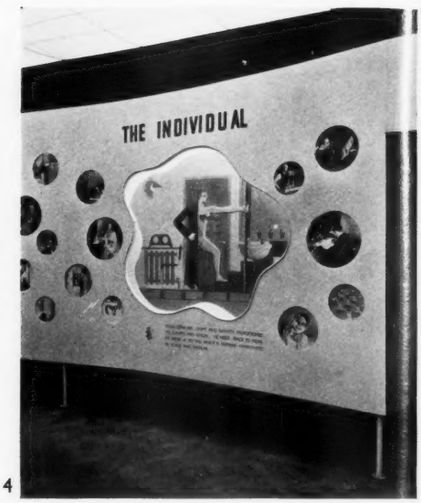
But there is another reason why MARS has been able to score such a brilliant success. Important industrial enterprises and wealthy commercial organizations appreciated the generosity of mind which animates the Group, and have contributed so liberally to its funds that it was possible to stage this exhibition under conditions I have never seen approached elsewhere. Is it Old England's greatest secret that,



3

ENTRANCE: THE ESSENTIAL CONDITIONS

Sir Henry Wotton's three conditions are symbolized on a black surfaced screen, 3. Delicate white-line drawings and figures in red and white suggest the three corresponding provinces of architectural design: planning, structure and æsthetics. A notice framed in an open panel, cantilevered at the end of the screen, amplifies the requirement of "commoditie," the subject-matter of the first room.



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7

in her chosen hour, she always knows how to blend the noblest ideals with the measured realities of hard economic facts?

What strikes one particularly in this exhibition is the elegance, the intimate eloquence, of its sequence of presentations, none of which could possibly alarm anybody. The visitor is led by the hand, and almost imperceptibly finds himself convinced by one after another. The sunshine of innumerable electric globes suffuses every room in the gallery with the soft atmosphere of springtime. The pictorial argument adopted—a selection of photographs chosen from the whole world—is so arranged that from every angle the pure prisms of the New Architecture can be seen rising out of sunlit trees and lawns, or from the water's edge. There are great glass bays bathed with light; interiors lovingly proportioned to the human scale. Some rooms have been actually reproduced with their furniture so as to offer the visitor a concrete fulfilment of the expectancy born of all these photographs.

The party I attended in this setting was a crowd so delighted with all it saw as to let itself be gently carried away by the promise of town-planning, construction, and technology—things which by all the rules ought to have been invincibly tedious and forbidding. But the only memories of these the guests took away with them were of the lyrical appeal of those poems in steel, glass, and concrete. The New Architecture can no longer be reproached with being mere insensitive and soulless technics. The MARS Exhibition will prevent the repetition of such calumnies as these.

The greater task still lies before us. The benefits of the New Architecture must not be confined to the homes of the few who enjoy the privilege of taste or money. They must be widely diffused so as to brighten the homes, and thus the lives, of millions upon millions of workers. That is the present position in all its earnestness, and that is why our generosity impels us to pursue this aim and assure its triumph. It necessarily postulates the most crucial issue of our age: a great campaign for the rational re-equipment and proper utilization of whole countries regarded as indivisible units. Granted a due æsthetic sensibility to form, that campaign will enable us to carry out vast undertakings, like the rebuilding of our towns, in a spirit of grandeur, nobility, and dignity. When the hour for it strikes, planning—urban, regional, national, international—will become humanity's omnipotent orderly officer, the universal disposer, the Supreme Architect.

In very truth our epoch holds out the promise of a fresh cycle of architecture that shall express the new Mechanistic Civilization we are now entering on—a civilization that has no reason to prove inferior to any which have preceded it, and ought to be worthier, purer, more resplendent than all of them.

One must be allowed a little indulgence to weave such luminous dreams as these after seeing the MARS Exhibition, for that exhibition was one where youth and enthusiasm have expressed themselves in purity and precision.

Trans. P.M.S.

EXHIBITION: A PICTORIAL RECORD

FIRST ROOM: BUILDING NEEDS

The indication of the needs that architecture must cater for begins with the needs of the individual, which are symbolized in a coloured painting recessed in a screen, 4, *surrounded by similarly inset photographs, typifying personal activities : shaving, cooking, writing a letter. The legend reads :*

" the individual needs clean air, light and warmth proportioned to climate and season. He needs space to move. He needs a setting which is humane : sympathetic in scale and texture."

The screen continues, 5, *to show in similar technique the needs of the family and of the community :*

" the family, the extension of the individual, is the social unit. The dwelling must be modelled upon the routine and variations of family life, harmonizing the needs of worker, housewife, child and guest.

" the community, the larger unit, is the product of collective needs. Responsibility is shared and delegated. Public services are planned comprehensively, eliminating waste, canalizing the knowledge of the scientist and the engineer "

A large mural painting, filling the end wall of the room, 6, *next indicates the needs of leisure. Beneath, stretched on a tubular frame, are photographs of relevant modern buildings. In the middle of the room is a curved wire-mesh frame,* 7, *serving as transparent background to a design symbolizing the essential social services. On two plate-glass shelves within the frame are models of a clinic and a school. The third main wall of the room,* 8, *indicates the needs of work. Work is divided into four kinds : agriculture, industry, commerce and administration. The needs of each are detailed on the central panels and above and below are photographs of appropriate examples of modern architecture. Further along the same wall the indication of building needs is completed by a revolving wheel,* 9, *set against a background of corrugated asbestos, on which the forms of transport are picked out one by one as they are brought opposite the modern architectural expression appropriate to them.*

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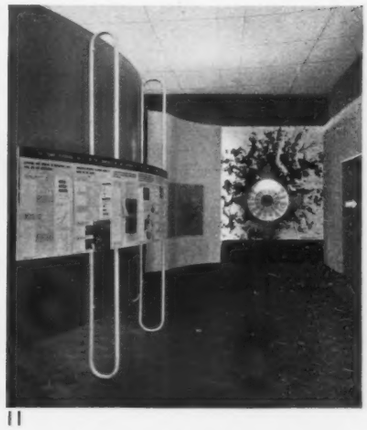

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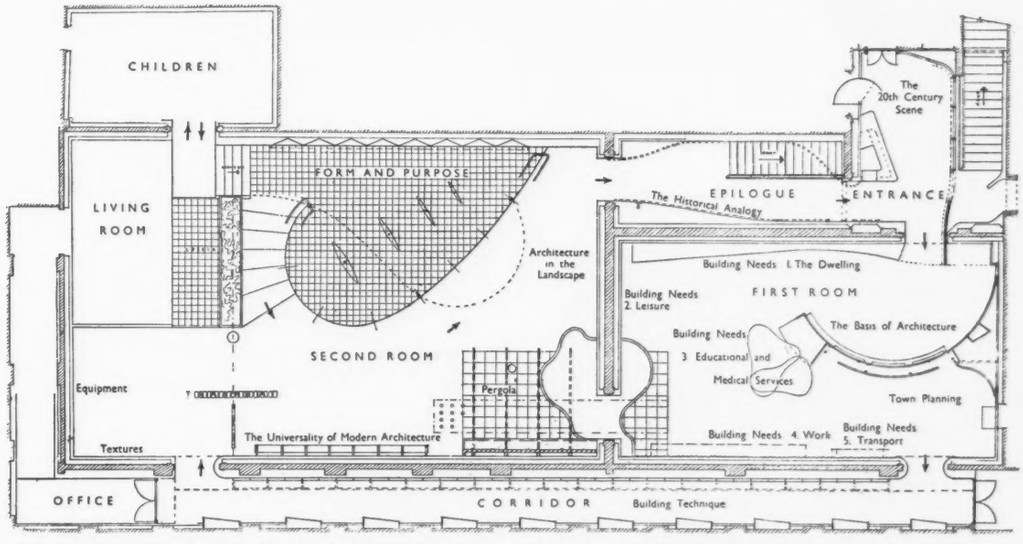
10, *a vista down a garden pergola giving a preliminary glimpse of the second room. The last portion of the first room, adjoining the entrance to the corridor, is occupied by a town-planning section,* 11, *comprising a study of the problem of expanding London, together with suggestions for a possible solution, worked out by some members of the MARS Group.*



PLAN OF THE EXHIBITION: the arrows indicate the one-way circulation

9

THE MARS GROUP EXHIB

A PICTORIAL RECORD

12

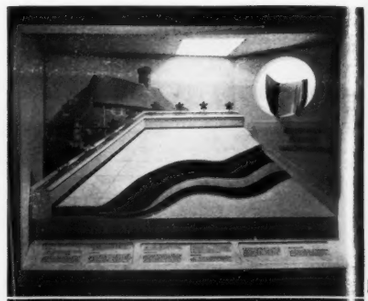
The first room having summarized the needs of architecture, the corridor leading from the first room to the second is used to show the means at the modern architect's disposal. This is done in a series of windows along the left-hand wall of the corridor, **13**. *These serve also as the source of light and are set at a slight angle to be more easily studied from the direction in which the visitor progresses. A corrugated steel panel separates each display window. At the far end the corridor debouches into the corner of the second room. By a light barrier consisting of specimens of reinforced concrete, steel and masonry construction, the visitor is directed along the end wall of the room, entering first a bay devoted to equipment,* **12** :

" The standardized craftsmanship of the machine must be faultless in appearance as in technique."

A photomontage displays typical modern examples, and actual specimens are shown of a portion of an under-floor duct system, an electrical control panel, and so on. The left-hand wall of the bay supports a series of frames displaying textiles.

13

CORRIDOR:
BUILDING MEANS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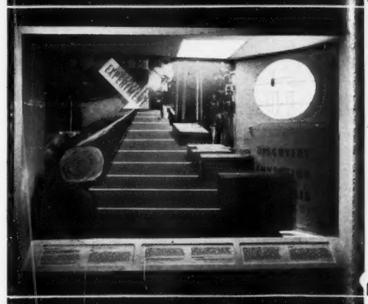
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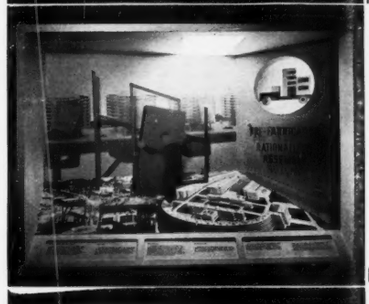
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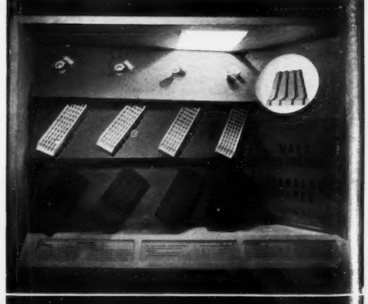
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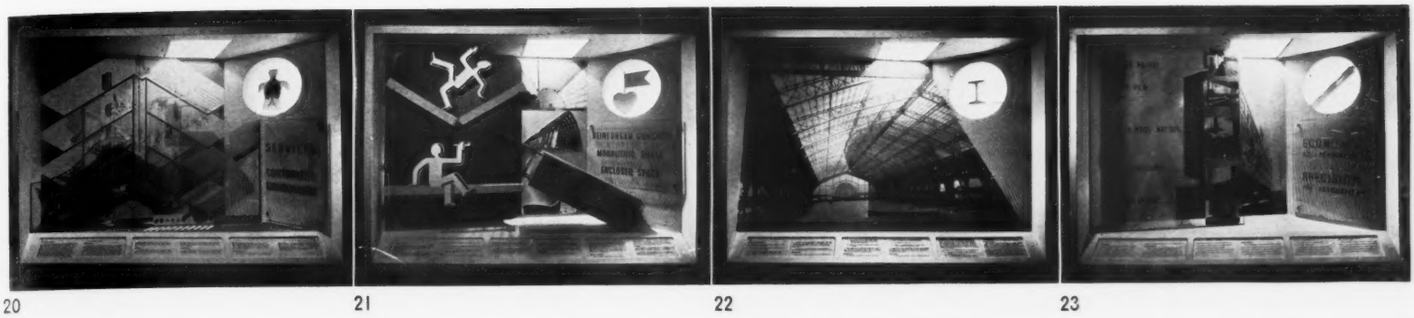

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BUILDING MEANS: THE TECHNICIAN'S CONTRIBUTION

In this corridor section a detailed dissertation on the aspect of building technique dealt with is inscribed below each window, so that the corridor plays its part in introducing variety into the visitor's progress round the exhibition by providing a refreshing change of tempo: it forms a more specialized interlude between the two principal and more general rooms. There are ten display windows. The first, 14, *gives a general acknowledgment to industry and science, on which building technique is based. The remaining nine deal, by means of a three-dimensional pictorial display of models, photographs and specimens of materials and of legends and drawings on transparent sheets, with various characteristics of modern building means, as follows:*

15, "*Mass production: standard shapes.*" *The growth of the principle of mass production from the primitive brick to the present wide-spread application.*

16, "*Industrial process: standard quality.*" *The advantages and implications of a highly industrialized production technique.*

17, "*Pre-fabrication: rationalized assembly.*" *Building methods compared with those of motor-car production. The growth of the idea of building in pre-fabricated units.*

18, "*Discovery: invention: analysis.*" *The debt of architecture to scientific experiment, typified in the recent development of new materials with entirely new properties out of one basic material, timber.*

19, "*Experiment: testing: classification.*" *The utilization of new materials and methods. Their influence on architectural design.*

20, "*Services: controlled environment.*" *The elaborate skeleton of service pipes that form the functional core of a modern building.*

21, "*Reinforced concrete: monolithic shell: enclosed space.*" *The scientific principle of reinforced concrete and its architectural implications.*

22, "*Skeleton construction: wider spans: fewer points of support.*" *Structural steel's revolutionary influence on architecture. The huge uninterrupted span and lightness of a modern roof contrasted with the closely spaced massive supports of an Egyptian temple.*

23, "*Economy of planning: precision in execution.*" *From science modern design has learnt new ideals of logic and exactitude. The search for order.*

THE LIVING-ROOM

"*Not a machine: not a space conforming to fixed routine, but a harbour for relaxation and a background.*"

24

THE MARS GROUP EXHIBITION:

25

26

THE LIVING-ROOM

A model living-room, 24, 25, and 26, shows permanent interior equipment planned to suit differentiated needs. A long built-in furniture unit contains electric fire, radio and television sets, bookshelves and, at the right-hand end (see 24 overleaf), gramophone and record-storage cabinet. In front of the fire a sitting space with upholstered seats is circumscribed by a permanent low wall. On the right is a space, lined with bookshelves, set apart and fitted up for writing. The room is also a setting for some modern abstract painting and sculpture and for an antique Siamese head.

27

CHILDREN

Beyond the living-room is a small room devoted to the special architectural needs of the child :

" children need an architecture which is sympathetic and cheerful, differentiated to the diminutive scale of childhood."

Beside a large evocative photograph, 27, are four rows of small photographs, mounted on fins slanting in alternate directions in each row, illustrating examples of modern nurseries and nursery schools, and equipment for each. The legends on the wall beside them point out the essential qualities of their design. The rest of the room is occupied by a model nursery, 28 and 29, raised on a platform so that the visitor looks at it from the eye-level of the child.

28

29

SECOND

31

A PICTORIAL RECORD

30

A frieze of large photographs displaying textures of materials decorates the end wall of the principal room, above the lower ceiling level of the equipment section and the model living-room. 30 *is taken from the curved platform which occupies the greater part of the room, and which the visitor mounts on leaving the children's room (see plan on page* 111*). These changes of floor and ceiling level and the general free use of three-dimensional space in this room effectively give the exhibition a special character as itself a piece of imaginative architecture, breaking free from the picture gallery convention of permanent floor and ceiling with exhibits displayed round the walls.*

ROOM: FORM AND PURPOSE

32

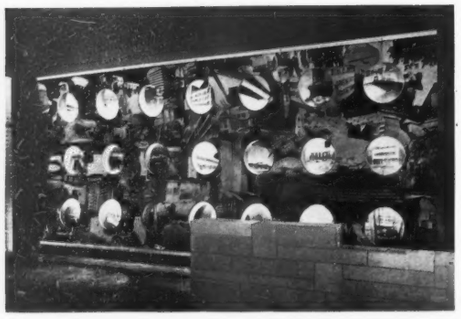
33

The needs of architecture having been summarized in the first room and the means in the corridor, on the platform is shown the finished product; but with emphasis on design:

"Discarding the worn-out husk of 'style' and the principal of 'decorated structure' modern architecture postulates a coincidence of form and purpose."

Photographs of distinguished examples of modern architecture are displayed in a long range of panels, 32*, and to a larger scale on a series of free standing screens,* 31*, occupying the centre of the platform. The examples are classified according to the type of formal quality predominant in them. Further examples are displayed in the form of models which are seen first from the platform as from the air, and again from the floor of the room as from normal eye-level.*

THE MARS GROUP EXHIBITION



34

UNIVERSALITY

A screen in the second room, 34, *suggests the universal application of the modern architectural idea. The curved surface of the screen is a photographic medley of architectural examples from all over the world. Set within holes pierced in the surface, each separately illuminated, are modern examples of twenty-one different types of building.*

35

ARCHITECTURE: GARDEN LANDSCAPE

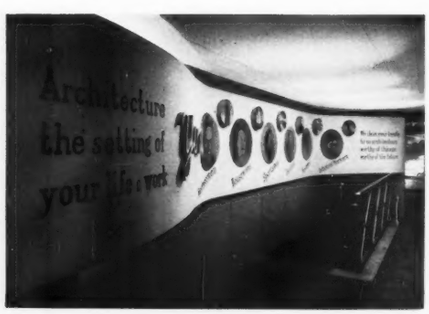
The corner of the room is occupied by a garden pergola, 35 *and* 36, *which frames a vista, as already noted, between the first room and the second. It is bounded by a brick wall and formed of four right-angle fins, painted in brown and glossy white, supporting a waved canopy of plywood. The floor is paved, a concrete curb encloses a plot of grass and a silver birch tree grows up through the pergola. This section suggests the modern architect's interest in the out-door extension of architecture, in breaking down the rigid separation of room from garden. As a background, the whole end wall of the room,* 36, *comprises a huge aerial photograph, tinted blue, of a modern house, set with its garden in the landscape :*

" The architecture of the house embraces the garden. House and garden coalesce, a single unit in the landscape."

36

EPILOGUE

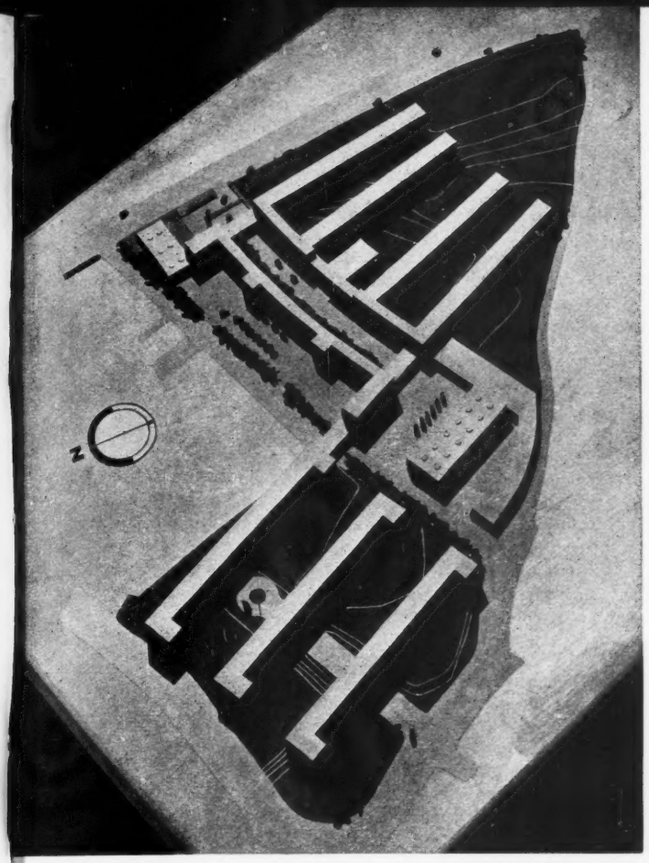
37



38

In the exit corridor attention is drawn, 37, *to the historical continuity of architectural styles. Each period is summarized by an example, typical in kind as well as design : a fortress for the Norman, a church for the Gothic, a grand mansion for the Elizabethan, a sober urban crescent for the Georgian and an institutional building for the Victorian, concluding with a typical modern block of workers' flats with nursery school. On the concluding screen,* 38, *the exhibition frankly admits its propaganda purpose and demands the cooperation of the visitor in bringing about the new world that he has been introduced to.*

A PICTORIAL RECORD



A model showing a scheme for replanning an industrial site in Manchester. Illustrations of the progressive stages of the scheme are shown overleaf; also details of a first unit that has already been built.

BUILDING FOR INDUSTRY

THE ROLE OF THE ARCHITECT

By R. A. Cordingley

THERE is no field in which the architect has so much difficulty in selling his services as the industrial. The profession is quite familiar with the reasons. In industry, building structure frequently is subordinate in importance to a manufacturing plant or to a process, not, as in commerce, normally representing a principal capital asset. Hence a tendency to regard structure as a necessary but non-revenue-producing concomitant of an industrial undertaking; a sort of envelope to a promissory note, not of itself of value, but a guardian of the agent of profit.

Actually, building costs may well absorb a considerable proportion of the expenditure involved in an undertaking, both at the initial stage and subsequently in maintenance. Consequently the industrialist is tempted to find strong justification for the most strict economy, both in the size and in the quality of the envelope, saying, in effect, to the architect, " I require, not architecture, but just plain, straightforward building. I cannot afford frills." In so saying he perpetuates a fallacy. The architect is not a lithic costumier, a clothier of structural skeletons. His especial province is organization, and organization is outstandingly a business affair.

Keeping precisely to the facts in this regard, what is it that the trained architect offers to the industrialist? Initially, he undertakes to investigate the sequence of any specific process and to decipher that particular relationship of the elements involved which will ensure economy and efficiency in operation, economy in first costs of the structural envelope, and economy in subsequent maintenance of the whole. It is not to be assumed that because the stages of manufacture follow an inevitable sequence, the elements of a plant will fall into an equally inevitable physical relationship. On the contrary, it may be taken as a general rule that, no matter how limited or how complicated the process, there will be considerable flexibility in the general spatial arrangement. Manufacture is, indeed, basically of two principal types, either employing an indefinite number of identical machines performing a similar operation, or a complex process in which nearly every operation is unique. The majority of " heavy " industries are of the latter type, but usually there is a parent process feeding a number of otherwise independent subsidiaries. Obviously the first type allows of alternative groupings of multiples of the manufacturing element, among which there is one arrangement which will be the most advantageous for simplicity of building structure, for co-ordination, and hence for economy of production. Similarly, the second type is equally, if not more, amenable to organization. Apart from the necessary link, both parent and subsidiary processing plants allow the widest latitude in design for economic ends.

Yet, strangely enough, it is very rarely that, in this country, a " heavy " industrial plant is coherently planned. Some, doubtless, have grown up piecemeal, but even amongst recent completely comprehensive ventures, there are all too many instances of wasteful, not to say unsightly, layouts. Frequently the waste (from the economic point of view) may be attributed to the fact that the plant of each subsidiary process has been independently conceived as a specialist element, and hung on to the *ensemble* as an unweaned piglet to a sow.

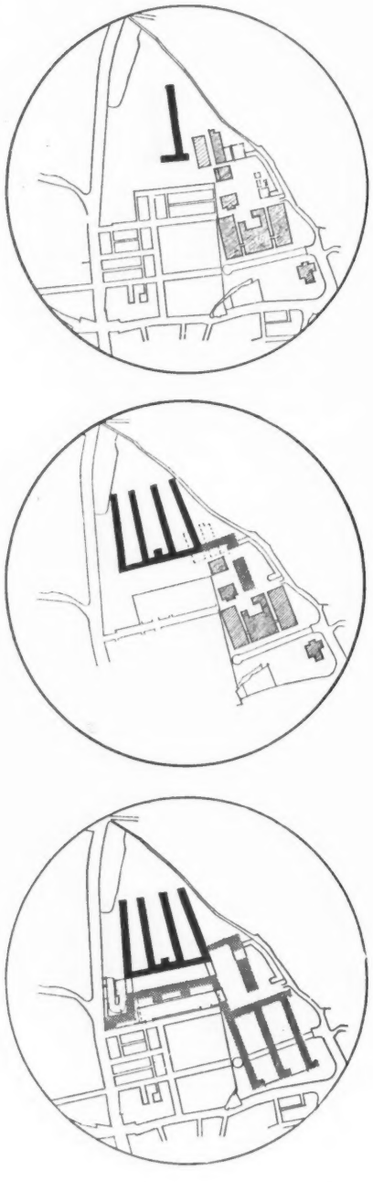
Among the smaller scaled " light " industries, the circumstances are not usually very dissimilar from those obtaining in commercial undertakings. The buildings are much less definitely subordinate to the plant, and the relationship of producer to consumer tends to be more close. Hence the architect much more frequently is employed, though not always because his capacities as a technical expert are fully appreciated, but rather because the good appearance of buildings has, in these modest factories, a much more obvious commercial value. Then, too, such factories generally are sited in " developed " areas, and Town Planning enactments and by-law control demand some respect for rationale and amenity.

Unfortunately, the speculative house has its counterpart in industry. The reach-me-down factory, offered complete for sale or hire to anyone who may be beguiled, can only rarely be wholly suitable for the particular industry which eventually it comes to house. The floor area, the light provided, the degree of ventilation, may be too much or too little; the shape of the building or the disposition of stanchions may not allow of a convenient arrangement of the plant; the services may provide difficulties, and so on. A bad plan is worse than no plan at all, and industry is more individual in its requirements than any human being.

Industrial undertakings are not, of course, all of them of the manufacturing class, but since the misunderstanding of an architect's function attaches especially to this type, it is instanced here to show his true function as an organizer and co-ordinator. In this connexion, the services which he offers do not end with his conception of an industrial scheme as an economic entity. There are two other aspects of organization, both of them of high importance to the practical business man. There is the layout as it affects the personnel, and again, as it affects the " consumer." Incidentally, there is no industry utterly independent of the " consumer." Each industry, directly or ultimately, is dependent upon the attitude of a part or the whole of the general public. One need not stress that an industrialist, like everyone else, has moral obligations; in his case, towards his own operatives and to the general public alike. Doubtless he is ready to recognize the fact, but, as he may well say, he " is not in business for his health." He is a shareholder, perhaps one among many, not an individual philanthropist. Up to a point he can meet his societary obligations, but business being business, he must seek practical advantage for expenditure upon every count. Fortunately, he can do the one whilst doing the other. There is practical business advantage in safeguarding the comfort, convenience and health of his employees. There is an advertisement value in clean, neat layout of buildings and site, quite apart from the effect which these will have upon the attitude of the employee to his work. These are aspects of efficiency of which the architect would take account. The operative himself would be regarded not less as a human being than as a cog in the industrial machine, yet this for practical as well as for societary reasons. The architect would envisage the necessities of natural light, air space, ventilation, and the various supply and health services attending plant, product and personnel, and organize firstly in concept, and ultimately in fact, the construction and equipment of an orderly, compact fabric, of which the external expression, in each instance, would be the direct and logical outcome of the particular function the building was to fulfil. That is not to say that any external or, for that matter, internal effect of appearance would be fortuitous. On the contrary, such would be a matter of calculated design, an effect foreseen broadly in the manipulation of the organism as a whole. The effectiveness, architecturally, of building springs from a certain orderliness of all its parts, and the job of the architect consequently is to contrive that the inner and outer orderliness shall be of the same kind.

RESEARCH LABOR-

One cannot hope to find a more direct or ideal illustration of the architect's part in that intimate collaboration between technicians so essential to successful results than is afforded by a building recently erected at Blackley, Manchester, for the Dyestuffs Group of Imperial Chemical Industries. This, a block of research laboratories, was built as a first instalment of research extensions of the Dyestuffs Group's Manchester site. As is invariably the case, the project presented its own peculiar problems, some unusually difficult. The existing buildings, which are of specialized character, were to continue in service, and the communications between them were not to be impeded. A somewhat restricted plot to the south-east, of approximately triangular shape, was to provide the site for the new research laboratories and for future additions to them. Eventually a new by-pass road is to be constructed along the south-eastern boundary of the site.



Above are three progressive stages in the re-development of an industrial site in Manchester; Serge Chermayeff, architect. The site is that of the Dyestuffs Group of Imperial Chemical Industries. Top, a new block of research laboratories (shown in solid black) which has now been built and is illustrated on the following pages. Centre, the future building programme (shown in black): a range of laboratories based on the same unit. The existing service and administration buildings are shown hatched. Bottom, a conjectural scheme for replanning the whole site. New service and administration units (shown cross-hatched) replace the casual collection of buildings that spasmodic development has produced.

At an earlier stage laboratories of more stereotyped design had been contemplated upon the site: a one-storey arrangement around a central court; but as the shortcomings of the type were becoming increasingly patent, the Dyestuffs Group of the I.C.I. determined upon a complete re-assessment of the research workers' requirements with the object of arriving at a solution more nearly ideal.

The architect for the new scheme, Mr. Serge Chermayeff, found a clue of high importance in questioning whether the traditional north light was really essential or even advantageous to research work. Tests made in the older type of laboratory proved conclusively that in actual fact east and west light, artificially diffused, was better for the purpose, and in consequence a multifloor scheme was devised which, besides allowing high economy of site area, gave other advantages of even greater moment: more compact planning of working space and communications, pleasant aspect to the private offices and, above all, greater flexibility of technical services, these latter the very kernel of the problem.

The site allowed then of a scheme comprising four three-storey blocks, linked at the south end by a transverse arm containing private rooms, the latter with a south aspect over what will be gardens between the blocks. The completed new building is one unit of the four. A second has been begun.

In the design of the building the stern endeavour to meet the convenience of the research worker has resulted in a further unique feature. Laboratories of the older form were halls rather than rooms, and the inevitable regimentation of the benches of the chemists tended to destroy that air of privacy and individuality which properly should surround work which, in certain respects, is personal in character. Complete isolation of the individual, on the other hand, has equally its disadvantages. In the Blackley building the architect has achieved a happy mean. The laboratories are planned for four persons, each chemist having his own double bench, but separated from his colleagues by tiers of shelving, which act as screens for his privacy, but do not sever him entirely from their fellowship.

The aspect of the laboratories is east, continuous windows lining the external walls. Fume cupboards occupy the majority of the west wall, but being glazed on both sides, allow of additional light from the west windows whilst serving, with the corridor beyond, to protect the rooms from the heat of the sun. For the services, twin ducts in the depth of the floor run the length of the building, and allow connections to the fume cupboards and to the benches in whatever position it may be found convenient to use them. Vertical services and drainage are connected below the building by a third duct, and the service pipes, cables and their controls, as a whole, are readily accessible at any point.

More than usually important was the question of ventilation. The nature of the work to be conducted in the building required constant and ample change of air—this not likely to be affected by natural means without considerable waste of cubic space. Artificial air-conditioning, therefore, was adopted throughout, as the only possible guarantee of ideal conditions. The fume cupboards, however, have an entirely independent system of high velocity extraction.

These material considerations enumerated, and others similar, have rough-shaped the solution to the present problem, but it requires no professional eye to appreciate in the completed building that the effectiveness and propriety of its appearance are neither superficial nor accidental. No element whatsoever is redundant for the purpose of the building, and it is the organic arrangement of structural parts, the texture and colour, natural or artificial, of the materials employed, which convey an intended stimulus and refreshment to the mind.

Visualizing its eventual appearance when set about with grown trees and gardens, one discovers, finally, a new concept in industrial architecture. Its fresh and cheerful air is in marked contrast with the drab gloominess which formerly characterized industrial surroundings in general. The architect has played his part, an important part, in collaboration with the administration, chemist, engineer and other technicians and operatives, in producing a building which is wholly efficient for its material purpose, whilst providing for those who are to work there, an environment as pleasant as could be desired.

ATORIES AT BLACKLEY, MANCHESTER

1

This block of laboratories represents the first unit in a long-term building scheme which aims at providing up-to-date accommodation for research for the Dyestuffs Group of Imperial Chemical Industries. The full immediate building programme, of which this block forms a part, is illustrated in Professor Cordingley's article on the preceding pages ; also a scheme for eventual reorganization of the whole site.

The first block, containing 21 laboratories, is analyzed in detail on the following pages. Laboratories, up to a short time ago, have been with few exceptions, both in industry and in technical and scientific colleges, no more than new buildings which, while employing certain new developments in building technique, have perpetuated, from the chemist's point of view, a great many anachronisms : inadequacies of lighting, both daylight and artificial, insufficient ventilation, inflexible and inaccessible services ; and this while the latter were becoming increasingly more complex to meet the requirements of modern research work. In the dyestuff industry, for example, laboratories were of the single floor type, with large uneconomic volumes to compensate the inadequacies of natural ventilation. They were top lit, giving the effect of wells, and had the disadvantage of occupying large areas. In the present instance to have continued with buildings of this type would have very seriously prejudiced the development of the available site, apart from the disadvantages already mentioned.

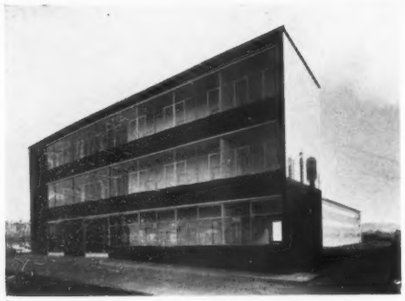
For example, the possibility would have been lost of presenting architecturally important buildings to the new by-pass road which will run along the south-east boundary of the site and which will turn what is now a backyard into an important frontage. The abandonment of the single floor system in favour of a multi-floor block, and the plan evolved, allowed the best utilization of the entire site.

The actual architectural form of the building is the result of the application of modern technical advance in equipment and construction to the especial requirements of research workers, and the illustration of the building on the following pages is presented in stages according to the different factors that determined its shape. On this page are two general exteriors ; 1, from the south : 2, from the east showing the range of laboratory windows.

SERGE CHERMAYEFF, ARCHITECT

2

RESEARCH LABORATORIES



3

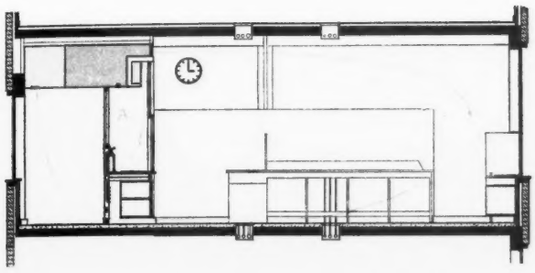
4

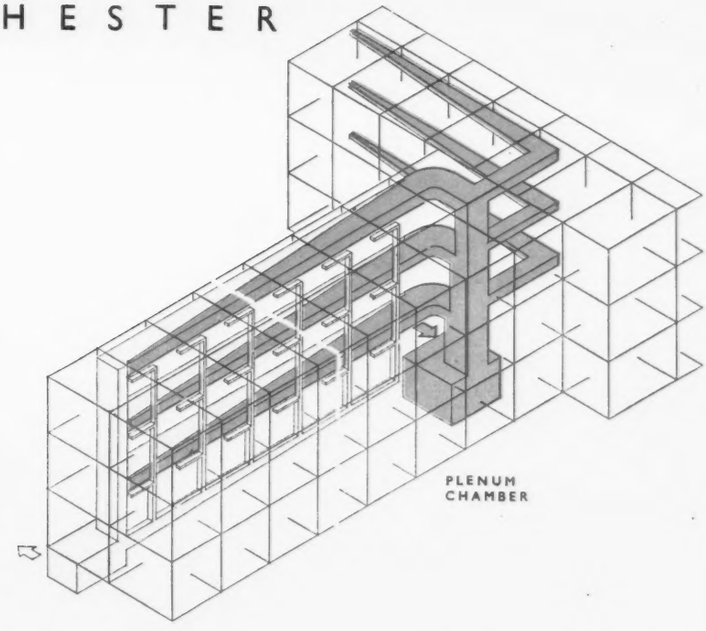
5

6

The research block ends in a shorter wing at right angles, 3 and 4, which is slightly curved on plan and contains private offices, the main stairs and lift. This wing will eventually form a link, through its north corridor, between each group of laboratories. 5, a view from one of the offices along the corridor facade of the laboratory block proper.

BLACKLEY, MANCHESTER

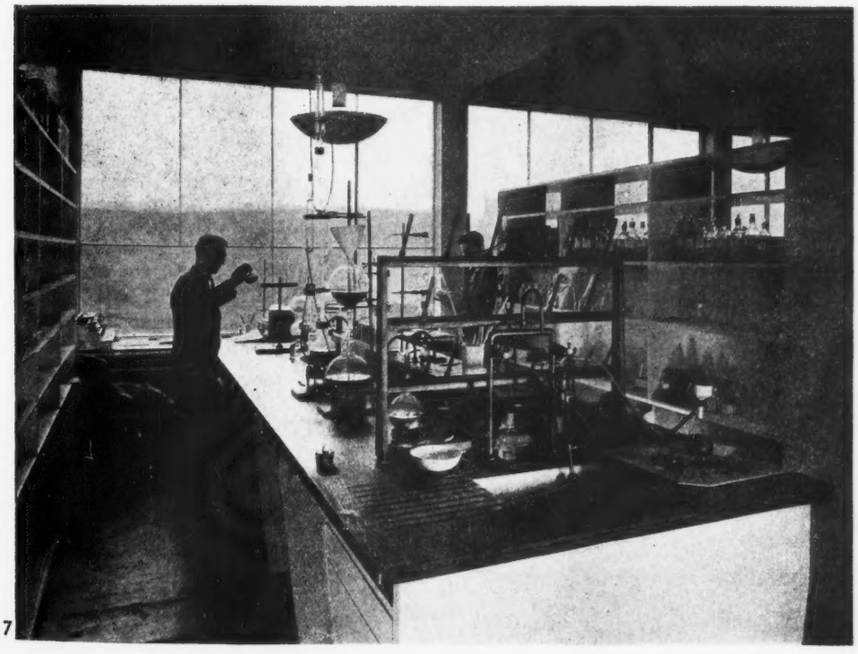




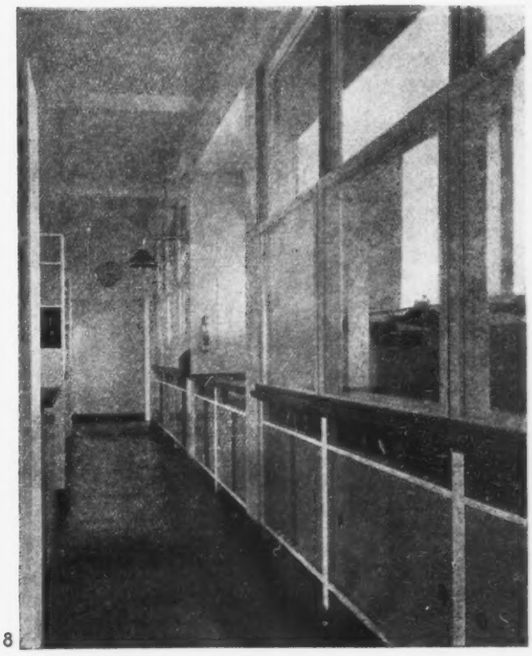
1 VENTILATION

In a chemical research laboratory an essential factor governing the plan is ventilation. Artificial air conditioning for the whole building was adopted as the only means which could guarantee consistent ideal conditions within the building, irrespective of weather or the impurities of atmosphere in industrial surroundings. A constant and ample air change allowed a large reduction in the cubic contents of each laboratory. The automatically purified, warmed or cooled air is taken to each individual working space through ducts running the full length of the building over the corridor. The used air is extracted again below the fume benches, partly by means of an extract duct, and partly by displacement under pressure from the incoming fresh supply. The extract duct runs parallel to the intake in the corridor ceiling.

In addition to the general air conditioning of the building, a system of high velocity extract has been installed for each fume cupboard for light and heavy gases through an entirely independent system of vertical ducts. The section above on the left, through the standard unit of corridor, fume cupboard and laboratory, shows the run of these separate ducts in the corridor ceiling. The plenum intake is shown in solid blue and the used air extract in blue tint. The special gas extract is at A. The diagram on the right shows the air conditioning system in relation to the plan of the building. The incoming conditioned air is in blue and the extracted vitiated air and the fume cupboard gas extract in yellow. 6, a view along the corridor, shows the fume cupboards on the left with the extract slots beneath them and the extract duct grilles in the ceiling.



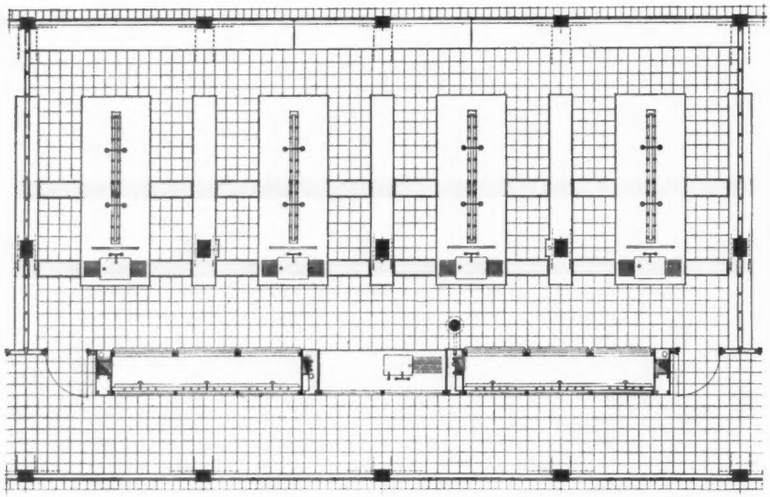
7



8

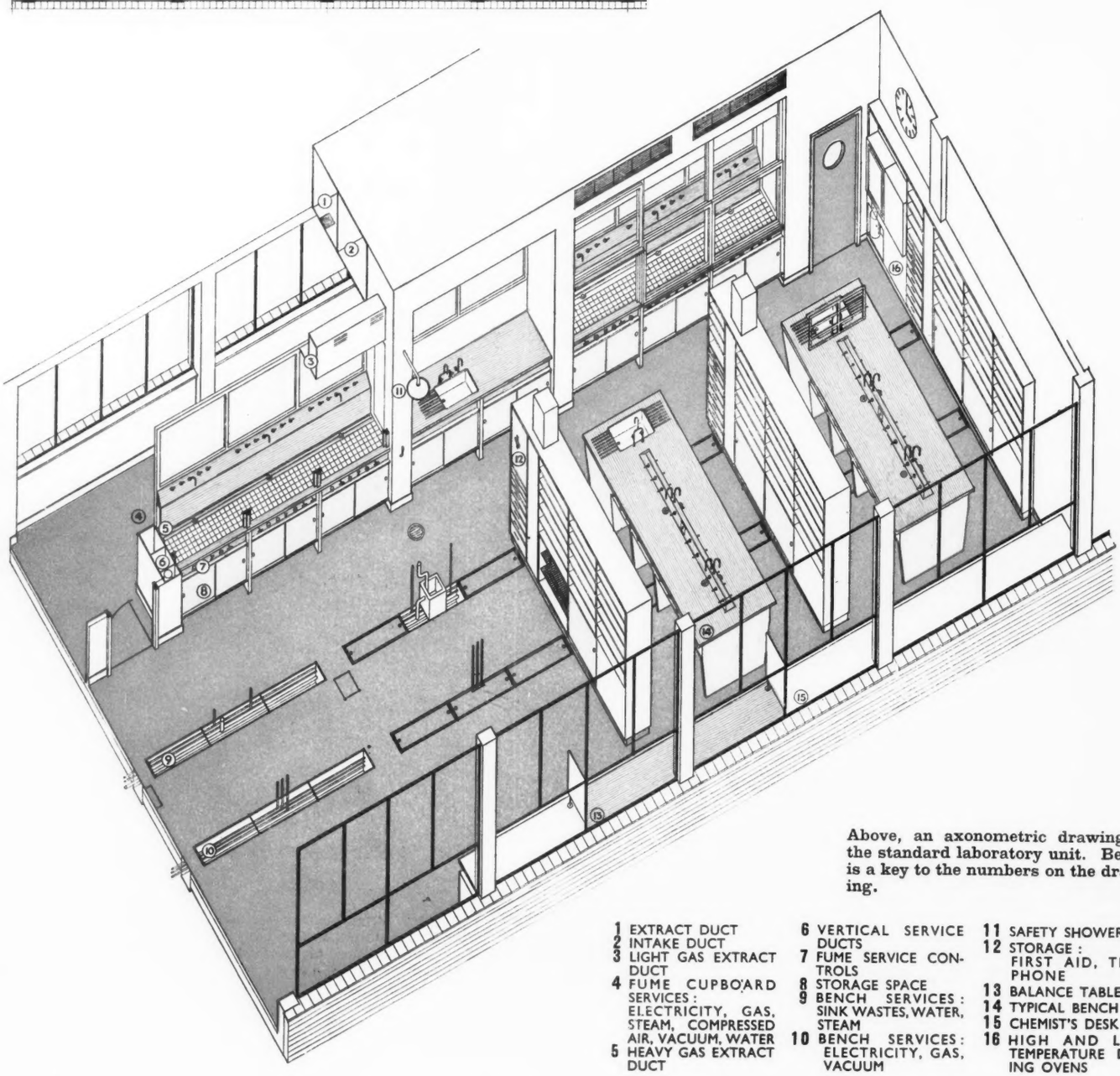
2 LIGHTING

Actual tests made in the old type of laboratory proved conclusively that north light was not only actually disadvantageous for economic and scientific reasons, but did not, in fact, provide such good light as continuous east and west fenestration. The abandonment of the north light principle made a multi-floor building possible and immediately brought in its train many further advantages : greater compactness of planning of the working space and communications, greater flexibility and accessibility of technical services, ideal orientation of private offices, release of space between building for amenities of garden and light. The plan has provided for such spacing of structure as to give a continual maximum of daylight to every portion of all buildings. The complete run of available working space is divided by a continuous run of fume cupboards and sinks into the laboratory working space to the east, 7, which gets full advantage of the morning light, and the corridor to the west, 8, which acts as an insulator from the warmer westerly rays. The fume cupboards are glazed on both sides, allowing ample light to come through so that each laboratory is virtually lit from either direction.



3 LABORATORY SERVICES

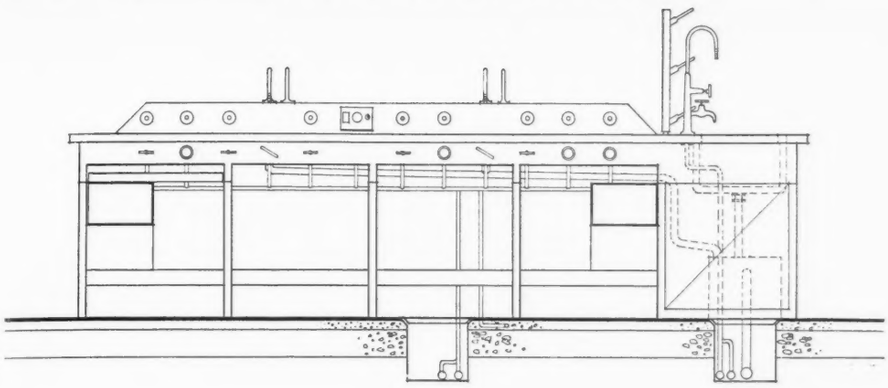
The adoption of a structural unit and a uniform distribution of work benches throughout the building has made it possible to provide a series of fully accessible service ducts capable of accommodating future extensions to every fume cupboard and laboratory in any given position throughout the length of the building. Shallow horizontal ducts, with removable covers, in the laboratory floors passing under the benches, carry all services to each individual chemist. All service pipes, cables and their controls throughout the building are accessible through their length from intake from mains in the basement to the actual tap, valve or switch on a bench. Repairs and extensions may be carried out immediately without interference with the fabric of the structure. In the typical laboratory plan on the left, the vertical and horizontal ducts for all services are shown in yellow. These feed both fume cupboards and benches. The fume cupboard air extracts are in blue, as in the section already shown.

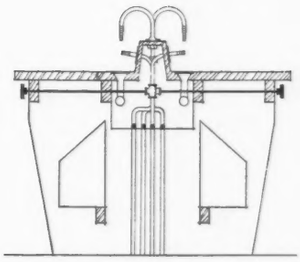


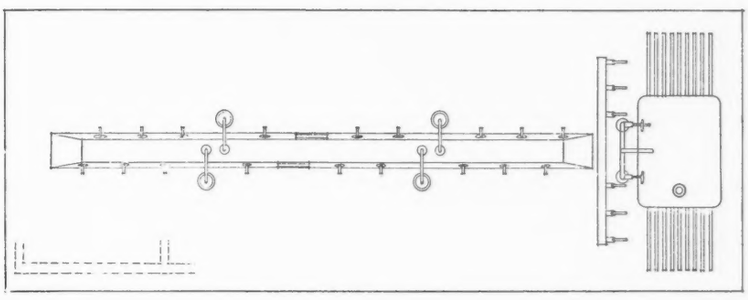
Above, an axonometric drawing of the standard laboratory unit. Below is a key to the numbers on the drawing.

1 EXTRACT DUCT
2 INTAKE DUCT
3 LIGHT GAS EXTRACT DUCT
4 FUME CUPBOARD SERVICES: ELECTRICITY, GAS, STEAM, COMPRESSED AIR, VACUUM, WATER
5 HEAVY GAS EXTRACT DUCT
6 VERTICAL SERVICE DUCTS
7 FUME SERVICE CONTROLS
8 STORAGE SPACE
9 BENCH SERVICES: SINK WASTES, WATER, STEAM
10 BENCH SERVICES: ELECTRICITY, GAS, VACUUM
11 SAFETY SHOWER
12 STORAGE: FIRST AID, TELEPHONE
13 BALANCE TABLE
14 TYPICAL BENCH
15 CHEMIST'S DESK
16 HIGH AND LOW TEMPERATURE DRYING OVENS

LEY, MANCHESTER







DETAILS OF A STANDARD BENCH

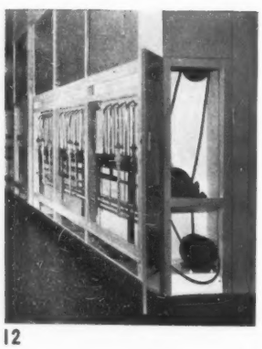
9

10

3 LABORATORY SERVICES

The drawings show details of a standard bench. The teak dashboard of connectors is removable for access to all service pipes. The controls are set in the bench apron and are distinguishable by both colour and shape. Each bench unit is fully equipped with writing desks under windows, and carefully calculated storage space between the benches, which at the same time act as screens giving a certain privacy to each group of chemists, and eliminating the inconvenience of working back to back. In addition to the balances provided in each individual laboratory, there is a special balance room in a central position on each floor. 9, looking along the windows showing the desks divided by light screens for privacy. 10, a typical two-chemist unit looking towards a fume cupboard on the left and the laboratory wash up. Between the two is a safety shower with the first aid cupboard signalled in red immediately on its right.

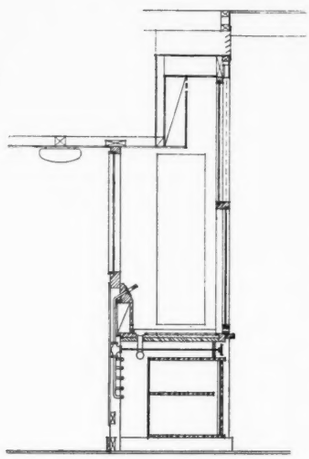
11



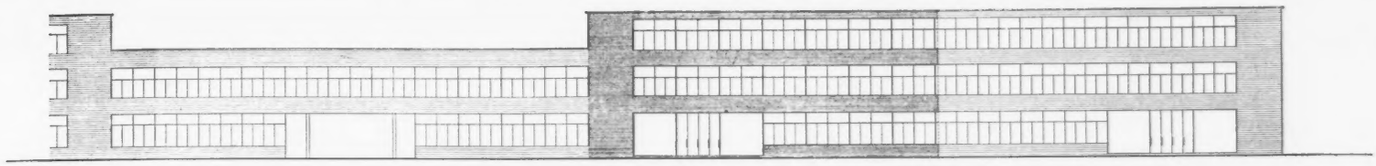
12

3 LABORATORY SERVICES

11, a close-up of a typical fume-cupboard. It is glazed with Georgian wired safety glass, clear on the laboratory side and obscured on the corridor side. The controls are outside, but well set in to avoid accidental interference. 12, the fume-cupboard services on the corridor side with the access panels removed. Right, a section through the fume cupboard showing the teak ducts for extract of light and heavy gas, with connection dash-board above and continuous trough below the heavy gas duct.

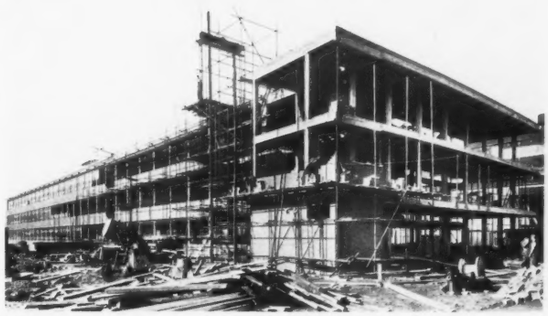


LABORATORIES AT BLACKLEY, MANCHESTER



4 STRUCTURE

The main block running north and south, as well as the entrance and office block running east and west, forming the head of the T, are built on a single standard structural unit throughout, and have left the interior quite free for the extension or contraction of any given laboratory or office within the limits of the structural unit, each of which contains, in the case of the laboratories, all accommodation and technical services required for a double bench for two chemists. The private offices are housed in the north wing and look out to the south over future gardens, and are immediately accessible from the main stair and lift hall with its cloakrooms on the opposite side. The north corridor in this section is planned to link together, eventually, all blocks of the research group. Additional cloakrooms are provided at the south end of each building adjoining a secondary staircase (see plans below). The structural framework is of reinforced concrete, cantilevered to the width of the corridor in the north wing to permit continuous fenestration in the completed building as shown in the drawing above. The completed elevation is shown dark. The outer walls are of Accrington brick externally with standard steel windows set on the outside face, with an inner skin of partition block and additional insulation of heraklith to plenum ducts. 13, a progress photograph showing the reinforced concrete frame. 14, a night exterior.



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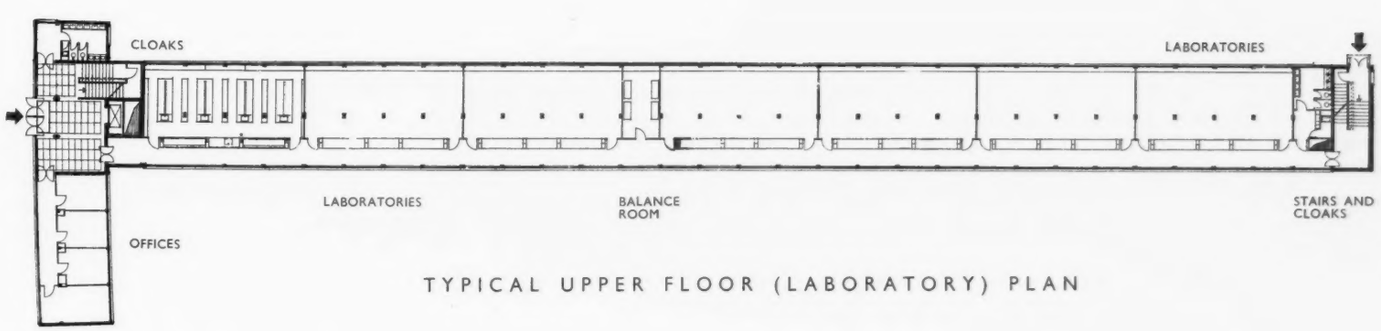
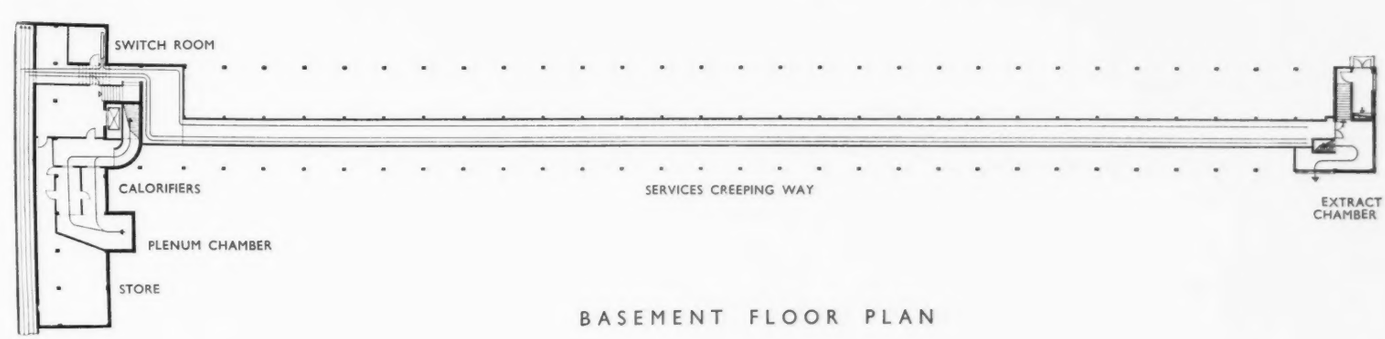


TYPICAL UPPER FLOOR (LABORATORY) PLAN



BASEMENT FLOOR PLAN

15

16

17

5 INTERNAL FINISHES

Air conditioning is the greatest contributory factor to hygienic conditions, but vulnerable wall surfaces have also been reduced to a minimum. Wherever paint has been used it is of an acid and steam resisting kind. The flooring throughout the working space is of cork tile, laid in bitumen, which provides not only a durable and hygienic finish, together with the most comfortable working conditions, but is at the same time of considerable value in reducing noise. The entrance hall is paved in terrazzo. The stair wall fin and columns are tiled. Each laboratory floor is identifiable in a different range of colour for the entrances, and the laboratory fitments are in variations of tone of the individual floor colour. All doors and windows in the staircase hall are dark brown with old bronze metalwork. The lift cage is scarlet internally. 15, the staircase. 16 and 17, an upper floor landing. 18, the ground floor entrance hall.

18

THE GARDEN IN THE MODERN LANDSCAPE

In the landscape photograph above the planting in the garden which occupies the foreground (in contrast to that in the garden shown in the series of reconstructions on the following pages) is only of 30 years' standing and has lately been remodelled by the writer of this article. That of the middle distance (a "belt" on the borders of a developed estate) is about the same age, while the wooded pastureland beyond has reached the climax of its œcological development. The whole area lies within 25 miles of London.

By Christopher Tunnard

LANDSCAPE into garden—garden into landscape: this fusion took place in the eighteenth century. Social and economic forces contributed to the metamorphosis; Italian painters, English poets and Chinese craftsmen influenced its form. Only a social and economic revolution will enable men to garden landscapes once again, but a predetermination of the form of the new landscape will be the first logical step towards its realization.

The new landscape is the garden without boundaries.

The new garden will precede the new landscape.

The garden has always been subject to two main influences—the outer influence from the landscape and the inner from the house. These are fluctuating primary influences only one of which we are at present in a position to control.

Interpreting these influences in terms applicable to the garden is another matter. But if we believe, as it is not unreasonable to believe, that inspiration can be drawn from the underlying principles of contemporary art then the problem becomes capable of solution.

For the garden of today cannot be called contemporary in spirit, as can the modern movements in architecture, sculpture or painting. It is not of our time, but of the sentimental past; a body with no head and very little heart. Imagination is dead, romance a mere excuse for extravagance in decoration. Contemporary garden design has not even yet caught up with contemporary trends in architecture. It is to be hoped that in the near future garden makers will become aware of this fact and that instead of re-hashing old styles to fit new buildings they will create something more expressive of the contemporary spirit and something more worthy of the tradition to which they are the heirs.

The great white bird of modern architecture has therefore not yet found a secure and decorative perch such as would be provided in a truly modern setting. When the new materials find their way into the surroundings of our habitations, when concrete ramps, glass screens and steel pergolas become more common, these critics who consider modern architecture a purely urban style may decide to alter their opinions. If they are fearful of the incongruity of the new materials in their eighteenth-century landscapes, let them be comforted by the knowledge that it will not be long before new and more fitting landscapes will be created. Within a few decades the need for new backgrounds will become imperative, and the urban landscape for the urban style is not beyond the bounds of possibility. When the idea of the garden city has been shelved and the *ville contemporaine* become a reality it will be possible to plan the countryside for enjoyment once again. Yet until they are completely changed, those eighteenth-century landscapes which remain will suffice for most of us and can be adapted for our needs. There are few honest people who would say for instance that the house in the landscape illustrated on page 131 is not at home in its surroundings—the work of mid-eighteenth-century planters.

In Thomas Sharp's book *Town and Countryside* the factors which make for harmony between house and landscape, are analyzed as follows:

"The assimilation of a building into the natural scene depends on two things: on the congruity (or harmony or unity) of its artificial materials, and in the form or silhouette of the buildings with the general form of the surrounding landscape." Discussing the first factor, Mr. Sharp arrives at the conclusion that where materials of a sympathetic colouring and texture are no longer obtainable "it is advisable to cover inharmonious materials in wall surfaces with a warm soft-toned colour wash." In this he includes tones approximating to white and cites as an æsthetically satisfying example the homogeneous whitewashed tenants' houses on Lord Barnard's great estate in south-west Durham. One wonders if those critics of some modern architecture who complain of its unnaturally light colouring have ever looked at Regency buildings or visited parts of these islands beyond the south of England and East Anglia. What will their reaction be to the sight of the first glass village? They fail of course to realize that the architect has now left the period of self-effacement which resulted in the wholly naturalistic style now happily departing, and is secure in his new architectural faith of bold and fitting construction.

A vindication of the new attitude occurs in Aldous Huxley's novel *Chrome Yellow*, published in 1921. The passage below was thought sufficiently topical to be quoted in a recent number of THE ARCHITECTURAL REVIEW:

"The house of an intelligent, civilized and sophisticated man should never seem to have sprouted from the clods. It should rather be an expression of his grand unnatural remoteness from the cloddish life. Since

the days of William Morris that's a fact which we in England have been unable to comprehend. Civilized and sophisticated men have solemnly played at being peasants. Hence quaintness, arts and crafts, cottage architecture and all the rest of it. In the suburbs of our cities you may see, reduplicated in endless rows, studiedly quaint imitations and adaptations of the village hovel. Poverty, ignorance, and a limited range of materials produced the hovel. . . . We now employ our wealth, our technical knowledge, our rich variety of materials for the purpose of building millions of imitation hovels in totally unsuitable surroundings. Could imbecility go further? "

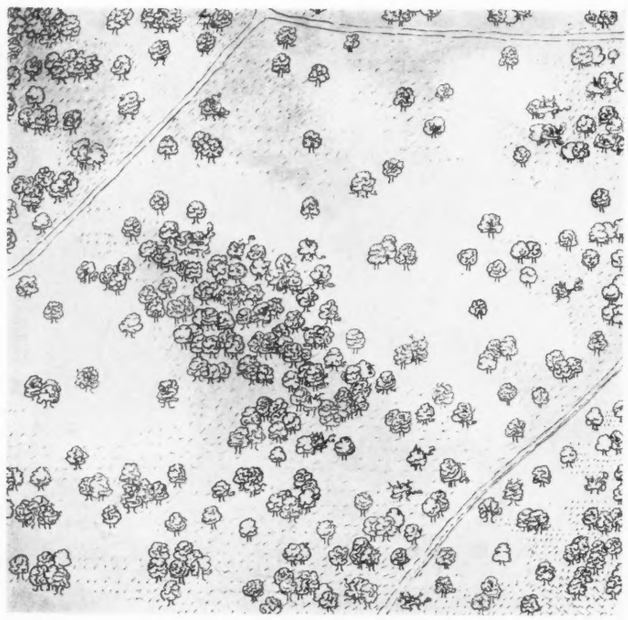
On the question of silhouette, Mr. Sharp, while not apparently having the new style in mind takes pains to point out the importance of the horizontal line in building and suggests anchorage in the form of curtain walls linking façade to boundary.

In reality, the extreme horizontal emphasis of window and floor levels and cantilevered balconies which is so often the accompaniment of the new building, will call for much more that the usual so called " formal garden " generally in evidence somewhere near the house. Terraces, hedges, borders and paving, together with newer forms like glass and metal screens and concrete walls, all following these horizontal lines, may help to provide the anchorage which ensures the stability of the house in the landscape. This may indeed come to be the chief function of the architectural garden. As a factor of arbitration in the disputes that unfortunately still arise between local authorities and progressive architects, the use of this type of garden may help to show how sympathetically the dwelling may be welded to the soil. Less obtrusively, the

[continued on page 131]

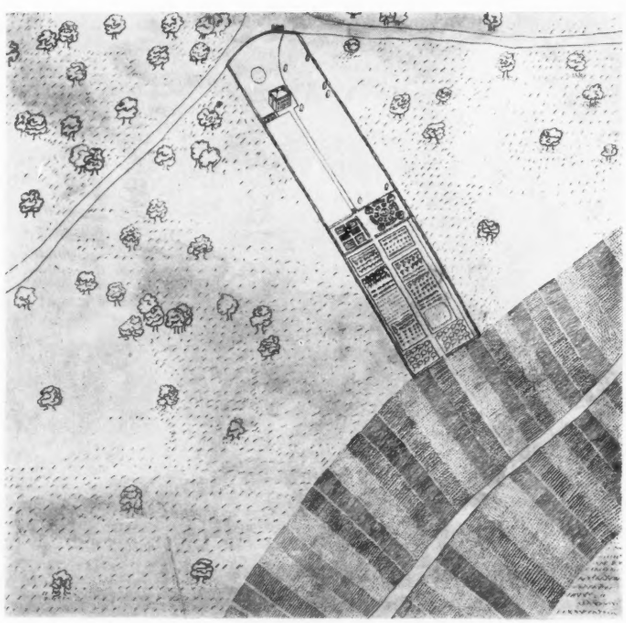
THE GARDEN IN THE LANDSCAPE

A SUMMARY OF CHARACTERISTIC DEVELOPMENT OVER 200 YEARS



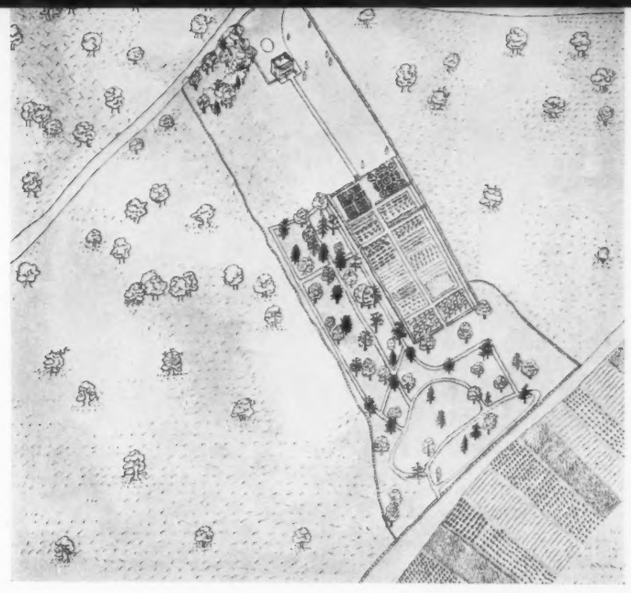
17th Cent.

A virgin tract of the original Windsor forest. Oak trees predominate. Primitive tracks run through open glades.



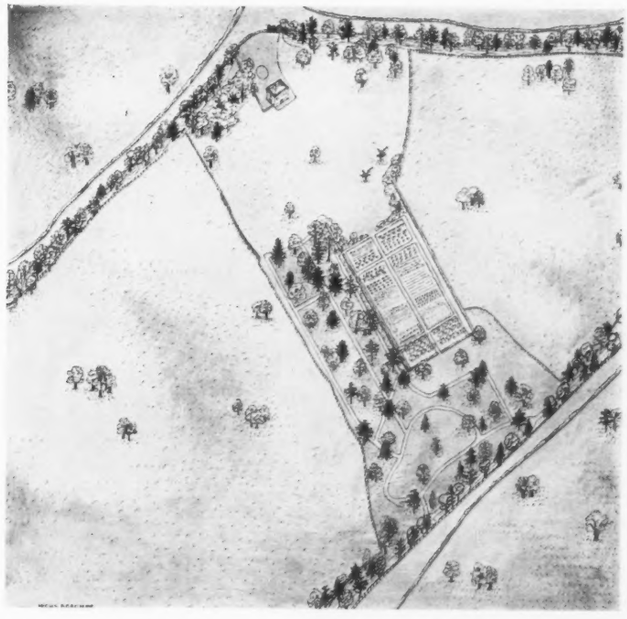
1700: Pre-Landscape

The forest cleared. The tracks become roads, along one of which the soil is cultivated in strips. A house with formal garden bounded by rectilinear walls. A simple lawn around the house; the rest of the garden geometrically planted, mostly for practical use. Even the decorative box-edged Dutch garden is planted with culinary herbs.



1725: Transition Period

Enclosure by landowner; more land is taken into the garden. The cultivation disappears from one side of the road. Planting of new trees, including conifers, to form an irregular wood instead of formal avenues: the "wilderness" of Batty Langley, with winding walks.

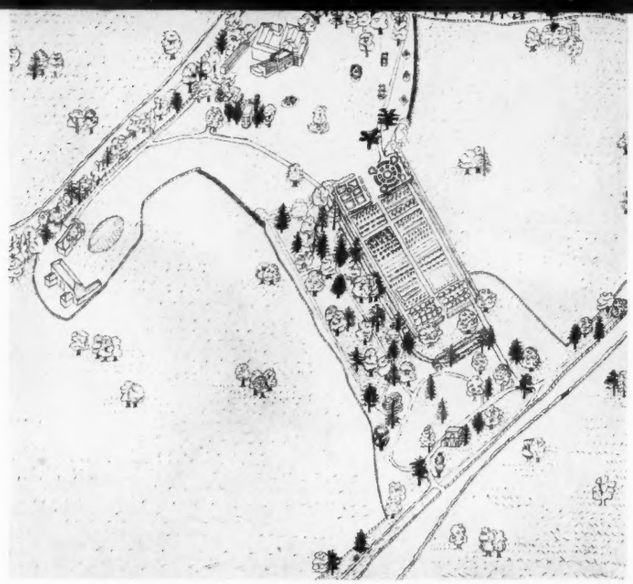


1760: Early Landscape Period

The strip cultivation has now all disappeared, and is replaced by the typical park landscape. Informal planting of a belt of mixed trees along either road. A winding walk among them. New clumps in the landscape. Cedars on the lawn. The formal garden disappears, to make way for an uninterrupted lawn around the house, a typical innovation of Lancelot Brown. A screen of trees hides the kitchen garden. A sunk fence, or Ha-Ha, provides the least obtrusive garden boundary.

1810: Late Landscape Period

The grounds are extended to take in a small ornamental farm. The house is rebuilt in the Regency style and a conservatory added. Architectural features, a classical temple, a grotto and a tea house, are brought in to adorn the garden scene in the fashion set by Repton. The cedars have grown rapidly.



1850: Victorian Period

Victorian complication of plan. The house is enlarged and the lawn in front of the house is broken up again with flower-beds, shrubberies and paths. A range of glasshouses (this is the age of Paxton). The formal garden has returned to its own site; this time for "bedding out." Hedges supplant the Ha-Ha.

1910

The small flower beds have been cleared away, but new twentieth-century features arrive: a tennis court; a row of villas in rectangular plots along the road. A villa on the near side of the road encroaches on the estate itself. Herbaceous borders of hardy plants make their appearance in the kitchen garden: the influence of Gertrude Jekyll. The shrubberies have become massed groups of rhododendrons.

1938

The garden as it is today, photographed from the air: St. Ann's Hill, Chertsey, a modern garden in the remains of an eighteenth-century landscape. The formal and kitchen gardens remain; also the careful planting in clumps; but unnecessary paths have been removed and the whole scene simplified. The house has been rebuilt in reinforced concrete and around it formal modern garden elements (see facing page) link the modern house to the scene but still fit aptly in the park-like setting.

THE GARDEN IN THE LANDSCAPE

Drawings by Letitia Hicks-Beech

A modern house in a landscape garden setting : above, a present-day landscape view of the house and garden at Chertsey whose history has already been used to summarize 200 years of English garden development. Right, two details of modern garden construction near the house : a screen wall to frame landscape views, and a swimming pool and fountain following the shape of a rhododendron clump. The house was designed by Raymond McGrath and the garden by the writer of this article.

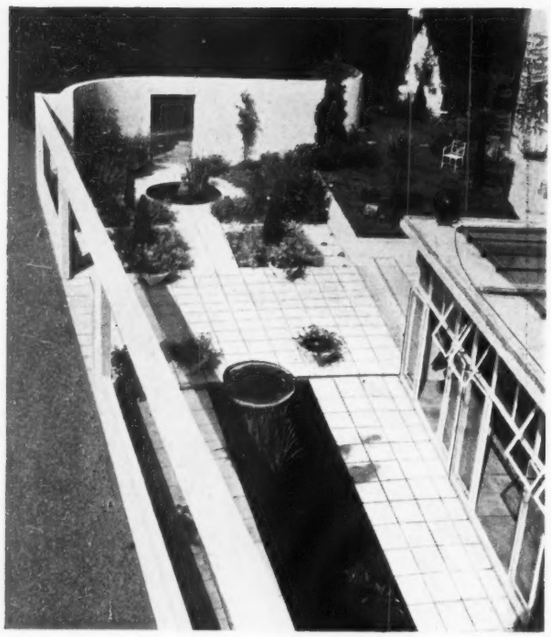
[continued from page 128]

irregular "atmospheric" planting of the landscape garden can achieve the same effect. Individual sites must dictate which type of garden (or balance of combinations of both types) is employed*—but a freer technique than that used in the past will be the most striking characteristic of the new garden. The faith of the designer in the probity of the creative act and his avoidance of the academic symbolism of the styles, the servile imitation of natural scenes, and outworn systems of æsthetics, will result in new forms significant of the age from which they spring. It is the writer's belief that a study of certain manifestations of modern art and science together with the use of a practical system of æsthetics would make possible the evolution of a fluid contemporary technique for garden planning. This, with the help of closer co-operation between architect, landscape architect, and town planner and a general realization that landscape and garden planning are functional problems rather than ones concerned with parasitic ornamentation, would without doubt eventually rid us of the romantic derivative apologies for garden schemes which are in evidence today.†

We can depend upon the fact that the new materials, concrete, steel and glass (the latter in its new forms), will find their way into landscape whether we wish them there or not; science and economic necessity are forces too strong to be denied. It is the duty of the landscape architect, as well as the architect, to adapt and use these materials in harmonious compositions. In

* It is essential that the modern garden planner should derive inspiration from the site, much as the sculptor is inspired by the form and quality of his material.

† Even the best of modern planning schemes, not excepting the imaginative and highly-organized projects of Le Corbusier, include garden layouts which are adaptations rather than pure creative works.



New materials find their way into an architectural garden planned as an immediate extension of the house. Concrete walls and granolithic paving used in the garden of the same house at Chertsey. On the right is a winter garden.

this the gardener has today been given a lead by the architect just as yesterday the architect was himself influenced by the ideas of that great gardener Joseph Paxton.

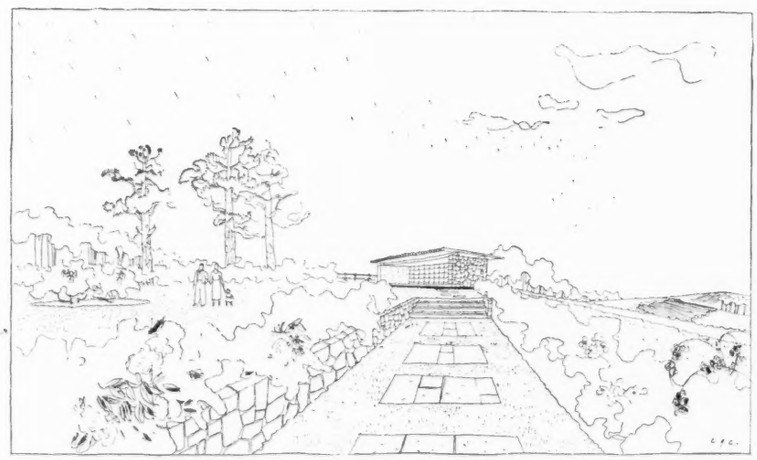
Behind the resentment against the new style and materials is our sentimental attachment to the past, which is a stumbling block to many forms of progress outside the sphere of art. One of the most persistent examples of this are the many societies whose aim is the preservation of the eighteenth century landscape. It is apparent to all of us that the countryside of the age-before-machines is disappearing, but what is not so clear is the necessity for the sterilization of large areas of precious and often productive land in an effort to stem the outflow from the towns. A certain amount of "zoning" might be an acceptable solution to the present problem were it accompanied by sound and rational town and country planning, but sterilization as an end in itself, of which the present efforts of various societies seem to consist, cannot but lead to eventual chaos, and congestion to the point of social strangulation. We must find room for the spreading population from the towns into the countryside, but is there any reason why the move cannot be accomplished in a less short-sighted manner?

The point that must be made here is that expansion need not mean destruction, as will inevitably happen if regulations remain as obstructive to systematized planning as they are at present. A planned England would not be an England devoid of trees, grass, flowers, blue sky and open spaces. Scientific agricultural development will not necessarily banish the lark from English meadows, and perhaps the cultivation of large planned areas may protect him from those present intrusions on his privacy which the motor car has made almost unavoidable. Trees and plants may flourish even better than in the hedgerow when they are systematically planted and their future development planned, as the owners of the remaining great estates can testify. Rusticity may depart in some measure, but the glory that is England's green fields, her trees and summer flowers will always remain. And are we losing much by sacrificing the character of rusticity to ordered development in the countryside? An eighteenth-century England abhorred it as heartily as we abhor a muddy and impassable road until Wordsworth and the great Romantics, frightened of what man had created in the new machines, cried out for a return to all that rural solitude implied.

All this is apparent in contrast to the new laws which can govern landscape design. Appreciation of the structure of things, of balance and controlled development, goes with an acceptance of the landscape planned for form and with imagination. We cannot all have Addison's "champain" view in this year of grace, and in the future perhaps we shall not be able to look for a hill-top without seeing some building or other astride the middle distance, though perhaps the idea of flats for country dwellers may not make this a universal necessity. We can console ourselves with the thought that the walled Cha-no-Yu garden often takes the place of a whole country of landscape to the Japanese. Without the unbroken view of our forefathers the prospect may yet be a pleasing one, and when our descendants are born into a world of planned landscape it is not likely that they will object to the appearance of buildings in country which they have never known as unencumbered. Disorder may be unpleasant to them. And after all is there not a tradition of orderliness in England? Listen to William Morris on the subject of our "little land":

". . . . there are no great wastes overwhelming in their dreariness, no great solitudes of forest, no terrible untrodden mountain walls; all is measured, mingled, varied, gliding easily one thing into another; little rivers, little plains, swelling and speedily changing uplands, all beset with handsome orderly trees; little hills, little mountains, netted over with the walls of sheepwalks; all of it little, yet not foolish or blank, but serious rather, and abundant of meaning for such as choose to seek it; it is neither prison nor palace, but a decent home."

Our plea for order and form in garden design is of equal importance in the sphere of the countryside. We have seen how necessary is a plan for gardens—how the so-called "natural garden" is a contradiction. Cannot we have a plan for the countryside, which will combine with economic sufficiency a new æsthetic heritage? It cannot be our purpose here to attempt an exposition of the wider planning, which is "that new science, the projection of the whole life of the community," and is necessarily bound up with economics and social legislation. But if we can experiment with gardens and remake our immediate surroundings into areas of imagery and beauty, it is likely that the influence may spread into a wider sphere, and one as badly in need of imaginative control.



A garden to a house near Leicester in which the character of the landscape finds echoes in the planting.

FLATS

GORDON JEEVES

THE SITE Grosvenor Road, Westminster. The front of the flats, known as Dolphin Square, overlooks the River Thames. Part of the waterfront is to be cleared and a garden and landing stage made for the use of the tenants.

PLANNING There are 1,236 flats of varying accommodation planned on ten floors round an open court. The plan below shows a typical portion of the block. The wing on the left was originally planned in the form of a hotel, for short term tenancies. In the centre of the court is a separate building which acts as a sports centre. It contains eight squash rackets courts, a swimming bath and a restaurant. There is also an underground garage for 200 cars.

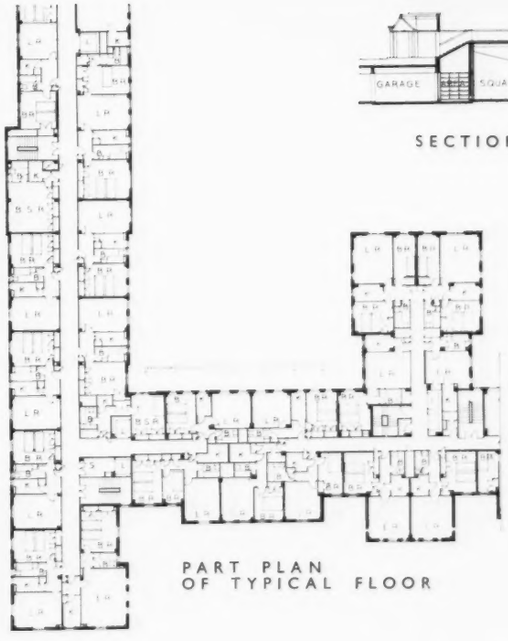
THE VIEWS ILLUSTRATED 1, general view looking towards the sports centre. 2–4, progress photographs showing the construction.

1

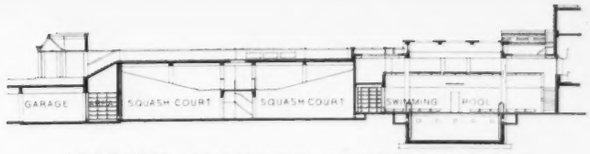
2

3

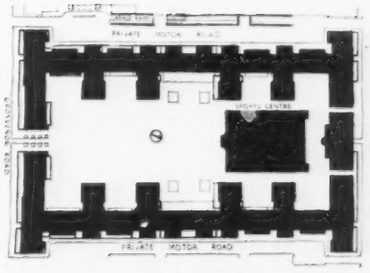
4



PART PLAN OF TYPICAL FLOOR



SECTION THROUGH SPORTS CENTRE



LAYOUT

FLATS

GORDON JEEVES

STRUCTURE AND MATERIALS

The building is a reinforced concrete framed structure, clothed with 11 in. hollow walls. The floors are all solid reinforced concrete 5 in. thick, finished with screeding and covered with cork or linoleum to tenants' requirements. The whole of the underside of the floor slab including the sides and soffites of all beams is covered with $\frac{1}{2}$ in. of cork, which is finished with a skim coat of plaster to form the ceiling of the room below. The roof is finished with screeding, 1 in. of cork, asphalt and quarry tiles. The whole of the basement is enclosed with reinforced concrete retaining walls, and a raft slab 12 in. thick. No asphalt tanking is employed, nor is the concrete treated with any waterproofing material, and it has been found that no leakages have occurred in these retaining walls.

EQUIPMENT AND FINISHES

There are four underground reservoirs each holding a quarter of a million gallons of water which is obtained from three artesian wells, each producing about 2,000 gallons of water per hour. There is additional storage for 80,000 gallons on the roof and owing to the water being obtained from a source other than the Metropolitan Water Board, flush valves have been used on the water closets. There are three boiler houses which also contain the artesian well pumps, the circulation pumps to the domestic services, etc. Refuse collection proved to be a special problem and eventually a cupboard was designed at the side of the entrance door to each flat with doors opening into the flat and the corridor. The small dustbins can be collected each night, and taken to the basement where a room has been provided for washing and disinfecting the dustbins, with a garage adjoining, in which the local authorities' refuse collection van can stand. Each cupboard is ventilated by means of a small duct attached to special fans in the penthouses on the roof. Internal bathrooms and w.c's. are mechanically ventilated and given six changes of air per hour by means of inlet and extract fans. Internal kitchens are also mechanically ventilated by means of an extract fan only, also giving six changes of air per hour.

THE VIEWS ILLUSTRATED

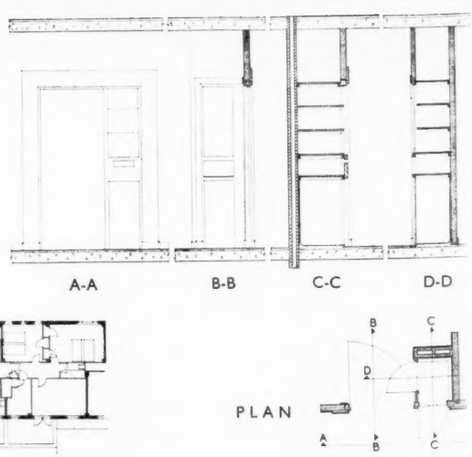
5, the main front to Grosvenor Road. 6, the beginning of the ramp leading to the underground garage. 7, the inner court and sports centre.

5

6

7

NINTH FLOOR PLAN



DETAIL OF REFUSE CUPBOARD

LIBRARIES

L. H. KEAY

1

THE SITE

Townsend Avenue and Utting Avenue East, Liverpool. The building is the Norris Green Branch (called the Harry A. Cole Library) of the Liverpool Public Libraries.

PLANNING

No rights of lights were involved, but the building is given a splayed corner to comply with the town planning regulations of the borough.

The library contains over 20,000 books, representative of all classes of literature. The three main rooms, which are separated by large plate-glass partitions, are fitted with bookcases, newspaper stands, counters, tables, etc.

The librarian's room, the various staff rooms, etc., are on the ground floor at the rear of the building.

The young people's department, with a separate entrance, contains books and magazines suitable for boys and girls between the ages of 8 and 14 years. The general reading room is provided with wallstands for 25 newspapers, together with an adequate supply of reference books and periodicals, the latter being displayed in special cases. The room contains seating accommodation for 72 persons.

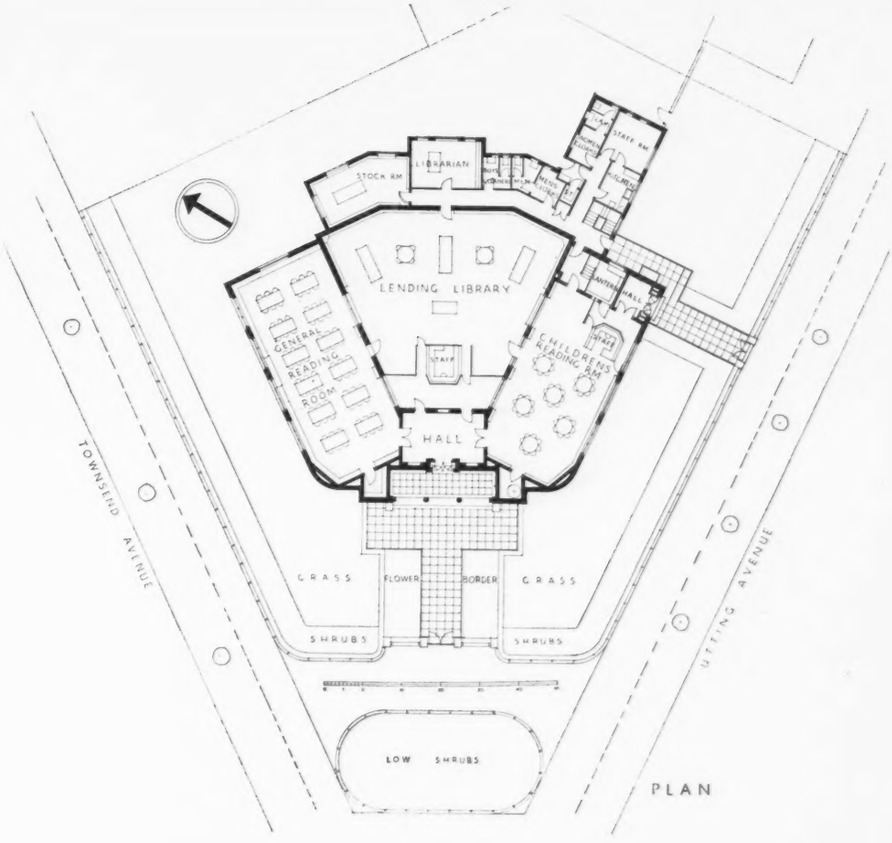
CONSTRUCTION AND MATERIALS

External walls are of 13½ in. solid brick construction, Jacobean sand-faced, with ivory-coloured cement joints. The metal casement windows have Portland stone surrounds. The portico, which is flood-lit at night, measures 27 ft. by 7 ft. and has two Portland stone columns.

Natural lighting is supplied in the adult lending library by 14 concave roof lights. The wall cases rest on the brick and tile plinth 18 ins. from the floor. All walls not covered with bookcases have 6 in. square biscuit-coloured tiles, with joints of white cement, up to a height of 6 ft., the wall space above being in distempered light stone.

THE VIEW ILLUSTRATED

1, a detail of the main entrance.



PLAN

LIBRARIES

L. H. KEAY

2


3


4


5

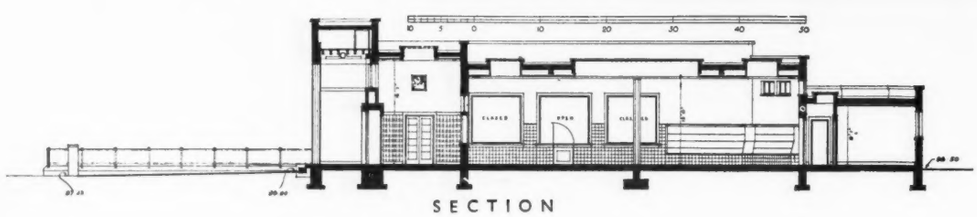
EQUIPMENT AND FINISHES

The electric fittings are of the spherical type. There are 17 in the adults' lending library, 10 in the general reading room and 8 in the young people's department. Here a projection room is provided for the operation of a cinematograph, for use in connexion with lectures and story hour talks to children, and is wired for a loud speaker which is situated at the opposite end of the department. Provision has also been made for a microphone unit. Under the projection room provision is made for the storage of the collapsible forms which will be used during the young people's lectures and story hour talks.

The main entrance hall has walls of Swedish green and black marble and biscuit-coloured tiles ; the floor is of light green terrazzo tiles. The door is of the double-folding type made of oak and when folded back into a recess exposes two glass doors with horizontal dividing bars. All inside doors are similarly panelled.

THE VIEWS ILLUSTRATED

2, view from the south west. 3, the general reading room. 4, the children's reading room. 5, the lending library.



SECTION

STORES

W. A. JOHNSON
J. W. CROPPER,
ASSISTANT

1

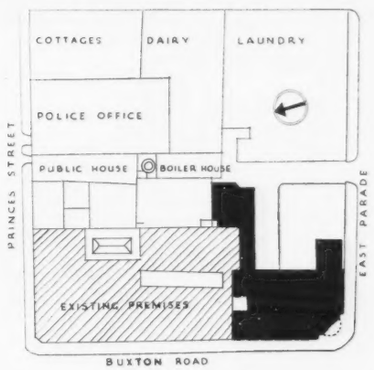
THE SITE

Buxton Road, Huddersfield. The building is an extension of the shop premises at the drapery department of the Huddersfield Industrial Society, Ltd. It includes a restaurant and an assembly hall.

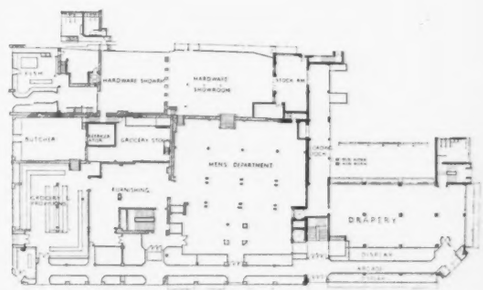
PLANNING

The sales departments are in the basement and on the ground and first floors ; the restaurant is on the second floor and the assembly hall on the third floor.

The extension is planned with large open steel bays and in direct communication with the old adjoining building, a new staircase and passenger lift being placed alongside the old building to facilitate access from floor to floor. The arcade on the ground floor, when the alterations to the old building are completed, will run the complete length of the Buxton Road front. When the restaurant and the assembly hall are in use after the sales departments are closed, the departments on each floor are cut off from the main staircase and lifts by geared roller shutters.



SITE PLAN



GROUND FLOOR PLAN of the complete store, showing the alterations to the old building and, on the right, the new drapery department.

CONSTRUCTION AND MATERIALS

Steel frame construction, with reinforced concrete floors : 14 in. ashlar faced walls to front and side elevations and 14 in. brick walls to rear. Internal partitions are 4½ in. brick ; w.c. partitions, 2½ in. white glazed brick ; basement walls, reinforced concrete. Roofs are : over the assembly hall, steel trusses, boarded and felted, and covered with slates and patent glazing ; over the kitchen, staircase, lavatories, etc., reinforced concrete, covered with asphalt. The shop fronts are in bronze ; the stallboards in red and amber granite. The four large mullions to the corner window and the transomes to the staircase window on the Buxton Road elevation are in reconstructed stone.

EQUIPMENT AND FINISHES

The shop fittings and columns in the basement and on the first floor are polished oak and those on the ground floor are polished Honduras mahogany. Ceilings are fibrous plaster slabs. In the restaurant the columns are walnut with concealed lighting in the fibrous plaster caps ; the dado is walnut ; the ceilings and beams are fibrous plaster, decorated, and the floor is finished in linoleum. The main staircase has a marble dado 3 ft. 9 ins. high. Passenger lift doors are metal, cellulose sprayed.

THE VIEWS ILLUSTRATED

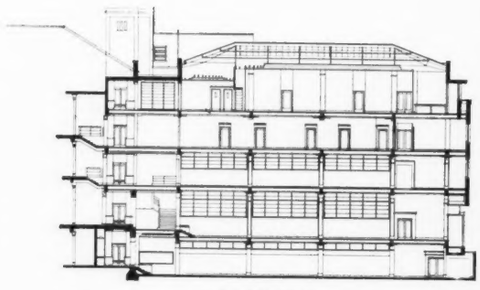
1, the Buxton Road front. 2, the East Parade front.

2

STORES

W. A. JOHNSON: J. W. CROPPER, ASSISTANT

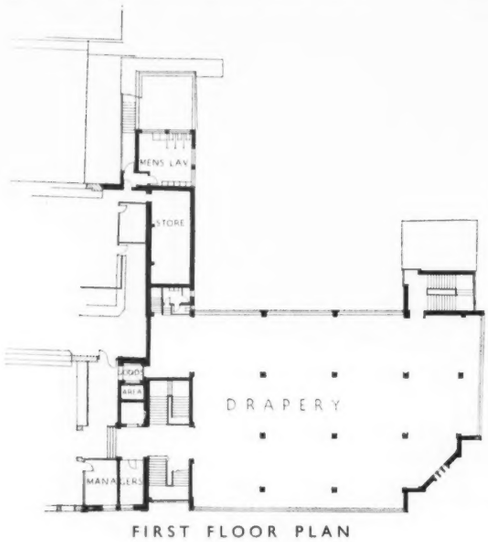
3



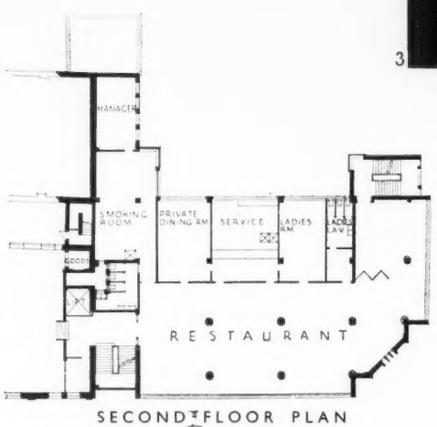
SECTION

THE VIEW ILLUSTRATED

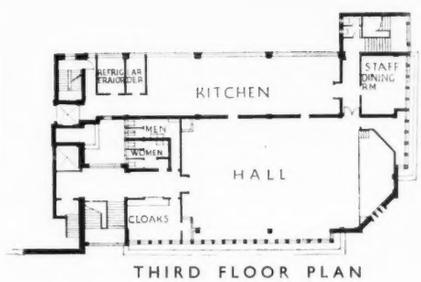
3, a display stand for ladies' hats. The tubes for the vacuum cleaning and the pneumatic cash carrier systems are concealed in the column casings and the fibrous plaster beams.



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

HOSPITALS

CECIL BURNS

THE SITE

Ethelbert Road, Canterbury. The main entrance to the building, the Kent and Canterbury Hospital, is from this road, with a chestnut avenue leading to the main forecourt. A secondary connecting road, round the back of the buildings, joins the Nackington Road. 1, a general view from the south.

1

HOSPITALS

CECIL BURNS


2


3

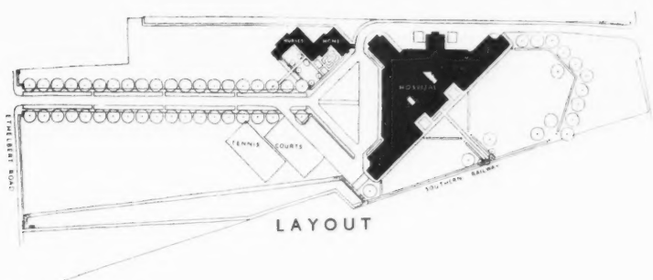

4

PLANNING

The ward blocks are planned on three floors, providing accommodation for 181 patients. The kitchen projects clear of the other buildings, and so has natural cross-ventilation ; but to prevent the smell of cooking penetrating into the main building, a ventilating shaft is carried up beside the main boiler chimney shaft.

The nurses' home is connected with the main building by a covered way. It contains five sitting-rooms and 97 bedrooms for the nursing and domestic staff.

A special feature is the low basement, which extends under the whole of the hospital buildings. Here are run the electric mains, also the pipework of every description, including drainage. From this basement vertical ducts are carried up the building at convenient positions.



LAYOUT

STRUCTURE AND MATERIALS

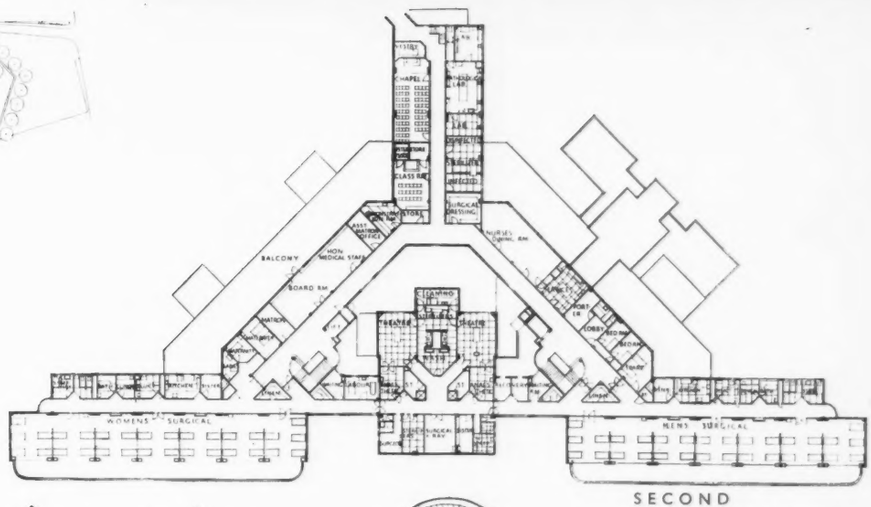
Reinforced concrete construction has been used throughout. No internal walls are structural. The concrete has been finished externally with a special white finish, but the aggregate has been left exposed in places in the form of panels. The floors are of hollow construction with suspended ceilings to prevent sound transmission.

EQUIPMENT AND FINISHES

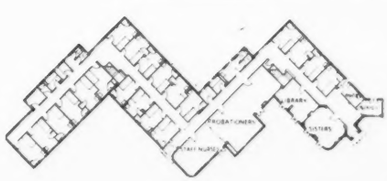
Heat for all purposes for the hospital and nurses' home is generated in one central boiler house containing three high-efficiency steam boilers. The theatres and adjacent rooms have steam heating panels. This group of rooms is also air-conditioned. Low-pressure steam is distributed where necessary in the hospital for sterilizing and cooking, and steam mains are available at a higher pressure for special sterilizing apparatus. Special engineering equipment in the hospital includes : electric service and bed lifts ; automatic telephone installation ; broadcast call system, which allows any person to be called by the telephonist ; electric clocks operated by a master clock ; electric bell with luminous signalling system for patients ; wireless installation with headphones for all beds, and loud-speakers in certain cases.

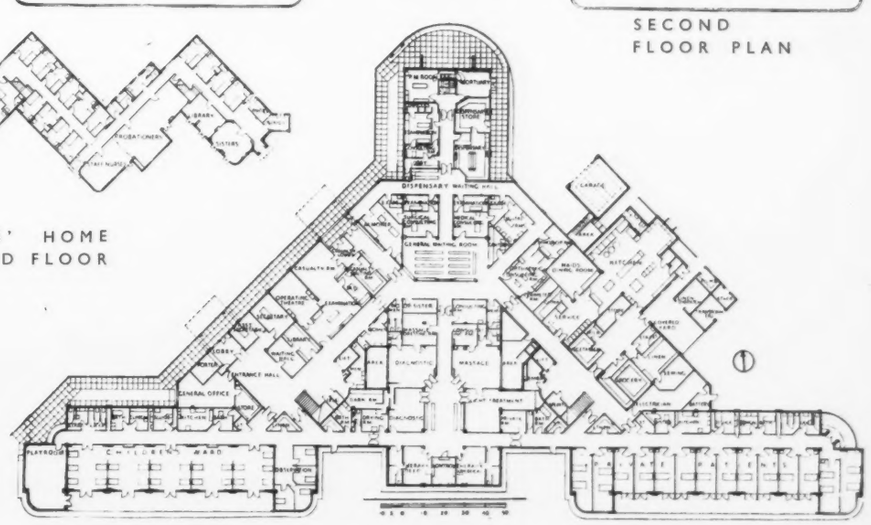
THE VIEWS ILLUSTRATED

2, the entrance front. 3, a sun balcony. 4, the nurses' home. 5 and 6, interior views showing equipment.



SECOND FLOOR PLAN


NURSES' HOME GROUND FLOOR



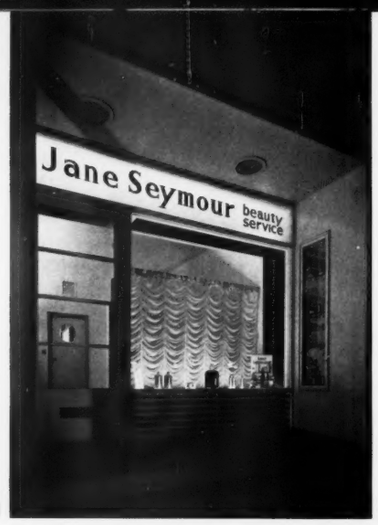
GROUND FLOOR PLAN


5


6

SHOPS

EDRIC NEEL



1

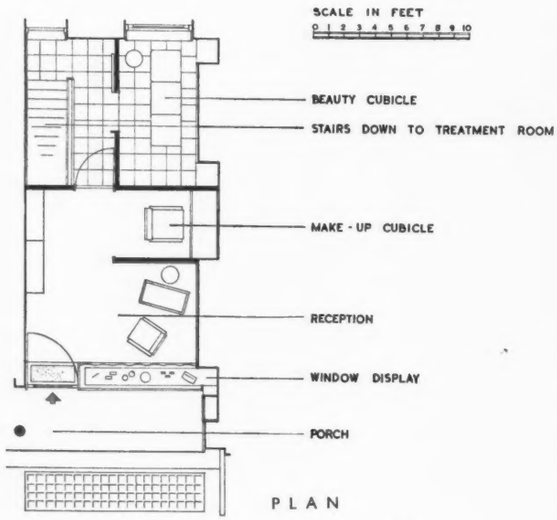
2

THE SITE St. George's Place, Canterbury. An existing eighteenth-century house had previously been converted into a hairdressing shop and a small lock-up shop. At the time of the original conversion the use of the lock-up shop was not determined, and the present problem was to adapt this shop to the peculiar uses of Beauty Treatment.

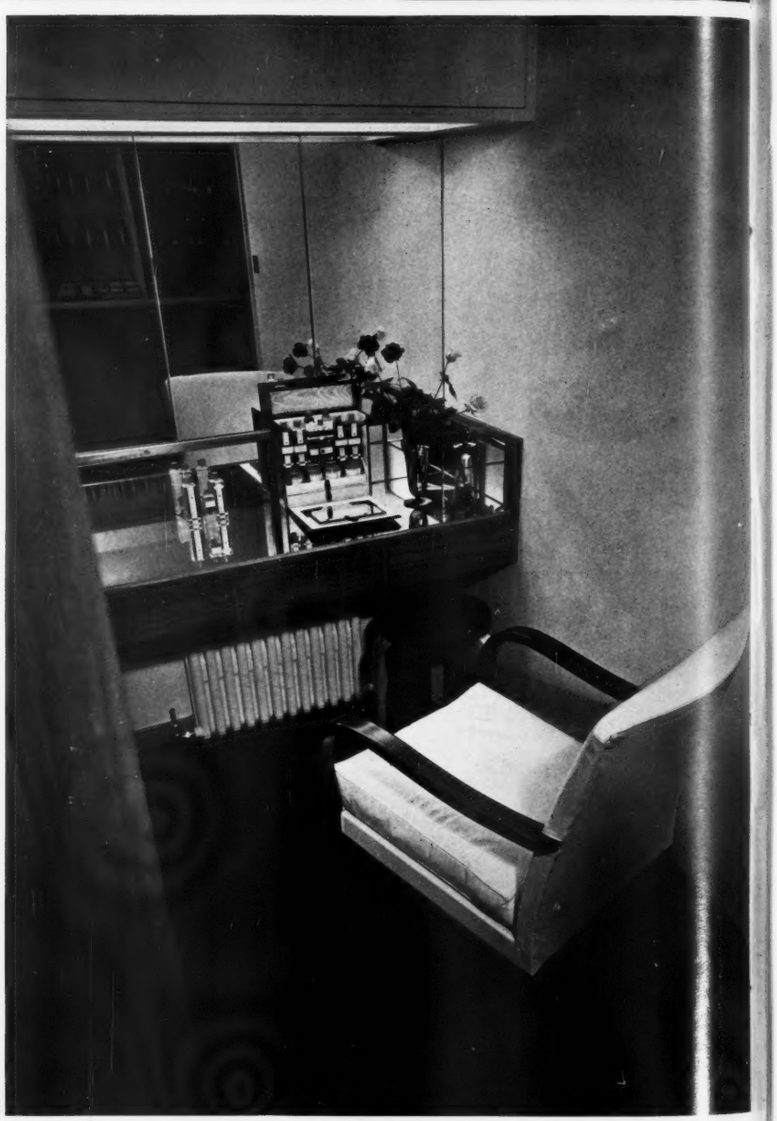
PLANNING The requirements included—a display window, a reception area and further display space, a make-up cubicle and access to a preparation and special treatment room in the basement. The whole had to be planned within an existing space of 22 ft. by 12 ft., which included two large chimney breasts.

MATERIALS AND FINISHES The colour scheme is built up of white walls and powder blue doors, with wine coloured carpeting and dark cork flooring. The remaining woodwork and plywood panelling is in polished Lagos mahogany.

THE VIEWS ILLUSTRATED 1, the shop front. 2, reception bay. 3, make-up cubicle. 4, and 5, beauty cubicle.



PLAN



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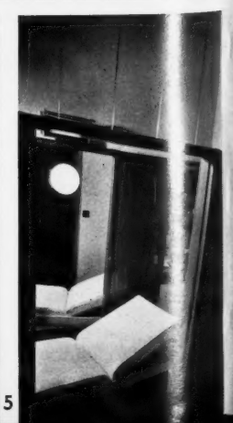


5

A PIONEER DESIGNER

Arthur H. Mackmurdo

By Nikolaus Pevsner

MACKMURDO'S ventures and discoveries are forgotten, and he, too, is forgotten, living in an Essex village in a seclusion of his own choosing. He no longer does architectural work, but in spite of his eighty-six years, he is passionately engaged in social and economic research of a radical nature. He will ask you out for a walk and talk to you of economic problems, his light blue eyes glittering, his wavy white hair blown by a breeze, a black coat slipped on over his butcher-blue blouse or blue shirt—the kind of blue blouse which William Morris wore: the kind of blue shirt which C. F. A. Voysey wears. And the shirt is in this case—as in other cases—a profession of faith. Mr. Mackmurdo belongs to Morris and Voysey, and between Morris and Voysey lies his great evolutionary importance. Morris was born in 1834, Voysey in 1857, Mackmurdo in 1851. Morris & Co. was founded in 1861; Voysey's early buildings date from the late eighties: Mackmurdo began work in the seventies, and reached full maturity as early as 1880. Some of his works between 1880 to 1890, this is an easily proved fact, were more advanced, more original, more adventurous than those of any other British architect during that decade (which is tantamount to saying the work of any European architect).

Arthur H. Mackmurdo is of old Scottish stock. His father had at one time read for the Bar, but later became a successful manufacturer of chemicals and a very wealthy man. When his son had expressed his desire to become an architect he was apprenticed to a man in London named T. Chatfield Clarke—this was in 1869—and as he found that he could not learn much from him, he chose his own master and induced James Brooks to accept him as a pupil. Brooks (1825–1901) belongs to the generation of Philip Webb and Norman Shaw, of Street, Burges, Bodley and Sedding. He was unusually interested in ornamental details and did not like to leave decoration to less sensitive collaborators. While acquiring his professional equipment, Mackmurdo read much, attracted particularly by works on social problems. He was fortunate in having as a guide Herbert Spencer, a friend of his father. Ruskin he discovered for himself and felt so profoundly moved by his books—it was the time of the first issues of *Fors Clavigera*—that he decided to graduate at Oxford in order to attend Ruskin's lectures. Ruskin seems to have recognized at once the exceptional qualities of his new pupil. He took him to Italy, travelled with him, induced him to sketch wherever they went, and to pay as much attention to nature as to the works of man. Sketches made in 1874 and 1875 are still in existence and will with Mr. Mackmurdo's other belongings one day pass over to the *Morris Memorial Gallery* at Walthamstow. In 1875 Mackmurdo set up a practice in London, first at 28 Southampton Street, Strand, and after 1880 at 20 Fitzroy Street, where his hospitable house was known to many an art lover and many a young artist (as is referred to in Sir William Rothenstein's recollections). It was also in these years that he was introduced to and became a friend of the Morris's at Kelmscott House, Hammersmith; and it is indeed impressive for the historian to realize that here is a man who in this year of 1938 can say in a fatherly undertone: "She was a remarkable girl, was May . . . I used to row her up the river." As to his work during these decisive fifteen years between 1875 and 1890 one should bear in mind into what artistic situation Mackmurdo came when he started on his own. What are the great public buildings in London representing the tendencies of the seventies? There is the Early English Natural History Museum of 1873–79 (by Waterhouse), the pompous Renaissance façades of the new Burlington House of 1873 (by Banks and E. H. Barry), Street's Gothic Law Courts of 1874–82, while there is also—smaller, but of great influence on the establishment of the Neo-Elizabethan style—Norman Shaw's *New Zealand Chambers*, built in 1873. More important for future development were Norman Shaw's private houses. One of Mackmurdo's first buildings, a house at Bush Hill Park, Enfield of about 1873, 1, shows the impression which Norman Shaw's early works, such as Leys Wood, Sussex (1868–71) had made on him. Only five years later he designed another house at Bush Hill Park, Enfield, 2, and now he had found a style all his own. Where did these proportions originate, or the plain wall of the upper storey with its three horizontal windows placed on top of the pilastered ground floor? Where can he have seen anything resembling these clear-cut cornices, where the ornamented bands run along the windows? There is no doubt some faint recollection of the Northern Italian Renaissance in it, but it is ingeniously re-shaped. The feeling of this first floor design is that of Frank Lloyd Wright if anything, and it was then well over twelve years before Wright started work.

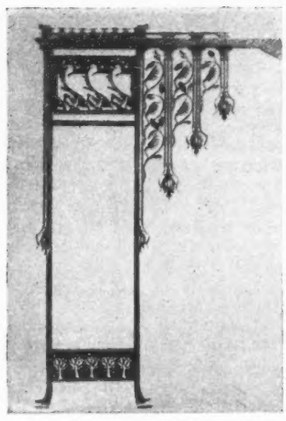
Alongside this rapid development of his architectural style we find an equally surprising progress in the field of design. Morris's style was really the *dernier cri* at the moment when Mackmurdo began, and yet, impressed as he was by Morris's theories (Morris's lectures started in 1877) he did not succumb to Morris's form. The proof of this lies in his work for the *Century Guild* and the *Hobby Horse*.

Mackmurdo saw, just as Morris had seen before founding his firm, that it was impossible to buy well-designed and decently made objects through the ordinary channels. So he combined with a group of artists and craftsmen to produce what they regarded as good quality work and to offer it to the public. The enterprise was started in 1880 or 1881 and called the *Century Guild*—the term *Guild* being an outcome of Ruskin's ideas and not really appropriate. This is the first of many cases in which schemes of Mackmurdo's have influenced or even originated later activities which, as time went on, became more famous or popular and overshadowed the original example. Among the co-operators in the *Century Guild* were Selwyn Image, whose power of design Mr. Mackmurdo deeply admires, also De Morgan, and Benjamin Creswick the sculptor. Clement Heaton specialized in cloisonné; Heywood Sumner in stencilling; George Esling did the copper, brass and pewter work. They all worked to their own as well as to Mackmurdo's designs. He also had wallpapers printed by Jeffreys and Essexs, and textiles woven by a Manchester firm. The agents to the public were a firm

Two houses designed by Arthur H. Mackmurdo at Bush Hill Park, Enfield, showing the rapid development of his style. The first, on the right, was built about 1873 and the other five years later.

1

2



3

4

Examples of the early decorative work of Arthur H. Mackmurdo. **3**, *the sign of the "Century Guild."* **4**, *the jacket of his book: "Wren's City Churches," published in* 1883.

called Wilkinsons of 8 Old Bond Street. The sign of the *Guild*, **3**, which was designed by Mackmurdo early in the eighties, is of the same astounding independence as his contemporary architecture. Only very little in it is reminiscent of medieval tradition, but there is no connexion either with the favourite Morris motifs. If we try to remember where we have seen such miniature trees as the ones at the bottom of the sign, or such birds as those on the top, Voysey or Baillie Scott would be the names occurring to our minds, men who were, like Wright, working at a much later time.

While engaged in the *Guild* work, Mackmurdo thought out another plan and again hit upon an idea of far-reaching influence. There was at that time no journal of artistic distinction in existence. Mackmurdo resolved to start one. He looked round and found in the *Chiswick Press* a printing press of unusually high standard and in Emery Walker a man to whom the reproduction of drawings and other works of graphic art could be safely entrusted, and ideal book-decorators in Selwyn Image and Herbert Horne. By printing the *Hobby Horse*—this was the name of the magazine—on hand-made paper, by carefully choosing a good traditional type, and by conscienciously setting and spacing the type, a production was achieved far above anything available at the time. "Never before," says Aymer Vallance in his article on Mackmurdo published in the *Studio* (vol. 16, 1899), "had modern printing been treated as a serious art." A first issue came out in 1884 and more numbers were published regularly from 1886 onwards. Seven volumes in all exist. Mackmurdo showed them to Morris, and he and Emery Walker, together perhaps with Cobden Sanderson, induced Morris to start a printing press. Thus the Kelmscott Press and even more the Doves Press may also be regarded as an outcome of Mr. Mackmurdo's initiative*. The same must no doubt be said of John Lane's *Yellow Book* which began to appear in 1894. In the first issue of the *Hobby Horse* Mackmurdo wrote on the idea of the *Guild* and also on Early Italian Painting, and it remained a characteristic of the journal to include regular contributions on Italian art. In fact it was at the time the most evident difference between Mackmurdo's and Morris's style that Morris never found anything appealing in Italy, whereas Mackmurdo—guided by Ruskin—passionately admired the musical element in Renaissance design and architecture.

The contrast showed itself in the early days of the *Society for the Protection of Ancient Buildings* (founded in 1877). Morris's interest came primarily from what he had seen of Gilbert Scott's misdeeds in restoring cathedrals, Mackmurdo's from the danger with which the development of the City of London threatened Christopher Wren's churches. But whereas Morris's sympathy with medieval art is clearly reflected in the forms which he himself created, it is surprising to see that Mackmurdo's book on Wren's churches published in 1883 has a jacket, **4**, without any allusion to Wren's style. It is a free decorative motif entirely "non-period" in character, and to a certain extent foreshadowing the ornament of *Art Nouveau*.

The *Society for the Protection of Ancient Buildings* was only one of the societies with which Mackmurdo was closely connected. Another was the *Home Arts and Industries Association*, started by Mrs. Jebb in 1885. Mackmurdo had for a long time been interested in a revival of rural England, a problem which is even more in the centre of his thoughts now. Equally topical is an enterprise of the eighties, the *Art for Schools Association*, discussed in the first issue of the *Hobby Horse*. The aim of this society, which later carried on as the *Fitzroy Picture Society*, was to supply schools with well-printed chromolithographs of valuable old and modern pictures. Burne-Jones, Watts and Walker were among those who contributed.

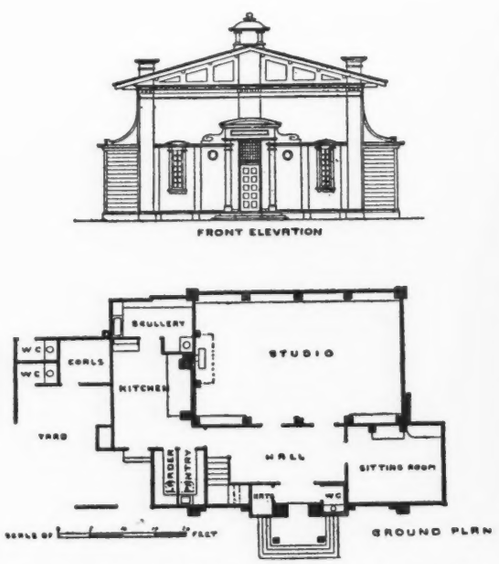
It was the same quick grasp and independent judgment of what was promising that made Mr. Mackmurdo discover Frank Brangwyn, whom he saw one Sunday morning wildly painting somewhere in the City. He gave him a studio in his house and introduced him to Morris. In the same house incidentally he had a collection of old musical instruments and encouraged Arnold Dolmetsch to give his first English concerts of sixteenth- and seventeenth-century music on contemporary instruments.

This comprehensive mind, always on the alert to introduce new yet unrecognized values, is most clearly expressed in Mr. Mackmurdo's architectural work in the eighties. One is the project for an artist's house published in the *Hobby Horse* of 1888, **5**, and exhibiting to perfection the qualities indicated in a less concise and balanced way in the second Enfield house. Another is the exhibition stand, **6**, designed for the *Guild* furniture at the Liverpool International Exhibition of 1886.

The furniture inside the stand still bears a close relationship to traditional styles in spite of the bold proportions of the cupboard on the right, and in spite of the fact that Mr. Mackmurdo introduced an electric table lamp. But it is the façade mainly that must surprise every twentieth-century critic. Its slim white pillars and its sharp and aggressive mouldings are so much in the spirit of Mackintosh's work that its date seems unbelievable.

Shortly after this Voysey began to follow his lead, and soon there were also Baillie Scott, C. R. Ashbee, and Smith and Brewer. But Mackmurdo kept in the vanguard. In No. 25 Cadogan Gardens, for example, built in 1899 for Mortimer Menpes, **7**, the three long and narrow bay windows are a sign of Mackmurdo's growing sympathy with the Anglo-Dutch style of the seventeenth and eighteenth centuries, but the façade towards Cadogan Gardens, with the first and second floor windows sunk in between unadorned brick strips and with the graceful outward-curving cornice, are of a delicacy of proportion and detail hardly surpassed at the time.

And besides the architectural qualities of his façades, there is his



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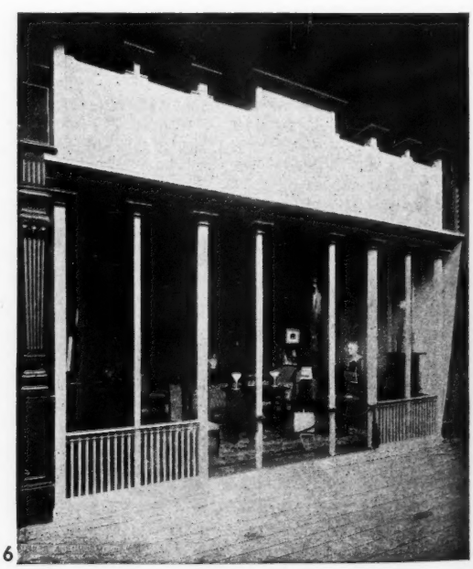


6

5, Mackmurdo's design for a "House for an Artist," published in the first issue of the "Hobby Horse." The magazine, which was started by Mackmurdo in 1884, *was a pioneer in its particular field. "Never before," wrote Aymer Vallance in an article published in "The Studio" of* 1899, *"had modern printing been treated as a serious art."* **6**, *the exhibition stand designed for the "Century Guild" at the Liverpool International Exhibition of* 1886.

* Recognized as such, by O. von Schleinitz in *Zeitschrift für Bücherfreunde* vol. XI, part I. 1907/08, p. 49/50.

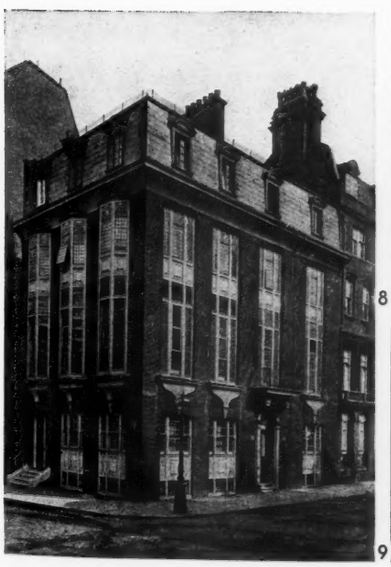
keen interest in questions of planning and technical equipment. He was among the first in this country to think of the problems of regional planning and garden cities. It was his idea, set forth about 1881 in discussions with Patrick Geddes, to establish " regional communities " with a Civic Hall and a Spiritual Hall as their centres, with workshops having direct access to roads, railways and waterways, and workers' houses close to the factories and also to the countryside, the school and hospital being placed at expedient intervals outside the ring of dwellings.

Another interesting project was the Hogarth Cloisters planned at Ealing about 1892. Mr. Mackmurdo suggested the erection of a vast quadrangle 1140 feet in length surrounded by cloisters which were to be open in summer and enclosed with glass and heated by steam in winter. The individual houses and flats were to open on to the cloisters. They were all to be lighted with electric light. A central club house should form the centre of one side of the quadrangle, including a dining-hall, a dining-hall for children and private dining-rooms, kitchen, steam laundry, billiard rooms, gymnasium, swimming baths, entertainment rooms and a nursery. It is unnecessary to say how progressive several points of this programme were in the nineties.

Amongst buildings carried out which introduced unusual technical problems was a cold store at 111–113 Charterhouse Street, erected in 1900, and a gymnasium built for the Gordon Institute for Boys in Liverpool about 1890, 9. The building, which measured 110 feet by 56 feet, was to cost only £1,000. The area is spanned by ten semi-circular wooden arches rising on either side directly from the ground. They carry the roof as well as the gymnastic apparatus, an ingenious arrangement, as the curves of the arches distribute all strains, and the elimination of angular joints makes the construction ideally safe.

Mr. Mackmurdo's largest building in London is the Savoy Hotel, 8, erected in 1889 while he was in partnership with Herbert Horne. Here and in other works of the same period he preferred a richer decoration to the simplicity of the earlier period. However it must be stressed that at no time was he a purist. Although there are more columns and curved cornices, and manifold mouldings, and more festoons in his houses built in the nineties and after 1900 than in those built before, he had always been anxious to introduce somewhere what he calls " a touch of musique."

At the beginning of the new century Mr. Mackmurdo left London and settled in Essex where he had bought an estate. In 1904 he started building the large house of Great Ruffins, Wickham Bishops. Later on, circumstances forced him to give this house up. But even then he did not return to his profession but preferred the quiet of his cottage. He now concentrated entirely on his economic research, which led him to his ideas of State-Socialism. He pleads for living wages and pensions fixed by the State, and for replacing a monetary system based on gold by a system founded on food vouchers. He is as actively engaged in this as he once was in planning and working out his architectural schemes. I am no judge of the practicability or the value of these ideas; but if that instinctive sagacity which has made him discover in the past just those forces which were to play an important part in subsequent developments has not abandoned him, one may assume that here there is once more something of great consequence for the future.



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9

7, house at 25, Cadogan Gardens: designed by Mackmurdo for Mortimer Menpes in 1899. 8, the river front of the Savoy Hotel, London, designed in partnership with Herbert Horne, in 1889. 9, the gymnasium for the " Gordon Institute for Boys," 1890.

A FOOTNOTE ON FORM AND MATERIAL

By J. D. U. WARD

It is, of course, a truism that most innovations of design in the constructional arts and crafts result directly from the invention or the fuller exploitation of new materials. Many people, however, do not grasp how completely design and materials often depend upon one another, so that it may be interesting to illustrate this principle from one of the few departments of eighteenth-century furniture history which is still awaiting thorough exploration.

The influence of mahogany, which enabled chairmakers to produce intricately carved backs strong enough for their purpose, is well known. Every student of old furniture is also acquainted with the efforts of country craftsmen to reproduce in oak or elm the fine designs which urban designers intended to be executed in mahogany. These chairs, commonly known as " country Chippendale," " country Hepplewhite " or " country Sheraton," sometimes have a naïve charm of their own, but more often they are gawky and graceless. It is not, however, with these familiar diversions that we are concerned, but rather with an opposite error, in some senses comparable with the building of the " Tudorbethan " villas of today: that is, the deliberate adoption of designs (and sometimes of constructional methods) which were based on a poverty of materials which no longer exists.

Windsor chairs were built by stick-construction methods: that is to say that the makers did not cut angular mortices and tenons but bored round holes to receive round sticks; the more important of the " joints " formed in this way were usually further secured by means of glue, wedges or transverse pegs. Many of the members of these chairs (at least of those made in the country) were mere hedgerow saplings, unworthy of the name of timber. Seats had to be taken from a big tree but every other part of the chairs (except the splats, in cases where these were used) could be made from mere sticks, and the frequent presence of sapwood and even bark on spindles, legs and stretchers proves to even the least observant that such materials were used by many Windsor chairmakers. It was natural that designs which grew up with this prime condition—the utilization of small wood—should at the same time exploit the youthful pliability of the materials. Hence the pleasant curves to be found in nearly all good Windsor chairs—curves such as can be found in no other unpretentious furniture.

Chairs which originated and developed under such remarkably strict limitations would hardly seem a likely source of inspiration to men accustomed to work in oak, walnut and mahogany, and to use mortice and tenon joints. Yet Windsor chair designs were borrowed and adopted by superior craftsmen. Some time ago Mr. R. W. Symonds published (in *Apollo*, August 1935) two very interesting items from the Royal Household Accounts:—

> " 2 Mahogany Windsor chairs, richly carved," which were for the Blue Room at St. James's;
>
> and " a very neat Mahogany Windsor Chair " for the Prince of Wales' library.

These pieces, which cost £4 each, were made by Henry Williams, *joiner*, within about five years of 1730. They were by no means unique. There are extant walnut, mahogany and oak chairs of about this period, chairs showing unmistakably the influence of Windsor designs. I have seen a photograph of one carved with a coronet. It was made for a nobleman's house, but is now in America: and four are shown in 1 to 4. All of these chairs are more ambitious than the typical Windsor, all are writing or library chairs, and all (especially 3) obviously owe something to Windsor patterns.

Though several Windsor and Windsor-influenced chairs in walnut and mahogany were of the low-back library or writing type, the finer woods were also used for Windsor chairs with high bow- and comb-backs. Indeed, many quite unpretentious Windsors were made of walnut, or partly of

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walnut, especially, I imagine, in Somerset and Gloucestershire, where walnut trees flourish. Some of these pieces are unexceptionable; the wood was sufficiently pliable to bend like yew. Mahogany high-back Windsor chairs are usually of the comb-back pattern commonly associated with a solid splat of the 1710–30 period and involving the minimum of bending; but other designs were also used, as is shown in 4. Incidentally, the rigidity of mahogany is its chief disadvantage so far as Windsor chair construction is concerned, and the statement that mahogany Windsor chairs were always made without any bent wood has been published.

Chairs 1 to 3 are outstandingly successful examples of the use of oak, walnut and mahogany to make Windsor or Windsor-type chairs of greater pretensions than any typical Windsor; yet the impression left by the illustrations is not entirely happy. There is an obvious incompatability between the stick construction and pliable wood of Windsor designs and the use of rigid woods and solid, starchy aspirations of their designers. Yet it is a fact that mahogany and walnut Windsor chairs usually command higher prices than similar pieces in yew.

Finally, a few notes on the design of writing or library chairs. The addition of an independent back to the three-legged stool used in the country for milking and other purposes, 5, is probably the origin of Windsor chairs. Now one might expect chairs or stools of this kind to develop on the lines indicated by 6. Actually, however, such pieces are very scarce: perhaps it is not an exaggeration to say that they are extremely rare. Certainly they are much less common than primitive pieces of the type of 5. It was not until about the middle of the 19th century that the familiar low-back chair built by stick construction methods, and now to be found in every other office, school and library, became popular. The 18th-century Windsor chairmakers nearly all preferred to give their chairs high backs, and the low-backed pattern was for a century and a half rarely used save by craftsmen working for aristocratic patrons.

Why the low-backed pattern should have been virtually ignored in the humbler stratum whence it came, and why it should have appealed to more ambitious chairmakers, seems to be one of the minor curiosities of furniture history, and I do not pretend to explain it.

Looking back, one may reflect that both parties erred. The superior chairmakers, as already noted, by borrowing a principle originally conditioned by the use of other materials and unsuited for execution in *their* woods: and the Windsor chairmakers by neglecting a type of low chair which was at once serviceable, easy and cheap to make (as the Victorians later discovered), and quite pleasant to the eye when executed in yew or ash. If the curve of the arms- and back-rail had been repeated, as it was in many high bow-back chairs, by a curved stretcher of the kind known as a *crinoline* or *spur stretcher*, and if the two chief arm supports had similarly been of the bent type often found in bow-back chairs, some perfect little gems of chairs might have been produced. As things were, the taste for clean lines had gone by the time that the virtues of the low-back chair were recognized, and in its place there was a passion for the grossest and most repulsive turning.

1–3, *Chairs in different materials which show unmistakeably the influence of Windsor patterns.* 1, *is a library or writing chair in walnut.* 2, *is one of a set of four oak chairs in the library of Felbrigge Hall, Norfolk, and* 3, *a similar type in mahogany.* 4, *a large mahogany chair, about* 1740–1750. 5, *a type which shows what is probably the original form of the Windsor chair, in the form of the addition of an independent back to the three-legged milking stool.* 6, *a true Windsor Chair in ash or beech dating from the mid-eighteenth century. The illustrations are reproduced by courtesy of Gill & Reigate* (1)*: R. W. Ketton-Cramer, Esq.* (2)*: Phillips of Hitchen* (3)*: W. Lee of Harrogate* (4)*: Acton Surgery* (5).

Book of the Month

"Commoditie,

THE NIGHT CLIMBERS OF CAMBRIDGE. By "Whipplesnaith." London: Chatto and Windus. Price 7s. 6d.

THIS book is no facetious account of adolescent escapades. It is the first detailed record to be published of the climbs in Cambridge and the best methods of tackling them. Equipment, weather-lore and stone conditions on the various routes are discussed with the expert seriousness of a Chamonix guide. Indeed, in parts it is so technical that a conscientious reviewer would be forced to don the climber's uniform, a golf-jacket and black plimsolls (or a skirt, if Newnham is the obstacle) to discover for himself the accuracy of the author's instructions and advice. Few however, will be encouraged to do so after inspecting the more hair-raising of the illustrations.

The practice of roof-climbing, or more accurately "night climbing," is one peculiar to the universities of Oxford and Cambridge. Owing to better stone conditions it is probably more popular in the latter. The rules are strict: no trace to be left, no damage done, or the nuisance becomes a menace. Crockery, banners and umbrellas are eschewed by the serious climber. Damage, however, in some degree seems

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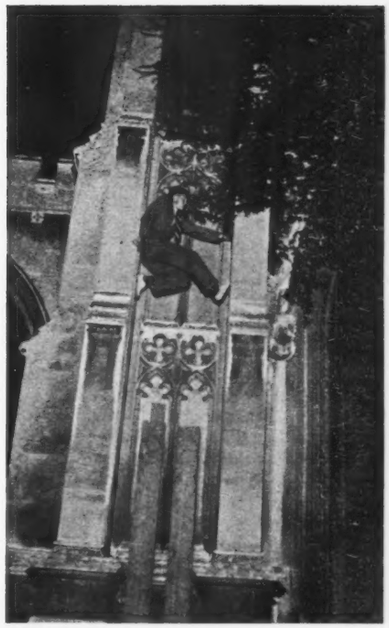
Firmènes and Delight"

By Hugh Casson



Climbing the Eagle Gateway of St. John's. The roof of the cloisters is reached by way of the "chimney" between the Gothic buttresses. From "The Night Climbers of Cambridge."

inevitable. Sometimes the cost of repair has been anonymously paid. An official statement that each climb of King's Chapel cost the authorities £200 is no doubt an exaggeration, and was the cause of a malicious and (I am glad to hear) unfounded suggestion that the whole business is subsidized by the Steeplejacks' Union.

Nearly every night climber starts his career in the same way—by climbing into college. Most undergraduates, however, stop at this point, and it is only a few who are sufficiently fascinated by the experience to become real climbers. The physical qualifications are moderate enough—a sense of balance and a head for heights. Most beginners are discouraged by a fear of giddiness—a fear, according to the author, which is easy to conquer. The sense of danger is, however, the basis of the stimulus which is the charm of climbing.

"For a climber is as a man standing on the edge of an abyss. . . . He cannot but visualize what would happen if he stepped forward, and realizes, with a shock, of what very small significance it would be. The sun would still be shining and the waterfall would still be roaring below, and suddenly he realizes, perhaps for the first time in his life, what a friendly fellow the sun is, what vividness there is in the green around him."

This kind of fear, this short-lived exaltation, the climber undoubtedly enjoys.

The risks are, of course, twofold. To the considerable physical danger must be added the risk of rustication. If one does not fall down one can be sent down. Official discouragement has forced so strict an anonymity upon all climbers, including the author, that often enough they are ignorant of their fellow enthusiasts' identities. They are perforce a mysterious, furtive lot, meeting, perhaps, like Whymper and the Italians on the Matterhorn, when assaulting the same obstacle, or seen silhouetted for a moment against the stars on some soaring pinnacle.

Cambridge climbing falls largely into two categories, "drainpipe" and "chimney." The former is the most essential to be mastered, and also the hardest. Every sort of pipe and the best technique for dealing with it is discussed, though we are warned to keep our sense of proportion. Swarming up drainpipes for their own sakes is a game for gymnasts, not climbers. A "chimney" offers more interesting climbing. It is a technical term for a fissure between two walls, in which the climber has his back against one and his feet against the other. By exerting pressure with his shoulders and feet he creates sufficient friction to ascend without the help of handholds. With these two methods nearly every climb in Cambridge can be confidently tackled.

Starting off with the Old Library, an ideal nursery, and some instructive experiences on such varied edifices as the Divinity Schools, the O.T.C. offices, the Market Square fountain, and the Fitzwilliam Museum, the first severe tests are reached in St. John's College, which offers many interesting problems. Trinity has extensive and varied attractions which make it the aristocrat of climbing grounds, as it is of so many other things.

In King's there are no easy rambles, only three major climbs, the Porter's Lodge, the Gibbs building, and the chapel. The first and second, though severe, are overshadowed in importance by the glamour of the chapel, which has always remained a fascinating and perpetual challenge to every roof-climber.

Nobody knows who climbed it first, though the discovery of a coin dated 1760, on a ledge twenty feet below the pinnacle, seems to indicate that the pastime is an old one. About 1922 a Kingsman was reported to have been given a fellowship for climbing to the roof without using the lightning-conductor. In 1932 there were several successful climbs, after one of which some umbrellas were left tied to the summit. The authorities, naturally anxious to save a steeplejack's fee, asked an undergraduate to remove the objects by gunfire. Later, when the same man was asked to shoot down a Union Jack which had in the meantime replaced the umbrellas, he loyally refused to fire upon the flag, or upon its companion, a bottle of Empire Burgundy.

In 1933 the lightning-conductor was removed, and for a while the chapel was deserted. After a near-success in 1934 it was conquered again in 1935 with the help of an archer and a ball of string. The authorities, arguing that since climbers could get up without it, the conductor did not matter, sensibly replaced it. The next recorded climb was the famous "Save Ethiopia" episode. The traditional alliance of liberal sentiments with roof-climbing is not seriously dimmed by frequent references, in the account of it in this book, to the "Wog Legation." Today the pinnacles are ringed with spiked collars, but after reading a description of some of the climbs in the book I cannot believe that they will be an effective deterrent. There is really no way of preventing the climbing of old buildings, except that suggested by a don (not "Mannie" Forbes), who advised encasing the colleges with chromium plating to a height of fifteen feet.

The men who took the photographs which illustrate the climbs are referred to generically, and I think very unfairly, as "the Inefficient Photographer." To underline the gibe a half-tone full-page block is wasted upon a blank negative. In any circumstances, however, these pictures would have been remarkable. Taken as they were by night, and under difficult and hurried conditions, they form a particularly dramatic record. A human form spreadeagled below a cornice, or "chimneying" a fluted pilaster gives an unusually vivid idea of the scale of the building which forms the background to the climber.

It will be seen that the climber has very definite ideas about architecture. He has a very natural preference for traditional design, and is a good judge of scholarly detail. As a client he is closest allied in taste with bank directors. He admits to liking fluted pilasters, string-courses, niches, rustications and cornices. For him the pierced trefoil and ordered stepping of cusp and crocket have more than their æsthetic value. To him (as, indeed, to the bank director) they mean security and stability. A more precise requirement is round rain-water pipes, fixed just clear of the wall, and if possible eighteen inches from a corner: cornices not too overhanging, preferably unweathered and well clamped back. His favourite architectural period is probably the nineteenth century. This is natural enough, for since the days of Rickman, Belcher and Waterhouse (the climber's favourite architects) little thought has been given to his problems.

The new architecture of Cambridge, though not modern in the modish sense, is for the most part lamentably simple in surface, outline and texture. The windows of the new

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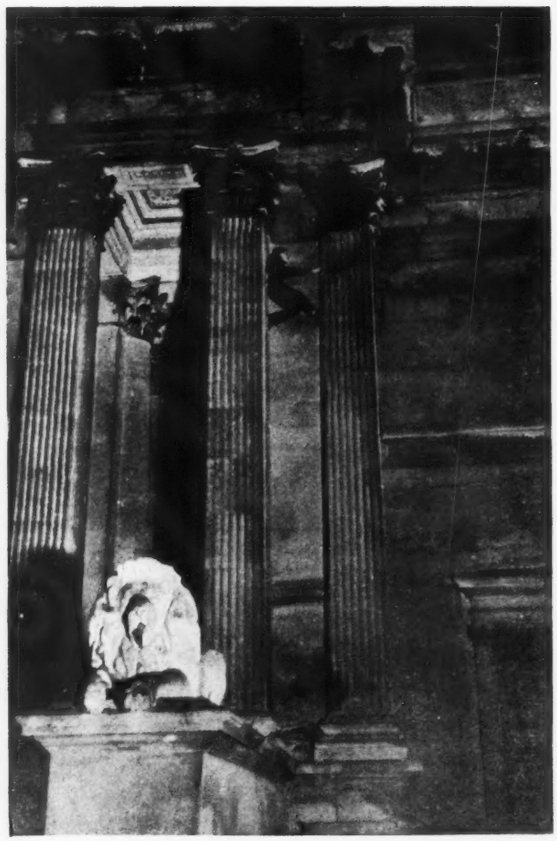
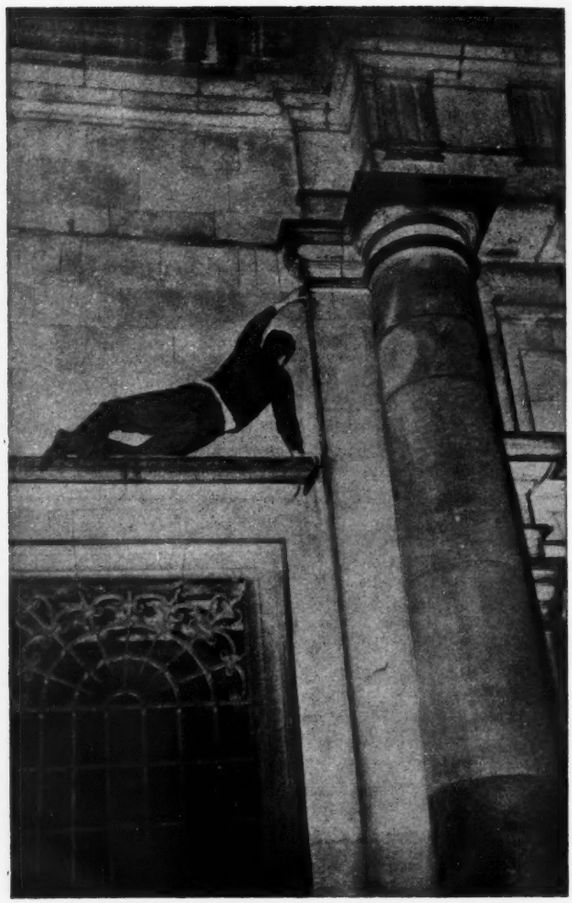




Two Cambridge climbs. Left, the "Lion Chimney" ascent of the Fitzwilliam Museum. "The chimney, above one of the lions at the north-east corner, is of an ideal width, with vertical grooves to keep the feet, and body, from slipping sideways." Right, the "Gateway Column Climb" of Trinity College Library. The illustration shows the first of the series of difficult balancing feats which are necessary to master the climb. From "The Night Climbers of Cambridge."

University Library might possibly be "chimneyed," but the eaves are an effective bar to further progress. The curious statues on the tower will probably never be discovered swathed in surplices and boating-scarves. The new Caius block is white, bland and treacherously smooth. I don't suppose that the delicate detail of Mr. Maufe's new St. John's buildings will give the climber much to get hold of. The polished brick face of the Mond Laboratory is scarred only by an incised line carving by Eric Gill of a crocodile into which scarcely a finger could be inserted.

There are only two buildings where any real attempt to deal with the problem seems to have been made by the architect. The new Downing by Sir Herbert Baker has plenty of string-courses, escutcheons, cornices and pipes, though these are admittedly square in section—a careless bit of detailing. Queens, the other example, as pink and iridescent as a piece of butcher's meat, has a fine busy skyline and some windows which look very suitable for scrambling over. There seems no other reason which could have dictated their curious shape.

There is no doubt that Cambridge has been better served by its architects than London University, whose smooth walls are almost bare of projection, and whose drainpipes are uncompromisingly square. Even "Whipplesnaith," I feel, would be appalled by the sheer cliff-like walls of the new tower. London, however, has its opportunities. Oxford Street is almost an infants' playground with Selfridge's as the first graduating test; and were the intervening streets a bit narrower, Trafalgar Square could be circled without touching the ground, much as one used to do round the nursery as a child. All this makes one think that the sport described in this book could be used to add impetus to the "Stay-in-Britain" holiday campaign. Tours could be arranged over the face of Northumberland Avenue or up the tremendous slopes of the Masonic Peace Temple. Parties could "urn" their way up Regent Street under academic instruction, or (after proper investigation as to their upbringing) rest thankfully upon Prospero and Ariel during their arduous ascent of the B.B.C. Now the stone has been replaced, the Houses of Parliament could be seriously tackled by the Public Schools Exploration Society, and for the architectural student the possibilities are unlimited. Instead of sketching famous buildings he might be guided from stone to stone over the faces of England's monuments. He would be quick to learn the subtlety of entasis, and the importance of a well tailed-down cornice. The discovery that the stone dome of the Fitzwilliam is an iron dummy (one of the most important finds of Cambridge roof climbers) should encourage further search for buildings which make use of similar architectural cosmetics.

Architecture is the most universal of the arts. It demonstrates every twist of contemporary taste to the passer-by who cannot avoid becoming in some degree aware of them. That these twists are so tortuous and bewildering is due, we are always told, to public indifference. This book, however, suggests a new method of arousing interest. An Epstein carving, a glass staircase, a folding roof are by now out-worn publicity gags, no longer able to stimulate the imagination. But in "climbability" we have an architectural quality which is comparatively easy to assess by the ordinary man, who is confused by, and therefore frightened of, æsthetic judgment.

An eye which is once accustomed to glance from string-course to pediment, from niche to cornice in search of footholds and resting places, cannot fail to return to earth unaffected by the experience, and without a consciousness of æsthetic pleasure gained. Once this consciousness has been aroused, interest will follow and judgment eventually be trained. The public will benefit from a new interest, which will give to architecture a much-needed stimulus.

The difficulty, of course, lies in the growing scarcity of examples for study. Georgian

London is fast disappearing and already the house-breakers are busy upon the monumental squares of 19th century Bayswater.

To the roof-climber modern architecture is undoubtedly a growing menace. Hitler's non-Aryan art gallery could hold no more sinister significance for a German than the warning given to the climber by the recent MARS Exhibition. He would not enjoy an evening on Kensal House or Gilbey's offices. I cannot imagine that he would have much fun on Athenæum Court or the north façade of the De la Warr Pavilion at Bexhill. Why even the drainpipes are placed inside these new buildings as often as not—an un-English trick. It is without surprise that one learns that these works are commonly by some foreigner or other.

Let him not despair, though. The Penguin Pool will provide him with a few elementary balancing problems, and there are other signs of a growing consciousness among modern architects of their responsibility in this matter.

Flats As They Might Be

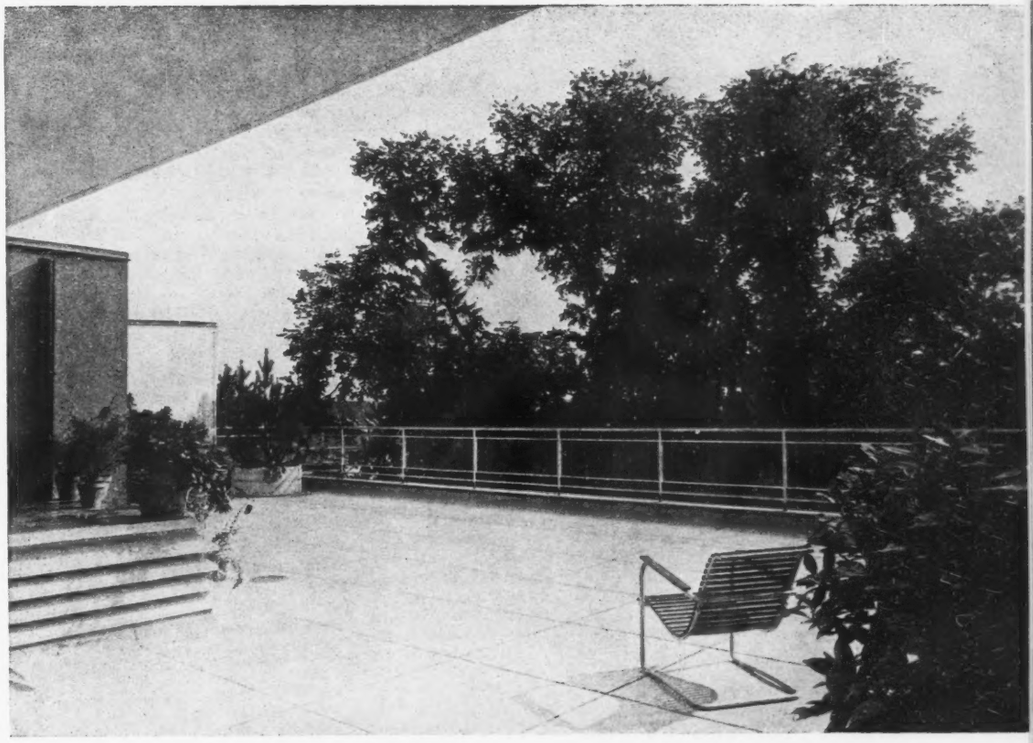
THE MODERN FLAT. By F. R. S. Yorke and Frederick Gibberd. London : The Architectural Press. Price 30s.

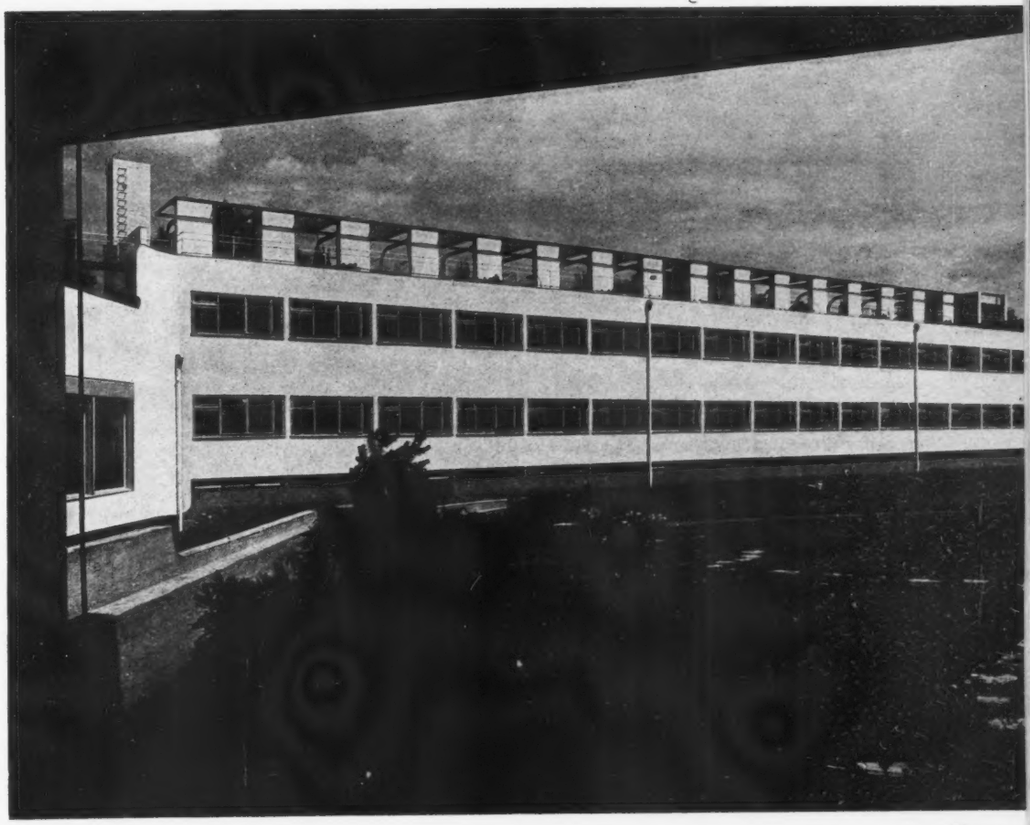
THERE are still those who argue that the flat is not English, just as there are still old gentlemen who shake their umbrellas at passing motor cars, but to an ever increasing number of people the building of blocks of flats is proving itself to be an essential measure in housing policy. It is now clear to many that flat building is not only a means of rehousing in overcrowded areas; others will admit its advantages to town dwellers of all classes, especially those usually condemned to live in "rooms"; still more, even if they cannot see flat building as an important means of reintroducing green space into the town, can at least agree that it might be a method of preventing the town from overrunning the countryside. But one cannot withhold some degree of sympathy for those who, whilst granting these more obvious advantages, are not yet convinced by the mass of flat building which has recently taken place, that the flat as a form of housing is an ideal environment for human beings.

It is precisely in its treatment of this point that Mr. Yorke and Mr. Gibberd's book will perform a valuable service. It is not merely another book about flats—that might have been a very different story. This is a book about flats written from a special aspect which is indicated by the inclusion of the word "modern" in its title. Whatever interpretations may be placed upon this word, the authors clearly intend it to imply a method of design which has as its first consideration human requirements—convenience, fresh air, sunlight—and which employs all the advantages of recent developments in contemporary building technique to achieve its end. Primarily, then, the authors are concerned with homes and not with ten per cent. Perhaps their attitude is best expressed in their own words, for example this :

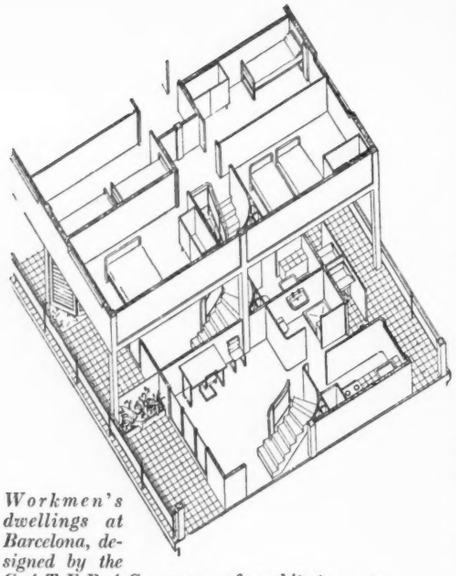
"The way in which we live, and where, is dictated by individuals who make their money by selling us accommodation and their concern is solely profit. . . ." or this :

"Although it is now generally accepted that the aim should be towards tall buildings, single flat thickness, without courts or areas and with wide spaces between the blocks, the general attitude of the speculator has not changed. His demand is still for the greatest number of flats on the site, and his architect is forced to prepare his scheme with this end in view, so that he must commence his work by fitting in a number of units on the site, and think of these units as dwellings afterwards, rather than consider the individual flat as a proper dwelling unit from the outset . . . a popular prejudice against flats still persists, because the homes they provide are not planned with sufficient consideration for the point of view of those who have to live in them. . . . It is still common for a flat to have poor aspect, insufficient light, no view. . . . "





Among the most valuable properties of the Flat are the possibilities it offers of making a better use of the available ground area from the point of view of "amenity" than is generally possible under existing economic conditions in the case of the urban house. The two illustrations reproduced from "The Modern Flat" emphasize this point. Above is the roof garden to a top floor flat in a block of flats in Basle : designed by Otto Senn and Rudolf Mock. Below is a view of the "Werkbundsiedlung" in Breslau : architect, Hans Scharoun, showing the open surroundings which the concentration of dwellings in the form of flats has made possible.



Workmen's dwellings at Barcelona, designed by the G.A.T.E.P.A.C. group of architects: an example of ingenious planning by means of which each flat is made to house six people on a frontage of only 13 feet. This is made possible by maisonette planning, with bedrooms on alternate floors projecting over the access gallery and the balconies. From "The Modern Flat."

It is clearly important that this should be said and that it should be understood that a condemnation of flats as they are is not a condemnation of flats as they might be. What they might be forms the main theme of the authors' text. The development of the plan from the closed court type to the open type, with its better lighting and ventilation, is traced; the various building types are analysed and their relative advantages and disadvantages from the tenant's point of view are brought to the surface, and finally the flat plan itself is analysed, and the general room requirements are stated clearly and simply, and illustrated by diagrams showing a wide variety of arrangements of living-rooms, kitchens, bathrooms, bedrooms, etc.

These forty pages of text act as an introduction to over a hundred and fifty pages of illustrations. The method of exposition will already be familiar to readers of Mr. Yorke's earlier book "The Modern House." Here, as in that outstanding work, the text is written in non-technical language which the layman can readily understand, whilst at the same time the architect will constantly be reminded of the essential basis of his problem. The illustrations themselves form a comprehensive collection of data relating to flat building throughout the world. Not the least impressive fact conveyed by a glance at these illustrations is the extent of flat building which has in some degree been based on the first principles which the authors have outlined in their text. Each scheme is illustrated by well-selected photographs and typical plans, furniture, equipment and important constructional features. The description of schemes under the headings: *type, access, construction, services* and *finance*, is useful for comparative purposes. Perhaps the heading *finance* will provide the most interesting food for thought. It is certainly important to note that private investment has been the financial source of a high proportion of the schemes illustrated in this book; on the other hand, it is clearly impossible for projects financed in this way to work on anything like the scale necessary to obtain the fullest advantages—the gain in surrounding green space for example—which are to be found in the work of public authorities. Several schemes of this latter kind are included, that at Drancy for instance, the Barcelona Workmen's Dwellings, and the Siemensstadt scheme in Berlin by Walter Gropius. Breuer and Yorke's "City of the Future" and Le Corbusier's "Ville Radieuse" point the way to a still larger field of operation. But in general, as the authors themselves point out, the buildings illustrated are isolated units not necessarily built in ideal surroundings. They are in fact the working models, the units of the planned type of urban development which has yet to be achieved on an extensive scale.

Finally, it must be encouraging to those who sympathize with the authors' point of view to find that their book can include so much work which has been constructed in this country; one of these schemes has been described recently as "one of the finest . . . middle class housing projects in the world." Another scheme is far-reaching enough to extend the problem beyond mere housing by the provision of communal services and a nursery school (a natural extension into the social sphere on which perhaps the authors might have laid more stress). But it is nevertheless obvious that the greater part of recent flat building in England is in many ways in direct contradiction to most of the principles set out in this book. Perhaps some of this work might have been built differently had "The Modern Flat" been available. As for future flat builders, we cannot say that they have not been warned.

J. L. MARTIN

Theory and Practice

THE PAINTER'S OBJECT. Edited with an introduction by Myfanwy Evans. London: Gerald Howe. Price 10s. 6d.

TODAY we have almost all returned to the position that art—whatever else it may be—is necessarily a medium of social self expression. It may also be a means of individual self expression or of producing self subsisting objects, but we are preoccupied with this other aspect, that art is communal, reflecting equally without prejudice, unity or discord in any society. All schools of criticism, Eric Gill or the Marxians, C. S. Lewis and Panofsky and Axis reflect the same approach. Within this preoccupation however, our schools of thought reflect the same division as that represented by Ruskin and Pater in the last century. On one side is the position that if art is communal, good art can only exist in a good society, that is, one founded on principles of justice, man's true nature, etc.; it is necessary therefore to reform our society before we can get on with our art. From the critics' point of view art becomes material for propaganda, from the artists' it is as Miss Evans says, escapism; "the real escapists are those who ask for conditions under which everything can be quite straightforward before attempting anything." On the other side the axiom is that art is indestructible, that it represents man's continual effort to give some order and intelligibility to the psychological or intellectual complex of his time, whether that be a lucid structure, undirected explorations, or a mere morass. From the point of view of the scholar art becomes infallible historical material (once you have understood it). Of the artists' point of view Miss Evans' book is as good a document as I can call to mind.

The Painter's Object is a collection of essays by artists; Picasso, Ozenfant, Kandinsky, Max Ernst, Paul Nash, Julian Trevelyan, Léger, Piper, Calder, Moore, Graham Sutherland, Hélion, Moholy-Nagy and de Chirico. It is admirably named. All the more important contributions deal, in either sense of the word, with the artist's "object." Either with his intention, what he thinks he is doing; or with his subject, whatever he is trying to find, to use, to transfix. The outstanding common factor in almost all of these essays is the artist's belief that his subject is outside himself. The two meanings of the word both therefore lead to the same problem. How does the artist find this thing outside himself, this piece, or this sight, of reality which it is the need of our time to possess? And how shall he paint what he finds? To me one of the most illuminating things about the book is the fact that to these artists it is the first, not the second, of these problems which is urgent.

Six of these artists seem to me to make remarkably explicit statements. No doubt it is the painter's job to paint and not write; but when painters can write well enough to convey to the reader twice the meaning that the best art critic can convey, let us be thankful. We do not want a theory of art; a consistent theory is, like Ruskin's, more liable to kill than to enlighten. We need illumination, new light on this idea or that picture, opening a new path for the mind to penetrate into the understanding of our art and our time. To me at least this book opens several paths.

The most complete essay is that of Jean Hélion: *Avowals and Comments*. He tells us his terms; elements derived from the intensification of images from nature, from the "discovery or rediscovery of the fundamental perception of the eyes, colour and form in their primary stages and all that is known as plastic"; out of which he has "evolved a pure alphabet of forms, very reduced a few years ago and later grown to be, in short, a world in itself, but very much bound, I feel and hope, to the motions of the other." He uses a world of visual elements just as Burne Jones and the æsthetic poets used the "transfigured world" of medieval romance, to speak of the real world to our imagination. He tells of his process of painting; sorting piles of drawings he recalls, distantly, a pre-existing structure. He nurses, explores, enriches it. "Then I transport it carefully to the full-size canvas . . . I move all parts, and I scratch until they ease up, until the *esquisse* takes a satisfactory plenitude. Then I start again, from one end to the other, painting as if playing the music I had written before. I follow it, form by form, and colour by colour, but I lay myself in its shadings, I blow the volumes with my lungs, or hammer them with my arms; I dwell in its intervals; I play on all the variations it comports, wherever my emotion can exhaust itself." This personality thus caught and possessed by the artist—or group of personalities—becomes his language, his way of living. The reading and knowing is a voyage into living projected as volumes, densities, movements.

To Kandinsky the object is multiple; the empty canvas, dots,—"a host of little tensions," circles red or black, all alive, all crying out "here I am." All waiting to be built up and combined into a unity, a diapason dramatic, or icy, or made to tell a sort of fairy story. He has been communing close on twenty-five years with these "abstract" things and still finds them a world of infinitely expanding possibilities.

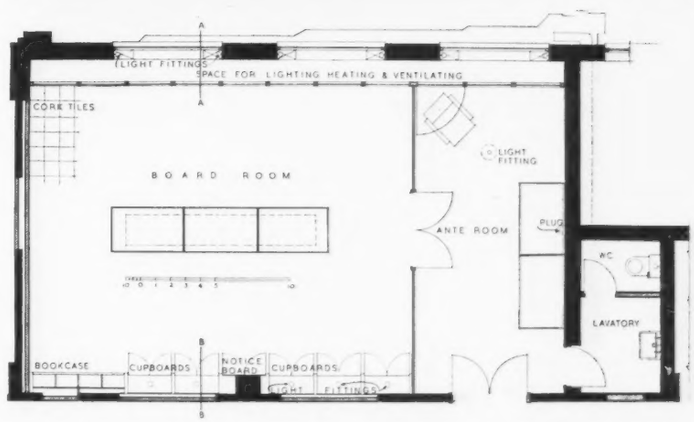
To John Piper the object is lost. It was destroyed by cubism and since then artists have spent their time looking for it or trying to replace it. Max Ernst and Paul Nash give the Surrealist approach, the latter very elegantly. Finally the *Conversation with Picasso* is a fascinating account of the processes of the only living artist who can take all life for his object, digest, and paint what he wants of it; of the superb arrogance—so unlike Hélion's tender care, or Piper's anxious search—which can maltreat or ignore according to the passion of the moment, the objects which it indiscriminately absorbs, knowing that its hold on their reality is indestructible. We write and talk a great deal about the disorder of our society yet the very existence of Picasso is formidable evidence to the contrary.

Miss Evans' introduction is interesting but rather on the defensive. As a comment on the book it is better read at the end than at the beginning. One or two of the essays at the end of the book, on Swanage, Anglo-Saxon sculptors and Moholy-Nagy's film scenario, seem irrelevant to the object of the book. All the essays are however worth reading and, with attention, intelligible.

NICOLETTE GRAY

DECORATION

MARCH 1938



A BOARD-ROOM SUITE
SERGE CHERMAYEFF, ARCHITECT

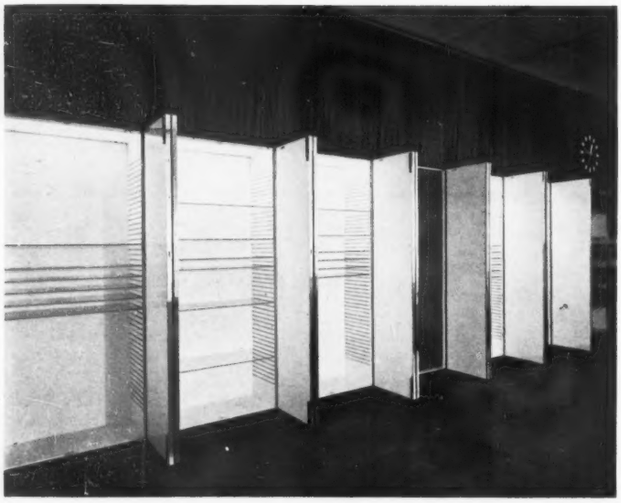
A new laboratory block attached to the I.C.I.'s Dyestuffs Works at Blackley, Manchester, is illustrated on pages 119–126 of this issue. At the same time the architect was also responsible for the design of this new board-room suite inside one of the old buildings on the same site. The suite consists of a board-room and ante-room (see plan above). 1 is a corner of the latter.

DECORATION: A BOARD-ROOM SUITE

2

3

To ensure sound insulation from works outside and escape from frequent fogs, the rooms are air-conditioned by their own independent plant. The board-room and ante-room were designed to serve two other purposes. First for lectures : the end wall is specially treated for projection ; and secondly for exhibitions : the cupboards seen closed in 3 and open in 4 are equipped with adjustable glass shelves and independent top lighting. A continuous hanging rail in copper permits the hanging of charts, etc., with special provision for the display of photographs and transparencies against the thermolux glazing of the false windows seen in 1 and 2. The tables are in units with reversible tops which can be rearranged for display purposes. In the air-conditioning system air is drawn in through oil filters, warmed by a continuous pipe run and comes into the rooms under the windows and is extracted through the false ceiling and air space between the old external and the new inner windows, ventilating the false window lighting at the same time. Acoustical correction has been obtained by untreated fibre board on the ceiling. The panelling is of Australian walnut ply faced on a core of the same fibre board. The chairs, upholstered in natural hide, are of birch. The brick red carpet has the hexagon device of the Corporation incorporated in the weave. The flooring is cork. The metal trim to cupboards, bookcase and panels, is of copper.



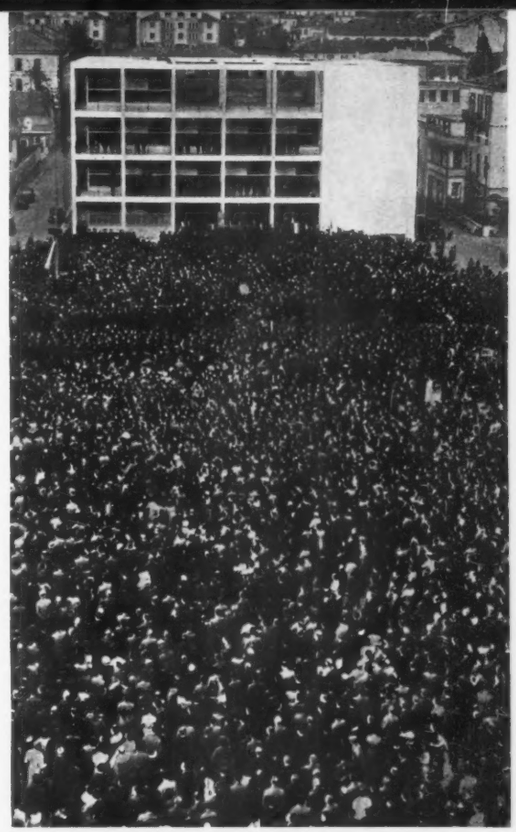
4

SERGE CHERMAYEFF, ARCHITECT

REPETITION IN DECORATION

THE PROBLEM RE-STATED

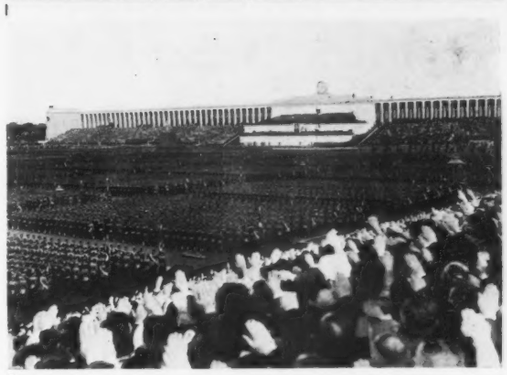
Various tendencies are combining to remove the architectural limitations which have in the past provided a framework for decoration. In the study of "Decoration without Limitation" in the February issue of THE ARCHITECTURAL REVIEW this was found to be particularly important in the case of the Cinema Auditorium. But if the modern interior is examined more closely it becomes clear that this lack of defining limits is not so complete as it first appeared. Many of the accepted means of definition have certainly disappeared, but there are new ones to take their place. The architects' problem is to clarify these new limitations and to incorporate them in a new technique of interior decoration.



1

THE HUMAN FACTOR

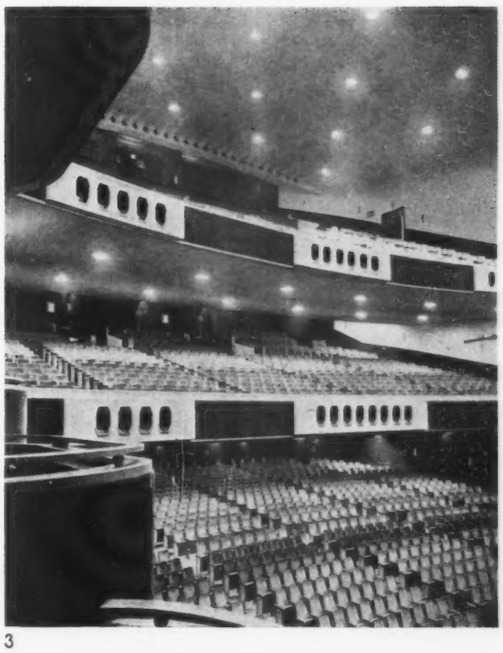
A useful starting point for our study is indicated by the fact that there are many types of architecture which are not designed as a setting for the individual but as a background for a "crowd scene." The Ballroom, the Baroque Garden and the Parade Ground are typical examples of this. It is clearly illustrated in, 1, which shows the mass of people at a Fascist Congress in Milan. By contrast, the National Socialist rally in Nüremberg, 2, shows how this human factor can be organized to produce a predetermined decorative effect.



2

A SOURCE OF DECORATION

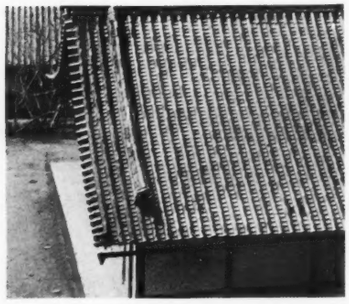
The same human factor is echoed in interior design in the form of rows of seats and similar ranges of furniture or equipment. In the auditorium of the Nippon Gekijo in Tokio, 3, for example, the final effect is almost entirely dependent on the rows of seats, the regularly-spaced lighting fittings and the groups of extract grilles. We can therefore accept "Repetition" of this sort as providing one possible means of re-defining architectural limitations in the interior and examine further its particular qualities and decorative possibilities.



3

PATTERN AND MATERIAL

Repetition, in the form of pattern, is a familiar element in decoration. The tiled roof of a Japanese temple, 4, the coffering of a Roman concrete vault, 5, and the panelled ceiling of a Japanese temple library, 6, provide various examples. They show how typical patterns have been evolved through an attention to the nature and qualities of different building materials. And in the same way new materials and their specialized uses suggest new decorative patterns, as in the case of the experimental design for a motor tyre, 7, the steel setts which provide a non-slip road surface, 8, and the fibrous plaster domes, specially designed for light reflection, 9.



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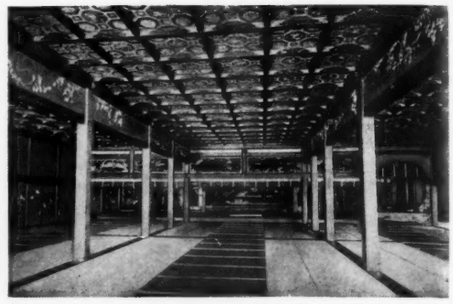

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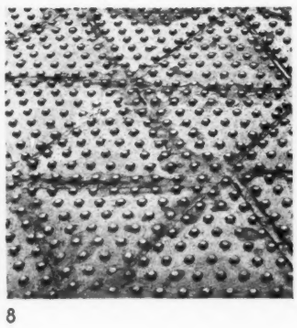

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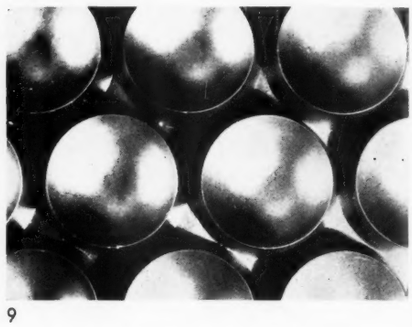
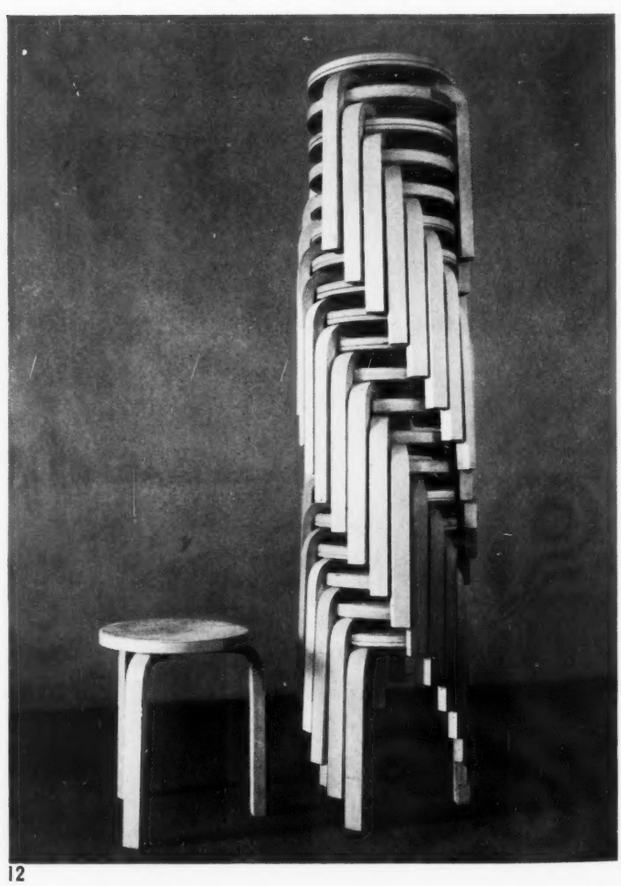


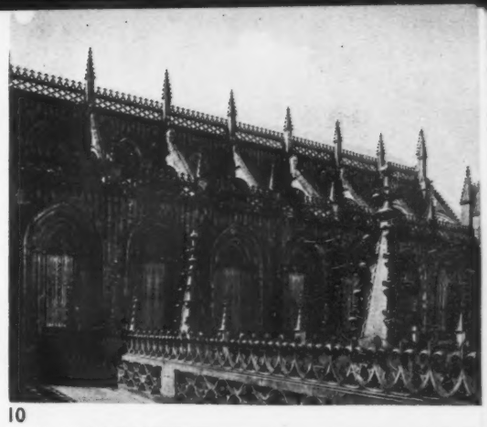
9

STANDARDIZA-



12

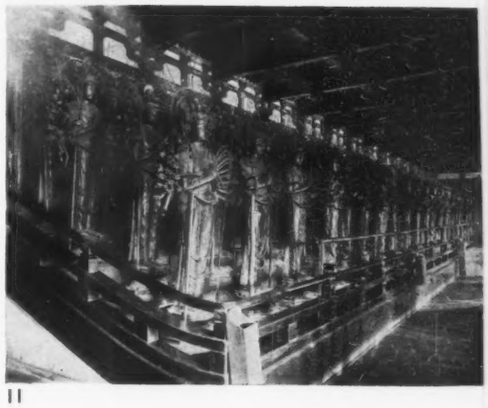
One of the main reasons why Repetition seems to be a particularly significant form of modern decoration is because the typically modern processes of standardization and mass production today almost force the architect to use it as a decorative form. The splice-jointed birchwood stools, 12, designed by Alvar Aalto are an example of a standard mass-produced element which has been used by the same architect to form regular rows of seating in the lecture room of the Viipuri Library in Finland, and in this way produces a typical modern interior, 13. A parallel case is the church in Basel, 14, designed by K. Egender and Ernst F. Burckhardt, where standard cinema seating is used in place of the usual solid pews.



10

THE HISTORICAL PRECEDENT

Examples of Repetition, as the necessary outcome of an attention to scale and the expression of order in building, are found throughout architectural history. The monastery church at Batalha, 10, for example, is almost entirely dependent on repetitive ornament for its decoration. The aim of the craftsman laboriously carving his repetitive patterns is today automatically realized by the machine, which itself provides new decorative motifs and characteristic surface patterns. Another aspect of Repetition is indicated in 11, the interior of the thirteenth-century Hondo of Rengeoin in Japan, where one thousand images of Kwannon are packed in rows on a stepped wooden dais. This "vain repetition" of the Deity for proselytizing purposes has a parallel in the repetition of industrial products in modern publicity displays.



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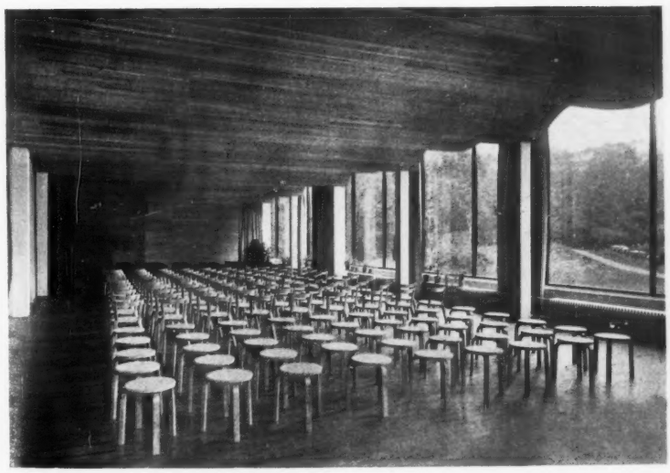

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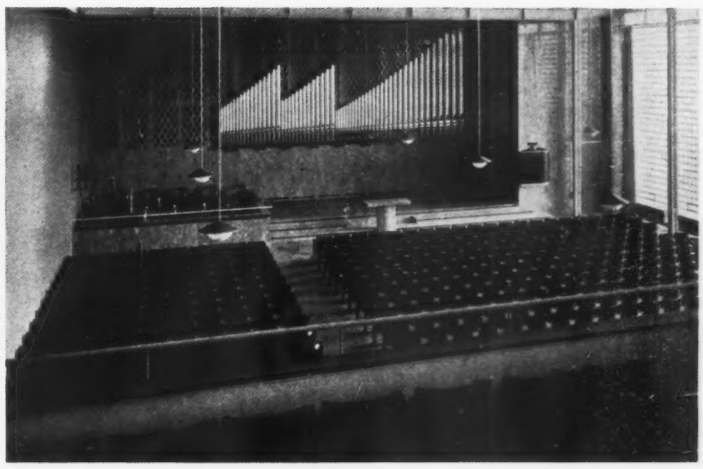


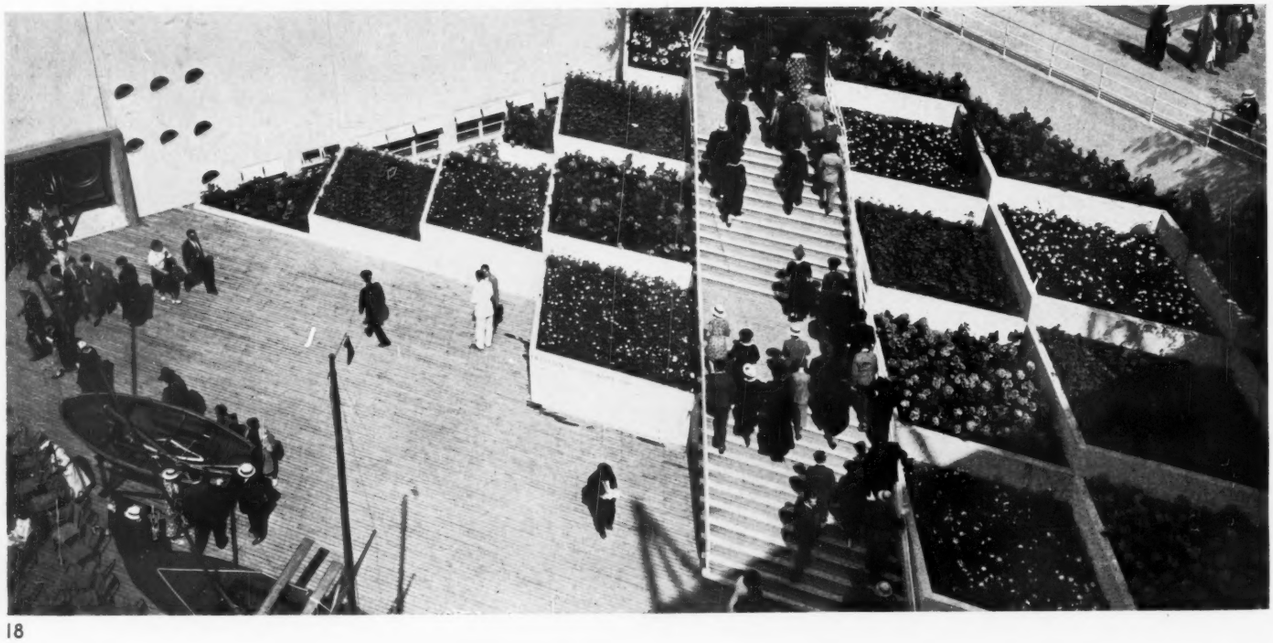
14

Different aspects of Repetition may be summarized under the accompanying headings—
The use of the characteristic patterns which result from machine production provides us with one aspect of Repetition as used in interior decoration. A second is the kind of Repetition which results from the regimentation of people and of the equipment they use. Finally, there is the use of Repetition in a frankly decorative way, itself largely suggested by the foregoing considerations, which has become characteristic of shop window and exhibition displays.

- 1. BUILDING TECHNIQUE
- 2. EQUIPMENT AND ORGANIZATION
- 3. DISPLAY

15

1. BUILDING TECHNIQUE



18

The machine has produced new building elements whose standardized forms lend themselves naturally to repetitive patterning. The familiar glass pavement lights which provided an expedient for lighting gloomy nineteenth century basements have been developed into the glass bricks and perforated concrete vaults of today.
The roof of the Viipuri Library in Finland, 15, designed by Alvar Aalto, is pierced with a series of 57 skylight prisms made of ground glass, with a thinner inside surface, which are spaced so that they shed an even light throughout the interior, 16. The diagonal wood struts which form a trellis for creepers in the Savoy Restaurant at Helsingfors, 17, also designed by Alvar Aalto, shows by contrast the use of Repetition in a traditional material. Its prototype is the garden trellis which is a common decorative motif in early nineteenth century architecture and which modern knowledge of plant cultivation makes it possible to use as a framework for living plants in the interior. Even that

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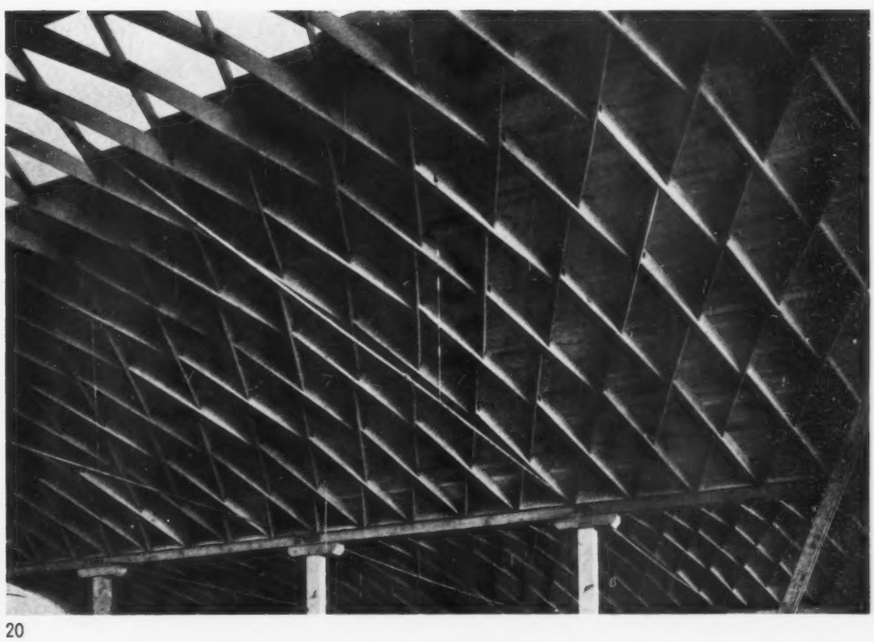
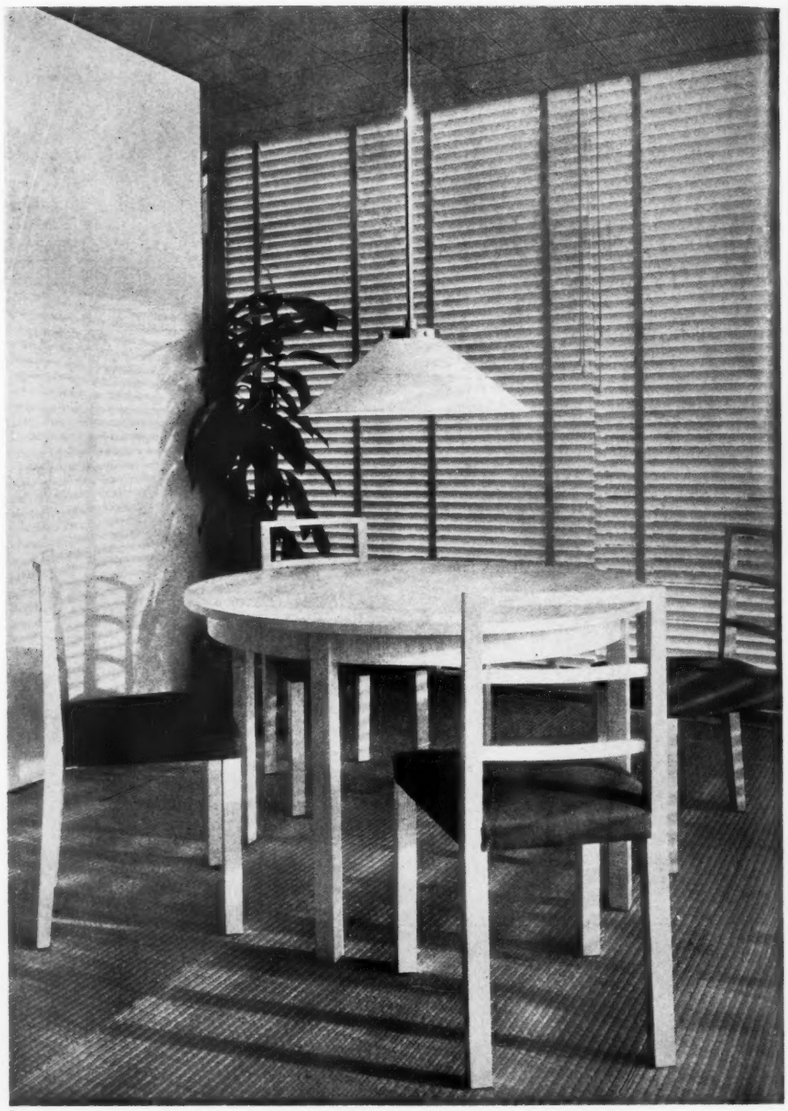
19



20

most unpromising of decorative materials, reinforced concrete, may suggest characteristic forms of patterning, as is shown in the boxed flower-beds, 18, designed by Oliver Hill as an introduction to the British Pavilion at the Paris Exhibition of 1937. In the case of many machine-made materials, processes such as atomising, sand or shot blasting, perforating and rolling provide an infinite variety of patterned surfaces which are essentially dependent on Repetition for their decorative effect. In this category of materials even the despised materials of corrugated iron and asbestos have real decorative possibilities if they are properly handled, as in the case of the corrugated asbestos wall in the dining-room of a house at Clifton, 19, designed by Marcel Breuer and F. R. S. Yorke. Similarly, new structural uses of traditional materials produce characteristic repetitive patterns; for example, the "Lamella" roof construction, 20, used in a church hall at Romford, designed by E. Meredith.



21

1. BUILDING TECHNIQUE

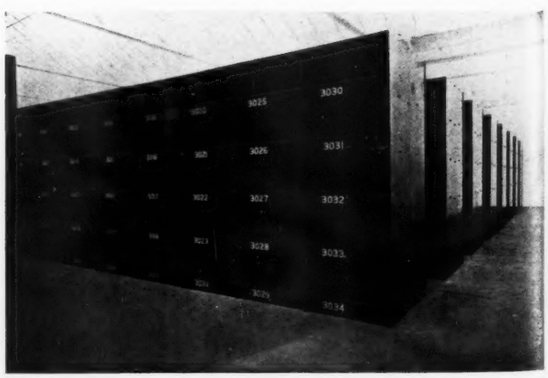
Textiles and similar materials provide, by their nature, a special category of repetitive pattern. The interior illustrated in 21, the dining-room of the Chrystal House near Chicago, designed by George Frederick Keck in association with Leyland Atwood, is one which derives its decorative quality very largely from the Chinese matting on the floor and also from the perforated ceiling material and the repeating slats of the Venetian blinds.

Another material which naturally produces a repeating pattern is the glass brick. It has been effectively used in this way in the living-room of the house in New York, 22, designed by Howe & Lescaze. 23, shows how that familiar building element, the rivet, can be made to assume great decorative importance in the interior. This example is from a bank in King Street, Manchester, designed by Sir Edwin Lutyens.

2. EQUIPMENT AND OR-

We have already seen how mass production technique and the consequent manufacture of standardized building elements provides one reason why Repetition has today become such a familiar decorative form. A second reason is the need for a strict regimentation of furnishing and equipment in certain types of interior. The ranges of lockers, 24, filing cabinets, 26, and storage racks, 25, with their series of stencilled numbers, provide illustrations of this, and all indicate possible sources of decoration for this type of interior.

24



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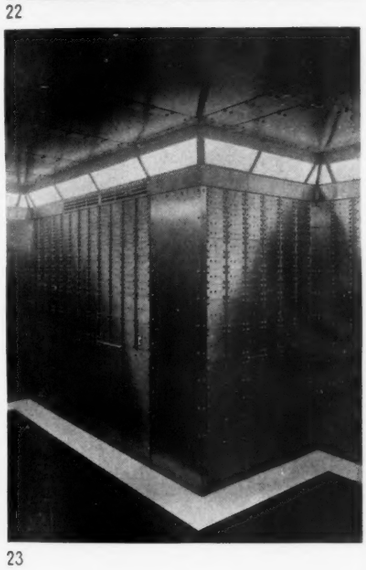
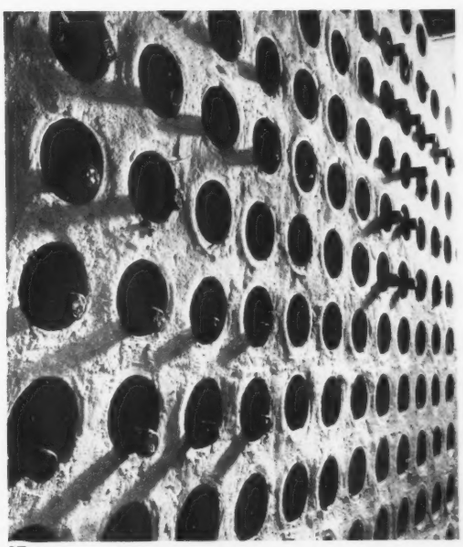


23

Examples of the way in which Repetition results from different types of organization are given in the illustrations below. 27, is a wine store in a house in Surrey, designed by E. Maxwell Fry. 28, shows the containers used for filing drawings in Troughton & Young's offices in Knightsbridge, London. The architect was A. B. Read. 29, are ranges of drawers in Messrs. Stunzi's silk showrooms in Market Place, London : Stanley Hall and Easton & Robertson, architects. 30, filing cabinets in the offices of "The Practitioner," Bentinck Street, London, designed by the same architects, and, 31, ranges of stainless steel safes in the London Safe Deposit, Lower Regent Street, J. J. Joass, architect.



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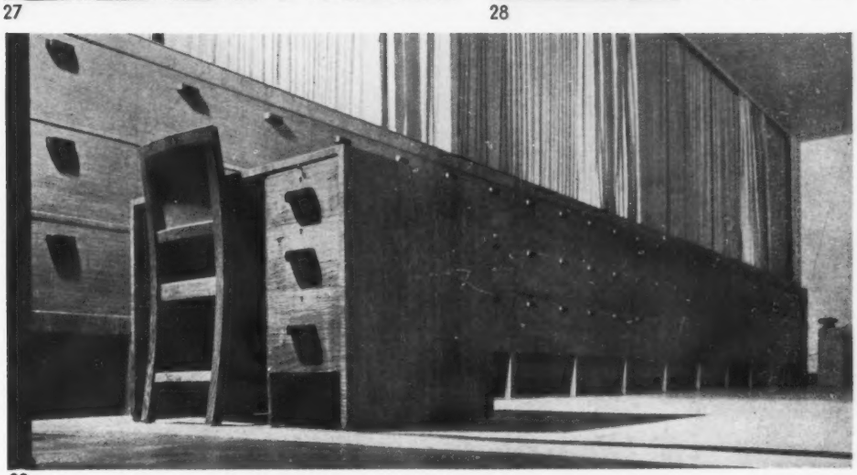

29

GANIZATION

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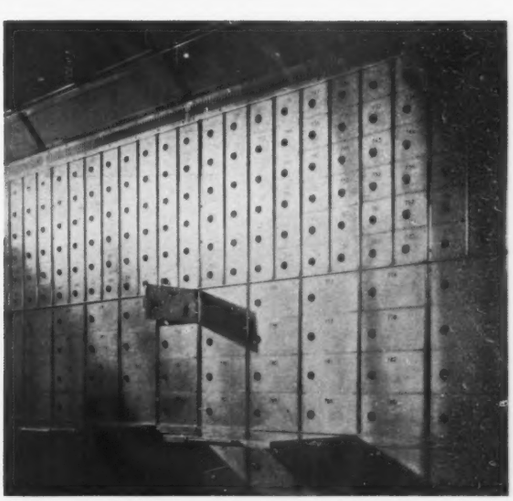

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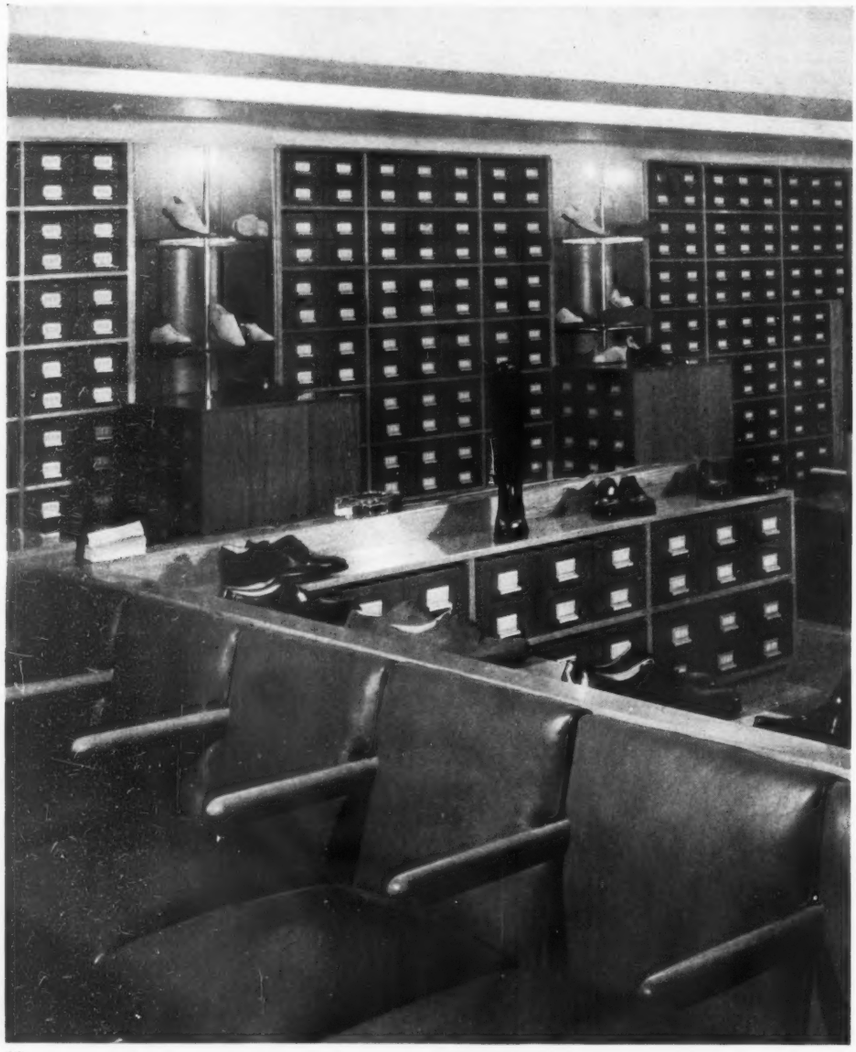

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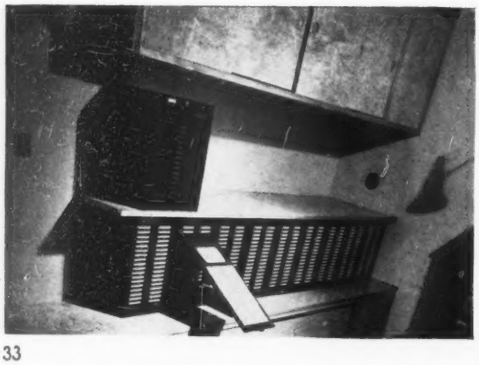

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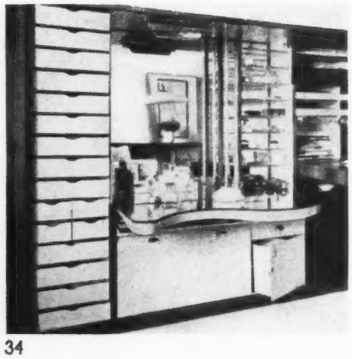


34

In the shoe department of Simpson's Store in Piccadilly, designed by Joseph Emberton, 32, the shoe boxes have been designed so that they produce a regular pattern in the interior. Similar to the repetition of labels on the shoe boxes are the filing tabs on the office equipment in, 33, which is another example from the offices of "The Practitioner," designed by Stanley Hall and Easton & Robertson. The bedroom wardrobe in a house in Vienna, 34, designed by Herrey S. Zwiegenthal, shows how special requirements such as clothes storage may introduce Repetition as a decorative form even into the domestic interior. 35–37 show other types of interior in which the organization of people and the equipment they use has contributed very largely to the decoration of the interior, 35, shows lunch counters in the Coco Tree Restaurant in Los Angeles, Richard J. Neutra and Gregory Ain, architects, and 36, the cafeteria lounge in the Pioneer Health Centre at Peckham, designed by Sir E. Owen Williams. A final example is the stacking of books in the library of the School of Mathematics in Rome, 37. The architect was Gio Ponti.

36

37

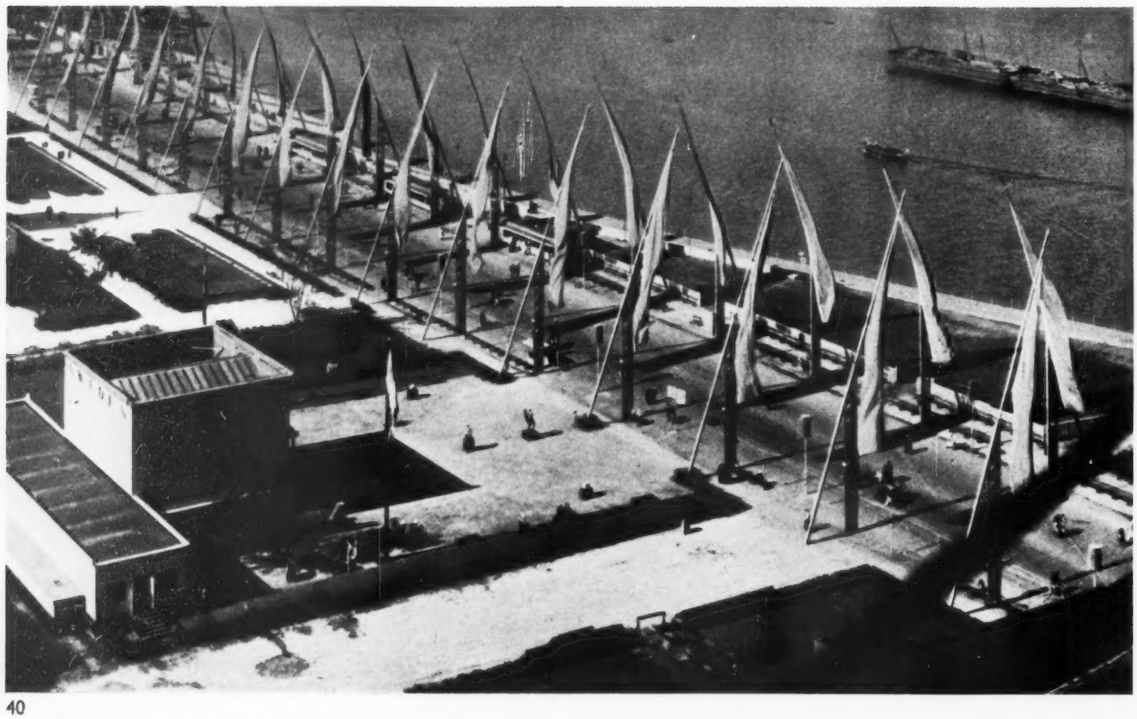
3. DISPLAY

Distinct from the associations of Repetition with modern methods of production is its deliberate use for decorative effect, as in the age-old practice of lining a processional way with masts or flags, 38. While this type of Repetition cannot claim to be a particularly modern form of decoration (the Egyptians incorporated it in their architecture when they built the avenues of Sphinxes leading to the Temple of Karnak) yet its effect is certainly increased by the use of standardized machine products in this way, so that in the arrangement of bottles of motor oil for display purposes, 39, the various aspects under which Repetition has been considered are all in a sense brought together to establish a typical modern decorative form.

38

39

REPETITION IN DECORATION



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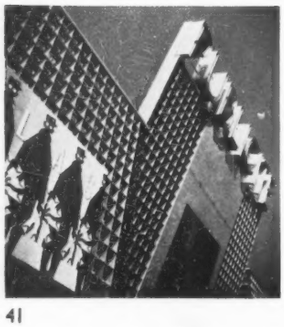


41

42

3. DISPLAY

Further examples of the use of Repetition for display purposes. 40, an avenue of flags at the Chicago Exhibition of 1933. 41, a "Publicity" display at the Paris 1937 Exhibition, and, 42, the entrance to the Polish pavilion in the same exhibition.

BULLETIN OF STANDARD DESIGNS

A, office desk, designed by Maurice A. Wimble, 5 ft. by 2 ft. 10 ins. by 2 ft. 6 ins. high. In Sapele mahogany and English oak (as illustration), Australian walnut and Canadian maple or Macassar ebony and sycamore. The drawer pulls are of satin-finished copper. The drawers conform to the standard sizes of the makers' filing systems. Prices, £35, £37 10s. and £35, respectively, for the alternative finishes given above. Shannon, Ltd.

B, portable room heater (combining circulation and warming of air). Height, 12 ins.; width, 17¾ ins.; depth, 13¼ ins. Controlled by two switches: the use of either reduces the heat by half, and the use of both turns off the heat entirely so that the heater serves only to circulate the air. Prices: fawn vitreous enamel finish, £7 15s.; chromium-plated finish, £8 15s. H.M.V. Gramophone Co., Ltd.

A

B

The Eternal City

Marius awoke early and passed curiously from room to room, noting for more careful inspection by and by the rolls of manuscripts. Even greater than his curiosity in gazing for the first time on this ancient possession, was his eagerness to look out upon Rome itself, as he pushed back curtain and shutter, and stepped forth in the fresh morning upon one of the many balconies, with an oft-repeated dream realized at last. He was certainly fortunate in the time of his coming to Rome. That old pagan world, of which Rome was the flower, had reached its perfection in the things of poetry and art—a perfection which indicated only too surely the eve of decline. As in some vast intellectual museum, all its manifold products were intact and in their places, and with custodians also still extant, duly qualified to appreciate and explain them. And at no period of history had the material Rome itself been better worth seeing—lying there not less consummate than that world of pagan intellect which it represented in every phase of its darkness and light. The various work of many ages fell here harmoniously together, as yet untouched save by time, adding the final grace of a rich softness to its complex expression. Much which spoke of ages earlier than Nero, the great re-builder, lingered on, antique, quaint, immeasurably venerable, like the relics of the medieval city in the Paris of Lewis the Fourteenth : the work of Nero's own time had come to have that sort of old-world and picturesque interest which the work of Lewis has for ourselves; while without stretching a parallel too far we might perhaps liken the architectural *finesses* of the archaic Hadrian to the more excellent products of our own Gothic revival. The temple of Antoninus and Faustina was still fresh in all the majesty of its closely arrayed columns of *cipollino ;* but, on the whole, little had been added under the late and present emperors, and during fifty years of public quiet, a sober brown and gray had grown apace on things. The gilding on the roof of many a temple had lost its garishness : cornice and capital of polished marble shone out with all the crisp freshness of real flowers, amid the already mouldering travertine and brickwork, though the birds had built freely among them. What Marius then saw was in many respects, after all deduction of difference, more like the modern Rome than the enumeration of particular losses might lead us to suppose; the Renaissance, in its most ambitious mood and with amplest resources, having resumed the ancient classical tradition there, with no break or obstruction, as it had happened, in any very considerable work of the middle age. Immediately before him, on the square, steep height, where the earliest little old Rome had huddled itself together, arose the palace of the Cæsars. Half-veiling the vast substruction of rough, brown stone—line upon line of successive ages of builders—the trim, old-fashioned garden walks, under their closely-woven walls of dark glossy foliage, test of long and careful cultivation, wound gradually, among choice trees, statues and fountains, distinct and sparkling in the full morning sunlight, to the richly tinted mass of pavilions and corridors above, centering in the lofty, white-marble dwelling-place of Apollo himself.

WALTER PATER

(Marius the Epicurean: *Macmillan*)

Christopher Wood

It is excellent news that a fully representative exhibition of the work of Christopher Wood is to be held, this month, at the New Burlington Galleries. Of all the artists who have emerged in England since the war, Wood will, one fancies, be regarded by posterity as one of the most important. It used once to be the fashion to refer to his promise and his tragic end in a way that indicated a belief that that promise was never fulfilled.

While his early death is to be deeply regretted, in a great deal of the work he left, including practically everything he painted during the last two years, there is no suggestion of promise but a splendid fulfilment. It is tempting to think that artists who die young are cut off before their artistic prime, but while a Titian may go on extending his mastery right up to the age of ninety there are plenty of examples to suggest that such figures as Bonnington, Beardsley and Wood might never have surpassed their finest achievements had their span of life extended to normal limits. This point is worth stressing as there is always a tendency among critics to neglect what they are given in favour of happy speculation on what is denied. In this case what we shall be given, if the exhibition proves to be as exhaustive as the preliminary notices suggest, is something so supremely good as to remove all cause for complaint.

Wood was almost unique among our younger painters in that while he availed himself of all that the modern movement abroad had to provide, he never lost his individuality or nationality. In none of his work can one detect that faint aroma of the *Rive Gauche* which vitiated the work of many of his contemporaries; but Wood always remains within the framework of the great English tradition of landscape painting. What is both strange and lamentable is that we have been given so few chances of seeing his work; after his death his paintings appear to have been

Crewe House, Curzon Street, London, showing the improvements made by the new owners, Messrs. Tilling. These are described in a note on this page.

Modern display technique: two details from the recent road safety exhibition organized by the Ministry of Transport, at Charing Cross Underground station. The exhibition was entitled "The Highway Code" and was designed by Hans Schleger.

R O A D S A F E T Y

cornered and stored away with the cunning and complete lack of public spirit that characterizes the operations of the Chicago Wheat Pool. Now at last we have the opportunity of assessing his position as a painter.

Crewe House

The photograph of Crewe House, which is reproduced on this page, provides the most powerful evidence of the fact that the commercialization of Mayfair is not necessarily a phenomenon to be deplored. When it was announced that Crewe House was to be disposed of by its owner, a wave of justifiable apprehension attacked those who still care for the architectural amenities of London. So many great houses had disappeared and been replaced by blocks of flats and offices; and even if some of these were of no great architectural merit, their substitutes were inevitably of infinitely less. It is therefore with the greatest pleasure that one draws attention to the remarkable fact that the state of Crewe House is, from the point of view of the public, even better now that it has been acquired by Messrs. Tilling than it was formerly.

Not only has the whole building been preserved, and not just the general character of the façade, as in the lamentable case of Lansdowne House, but the high wall which obstructed the view of the passer-by has been removed and a railing substituted. If one might venture one criticism in the face of such an admirable and enlightened effort, it is that the gates would look still better if given a coat of the same cream paint that has been applied to the house. But this is merely carping; Messrs. Tilling deserve the gratitude of all for providing so admirable an example of how the mansions of the nobility can be converted into temples of commerce without any detriment to the beauty and general character of the neighbourhood. One can only hope that it will prove an example that many will copy.

THE HIGHER ECLECTICISM

"*The building is a brilliant mingling of almost every known style in European architecture. The exterior of ironstone and Weldon stone is English Perpendicular Gothic. The first impression one gets on entering the church is almost overwhelming. The main*

ceiling has the unbroken band and pendants of the sixteenth century English vaults combined together. The octagonal columns of the nave in warm yellow ironstone, have the Greek 'entasis,' and the same fluting as the Parthenon, while the capitals and bases are of an original design.

"*A lofty rood screen has mouldings and acanthus scrolls on its traceries taken direct from ancient Greece, while in general design it is as much Italian as English. The dragons on the rood are borrowed from mediæval Greece, while the wrought iron screens are frankly Spanish in feeling.*

"*Photographs can only give a feeble impression of the gorgeous richness of the interior of this church whose brilliant gold and colour decoration is rendered still more vivid by contrast with the white walls, lit up by every ray of sunlight that pours in through the large windows which, even where filled with painted glass, do not exclude the light.*

"*The Jesus Chapel—the northmost of the five aisles—was built first, and is more severely Gothic in style and treatment of colour. The plan of the church consists of five aisles at the east end, and is more French than English.*"

PAX.

In a recent issue reference was made to the new lamp-posts in the Avenue Président Wilson, Paris. The above photograph shows these lamp-posts at night, and gives an admirable idea of how well suited they are to broad tree-lined thoroughfares. They should be compared with the old world galleon lamp-posts alongside the Mall

Troisième Empire

Whatever the future may bring forth, and despite purges, economic embargoes and other troubles, it seems as though the *Dritte Reich* will set its seal on and give its name to an architectural style as distinctive, as grandiose and as chilly as that of the Napoleonic *Empire*. In both cases the creator of the epoch took a personal interest in the development of the new style, though Napoleon lacked Herr Hitler's early architectural training. And, moreover, in both cases the furious denunciation with which the style of the preceding epoch was greeted, relied on a strong moral fervour rather than any æsthetic basis; the manner in which the new leaders of German art refer to *Kultur - Bolshevismus* is no more venomous and indignant than the terms in which David and the other prophets of neo-classicism were accustomed to refer to the works of Fragonard, Greuze and the last survivors of the eighteenth century tradition.

In the first *Deutsche Architektur und Kunsthandwerks-austellung*, recently opened at Munich, the whole scope and range of the coming style are fully displayed—albeit only in models. The chief impression that the visitor takes away, one gathers, and it is an impression that is reinforced by such buildings as have already been erected in the last five years, is one of size. While, as the critic in the "Spectator" remarks in a splendidly alliterative outburst, "Diese Mentalität von den Monumenten wirkt monoton und monomanisch," these vast empty façades are at least free from those endless swags of fruit and occasionally unexpected balconies with which any undue effect of size is so skilfully avoided in this country. And after all it is not for us to sneer at grandiose town-planning, who have never even considered a large-scale scheme of reconstruction since the authorities first created a black precedent by turning down Sir Christopher Wren after the Great Fire. But the fact that nowadays every dictator seems to be his own Haussman cannot, alas, be regarded as yet another example of the superior advantages of democracy.

THE MODERN NECROPOLIS

"*Thanks to British architects, many hundreds of 'Silent Cities of the Dead' have been built in different parts of the world. All are dignified, beautiful and restful and are admired by the foreign peoples in whose land they are.*

"*It therefore puzzles me sometimes why so much inferior work has been done in these* 20 *years for the dwellings of the living in this country which our dead*

loved and for which they gave their lives."—H.R.H. Duke of Gloucester at Gloucestershire Society Dinner.

Precedence

Any architects who are still a little uncertain as to their exact position in the social hierarchy have now no further excuse for continued ignorance.

Architects rank above musicians and just below "artists."

This interesting piece of information is derived from the list of signatories drawn from all the professions to an appeal to both sides in Spain to abandon civilian bombing that was recently handed to the Prime Minister. Architects, on this occasion represented by Sir Edwin Lutyens and Messrs. Chermayeff and Wells-Coates, occupy a sadly lowly place on the list, which is headed by the various religious leaders and works downwards through Members of Parliament, Lord Mayors, legal luminaries, bankers, doctors, the military, scientists and economists to the arts. Among their fellow artists architects come after poets, novelists and painters, but ahead of musicians, actors film producers, racing motorists, and, wonderful to relate, cricketers.

It is well known that M. Le Corbusier is, besides an architect, a distinguished abstract painter, but there have been few opportunities of seeing his paintings in any quantity. This opportunity has recently been given, however, by an exhaustive exhibition of his work organized at the *Kunsthaus* in Zurich to celebrate his fiftieth birthday. Above is the cover of the catalogue of the exhibition, designed by M. Le Corbusier himself. The catalogue contained an important article contributed by Dr. Siegfried Giedion.

CORRESPONDENCE

To the Editor,
The Architectural Review.

Sir,

In the review of *Timber Houses*, the book which I have recently edited, which appeared in your February issue, some interesting points were made by the reviewer about the desirability of including traditional types of houses. He picked out, and praised especially, designs which were in the modern technique; and a number of other modern timber houses, notably those by Walter Gropius and Maxwell Fry, Nuttall Smith and David Booth, and the house at Milton, Massachusetts.

Nobody will deny the charm and clean, simple beauty of these modern houses; and nobody would dream of casting any doubt upon their structural integrity: the architects responsible for them make such a doubt impossible. But, I do most humbly suggest that there is a case for using traditional methods of structure with timber houses, and there are a number of different methods of surface treatment which, although traditional, are extremely sound. Your reviewer took occasion to object to the use of logs in timber building, and he stigmatized a house in which shingles were hung on the surface, as "obviously associated with stone structure." I think these facts about surface finish in timber houses should be put before your readers: There are nearly twenty weatherboarding finishes. There are various sizes and shapes of shingles. There is log siding.

All these finishes represent traditional methods of handling timber. All of them represent a proper use of wood as a material; they are not imitating any other material.

I am forced to the conclusion that some of the comments about traditional timber houses were inspired by the fact that pitched roofs were shown. Now a pitched roof represents good timber construction; in fact, it is probably the best form of construction for a timber house, because it braces the whole framework, and gives the best insulation, and is particularly suitable for the climate of England and Scotland. I am not proposing to join in the weary flat roof versus pitched roof controversy, which obscures so many problems of building, but I would make a plea for an impartial consideration of a timber house that has a pitched roof, because, nine times out of ten, that is by far the best structural solution.

Apart from his strictures on the illustrations of timber houses which were included in the book, your reviewer had occasion to make some statements about the work of the Timber Development Association which were inaccurate. He suggested, quite rightly, that technical information should be pooled for the benefit of architects, and that existing experience of timber structure should be collected; he stated that this work had not been undertaken by the Association, but it has. For a year past, a special Housing Officer, an expert in timber construction, has been available for advisory work; and the Enquiry Bureau of the Association at Equitable House, 47, King William Street, London, E.C.4 (telephone number: Mansion House 3131) answers a considerable volume of queries every week, regarding the erection, finish and structural nature of timber houses. Incidentally, these questions get the right answers.

It should be pointed out that the function of the Timber Development Association is not to educate the public regarding a particular technique of architectural design: it is to make available information regarding all methods of building in timber. What would a modern architect do if a client insisted on a house being built in a traditional style, whether it was in timber, brick, or stone? Supposing he failed to convert him to allowing the house to be built in the modern manner, would this mean that the architect and his client would part company? May I be forgiven for asking that question, as it is not unconnected with the criticisms which appeared about my book on Timber Houses and the work of the Timber Development Association.

Yours, etc.,
E. H. B. Boulton,
Technical Director, The Timber Development Association.

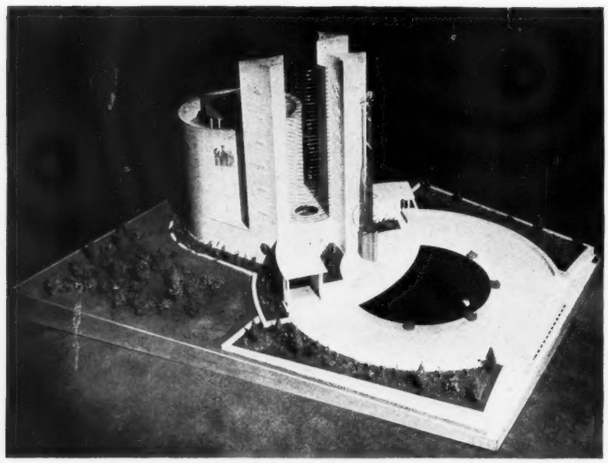
Rug designed by John Hill

In the caption to the illustration of Mr. Kenneth Clark's sitting room, reproduced on page 47 of the January issue, the designer of the rug was given in error as Mrs. Marion Dorn. The rug, as well as the curtains, was actually designed by Mr. John Hill.

Correction

The photograph of a Norwegian timber-built farmhouse, reproduced on page 58 of the February issue (but stated in error to be Swedish) was taken by Mr. E. R. Jarrett, not by Mr. Westwood.

Trade News and Reviews



Model of the pavilion for Imperial Chemical Industries now being erected at the Empire Exhibition, Glasgow. The architect is Basil Spence.

By BRIAN GRANT

The Empire Exhibition, Glasgow

"Scotland is preparing for a great Empire Exhibition. It is a really big thing. It will rival Wembley and Paris in size and excel them in beauty. In a beautiful park of 175 acres on the outskirts of Glasgow nearly 200 pavilions and kiosks are being erected. £10,000,000 will have been spent on it by the time the King opens it on May 3."

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The above I quote from an article that appeared in an English newspaper a few Sundays ago. The writer also said: "Now the curious thing is that although Scotland thinks of little else but the coming Exhibition, although it will include so many new things never seen before, although it will play a most important part in Empire Trade, the south has barely heard of it."

• • •

This, indeed, is too true. What do we southerners know of the Exhibition? What have we been told? We had heard rumours that something was afoot in Glasgow but only an Act of God brought us assurance that a projected Exhibition was in fact already under construction. We read in the papers a little while back that a 70-mile-an-hour gale had inflicted considerable damage upon the partially constructed Canadian Pavilion.

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One thing we do know—and the knowledge is encouraging. The Exhibition administrative committee have engaged the services of an exceedingly competent architect. Thomas S. Tait, equally well known on both sides of the Tweed, has been entrusted with the architectural development of the site and the design of the principal pavilions. There is to be a Palace of Industry and a Palace of Engineering. Standing as a landmark and symbol to the Exhibition a 300 feet observation tower is being erected on a hill which is itself 170 feet high. As a result of the recent tempest we learn that Canada is to have a Pavilion, from which communication we may (may we not) assume that Australia, New Zealand, South Africa, &c., are to be suitably represented.

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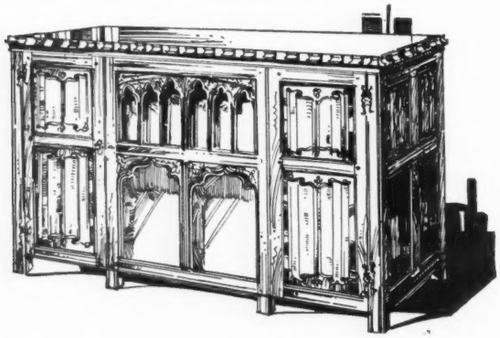
The Exhibition is to be opened by the King on May 3rd, 1938; the opening day, then, is a short two months off. In the meantime do let us tell the world, or at least our own country and Empire, just what sort of an exhibition it is going to be. I shall welcome news items from all those participating, architects, exhibitors, engineers and contractors.

• • •

Radio fashions

Music and programmes to suit every taste: high-brow, medium-brow and low-brow, all have to be catered for by the entertainment pundits at Broadcasting House. It seems, too, that the lot of the radio equipment manufacturer is quite as harassing and exacting. I have in my possession a catalogue of "exclusive" radio cabinet designs (modern & antique) issued by the makers of Halford radio-sets. Heigh-ho for the Olde Worlde! Can it be true that 20th century persons in their 20th century costumes (even though they may live in 16th century mansions) insist that their radio entertainment be served out to them through the medium of imitation Olde-Worlde armoires and tall-boys? It would appear so, since nearly one half of the illustrations to the catalogue depict "exclusive" period designs, and it seems unreasonable to suppose that Messrs. Halford produce these for their own peculiar delectation. And so it may be just possible that there are in the ranks of ARCHITECTURAL REVIEW readers those who "every day and in every way" hanker after "Ye Olde," and for their especial benefit the design on this page is reproduced; on the next page is an illustration of the Halford "Bookcase Model Automatic Radiogram."



One of the "Period" radio cabinets illustrated in Messrs. Halford's catalogue.

Bookcase and radiogram designed by John H. Butler and built by "Practical Furniture" for Halford Radio.

The "Amplilux" Prismatic Ring
New lighting efficiency

Here is something that I particularly commend for your attention and further investigation—a new lighting device that appears, quite definitely, to do all that is claimed for it. The "Amplilux" system of lighting is based on the principle of "total internal reflection," its main purpose being to control the light rays from any form of lighting unit so that they shall be directed with a maximum of efficiency and even diffusion over the area or working plane required to be illuminated. This control of the light rays is effected by the "Amplilux" prismatic glass collar or ring designed to encircle an ordinary electric lamp (see, 2, on next page). The ring is held in position round the lamp by means of an adjustable wire bracket; the bracket and ring must be fixed to the lamp so that the top edge of the prismatic ring is in line with the filament of the lamp. Overleaf I have sketched a section through the prismatic ring showing the paths of the light rays from the lamp filament; the angles of the ring are so calculated that all the rays which strike the vertical face pass through the glass to the outer inclined surface and, striking the latter at an angle greater than the angle of total internal reflection, are reflected downward. It will be seen by reference to the figures that light rays from the lamp which would normally travel horizontally from the filament, thus to a large extent being wasted, are reflected downward and outward so that illumination is concentrated on the working plane.

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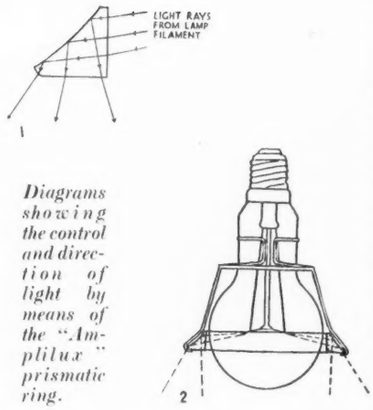
In actual practice the "Amplilux" prismatic ring gives quite remarkable results. I was present last month at a demonstration and though, as is my wont, I looked hard for any possible "snags," I came

away much impressed. Here are some facts and figures noted during the demonstration. The prismatic ring attached to a bare lamp increases the vertical illumination by nearly 200 per cent. In conical shades made of opal glass approximately 100 per cent. increase is obtained and in vitreous enamelled reflectors, such as are largely used in factories and workshops, an increase of 60 per cent. is obtained with new reflectors and much greater increases when the efficiency of the reflector surface has been reduced through age or other reasons. Thus the prismatic ring can be used either as a means of obtaining more effective light from a lamp or to obtain the same foot candle reading on the working plane from a lamp of smaller wattage—hence economy in current consumption and a saving on lamp costs. The "Amplilux" ring can be fitted to any ordinary electric light source and can be incorporated with advantage in many standard types of electric lighting fittings: it is made in different sizes for lamps of various wattage from 25 w. to 500 w., the price for the ring, complete with fixing bracket, ranging from 5/6 to 15/–, according to size required; specified list reductions operate for large quantity orders. In addition to the manufacture of the prismatic ring for use with existing fittings, the company have also produced a range of specially designed "Amplilux" fittings for industrial, commercial and decorative lighting. All these fittings incorporate the prismatic ring and have been designed primarily as efficient and economical lighting units. The Amplilux Lighting & Illumination Company, Ltd., have their London office, showrooms and laboratory at 12 Grosvenor Gardens, S.W.1. To all interested in lighting I recommend a visit, even if only out of curiosity. You will be interested and, I think, impressed.



Diagrams showing the control and direction of light by means of the "Amplilux" prismatic ring.

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The gentle art of cleanliness

Shanks' general catalogue of sanitary fittings, appliances and accessories is now available. It consists of 377 well-printed and excellently illustrated pages, sectionized and indexed in a thoroughly practical manner. It has been bound in loose section form so that as and when revised pages or sections are issued by the manufacturers they may easily be inserted in place of the obsolete data. In addition to general equipment and fittings for bathrooms and lavatories, there are two special sections, one dealing with public sanitary appliances and the other with Shanks' special equipment for hospitals, operating theatres, dental surgeries and the like. It provides a most comprehensive range of up-to-date sanitary appliances and equipment for all purposes, wastes no space upon superfluous advertising "chatter" and is careful to give all size and specification details necessary for the architect.

Application for copies should be addressed to Messrs. Shanks & Co., Ltd., Tubal Works, Barrhead, Scotland, or to their London office at 81 New Bond Street, W.1.

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"Brivelvo" seating fabrics

The Pile Fabric Manufacturing Company (Industry Works, Bradford), manufacturers of "Brivelvo" upholstery fabrics, ask me to announce that they are now making increased quantities of their "Twinweave" seating fabric and that they will be very pleased to send their new pattern range to architects and interior decorators. "Twinweave" is made in the "Tiedloop" quality, with a fine weave construction and a small loop; exceptionally durable, it is a very pleasant

and soft material to handle and is made in a wide range of popular colours. It is being used extensively for cinema and theatre seating, a fact that speaks well for its hard-wearing qualities.

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An Exhibition of Art Thermolux Glass

James Clark & Son, in collaboration with the Thermolux Glass Co. Ltd., are organizing an Exhibition of Art Thermolux Glass Panels to be held at the former company's showrooms, Glasshill Street, Blackfriars, S.E.1.

It is not at the moment possible to announce the actual date of the Exhibition, but plans are now well advanced and a special pre-view for architects will probably be arranged for an early date in May.

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Evos Limited

Mr. Patrick Roger, well known to a large circle of our architect readers, has now joined Evos, Ltd., as their London representative.

Evos, of course, make doors. I believe the " Evos " door was the first branded door to be marketed in this country; it was then an American product. Evos, Ltd., today is an entirely British concern . . . . they are making doors of every size and type for every purpose.

The Buildings Illustrated

I.C.I. Research Laboratories, Manchester.

Architect : **Serge Chermayeff.**

Chief Engineer, Dyestuffs Group : **J. McKillop.**

Structural Engineers : **Samuely and Hamann.**

Quantity Surveyor : **C. Sweett.**

The general contractors were Russell Building and Contracting Co. Ltd. Among the sub-contractors and craftsmen were the following: Limmer and Trinidad Lake Asphalt Co. Ltd. (asphalt), Carter and Co. Ltd. (quarry tile paving and vitreous tiling to fume cupboards), Fram Reinforced Concrete Co. Ltd. (cork tile pavings), Venesta Ltd. (Plymax desk screens, w.c. partitions), Williams and Williams Ltd. (metal windows), Marryat and Scott, Ltd. (goods passenger lift installation), Ronco Ltd. (steel cloaks lockers), Samual Platt Ltd. (laboratory stirring gear, shafting and meters) Malcolm and Allan Ltd. (general electrical installation), Troughton and Young Ltd. (electric light fittings,) Herbert Terry Ltd. (electric light fittings), Gent and Co. Ltd. (electric clocks), Wardle Engineering Co. Ltd. (electric radiators), Hall and Kay Ltd. (air conditioning, heating and ventilation), J. G. Wagstaff Ltd. (hot water supply), J. A. McCrea & Sons Ltd. (plumbing : including water, gas, vacuum, compressed air and steam services to laboratories: (glazing), Morrison, Ingram and Co. Ltd. (sanitary fittings), Baird and Tatlock Ltd. (laboratory bench and fume cupboard fittings), Turners Asbestos Cement Co. Ltd. (asbestos heavy and light gas extract ducts), Lloyd's Sawmills (general joinery), Tinker and Young (general joinery), Carter and Co. Ltd. (terrazzo flooring and staircases), Pel Ltd. (steel chairs), Tan-Sad Chair Co. (steel chairs), J. Avery and Co. (light-proof dark room blinds), Eric Munday (lettering), Accrington Brick and Tile Co. Ltd. (brick supplies), Nobel Chemical Finishes Ltd. (paint supplies), Fredk. Jackson and Co. Ltd. (electric ovens), Greenwood's Ventilating Co. Ltd. (ventilating grilles), Lloyd Boards Ltd. (wallboards), Honeywill and Stein Ltd. (roof insulations; Heraklith slab), James Clark and Son Ltd. (mirrors), Engineering Specialists Ltd. (special steam valves,) G. A. Marchant Ltd. (special water valves), Imperial Chemical Industries Ltd. (" Pioneer " plaster), Robert Adams Ltd. (fume cupboard sliding sash springs, " Pulman " balances), W. J. Roberts and Son Ltd. (plastering and painting).

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Dolphin Square, Westminster.

Architects : **Messrs. Gordon Jeeves.**

The general contractors were Richard Costain Ltd. Among the sub-contractors and craftsmen were the following: United Strip and Bar Mill (reinforcing

steel), Girlings' Ferro-Concrete Co. Ltd. stonework), D. Anderson and Son Ltd., (" Thermotile "), General Asphalt Co. Ltd. (asphalt), MacAndrews & Forbes Ltd. (" Maf " Waterproofer for swimming pool and reservoirs), E. J. Elgood Ltd. (partition slabs), Express Lift Co. Ltd. (lifts), Mather and Platt Ltd. (sprinkler installation), K.S.B. Manfg. Co. Ltd. (under-water pumps for artesian wells), Turn-Over Filter Co. Ltd. (swimming pool treatment plant), R. Richards and Co. Ltd. (artesian wells), Crittall Mfg. Co. Ltd. (windows and screens), G. N. Haden and Sons Ltd. (hot water installation), Bull Motors Ltd. (Bull silent motors), Kay & Co. Ltd. (" Kontite " fittings), Drake and Gorcham Ltd. (electrical installation), Tubelight Sales Ltd. (" Barlux " tube lamps), Fredk. Braby and Co. Ltd. (copper roof for loggia), Haskins (grilles), King's Decorators Ltd. (fronts to motor showroom, specialized joinery, painting and decorating), Haywards Ltd. (glazed lean-to), Diespaker and Co. Ltd. (terrazzo work in sports centre, tiling in swimming pool), Chas. Walker and Co. (wall tiling), British Vitrolite Co. Ltd. (glass wall tiling), Ronco Ltd. (lockers), Benham and Sons Ltd. (kitchen equipment), Peerless Kitchen Cabinets Ltd. (cabinets), Rippers Ltd. (joinery), MacAndrews and Forbes Ltd. (hardwood joinery for sports centre and flush doors), Mellows and Co. Ltd. (window and door casements in restaurant), Cork Insulation Co. Ltd. (" Eldorado " cork tile flooring), J. White and Sons (composition flooring to motor showrooms), Gradidge Construction Co. Ltd. (squash racket courts), Maple and Co. Ltd. (carpets, tables and chairs), Morris Singer Co. Ltd. (casting model of burnished brass Dolphin for swimming pool), J. W. Gray and Son Ltd. (lightning conductor).

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Norris Green Library, Liverpool.

Architect : L. H. Keay.

The general contractors were Tysons (Contractors) Ltd. Among the sub-contractors and craftsmen were the following : Waring and Gillow (1932) Ltd. (fittings and furniture contractors), Buckley Junction Brick Co. (facing bricks), R. W. Brooke and Co. Ltd. (oak and pine block floors), Richard Crittall and Co. Ltd. (invisible ceiling panel warming system), Crittall Mnfg. Co. Ltd. (metal windows), General Electric Co. Ltd. (electrical fittings), T. Jones and Co. (electrical installation), Lenscrete Ltd. (roof lights), G. Lowe and Sons Ltd. (iron railings, gates and spiral staircase), Quiggin Bros. Ltd. (door furniture and lettering over portico), Troughton and Young Ltd. (electrical fittings), Trussed Concrete Steel Co. Ltd. (reinforced concrete work), John Stubbs and Sons (marble, tiles and terrazzo work), Synchromatic Time Recording Co. Ltd. (electric clocks), Williams and Watson Ltd. (bronze display windows).

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Extensions and alterations to Huddersfield Industrial Society's central premises.

Architect : W. A. Johnson. J. W. Cropper. Assistant.

The general contractors were Co-operative Wholesale Society Ltd. Among the sub-contractors and craftsmen were the following : Trussed Concrete Steel Co. Ltd. (reinforced concrete, floors), Grip Steel Bar Co. Ltd. (reinforced concrete, floors), Elliott's Bricks Ltd. (bricks), Joe Shaw and Sons (stone), Empire Stone Co. Ltd. (artificial stone), James E. Norris and Co. Ltd. (structural steel), Vulcanite Ltd. (roofing felt), Pilkington Bros. Ltd. (glass), W. H. Haywood and Co. Ltd. (patent glazing), T. K. Yeates and Co. (woodblock flooring), Super Floors Ltd. (patent flooring, lintile and linoleum), Richard Crittall and Co. Ltd. (central heating, calorifier), General Electric Co. Ltd. (electric light fixtures), W. H. Haywood and Co. Ltd. (ventilation), Doulton and Co. Ltd. (sanitary fittings), Super Floors Ltd. (stair treads), W. H. Leggott Ltd. (door furniture), Crittall Mnfg. Co. Ltd. (casements; window furniture), Haskins (rolling shutters; sunblinds), Mather and Platt Ltd. (rolling shutters), Haywards Ltd. (iron staircases), Van Kannel Revolving Door Co. Ltd. (revolv-

ing doors), L. Stead and Sons (decorative plaster), Birmingham Guild Ltd. (metalwork), George Wragge Ltd. (metalwork), J. and H. Patteson Ltd. (marble), W. Fisher and Sons (tiling), Haywards Ltd. (pavement lights) Etchells Congdon and Muir, Ltd. (lifts), Gent and Co. (electric clocks), Mather and Platt Ltd. (sprinkler installation), Lamson Engineering Co. Ltd. (cash carrier system and vacuum cleaning installation).

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Kent and Canterbury Hospital.

Architect : **Cecil Burns.**

General contractors were Rice and Son Ltd. Among the sub-contractors and craftsmen were the following : Trussed Concrete Steel Co. Ltd. (reinforced concrete), B. French Ltd. (electrical installation), Tice and Co. Ltd. (heating installation), Matthew Hall and Co. Ltd. (plumbing), Permanite Ltd. (Permatile roofing and asphalt), Crittall Mnfg. Co. Ltd. (fold and slide doors and windows), James Gibbons Ltd. (all other windows, and lantern lights, special bed screens, instrument and poison cupboards, door furniture, etc.), F. McNeill and Co. Ltd. (Insulerete partition blocks), Henry Hartley and Co. Ltd. (Glitterecrete walls and skirtings), Gypsum Mines Ltd. (sirapite plaster), Conway and Co. and Matthews, (terrazzo and floor and cill tiling), Henry Hope and Sons Ltd. (steel door frames, partitions and hatches), Rippers Ltd. (linoleum and steel faced doors), Runnymede Rubber Co. Ltd. (rubber flooring), Cork Insulation Co. Ltd. (Eldorado Cork flooring), Hadfields Ltd. (paint and distemper), Manlove Alliott and Co. Ltd. (sterilizing apparatus), Davey Paxman and Co. Ltd. (steam boilers), Falkirk Iron Co. Ltd. (kitchen equipment), J. and E. Hall Ltd. (refrigeration), Joseph Avery and Co. Ltd. (dark blinds), Lenscrete Ltd. (roof lights), Waygood-Otis Ltd. (lifts), Shanks and Co. Ltd. (sanitary fittings), Sumerling and Co. Ltd. (bed-pan washers and warming cupboards), Synchronome Co. Ltd. (electric clocks), Haywards Ltd. (balustrades, cat ladders, gratings, etc.), Reginald Bell Ltd. (decorative glass), Modern Surfaces Ltd. (Brizocrete finish), Griffin and Tatlock Ltd. (dispensary, clinical room and pathological laboratory equipment), Howard Bros. (wood block flooring), General Electric Co. Ltd. (broadcast call system), James Clark and Son Ltd. (glass and glazing), Weekes Ltd. (furniture), Finmar Ltd. (furniture), Berry and Co. (bedside lockers), Silverdale Mnfg. Co. Ltd. (ward screens), Atlas Stone Co. Ltd. (paving slabs), Potter Rax Gate Co. Ltd. (shutter gates), Meldrums Ltd. (destructor), General Fire Appliance Co. (fire extinguishers), Roneo Ltd. (steel filing cabinets), Matthews and Yates Ltd. (ventilating fans), Ferranti Ltd. (meters), Holophane Ltd. (special bedside fittings), Simplex Electric Co. Ltd. (switch fuses and distribution boards), British Thomson Houston Co. Ltd. (main board), Automatic Telephone and Electric Co. Ltd. (telephones), Westinghouse Brake and Signal Co. Ltd. (rectifier), Technical Lights and Equipment Ltd. (operating fittings), J. H. Tucker and Co. Ltd. (switches), M.K. Electric Ltd. (switch sockets), Chloride Elec. Storage Co. Ltd. (secondary lighting battery), Walsall Conduits Ltd. (sparkless switches and switch sockets), Berrys Electric Ltd. (fires), Gent and Co. Ltd. (bell indicators), Hartley and Sugden Ltd. (calorifiers), Ideal Boilers and Radiators Ltd. (radiators), Stewarts and Lloyds Ltd. (steam tubes and fittings), Crane Ltd. (cast fittings), Le Bas Tube Co. Ltd. (malleable fittings), Yorkshire Copper Works Ltd. (copper tubes), Newalls Insulation Co. Ltd. (insulation).

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Jane Seymour Beauty Shop, Canterbury.

Architect : **Edric Neel.**

The general contractors were George Browning. Among the sub-contractors and craftsmen were the following : James Clark and Son Ltd. (glass), George Stephenson and Co. Ltd. (cork flooring), Joseph Sankey and Sons Ltd. (radiators), Troughton and Young Ltd. (electric light fixtures), James Gibbons Ltd. (door and window furniture), George Twyman and Sons (textiles), D. Burkle and Son Ltd. (furniture).