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THE ARCHITECTURAL REVIEW

Volume 113 Number 674 February 1953



This month's cover shows the model for the screen of sculptured figures which Henry Moore has designed for the Time-Life Building in Bond Street, London (to be described in the next issue). The screen is intended to give privacy to a small terrace at first floor level, while, being pierced, it will permit an outward view on to the animated bustle of Bond Street. With characteristic unpredictability Henry Moore has responded to this unusual commission with forms which have not appeared in his work before but are particularly apt to their situation—machine shapes, related, one suspects, to those of instruments of communication.

72 Frontispiece

73 Casa del Girasole by Reyner Banham

The quarrel which divides Italian contemporary architecture centres around the theories of Rationalism, on one side, and of the Stilo Organico, on the other. By the first are meant, more or less, the normal aesthetic and moral theories of the Modern Movement; by the latter a more eclectic view, concerned with questions of style, whose exact tenets have hardly reached formal expression yet, but which can be seen in much recent building around Rome. Mr. Banham, to demonstrate the style in action, takes the Casa del Girasole, by Luigi Moretti, and examines the characteristics which make this building a constituent monument of the style, shows how it depends on different moral and social assumptions from the work of the rationalists, and how this accounts for the rather disturbing qualities which the building undoubtedly possesses.

79 Technical College at Hatfield Architects: Easton and Robertson

J. M. Richards
Nikolaus Pevsner
Editors
Ian McCallum
H. de C. Hastings

Assistant

Editors: production, G. Bensusan.
art, Gordon Cullen. research, S. Lang.
Editorial Secretary. Whitehall 0611-19

89 **Bristol-Troyes-Gloucester** by Nikolaus Pevsner The invention of Perpendicular is one of the great mysteries of English architectural history and has exercised the ingenuity of many distinguished students of Gothic. Because the new style contained London elements when it first appeared at Gloucester, and does not seem a logical development of what had gone before in the West, it has often been claimed that works for St. Paul's and the Court must have been the original incubators of the style. Nevertheless, the brilliant and anomalous vaults and traceries at Bristol, in hand soon after 1300, cannot be ignored, and Dr. Pevsner, holding Bristol to be a vital link in the development of Perpendicular, proposes some sources for Bristol's anomalies. He separates those features of the manner which refer back to English sources from those, like the interlacing ogees of the Cathedral sedilia, which cannot claim such an ancestry. If these were not invented in Bristol, he claims, the most probable source seems to be St. Urbain at Troyes—then an extremely important foundation; with the earliest surviving ogee arch, several stylistic connections with England, an attribution to one Johannes Anglicus, and a trick of balancing a mullion on a gable which has immediate connections with the curious bracer arches, and their spatial implications, which appear at Bristol and repeat at Gloucester. A Bristol mason from this tradition, and armed with a knowledge of London practice, is a more likely candidate for designer, he feels, than a court mason aping Western usages.

Two Showrooms in Manchester:

99 **1 Showrooms for the Cotton Board** Robert and Roger Nicholson: *Designers*

102 **2 Showrooms for a Textile Manufacturer** Gordon and Ursula Bowyer: *Architects*

105 **Trim** by Kenneth Browne Close attention to detail is essential in urban landscapes, for small features left to chance or last minute improvisation can ruin the effect of any scheme. This is particularly true of edges where surfaces, different in plane or texture, come together. Mr. Browne concentrates attention on the management of these boundaries, emphasising that they must be drawn with simplicity and unassuming functional correctness.

115 Top Dressing by H. McG. Dunnett

The neglect of the art of the floor is due partly to the neutral dignity of hardwood coverings, and partly to the tradition of bad design in carpets and linoleum. Yet, in non-industrial surfacing materials, great advances have been made, and great opportunities exist for the designer who is prepared to seize them, for, in spite of the enormous variety of coverings which now exist, patterning still follows the precepts laid down in the era of marble and stone. Mr. Dunnett surveys the whole range of flooring materials from the traditional to the technological, examines their functional and aesthetic possibilities, and evaluates the economic factors involved.

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FIVE SHILLINGS





The Safat (or town centre) in the replanned city of Kuwait, on the Persian Gulf, an urban nucleus with a campanile, a cloister for shade and quiet, and a tank-tower for water—vital necessities in that climate. Gordon Cullen's impression of this project, designed by Farmer and Dark for His Highness, Sheik Sir Abdulla al Salim al Subah, KCMG, CIE, the Ruler of Kuwait, is taken from under the canopy of the coffee-houses which are an essential part of the life of such a centre, looking up the Naif Avenue, whose planning is discussed on p. 126.

CRITICISM

Reyner Banham

CASA DEL GIRASOLE

RATIONALISM AND ECLECTICISM IN ITALIAN ARCHITECTURE

In spite of official denials, the division of contemporary Italian architecture into two camps is real and visible. The grave masters of Rationalism regard the Roman practitioners of the Organic style with suspicion, since the relative indifference of the southern school to radical planning solutions leaves them in a morally insecure position within the Modern Movement. Nevertheless, the differences between the social structure of the industrial north, on the one hand, and of Rome on the other, are very considerable, and go some way to explain and justify the Organic position. From this side of the Alps the differences at issue between the Rationalist and Organic schools seem far less important and are largely obscured by characteristic Italian features which are common to both schools, and have been called Eclectic. The availability of fine finishing materials, the craftsmen to apply them, and the sunlight to show them to advantage, encourage the Italian architect toward a certain decorative bravado, a flourish of sumptuous effect. The rationalists tend to limit exterior display to high finishing and to bury these flourishes in the interior, but the peculiar situation of the Roman architect almost compels him to display his plastic virtuosity on the outside, since the interior may not be entirely within his control.

Thus, suffering a certain moral amputation; deprived of the discipline of designing outwards from an original planning solution, the Roman architect, to produce convincing buildings, must compensate with a visual discipline so brilliant as never to give the impression that he is avoiding the pitfalls of Eclecticism, a formal discipline so exacting as to galvanize a conventional layout into new, expressive, life. Few of the architects in Rome can body out this ideal, can resist the temptation to relapse into Empiricism or Imperial bombast, and of these few the most notable is Luigi Moretti.

His buildings show a peculiar sensibility to the Italian situation—in Milan his Casa Albergo, bachelor apartments for office-workers, is a northern functional problem housed in precise simple slabs whose rectilinear discipline is fully rationalist; but in Rome this same sensibility has produced a remarkable and daring solution to a certain kind of upper-class housing problem, the *Casa del Girasole*, Viale Bruno Buozzi, which seems destined to become the constituent monument of Roman Eclecticism.

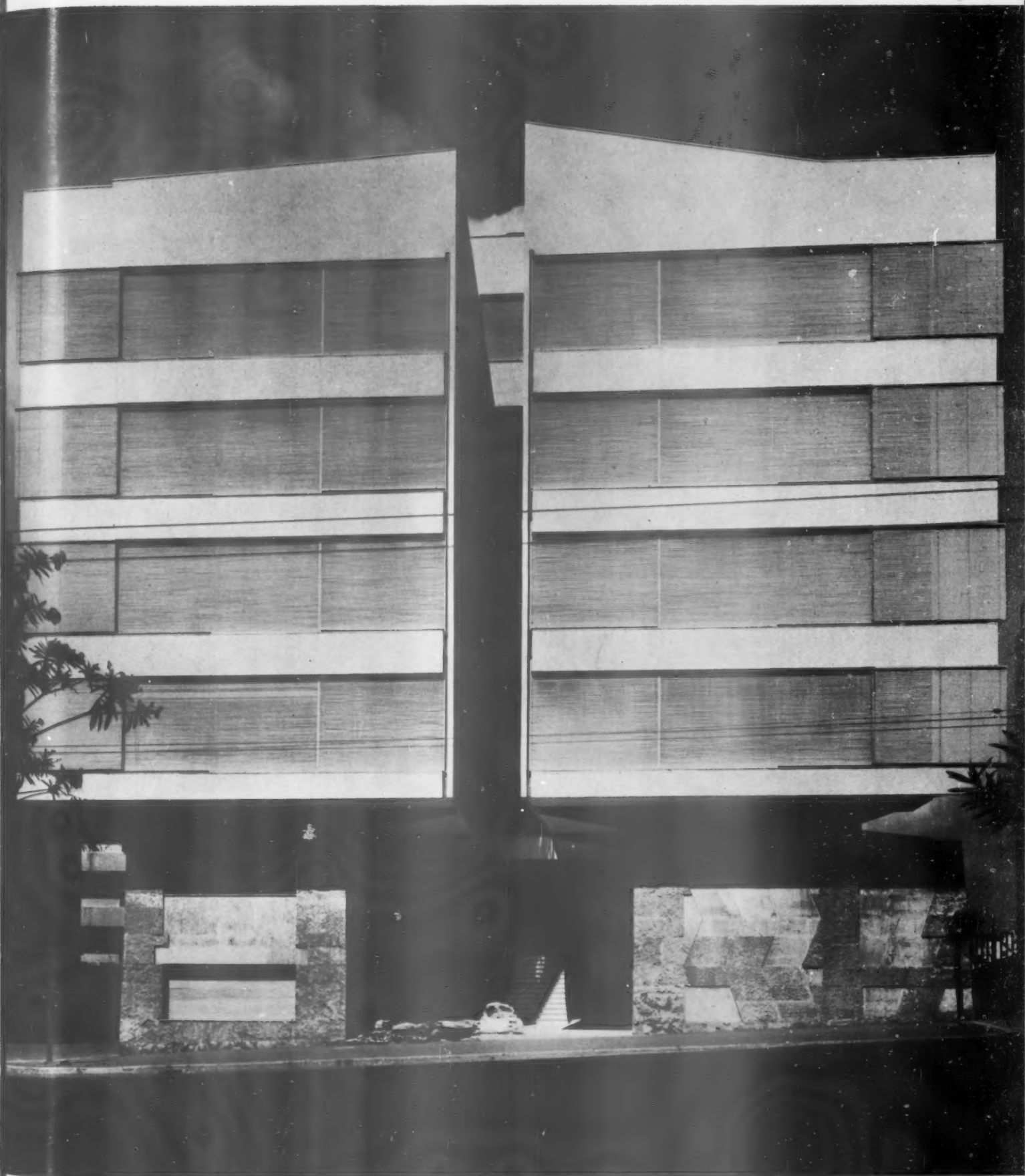
The planning of this building is of a routine kind—the deep narrow apartment, with bedrooms strung along a corridor which runs through to the services at the back of the flat, is a customary one for luxury accommodation on sites where frontage is expensive; Venice, for instance, or South Kensington. The kind of tenant who prefers this type of flat will also expect nineteenth century standards of privacy, and, therefore, a high degree of sound insulation. For this latter consideration the property has been developed as two separate units, so that none of the *sale padronali* shall share a party wall (we have already lost in English the words to describe the kind of social relationships that underlie this plan). The architect's block diagram shows this binary planning, 8 (2), but instead of building two separate slabs, as a dogmatic Functionalist might have done, Moretti has conceived the building as a single cube whose flat blank facade maintains the privacy of the interior, save where a shaft of shadow dramatically cracks the house to its core.

This assault on the privacy of the interior is not mere wilful formalism; this cutting back to what Clive Entwistle has called the *organes vitaux*, is implicit in the plan. It prevents the two living-rooms on each main floor from having a wall in common, and it stops when it reaches the stairwell, an organ which is equally vital to each half of the house. Nor is the extension of the facade beyond the limits of the block an effect irresponsibly made. It underlines the expression of the facade as a flat screen applied to the open ends of the flats, but it also provides needed rollaway space for the sliding windows, 4. Again, the change of surface from travertine to glass mosaic is not a mere empirical echo of the Palladian division into basement and order, but reflects a real change in occupation and rental, occurring as it does, at the level of the trolley wires, 1, the effective ceiling of street noise. Below this level are entrance facilities, services and a few small flats, above it are the luxury apartments and the owner's pent-house.

In fact, Moretti claims that functional and expressive usages coincide throughout the house, that every plastic device, such as the splaying out of the bedroom walls, 2, has a useful justification—in this case to catch the sunlight for the short period in the day that it rakes the side of the block. But here the word functional must clearly be understood in some psychological sense, the use of these brief interludes of direct light must be to remind the dwellers in the deeper rooms that it is the sun which is the true measure of night and day, and the architect's sketches, 8 (6), propound an organic analogy of a related kind. Psychological, too, must be the quotation of Roman ruins in the entrance and the fragments of sculpture, encastered in the western facade.* . . .

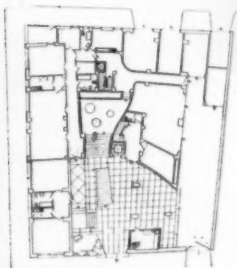
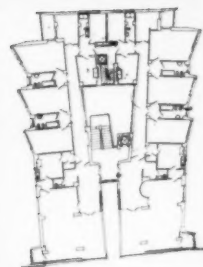
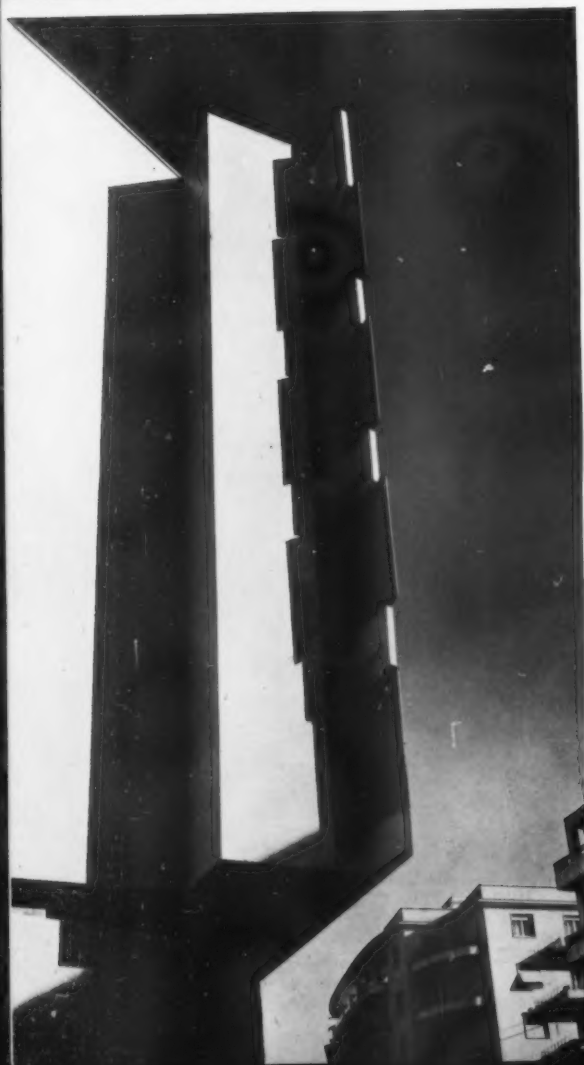
But these last are firmly in quotation marks; whatever their local emotional significance, they are unimportant parts of an architectural whole whose expressive language in all other matters is that of the Modern Movement, proposes a structural or functional justification for every particular usage, and exhibits a rigorous contemporary geometrical discipline. This is Eclecticism within modern architecture, and demands a high degree of self-control. Such fanatical restraint is demanded by Moretti in his writings, but the standard is one that he himself only just achieves in his buildings, and the rest of the Roman school never. His articles in *Spazio* show him to be fascinated by the expressive possibilities of current engineering structures, such as the vaults of Professor Nervi and the folded slabs of Guido Figus, and his own construction strives for that crisply made visual effect, that mechanical cleanliness which has always been a tenet of the Modern Movement. His Casa Albergo is faced with glistening glazed tiles, and where he cannot guarantee such visual cleanliness, as in the lower part of the Girasole, where it would be menaced by wear, dirt, commerce and political slogans, he provides a rough travertine surface which can stand such treatment, and patterns it in a manner so contemporary,

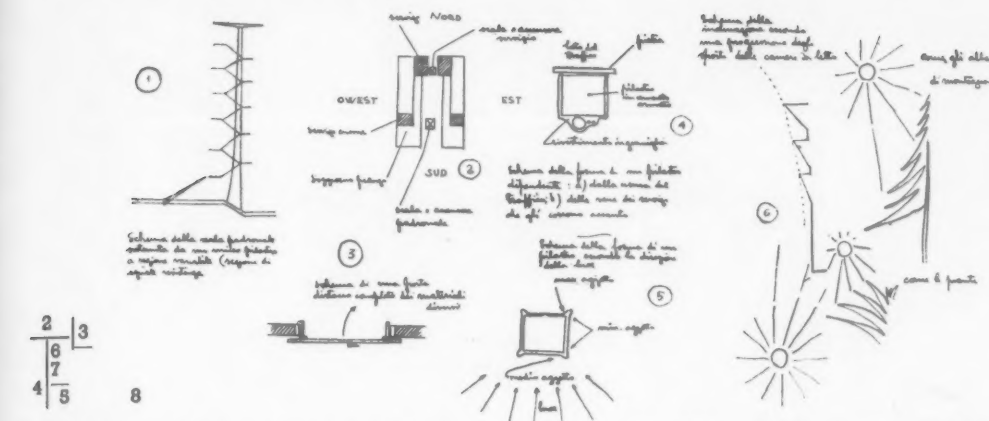
* See note on p. 125 of this issue.



1, the street facade, facing south, is frankly expressed as a screen drawn across the open front of the block; the split emphasizes the dual nature of the planning, and the glaring sunlight is exploited to dramatize it with sharp chiaroscuro; the palladian division of the elevation at the

height of the trolley wires expresses a real change in interior occupation and exterior wear and tear, for neither the more expensive flats nor the pure white geometry could be brought down to the ground without being disturbed by the life of the street.





8, features of the building explained in sketches by the architect.

1, arrangement of the main staircase, hung from a single tapering column (section of constant loading).

2, schematic plan, showing traditional corridor-flat layout with living-dining room at front, services at back—plan of main floors as built, 6, opposite shows ingenuity of Moretti's plastic solution.

3, a door, showing visual isolation of differing materials.

4, arrangement of the profile of a subsidiary column, with stone facing on side subject to wear and tear of passers-by, and grano covering modelled over service ducts, cf. 7, opposite.

5, arrangement of the profile of a column according to the fall of light, cf. 7, opposite.

6, progressively increasing splay of bedroom walls by analogy with alpine trees and plants.

Opposite; 2, the west facade with its bedroom walls splayed to catch raking light; 3, looking down the split of the facade to the feigned ruins of the forecourt; 4, the end of the facade, the overhang provides accommodation for the windows when they are slid away and for the lowered screen

when it is not in use; 5, the house in relation to the other buildings of the Viale Bruno Buozzi; 6, typical main floor, occupied by two large apartments; 7, ground floor plan showing the large entrance hall.

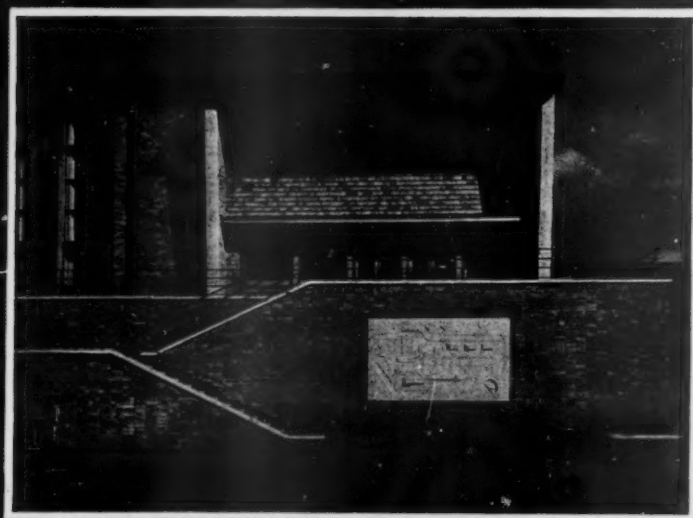
as to make it impossible to regard this as rustica in the historical sense. Above this, like a work of sculpture on a rough base, rises the main block of the building, gleaming, absolute and undefiled.

His care for visual qualities shows itself elsewhere in a fastidiousness which never allows two materials to abut in the same plane, but always to meet at right angles, or unambiguously to overlap, 8 (3); and again in his management of free-standing stanchions whose plaster jackets are profiled to take full advantage of the light that falls on them, 8 (5). The Girasole, existing in and by the sun, like the flower for which it is named, adds new meaning to the famous *Premier Rappel*,† which stated that architecture is 'le jeu savant, correct et magnifique des volumes assemblés sous la lumière.' Leaving aside the flourish of *magnifique*, the qualities on which Le Corbusier insists are cunning and correctness. Cunning the manipulation of surface and volume certainly is in this building, but also correct, for the effects made depend absolutely on a proper and accurate appraisal of the light that plays over them. The effects of light and shade by which Moretti splits the facade with a razor stroke, and fills the entrance with cool and mysterious shadow, would be unattainable without the staring violence of the Roman sun.

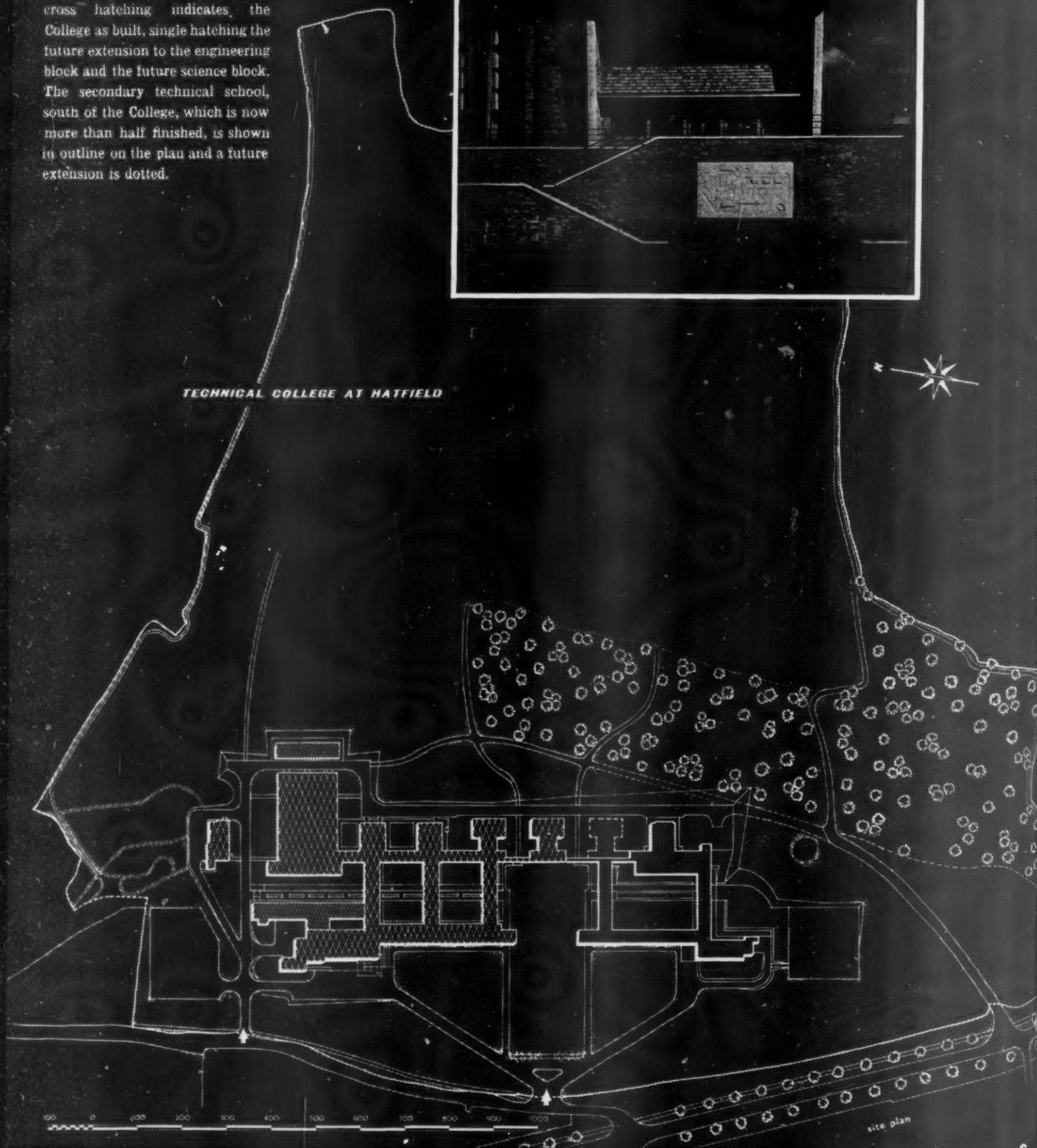
Thus socially, functionally, and visually he has put the house into a direct and active relationship to its environment, and it is this very directness which accounts for the disturbing quality it undoubtedly possesses. The Modern Movement has never seriously considered the housing of anyone but the 'deserving' in towns; the privileged are dismissed by car to the remoter suburbs, to Poissy, to the far end of Long Island, or at least to Lakeside Drive. But here Moretti attacks a problem which is morally outside the scope of the movement, and if the resultant building, in its division into rusticated basement and superimposed *piani nobili*, bears a strong relationship to palazzi of the baroque past, it is because the problem of packing the privileged on to a narrow urban frontage is one which only arises where a baroque social order survives. The attempt to wed a modern architectural idiom to such a planning problem seems to be a specifically Roman one, and much of the recent architecture of Rome, the buildings, 5, around the Casa del Girasole itself, bears misshapen witness to its shotgun wedding parentage. Yet Moretti, approaching the situation with complete frankness, visual sensibility and plastic ingenuity, takes the difficulties in his stride and demonstrates something that many people, perhaps even himself, would not care to admit—that modern architecture, far from being tied to a particular kind of social organization, or needing the support of a certain kind of technological environment (which does not exist in Rome) can now deal with any kind of building, has now become, like the great manners of the past, a universal style.

† Le Corbusier, *Vers Une Architecture*, p. 31.

The photograph inset shows Trevor Tennant's bas relief panel below the main entrance of Hatfield Technical College. The design is based on the plan of the College and it is cut in bianco del mare. The plan is shown in relation to the site in the drawing below: cross hatching indicates the College as built, single hatching the future extension to the engineering block and the future science block. The secondary technical school, south of the College, which is now more than half finished, is shown in outline on the plan and a future extension is dotted.



TECHNICAL COLLEGE AT HATFIELD



TECHNICAL COLLEGE AT HATFIELD

EASTON AND ROBERTSON : ARCHITECTS

1, approach to the high level main entrance. The sculptured panel, based on the college plan, is by Trevor Tennant.



This technical college forms part of the original post-war programme of the Hertfordshire County Council, by which a number of new schools were allocated to private architects. The Chief Education Officer of the Council, J. H. Newsom, briefed his panel of architects at the outset, and laid down the general aims of the Council in interpreting the requirements of the Ministry of Education.

The college occupies part of a site of 90 acres close to Hatfield, off the Barnet By-Pass, where a scheme of tree planting and landscaping generally has been prepared. The part of the site nearest the by-pass slopes fairly steeply and is not in its entirety suitable for a large building layout. One of the basic considerations of layout was the possibility of a large day technical school

being sited close enough to the college for certain facilities to be shared. The two groups were planned together from the outset. (This school is now under construction and should be completed in 1953.) Other factors determining layout were the desire for an orientation of class rooms a few degrees east of south, and the siting of a large engineering and building section to be easily serviced yet remote enough to avoid disturbance to the class rooms. The change of levels is used to give a two-storey façade on the by-pass, with single-storey workshops, gymnasias, etc., at the rear. As the hall with its completely equipped stage was also required for independent use, it is placed with the dining rooms and library as a separate block.

The college is for between 800 and 900 students of

which 300 to 400 are to be full time. Ultimately with day and evening students some four to five thousand will attend the college, although some of these will attend for one day a week only. To meet the needs of varying numbers spread over a large area of classrooms and workshops, lavatories and cloakrooms have been dispersed throughout the building, and the dining room,

2

of the adjoining day school) allowing economies in material and the maximum possible work 'off site'.

Later the brick supply improved and brick walling was introduced in certain places as a cladding and for divisions between class rooms. However, the original method of cladding the spandril walls between long rows of windows with light slab faced with cedar shingles was retained, and cedar shingles are also used for the pitched roof of the assembly hall and gymnasium.

External painting, especially of concrete members, has been deliberately kept to a minimum to reduce maintenance costs over the long term. Internally also, painted surfaces are confined chiefly to the stanchions and beams and the ceilings where the unusual form permits a variation in the colour of the planes. Colours used are shades of grey.

The brick bond has been varied at times for decorative reasons since the absence of plaster entails large areas of brick in fair face. Cold glaze has been also used, though sparingly, for example, on the staircases to relieve monotony. Here certain bricks are picked out in a repetitive pattern; their glaze is dark green mottled with orange. There are no painted walls or dados, and no skirting.

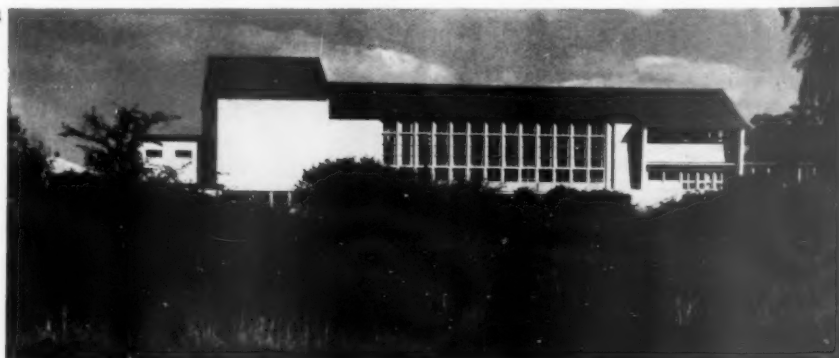
Although the colour scheme is generally in fairly muted tones, it plays an important part in the interior effects of the assembly hall and dining room in particular. Frames are picked out in light straw; the coffered ceiling is painted mastic, primrose and pantile red. This latter colour is echoed in the curtains. The floor is European beech clear cellulosed. There will be eventually a good many pictures on the walls. Meanwhile the provisions of the contract have allowed for two works by Ben Nicholson and a bronze by Reg Butler inside the building and for the hoptonwood group 'Vertical Forms 1951', by Barbara Hepworth, and the bianco del mare panel based upon the plan form of the college, by Trevor Tennant, for display outside. (See also note on page 125.)

catering for 300 in two sittings, is supplemented by a students' cafeteria and staff bay. The assembly hall seats 700 and the adjoining exhibition gallery can also be used for examinations. The main kitchens, situated at dining room level below the stage of the assembly hall, are accessible to the domestic science wing which is to be built as stage 2 of the present programme for the college.

When the building was authorised bricks, steel and labour were in short supply. The architects, therefore, devised, with their consulting engineer for the structure, Felix J. Samuely, a system of prefabricated concrete members (which is also being used in the construction

3

2, the entrance front looking towards the administration block. 3, the assembly hall, dining hall and main entrance block from the road. 4, opposite, general view from the south of the assembly hall and dining hall block. The concrete is unpainted, windows are grey-green and railings dull red. Brickwork is buff; the roof is natural shingles.







section through administration block and east corridor.

The committee and more important rooms of the administration block have walls lined with wood ply paper and electric fire surrounds in hoptonwood stone. The board room furniture was specially designed by the architects, who also assisted in advising the clients upon the design of the scholastic equipment generally.

The lighting and heating installation take into account the possibility of changes and alterations to services in the future as the work of the college develops. The main hot-water heating is by convectors in the corridors and floor heating in the class rooms, with various types of unit heaters for the shops and other large spaces. The



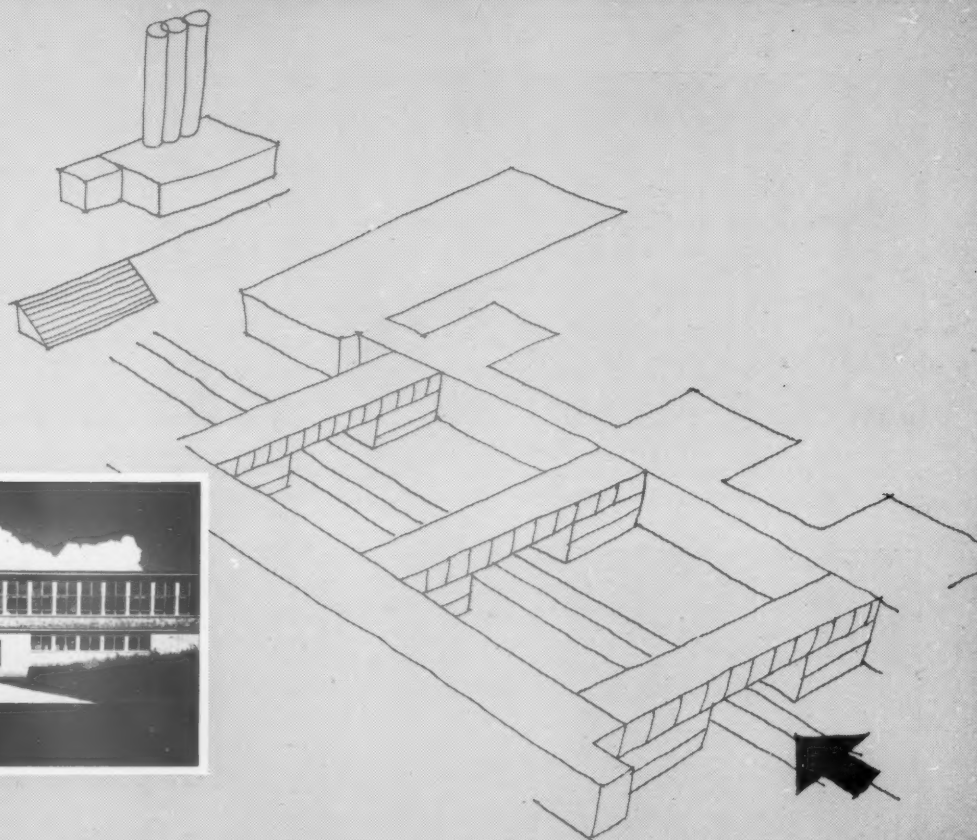
5, one of the two internal quadrangles formed here by the administration block on the left and one of the class room blocks on the right. 6, the administration and cloakroom block on the main front. In the foreground is Barbara Hepworth's sculpture 'Vertical Forms, 1951'.





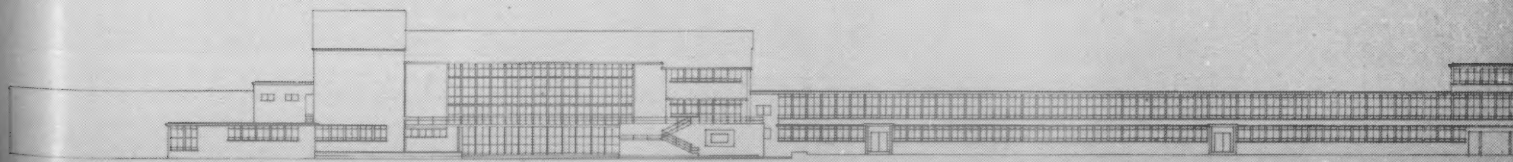
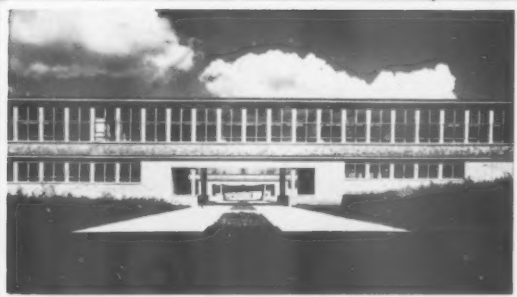
7

The diagrammatic view, right, shows the walkway which passes under the three classroom blocks and links the two main courts which have been designed to capture some of the feeling of college quadrangles. The walkway is terminated by the steps of the boiler house block, 7, with its triple engaged circular chimneys. 8 is a view down the walkway, looking north to the steps.



TECHNICAL COLLEGE AT HATFIELD

8



west elevation



9, the lower entrance hall ; patterned floor is of York and Westmoreland stone.



10, the main dining hall seating 700 in two sittings. Colours are pale buff, off-white and primrose.



11, the cafeteria, separated from the dining hall by a glazed screen.



12, the assembly hall looking towards the entrance. Colours are pale biscuit, white, yellow and scarlet.



13, the exhibition gallery, with hanging-battens on the brick walls. The ceiling is vermillion and white.



14, the board room, with furniture designed by the architects.



15, typical classroom corridor ; glass brick panels on the right give additional light to classrooms.



16, the geography room, with double sliding blackboard and screen.



17, special fittings of the geography room, map desk and drawers.



18, the display window of the College shop, on the ground floor of the east corridor.

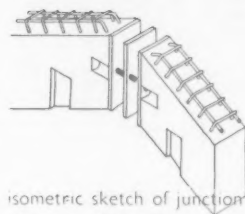


19, the engineering machine shop ; reinforced concrete frame is painted in light terra-cotta.

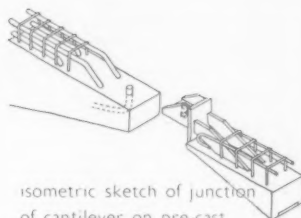


20, one of the gymnasia ; colours are off-white and pale blue, with fair-faced buff brickwork.

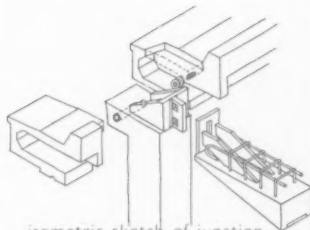
A main problem that arises when using precast concrete for a framework is that of the connections. If these connections are grouted, the whole erection is held up while this is being poured and cured and the standing time for cranes, etc., becomes too great to be economical. If, on the other hand, the units have only mechanical connections, there is the danger that the building loses its over-all rigidity completely. The compromise selected for this building has proved very successful. It consists of mechanical connections between the units (i.e. by means of steel only) strong enough for erection purposes and capable of taking a moment, thus avoiding additional wind braces, but strengthened afterwards by in situ concrete poured quite independently of the actual erection. Further, this in situ concrete is contained everywhere by precast units so that no timber shuttering is required. It became apparent to the architects at an early stage that this type of construction could only be successful if there were a very high degree of standardization, the non-standard units being the exception. The scheme adopted is based on a grid of 5 feet 6 inches with an exceptionally high degree of repetition which has made it possible to put these principles into practice. The grid dimension used has proved to be eminently satisfactory from both the planning and construction standpoint. Prefabricated reinforced concrete stanchions, floor pots of special design and roof trusses of reinforced concrete with exposed steel tension members have all been specially designed for this job, utilizing a minimum number of types. The trusses are mounted in reverse, the finished wall board ceilings following the line of the tension members, thus forming above the ceilings a space available for insulation, running of services, etc., and also permitting excellent high level daylight lighting. The strength and stability of the stanchions and trusses were fully tested in a prototype, and then manufactured in bulk and delivered to the site. During this period a separate foundation contract was in operation and much time was saved thereby.



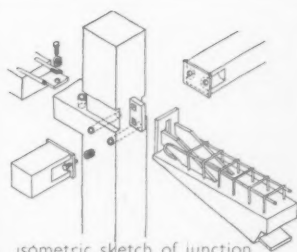
isometric sketch of junction of pre-cast concrete frames at ridge level



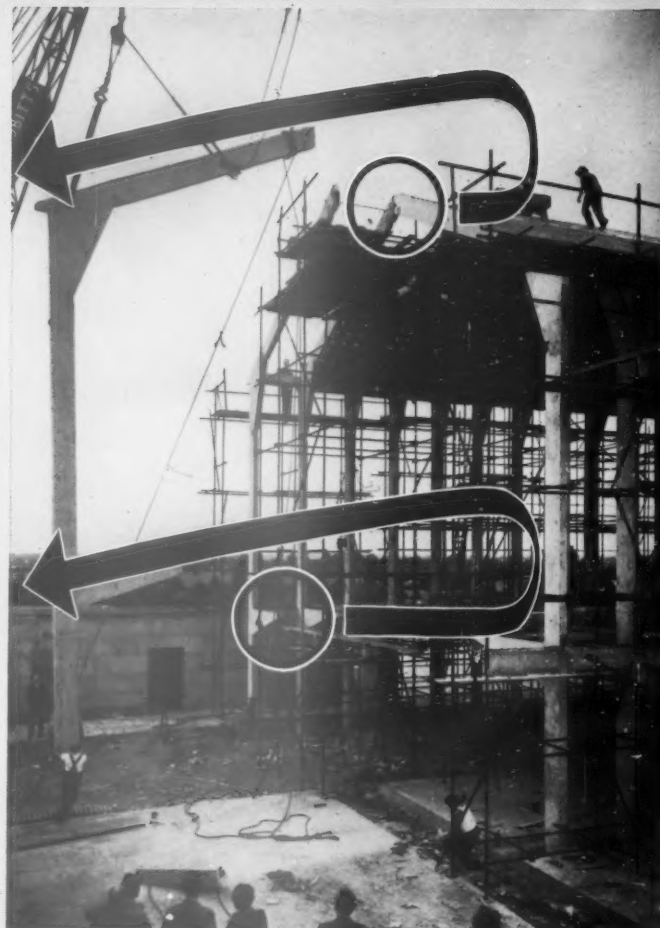
isometric sketch of junction of cantilever on pre-cast concrete column with trussed beam.



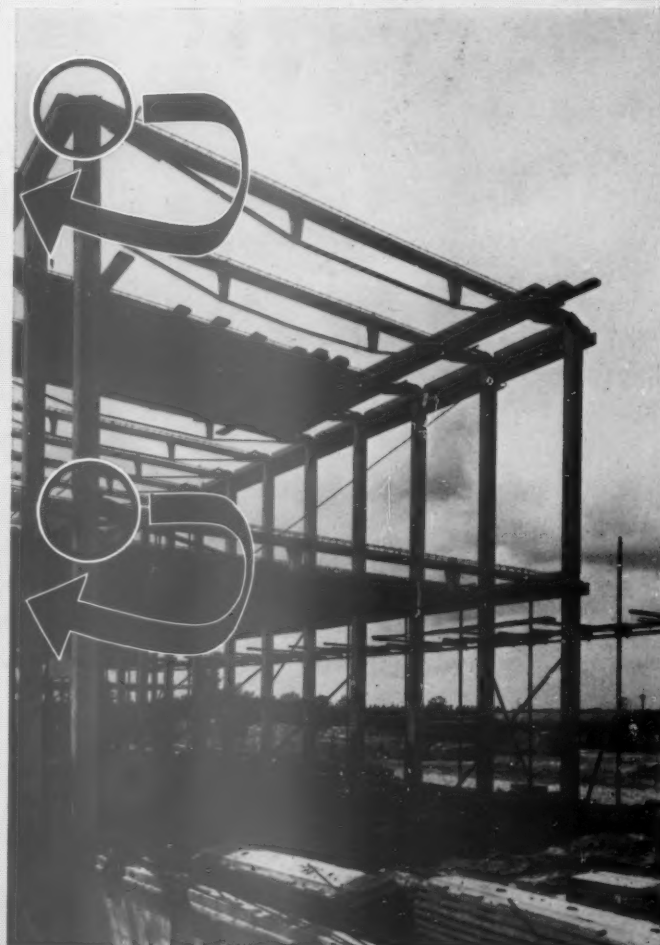
isometric sketch of junction of trussed beam, eaves unit with pre-cast concrete column.



isometric sketch of junction of trussed beam, beam, tie-beam with pre-cast concrete column.



21



22



23

23, the lower entrance hall with iron sculpture. The Oracle, by Reg Butler; the background screen is off-white. 24, one of the waiting bays off a first-floor corridor, with a picture by Ben Nicholson. Walls are of brown fair-faced brick.

detached boiler house provides service to the adjoining school and can be used also for instructional purposes.

This is the first large technical college to be built as part of the post-war programme. Although its finishes and specifications are conceived on an austerity basis, equipment and installations have been considered from the outset as an integral part of the design. Here the architects had the benefit of direct consultation with Dr. W. A. J. Chapman, who was appointed Principal while construction was under way.

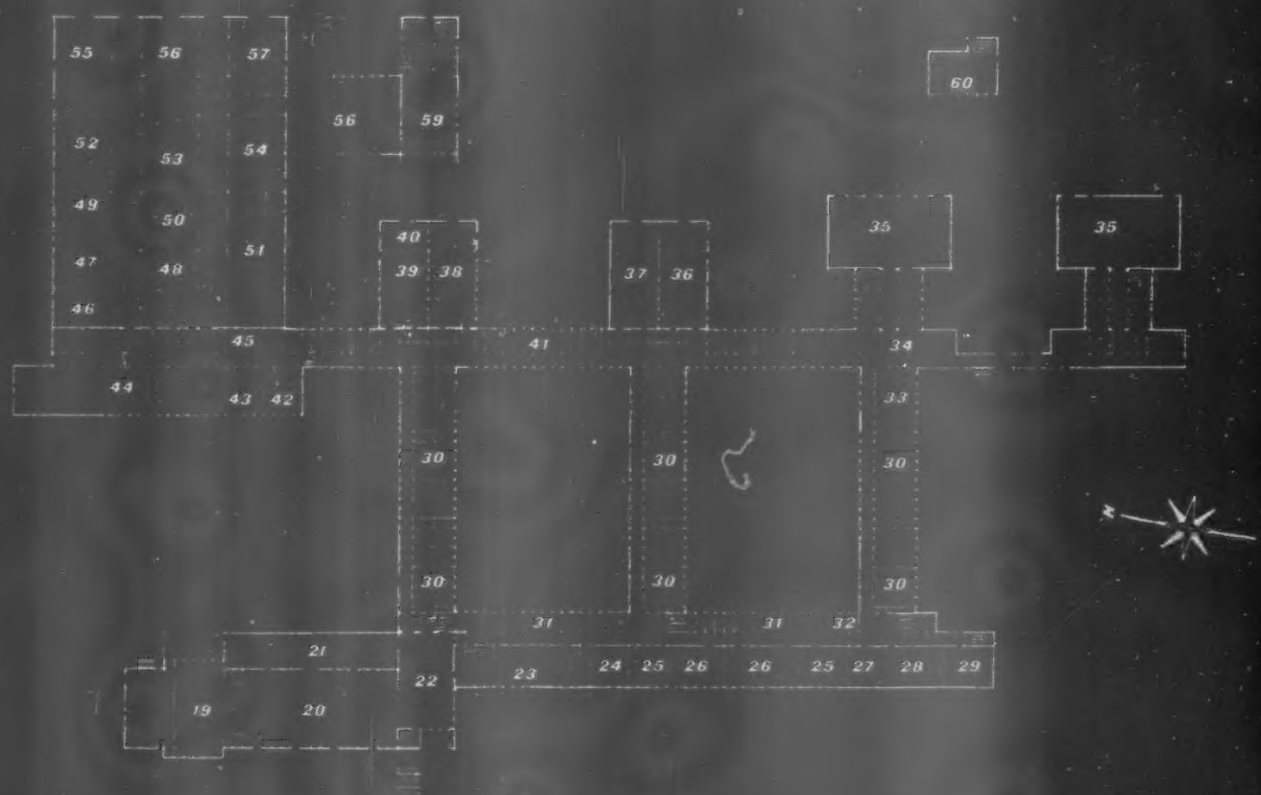
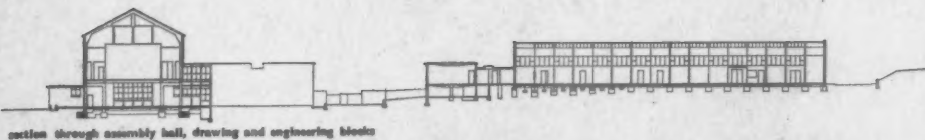
TECHNICAL COLLEGE AT HATFIELD



24

TECHNICAL COLLEGE AT HATFIELD

- key
- 1, kitchen yard. 2, kitchen. 3, dining hall. 4, staff dining. 5, cafeteria. 6, staff cafeteria. 7, lower entrance hall. 8, drying rooms. 9, male entrance. 10, cloak. 11, washrooms and w.c.'s. 12, female entrance. 13, office. 14, cycles. 15, stores. 16, housecraft and upholstery. 17, switch. 18, drawing studios. 19, stage. 20, assembly hall. 21, exhibition hall. 22, entrance hall. 23, general office. 24, head. 25, staff rooms. 26, committee rooms. 27, students' quiet room. 28, common room. 29, female common room. 30, classrooms. 31, waiting bay. 32, students' quiet room. 33, geography classroom. 34, showers and changing room. 35, gymnasia. 36, plumbing. 37, woodwork. 38, brick and masonry. 39, plastering, painting and decorating. 40, stores. 41, shop. 42, head of building. 43, head of engineering. 44, drawing studios. 45, switch room. 46, radio laboratories. 47, general science. 48, metrology. 49, electrical laboratory. 50, mechanics. 51, aerodynamics. 52, electrical installation. 53, engineering and metallurgy. 54, engineering. 55, sheet metal and welding. 56, general workshop. 57, engineering machine shop. 58, upper assembly hall. 59, library. 60, caretaker's cottage.



upper ground floor



lower ground floor

scale: 1/96 in. = 1 ft.

The early fourteenth century is one of the rare periods of architecture in which England was leading Europe. Although English achievements were based on what was most adventurous in the France of a generation before—especially on St. Urbain at Troyes the soaring and brittle porch of which appears on the facing page  neither France nor Italy nor Germany has anything to emulate the imagination and daring of Bristol Cathedral. In elevation as well as detail, everything is new and ingenious here. The following article analyses the innovations of Bristol, connects them back with Troyes and tries to prove that, again one generation later, the first master of Gloucester, though making use of Perpendicular motifs and the Court Style, must have been a product of the Bristol 'Lodge'.

BRISTOL TROYES GLOUCESTER

THE CHARACTER OF THE EARLY FOURTEENTH CENTURY IN ARCHITECTURE

The origin and the earliest history of the Perpendicular style in London and at Gloucester have been much discussed lately, above all by Dr. Maurice Hastings, Mr. John Harvey and Dr. Joan Evans. The following notes, however, though they deal partly with Gloucester, are less concerned with the Perpendicular style as such than with the personal style of the designer of the alterations to the Norman east parts of Gloucester which were begun in 1331.

Mr. Harvey's most recent pronouncement on Gloucester is to be found in his book *The Gothic World*.¹ Here he says: 'At the south transept of Gloucester Abbey, we find in the years 1331–37 a juxtaposition of Curvilinear, Kentish and Perpendicular forms. . . . It is evident that the new work at Gloucester depends directly on what was happening in London, where in 1332 William Ramsey, who had worked under Thomas of Canterbury at St. Stephen's, began a new chapter house and cloister for St. Paul's Cathedral. The remains of this work, and the views of it by Hollar, show that its character was distinctively Perpendicular, and extremely close to the refacing of the choir at Gloucester from 1337 to 1350. William Ramsey . . . became King's Mason in 1336 . . .

and died in 1349. Before the Black Death he had co-ordinated all the main elements of the Perpendicular style, of which he may fairly be termed the inventor.'

Mr. Harvey had written already in 1944:² 'The credit for the invention of what we know as the Perpendicular style belongs to William de Ramsey. . . . Ramsey was invited to design the new Chapter House and Cloister of St. Paul's Cathedral in London, and he was actually engaged in the supervision of the work by the summer of 1332. The buildings themselves perished in the Great Fire of 1666, but Hollar's fine engraving shows the new details, including the vertical panel treatment in the spandrels of the basement arches of the chapter-house, and some entirely fresh types of window-tracery, linked to the "long-panel" bay design, in which the window-mullions are carried downwards over a space of blank wall. . . . Now all the inventions utilized by Ramsey in London . . . were also being employed at Gloucester Abbey . . . and there can be little doubt that William Ramsey, the genius in the royal service, went to Gloucester to provide designs for the transformation of the abbey church into a royal mortuary chapel. It would be a most extraordinary coincidence if this were not

¹ 1950, pp. 93–94.

² Henry Yevele, pp. 7–8.

the case, for the Gloucester work includes such minutiae as the bands of quatre-foils so characteristic of Ramsey. . . .¹

To this Dr. Hastings has vigorously objected in an article called 'The Court Style' in *THE ARCHITECTURAL REVIEW*.² He says: 'There is no connection between St. Paul's and Gloucester whatever. On the other hand, the connection between Gloucester and the Court at Westminster is a very striking one. . . . It seems evident that the work (at Gloucester) was put under the ordination of one of the great masons of the Court School, and equally evident that the West Country masons listened to all that was said, and then did things in their own way.'

As for that special way of the West Country masons, Dr. Hastings has devoted a separate article to it a little later.⁴ But there again his principal contention is that Gloucester is not a step in a West Country development. 'Perpendicular is disseminated from London; although certain details of Gloucester are recognized as Western in origin rather than derived from London. The confusing fact that the later Perpendicular style includes these Western elements is explained by the reverberations of Gloucester on London from 1350 onwards, or perhaps more precisely 1351, when Thomas of Gloucester appears in London.' Dr. Hastings's description of West Country elements and their migration is convincing, but it does not include those elements which seem to me essential for an appreciation of the Gloucester master and his personal style.

These elements, in my opinion, point to Bristol as the lodge in which he was trained and first distinguished himself.

It will therefore be necessary first of all to analyse certain features which appear in the thirty years before 1331 in the buildings of St. Augustine and St. Mary Redcliffe. The necessity of this has become doubly urgent because Dr. Joan Evans in her *English Art, 1307-1461*⁵ has put forward a conception of St. Augustine with which I find myself in disagreement. Dr. Evans places St. Augustine at the beginning of her chapter on the Perpendicular style, on account of a 'new emphasis on horizontal line,' for instance in the transoms in the windows and the bridges across the aisles, and also on account of a 'curious linear quality strangely different from the plastic roundness of Exeter.' On Gloucester, Dr. Evans hesitates to accept either Mr. Harvey's or Dr. Hastings's view. As she places her description of Gloucester immediately after that of Bristol, one may assume that she wishes the two buildings to be understood as connected, but she does not explicitly say so.

As far as my own views on Bristol are concerned, they appeared for the first time very briefly in my *Outline of European Architecture*,⁶ but I find after the publication of Mr. Harvey's and Dr. Evans's books that a more detailed justification of my conclusions may be needed. These conclusions are in brief that Bristol, side by side with Albi, must be considered the most important, and at the same time the architecturally most brilliant, building of the period about 1300 in the whole of Europe.

According to Abbot Newland's Roll⁷ St. Augustine—a church of Austin Canons made into a cathedral by Henry VIII only in 1542—was begun in 1298 by Edmund Knowle, treasurer of the Abbey. In 1316 he became abbot. The late G. McN. Rushforth⁸ has proved by heraldic arguments that the east window was glazed some time between 1312 and 1322. By 1332, when Abbot Knowle died, the parts of the building east of the crossing were probably complete; for Newland's Roll mentions no building activity under his successor.

¹ Vol. 105, 1949, p. 9.

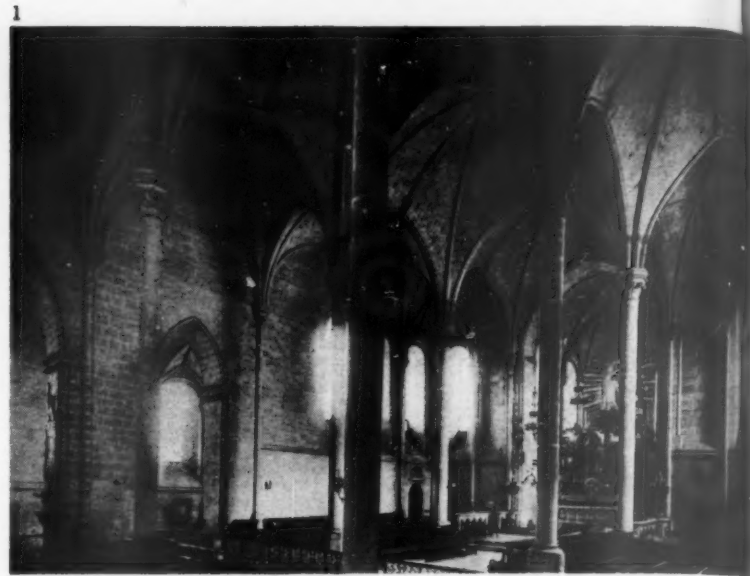
² *THE ARCHITECTURAL REVIEW*, Vol. 106, 1949.

³ 1949, pp. 66-68.

⁴ Second edition, 1945, p. 67.

⁵ *Bristol and Gloucester Arch. Soc. Trans.* XIV, 1889-90.

⁶ *Bristol and Gloucester Arch. Soc. Trans.* LIV, 1932.



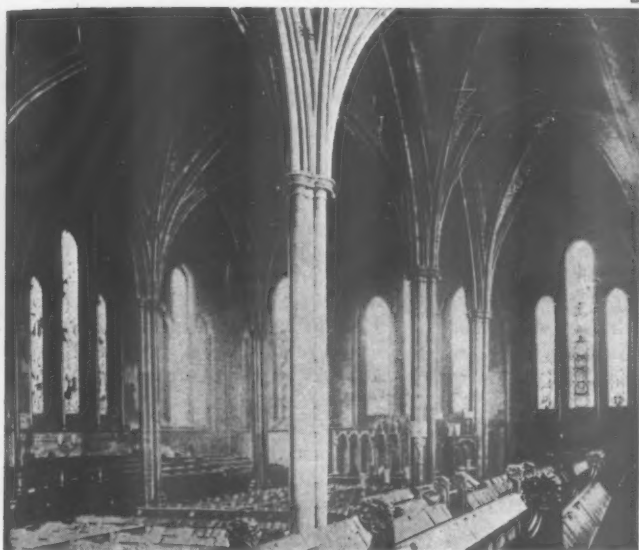
The building history of St. Mary Redcliffe has been investigated by Brakspear.⁹ Accurate dates are lacking, save for a seventeenth century entry in the Mayor's Calendar according to which the building was begun in 1294, and another according to which William Canynge's extensive work began in 1376. The parts of importance in connection with St. Augustine and Gloucester are the south aisle and its vault, the south transept and the north porch.

It is known to everyone that St. Augustine's Bristol is wholly exceptional among the major churches of Britain in that it is a hall church, that is, a church with aisles nearly the same height as the nave and without clerestory, 9. What made its designer choose a form so out of the ordinary has never yet been explained. Hall churches were by 1300 usual only in two areas of Europe. In Poitou and Anjou on the one hand, and in Germany on the other. As long as the Romanesque style ruled, they were a purely regional peculiarity of Poitou in France and of Westphalia in Germany. In France they remained regional in the thirteenth and fourteenth centuries, in Germany a few Friars' churches (Frankfort, c. 1240, etc.), St. Elizabeth at Marburg (c. 1250-60) and the east parts of certain Austrian Cistercian churches (Lilienfeld, Heiligenkreuz consecrated 1295) established the form in a much wider area, until it became the most characteristic expression of the spatial ambitions of German Late Gothic architecture.

As a source for Bristol, Anjou and Poitou are more likely than Germany and Austria. But if one takes for a comparison so pure an example of Angevin hall church design as St. Serge at Angers, 1, of about 1200, the contrast to Bristol is at once evident. Thin, widely spaced circular piers support a low, broad, spreading vault with thin ribs of circular section. There is neither the upward drive nor the close setting of many verticals which are so characteristic of the Bristol choir. More likely is, therefore, its derivation from the retrochoirs of Winchester and Salisbury, 3, and the chancel of the Temple Church in London, 2, all structures of between 1200 and 1240. Their proportions at least come closer to those of Bristol, but the extremely long and extremely thin piers supporting their vaults are still essentially different from the multifarious component piers of Bristol.

Besides, Bristol possesses a number of details not to be met anywhere else. The first of these is the abutment of the

⁹ *Bristol and Gloucester Arch. Soc. Trans.* XLIV, 1922.



Bristol Cathedral is a 'hall-church,' the only major hall-church in England, that is a church in which the aisles reach up as high as the nave, thereby creating a spatial unity across the whole building, which would be impossible in any other way. As a source for this new solution at Bristol, St. Serge at Angers, 1, c. 1200, has been mentioned. But it is more likely that the retrochoirs of Winchester or Salisbury, 3, and the chancel of the Temple Church in London, 2, are reflected in the elevation of Bristol.

nave vault, 10. As the aisles are too high to permit of flying buttresses, the designer has chosen transverse vaults instead, an idea which is not in itself novel. It exists for instance at Tournus nearly three hundred years before and in England at Fountains. However, the transverse vaults at Bristol are not tunnel-vaults but cross-ribbed vaults of two bays each so that points of support have to be created for the inner springings of the two bays. The outer springings rest, of course, on the nave piers for the inner bay and on the walls for the outer bay. Now these inner springings rest on bridges thrown across the aisles. The motif of the bridges has been rightly referred back to the lower part of the Sainte Chapelle in Paris by Dr. Evans and Mr. Harvey, 5. But the bridges in Paris are very small, less than six feet long, and besides, what is absent in Paris is the very motifs which make the Bristol bridges so remarkable, the oversized pierced mouchettes in the spandrels (the origin evidently of what was done about 1338 in the huge strainer arch at the crossing at Wells, 8), and the complete omission of any infillings of those cells or webs of the vaults which stand vertically on the bridges, that is those arched parts which in a normal vault would be bordered on the left and right by the wall arches or dossierets. Now this is, in my opinion, an invention of the first order. It connects the vaulting zone of the aisles in a most unexpected and tantalizing manner. It breaks the clarity of axes which had been a basic rule of all classic Gothic architecture. And it is a logical development out of the choice of the hall type; for a hall as against a church with lower aisles also tends to make one see separate spatial entities as one.

It is eminently characteristic in this connection that the same designer in the contemporary vestry or anteroom to the Berkeley Chapel south of the south aisle¹⁰ introduces what can only be called a skeleton vault, 11, that is he gives the small room a flat stone ceiling and supports this by a complete vault of flying ribs with all cells left out. The effect is as fanciful and as spatially suggestive as that of the aisle bridges. Here, however, the designer of Bristol was probably following someone else's inventiveness. For not only has the pulpitum at Southwell flying ribs inside its 'verandah' vaults¹¹—and this may or may not be contemporary with Bristol—but the same ribs on a very small scale also exist inside the Easter Sepulchre at Lincoln, where they must date from the

last decade of the thirteenth century (naturalistic foliage in the capitals; but no ogee arches yet).

Bristol seems in no other way directly connected with Lincoln, and so it might be worth considering, whether a joint London or, to use Dr. Hastings's term, Court source should not be surmised. The reason why one is inclined to look in that direction is that Bristol is sometimes credited with the earliest lierne vaults (Dr. Evans), but that these are in fact taken over from the lower chapel of St. Stephen's in Westminster Palace, begun in 1292, 7. Dr. Hastings has, I think successfully, tried to establish the Court School as the one in England most out of sympathy with the vagaries of ogees, nodding ogees, liernes and so on; but he has also shown that in spite of that both liernes and ogees appear for the first time in Court work—ogees in the Eleanor Crosses, St. Stephen's and the monument of Aymer de Valence.¹² As for the Bristol liernes, a speciality here, which was to be taken over at St. Mary Redcliffe (first in the tower hall) and then in the Presbytery at Wells and the choir at Ottery St. Mary, is the cusping of the lozenges formed by the splitting asunder of the ridge ribs. This cusping tends even more than ridge ribs as such or tiercerons to make the vault appear a curved lid on the interior space rather than a system of currents of energy as the classic French quadripartite rib vault was. The English vault always emphasizes the weight of the top covering; the lozenges and especially the cusped lozenges make it part of the same system of complicated line patterns as the Decorated tracery of the Bristol east window. There is, however, one difference. Decorated tracery consists largely of flowing lines. The later Gothic style in Germany and Spain—two hundred years later—has often similar undulating patterns of tracery and similarly elaborate vaults; but the vaults there use curved ribs as well. That is not done at Bristol, at least not at St. Augustine; for it does occur in the south aisle of St. Mary Redcliffe, c. 1325, and then at Ottery St. Mary, c. 1345.

One effect of the Bristol lierne vault—and one incidentally which could also be obtained by the use of tiercerons without liernes, say at Exeter—is that the vault is no longer felt to consist of individual bays, but appears as one. It is obvious that this tendency is in full harmony with the introduction

¹⁰ The burial is recorded in Smythe's *Lives of the Berkeleys* of Lady Joan, wife of Thomas Lord Berkeley, in 1309 in the arch between the south aisle and the chapel (see P. W. Paul in *Archæologia*, Vol. 63, 1912).

¹¹ Illustrated in my *The Buildings of England, Nottinghamshire*, 1951, pl. 18.

¹² The earliest three-dimensional or nodding ogee arches known to me are to be found outside the south aisle of Newark Parish Church in Nottinghamshire which is said to have been under construction in 1312, and in the Bishop's Throne at Exeter, that is in 1316-17. It is highly unlikely that they should be an invention of a Newark mason or an Exeter or Wells woodcarver. So perhaps their origin will also one day be established at or near the Court.

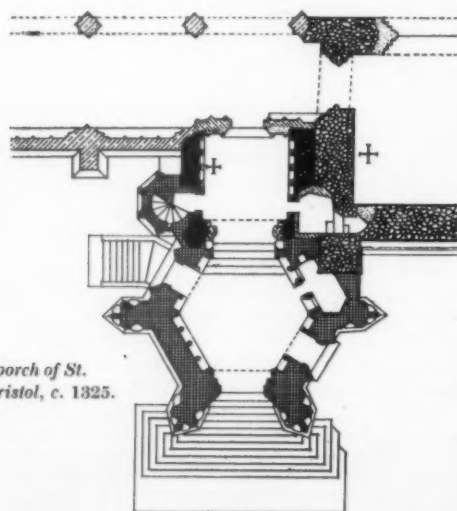
of the hall form and the pierced divisions between the aisle vaults. For the same purpose the arcade supports at Bristol are almost entirely deprived of capitals. Now this, although in its particular form entirely Gothic, can be regarded as a continuation of an English Norman tradition—a continuation not a revival. Brakspear has traced it back to the twelfth century at Malmesbury and Glastonbury.¹³ It also appears at Bristol itself in the Norman chapter house. Then in the early thirteenth century the triforium at Wells took it up. But all these occurrences were on a small scale. On a full architectural scale the earliest case seems to be the vestibule to the chapter house of the cathedral (former Benedictine monastery) of Chester, and here it is of the last third of the thirteenth century, 6. The appearance, however, is yet very different from Bristol, partly because the piers are so much lower and partly because capitals are altogether absent. At Bristol the piers are of a very complex compound kind, and the arches between the aisle bays and the vaulting ribs and the transverse arches of the nave have tiny capitals, whereas the arcade arches, by far the broadest part of the piers, are an uninterrupted continuation of the pier profiles. This in its appearance is much more immediately reminiscent of the French cathedral convention introduced at St. Denis in 1231, where the chief vaulting shafts are carried up to the springers of the main vault without any interruption and end there in capitals, while the arcade arches branch off with their own capitals at a lower level. Both have capitals, but since those for the main vaulting shafts are so much higher up, the effect is yet not dissimilar to Bristol. St. Mary Redcliffe went further than St. Augustine in this novel use of the capitalless pier in a Gothic building; for the wall-shafts inside the north porch have no capitals at all.

This porch, 4 and 13, altogether seems to me of great importance as a work of the same workshop and the same ideals as St. Augustine. It is undated, but probably of c.1325 or a little earlier.¹⁴ Not only has it ogee details in the tracery and nodding ogee heads to the niches by the sides of the portal, not only has it that famous, almost Moorish-looking filigree work of the door surround, but it is hexagonal in shape, a shape chosen no doubt because it has nothing of the firm axiality of the classic thirteenth century. In an octagonal chapter house the main axes at an angle of 90 degrees to each other are preserved, even if they are connected by diagonal bays at 45 degrees. The 60 degrees between the sides of the hexagon are much less easily taken in.¹⁵

¹³ *Archæologia*, Vol. 81, 1931.

¹⁴ Brakspear's date c. 1290 is, according to to-day's state of knowledge, quite impossible.

¹⁵ Hexagonal also, it may be mentioned, are the Eleanor crosses of Waltham and Northampton, both begun in 1291.



4, plan of the north porch of St. Mary Redcliffe at Bristol, c. 1325.

Moreover, the stellar vault of the porch—and this is, I think, the proof that my interpretation is not subtler than the designer's own idea—has a hexagonal centre turned by 30 degrees so that each side of the centre faces an angle of the outer wall, and each side of the outer wall an angle of the centre.¹⁶

It is the same ingenuity and sophistication as in the opposition of the convex and concave lines of the inner and outer parts of the porch doorway. The proof that the St. Mary Redcliffe and the St. Augustine's workshop were closely connected and worked in one and the same style is the contemporary sedilia and tomb recesses inside St. Augustine, 14. The tomb recesses have surrounds of concave lines, as the porch doorway at St. Mary Redcliffe, and in addition such perversities as sudden right angles (east wall) or angles of 45 degrees (aisle east wall) in the cusping and framing. The severely restored sedilia, 15, have canopies which can be described as consisting of interlaced ogee arches, but in effect look as if on the apexes of normal pointed arches stood, or rather tip-toed, another set of pointed arches upside down.¹⁷ The resulting pattern is as capricious and as fascinating as all the other motifs used or created by the Bristol master mason.

Created or merely used? It is time now to look round for sources of individual motifs and, preferably, of the whole of this novel style in its peculiar character. Such sources seem to be totally absent in England. Neither Exeter, nor Lichfield, nor the east part of Durham have anything of the Bristol spirit. A search in France is more promising, where we have already seen connections with the Sainte Chapelle built in 1243-48 and with St. Denis and its many followers. Here it was, no doubt, that the tendency towards thinness and transparency first developed, in complete contrast to the luxuriance and breadth of the Late Early English in the Angel Choir of Lincoln and at Exeter.

One building in particular, I suggest, can be singled out as a possible example known to, and appreciated by, the Bristol lodge. St. Urbain at Troyes in Champagne. The connection may sound far-fetched, but it must not be forgotten that Bristol was one of the foremost ports of England and thus very much in the centre of foreign relations, and the St. Urbain was far from what it appears now, a parish church in a provincial city. It was the foundation of a Pope, Urban IV, who was a native of Troyes and in 1261 acquired the site of the house, where his father had been a cobbler, and several sites around. He endowed the church with 10,000 silver marks—the equivalent of about £150,000 in money values before the First World War—the money to be used for the building and the foundation of prebends. Building proceeded extremely rapidly. Before the spring of 1266 the roof was on the east parts. Timber work for the chancel stalls went into position in the autumn of 1265. Then, still in 1266, infuriated nuns broke in and did considerable damage, and in the same year a fire damaged more. But the damage was quickly repaired by the nephew of the Pope, Cardinal Archer—the Pope had meanwhile died—and an inventory of 1277 tells of rich ornaments and garments belonging to the church. Yet it was still unfinished. The nave apparently was only begun, including the west portal. Work ceased at Archer's death in 1286, consecration took place only in 1389, and the west parts were not completed until early in this century.¹⁸

The church is not large, 130 feet long. The plan, 29, is not

¹⁶ This same turning occurs in the Ely Octagon, the other *magnum opus* of the Decorated style in England. Here the date is after 1322. The stone octagon and the timber octagon above it differ axially in exactly the way as at St. Mary Redcliffe. Mr. John Harvey reminded me of this on the occasion of a paper I read at the Society of Antiquaries. I wish to thank him and also Dr. Joan Evans and Mr. Gerald Cobb for their contributions to the discussion after the delivery of my paper.

¹⁷ This motif is repeated on a huge scale in the strainer arch of 1338 at Wells to which reference has already been made.

¹⁸ E. Lefèvre-Pontalis in *Bulletin Monumental*, Vol. 68, 1904, also *Congrès Archeologique de France*, 1902; A. Babeau: *St. Urbain de Troyes*, 1891, and L. Morel-Payen: *Troyes et Provins*, 1926.



5, lower chapel of the Ste. Chapelle in Paris, 1243-48, the suggested source of the aisle bridges at Bristol.



6, vestibule to the chapter house at Chester, late thirteenth century, the earliest English case of piers without capitals supporting the vault.



7, lower chapel of the Chapel of St. Stephen at Westminster Palace, now within the Houses of Parliament, begun in 1292, showing the earliest existing lierne vaults.



8, the strainer arch at Wells of c. 1338, probably the work of a former member of the Bristol 'lodge.'

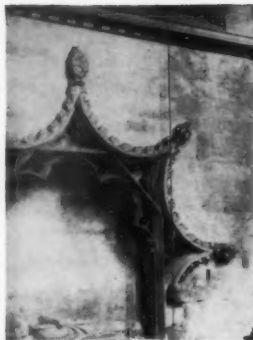
BRISTOL The personal genius of the master of Bristol was one of spatial fantasy. No one else in Europe at his time handled space so ingeniously. By means of bridges high up across the aisles, 9, to counteract the thrust of the nave vault, by means of flying ribs or a skeleton vault (antechapel of the Berkeley Chapel, 11) and by means of novel patterns of ribs (chancel, 9; north porch of St. Mary Redcliffe, 12) he, or his 'lodge' creates unexpected vistas and points out unexpected angles of vision. The detail of the master and his school is just as original: on the next page, 13, the north doorway of St. Mary Redcliffe, 14, funeral recesses in the cathedral, 15, the sedilia. Such things as the reversed arches of the porch doorway, the sedilia and the recesses should be noted, as also the perverse contrast of straight lines between curves in the recesses. The column of pictures on the left offers suggestions of sources of the Bristol style, 5, 6, 7, and the most spectacular example of Bristol work outside Bristol, 8.



13



14

**bristol**

13, north doorway of St. Mary Redcliffe.

14, funeral recesses in the Cathedral.

15, the sedilia.



15

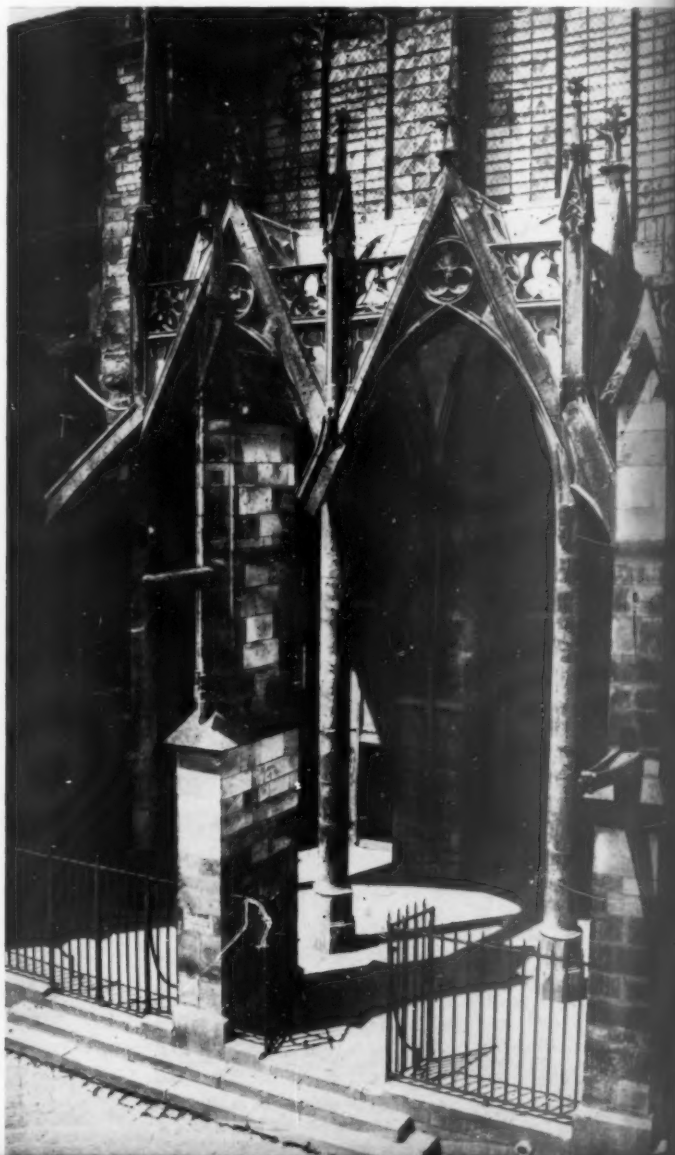
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TROYES St. Urbain at Troyes was built essentially between 1261 and the 1270's. The church, erected and paid for by Pope Urban IV, a native of Troyes, is the epitome of French mid-thirteenth century Gothic, bittler and bolder than any other. The arches of the apse windows, completely detached from the wall, are particularly characteristic, 16,

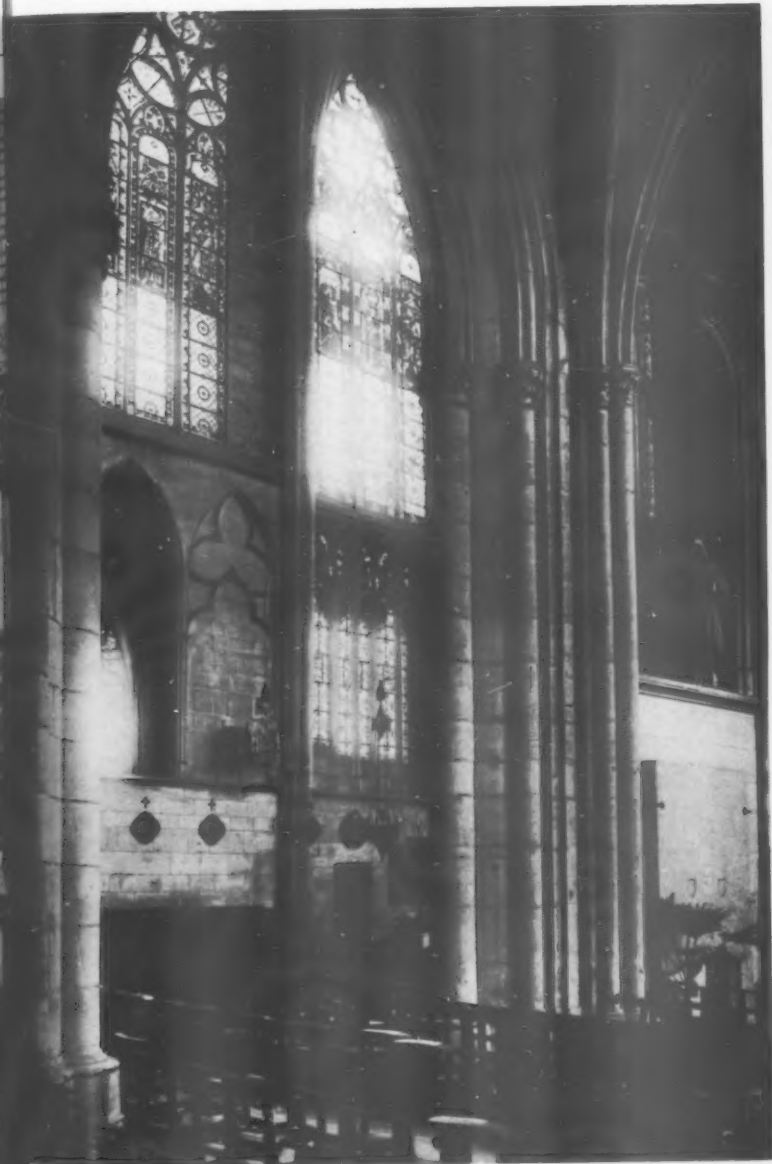


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as are also the slender round piers of the porches with no capitals, 17, the tracery in two tiers inside and the thin screen of tracery between the chapels, also inside, 19 and 18. A curious problem at Troyes is the occurrence of several typically English features such as the sculpture of the spandrels of the double piscina, 21, the tympanum with figures in quatrefoils, 20, and the one solitary oggee arch in the south porch, 22.



18



19



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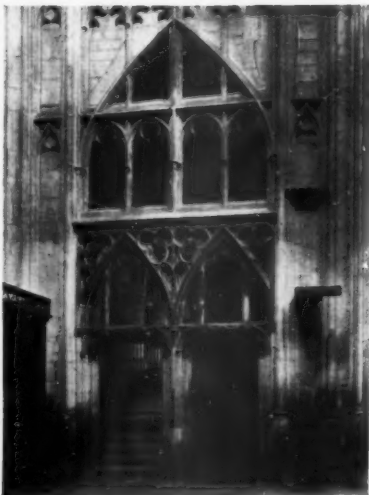
GLOUCESTER Gloucester is familiar as the chief breeding ground of the Perpendicular style, although the origin of the style has recently been traced back to the Court Style of London. The new vocabulary is complete in the chancel, begun in 1337, 23, but appears already in 1331 in the south transept. Here, however, there are other motifs at least as remarkable and individually even more significant which lead back to the peculiar spatial idiom of the Bristol 'lodge.' This is especially noticeable in the small south door, 26, the delightful angle bracket, 24, the frilly tops of the double doorway from the transept to the east, 27, and the way in which mullions tiptoe on arches, 25. This latter motif was even continued in the chancel, 28.

24



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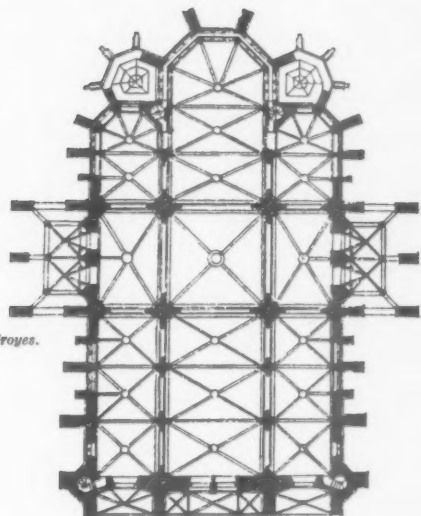
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28



29, plan of St. Urbain at Troyes.

that of the major French churches of the time, with ambulatory and radiating chapels, but of the traditional Champagne type with a major apse flanked by minor aisle apses to the left and right. The vaults are of the normal quadripartite kind. All the unusual and ingenious features of the church are in the elevation, 16. The apse, above no more than a plinth of solid stone, is entirely glazed, 19, a motif taken over from the Sainte Chapelle. But the glazing is divided by a transome and the lower part has double tracery, 18, the inner tier being flush with the upper part of the window and the outer tier being a little projected. Double tracery was a motif which had made its appearance quite naturally when the triforium between arcade and clerestory had first been pierced and glazed. This was done at St. Denis after 1231 and at Amiens, in the chancel, after 1236. But the interesting feature at Troyes is the difference in the two superimposed patterns of tracery. They create an effect of surprise and intricacy which must have pleased a travelling young mason with the future Bristol ideas still unformed in his head. Similarly, the wall between chancel and aisle apses is partly solid with thin blank tracery and partly open with the same tracery transparent. Then on the north side of the main apse the inner tracery has a curious and, as far as I can see, unprecedented pattern in which the mullions cut across circles, 30. Here again the man who was to design the Bristol sedilia might well have been delighted enough to make drawings and take them home.

The same sense of transparency and brittleness made the master of St. Urbain let the gables above his apse windows outside stand away from the wall, 16. The spandrels to the left and right are decorated with sexfoils in circles and these also are open work against and separated from, the wall behind. Finally, the same spirit found its supreme expression in the porches in front of the transepts, 17. Their details look a little later than those inside, but there is no reason to date them later than about 1280. Again, what is so thrilling here is the openness of the little structures, the way in which flying buttresses are thrown across at a level where one would not expect them, to run against outer freestanding buttresses, the surprising vistas which one enjoys looking up into the

vaults, and the thin circular shafts supporting the vaults without any intervening capitals. It must be the first time that this motif appears in France. There was no tradition of capitalless piers in France as there was in England. The logical mind of the French would not have tolerated such a solecism at the time of Chartres, Reims and Amiens. Now the architect of St. Urbain may have been one Johannes Anglicus. He is called *quondam magister fabricæ* in 1266, at which time he had left Troyes after embezzling some building funds and gone on a pilgrimage to the Holy Land.¹⁹ It is true that Johannes was a citizen of Troyes, yet curiously scattered and admittedly far from conclusive stylistic connections with England exist.

One is the capitalless pier. A second is the west portal which at Troyes, 20, has a tympanum, not arranged in tiers as at Paris or Amiens, but with Christ in a quatrefoiled circle and little scenes under pointed blank arches below them, a composition derived from St. Nicaise at Reims, begun in 1231, and later repeated at Sens, but otherwise exceptional in France, but proved by Lethaby to have existed at the north transept of Westminster Abbey about 1250-60 and still surviving at Lincoln about 1260-70. Then there is the double piscina at Troyes, with figures in the spandrels to the left and right of the gables. This again is a favourite English motif, from Worcester about 1200, to the Westminster Abbey transept (wall arcade in the aisle) and the Salisbury Chapter House. One might well say that the double tracery with contrasting patterns has also an English precedent in the double arcading with different patterns in the aisles of the east part of Lincoln about 1200 (taken over at Mont St. Michel in 1225-28). Finally, there is the surprising fact that inside the south porch at St. Urbain amongst some blank wall arcading of no special interest, just one arch appears with an ogee head, 22. Dr. Hastings has drawn attention to some possible French thirteenth century ogee arches in funeral monuments drawn by Gaignières, but the arch of St. Urbain is certainly the earliest of all surviving ogee arches anywhere. It is so improbable that Lasteyrie tried to prove it belonged to the nineteenth century, but evidence on the spot does not bear that out.

Perhaps the tracery above the doorways of the porch is just as improbable, 20. It is of two lights with the mullion tiptoeing on a gable below. This motif brings me back at last from France to Bristol and on to Gloucester.

The first alteration of the Norman abbey church was concerned with the south nave aisle. The date is 1318-29. Here the copious use of ball-flower is typical of the West Country and matched for instance inside St. Augustine's and

outside the tower of St. Mary Redcliffe. The tracery is nothing special, but also comparable to Bristol.

The next work put in hand after the south aisle is the one which made the scale of the future alterations possible: the monument or rather shrine erected to the murdered Edward II. The murder was committed in 1327. This monument with its delicious confectionery canopies,²⁰ its plentiful ogees and abundant crocketing and especially its gradual and ingenious recession in diagonals—first the lower buttress shafts, then diagonally back by flying buttresses to the short upper buttress shafts, then diagonally back to the small side



30, tracery at St. Urbain at Troyes; a, above the doorway of the south porch; b, in the apse.



¹⁹ See E. Lefèvre-Pontalis l.c. and also, as Mr. Harvey tells me, *Bull. Mon.* 81, 1922, p. 480, where Lefèvre-Pontalis pronounces against the attribution of the design to Johannes because *magister fabricæ* often also means the clerk of the works, and a master mason would not be in charge of the building funds.

²⁰ See J. M. Hastings: *THE ARCHITECTURAL REVIEW*, Vol. 99, 1946. Thanks to Mrs. Clifford's kind help the canopy has recently been examined by Mr. L. L. Richardson, a geologist, and the verdict is that the canopy is 'of fine-grained oolitic limestone of the facies of Painswick stone and quite likely that stone. Plaster is only used for the joints.' That disposes of the doubts expressed by Dr. Hastings on p. 122 of his article.

openings of the big covering canopies, and again diagonally up to their main openings—seems to me to belong entirely to Exeter, that is the fashion of the West Country.

But more important still is the work which began a few years later on the south transept and chancel. The transept, it is known, was begun in 1331 and completed by 1337, the chancel was begun after that, and its vault was on before 1351.²¹ It is these parts which, according to Mr. Harvey and Dr. Hastings, were designed by one of the King's masons fresh from the Perpendicular experiments of St. Stephen's Chapel and/or St. Paul's Chapter House. Now my contention is that what motifs at Gloucester are Early Perpendicular can more easily have been picked up by a brilliant outsider than what motifs exhibit the spirit of Bristol. It is more likely that a Bristol mason studying for this new Gloucester job knew what was going on in London, and learnt the trick of panelling by means of descending mullions and transomes—a trick which in any case had been in use in France for quite some time (inner west façade Reims, c. 1275)—than that a London mason would have cared to, or have been able to, repeat and develop the ingenuities of the Bristol style. These appear at Gloucester in many characteristic ways.

On the ground-floor level of the transept the small south door has an ogee-headed surround and the few steps leading up to it are framed by solid side walls like the wings of a wing-chair, 26. The fronts of these side walls facing into the transept curve forward in their lower parts. There is nothing like that at Bristol, but the motif displays the same sense of play in space, the same unconcern with the merely structurally necessary, and the same relish of oddity as the tomb recesses at Bristol or the north porch of St. Mary Redcliffe. On the wings are figures of angels, and similar figures also occur supporting brackets on the east wall of the transept. Of these brackets the one south of the entrance to the chancel aisle is particularly capricious, 24—L-shaped in plan, that is projecting straight, and then in the front breaking by 90 degrees, and in section with concave sides. Here again Bristol offers us immediate parallels. Moreover, the twin entrance to the chancel aisle itself has two heads exactly as frilly as Bristol work, 27. Their shape is, in fact, a twice repeated motif like the old-fashioned writing-master's bracket, two S-curves meeting in a point. This doorhead carries a transome on which opens two normal pointed arch-heads with ogee detail. The spandrels of these upper arches have blank open-work trefoils and mouchettes, rather like the sexfoiled circles outside the chancel at Troyes. The arches carry a second transome and on this begins the new Perpendicular system of panelling, blank where it is applied to solid wall and open where it meets the voids of chancel aisle or chancel gallery.

The same system is used for the whole east wall of the transept—open panelling in front of the upper storey of the east chapel—and for the other walls. Where, on the west side, the nave aisle meets the transept blank panelling is again replaced by open panelling. Now the filigree character of this open panelling and the vistas it half reveals with space

behind seem to me in themselves an example of Bristol rather than London mentality, although Dr. Hastings has rightly emphasized the mullions originally descending in front of the lower chapel windows of St. Stephen's, 31. However, the effect there can never have been as much like that of a grille as at Gloucester. It stands, I would say, half-way between the classic Gothic double-layer tracery of Lincoln or Durham and Gloucester.

As we move on from the transept to the chancel, the re-modelling of which began in 1337, the situation remains the same. The panelling, it is true, gets more Perpendicular, but the spatial play is not given up. The doorways, for instance, between the chancel aisle and chancel are ogee-headed, 28, and on the point of the ogee tip-toes the mullion of the whole first bay, rising up to the vault, a motif clearly foreshadowed in the porch doorways at Troyes, 30. A similar oddity is the thin arches at the foot of the side parts of the big east window, 23. There can be no necessity for them; their only purpose is to break that very evenness of panelling which the designers had been shown as the new fashion in London and made to transfer to Gloucester.

But the highwater mark of this playfulness which is so

contrary to the spirit of the Perpendicular style is the strainer arches across the transepts at the crossing, 25. They are very depressed and carry a kind of king posts on their tops.²² The posts are supported by concave side pieces drawn up from the arch and on them and the posts tip-toe the springers of the crossing vaults. Now that is undeniably the very motif of the Bristol aisles all over again, except that everything is more fragile at Gloucester. This motif, it is my contention, structurally unnecessary as it is, would never have been introduced by a London mason. It proves that Gloucester carries on where Bristol left off, even if it is true that for a future which



31, the window of the lower chapel of St. Stephen's with descending mullions.

was to be in sympathy with the straight, rather than the sinuous, the Perpendicular import at Gloucester was to be far more important than all the Decorated subtleties. Yet these subtleties of filigree curves and unexpected vistas into space are what gives Gloucester its personal fascination and distinguishes it from so many later and more correct Perpendicular designs.

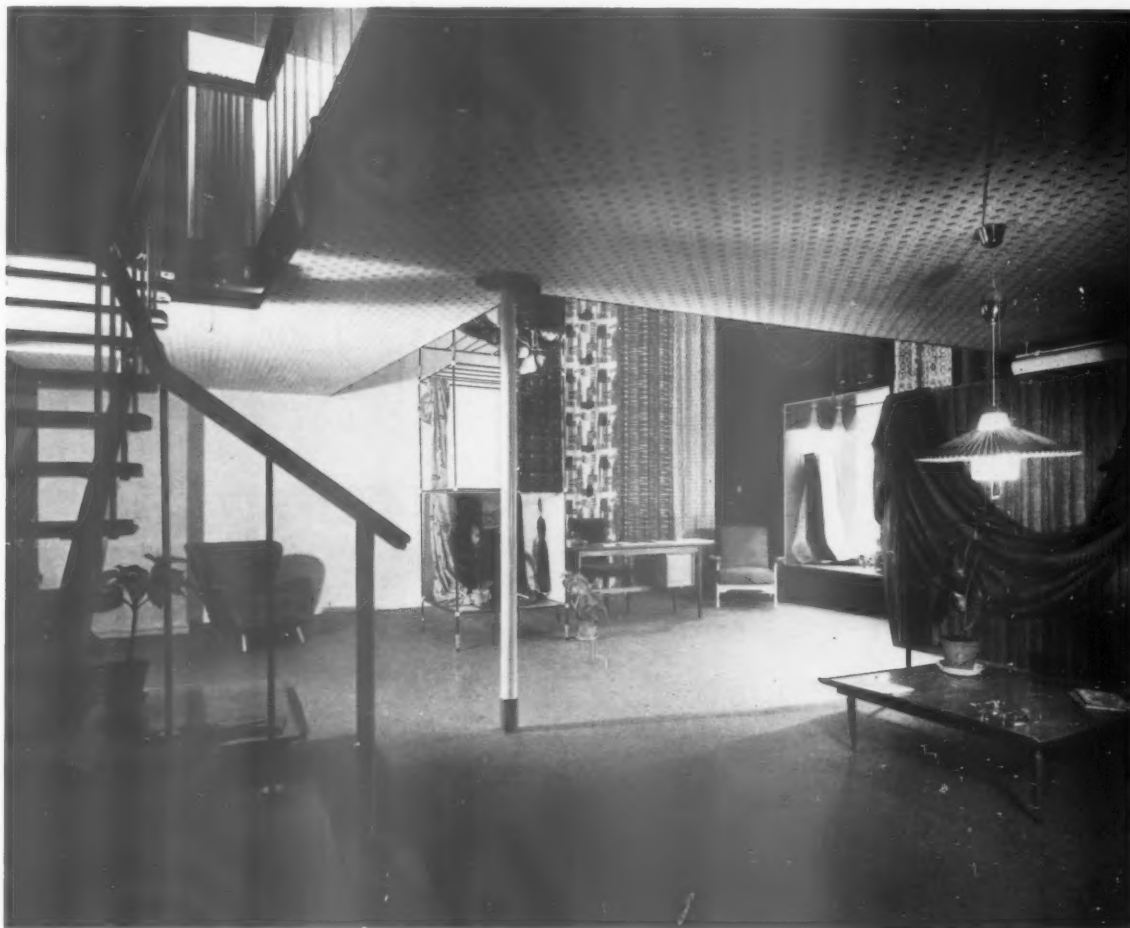
²¹ *Historia Monasterii Scti. Petri Gloucestriae*, Rolls Series, 1863.

²² Dr. Evans suggests that some of the Bristol peculiarities may indeed have a timber rather than a stone pedigree.

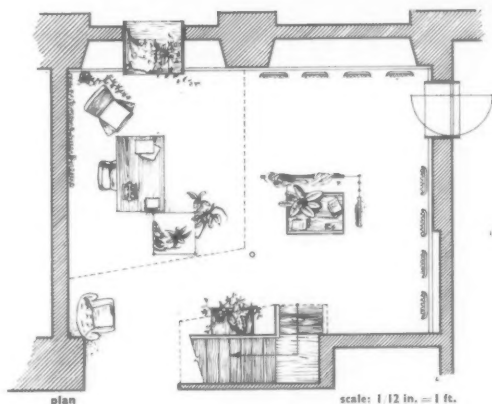
TWO SHOWROOMS IN MANCHESTER

SHOWROOMS FOR THE COTTON BOARD

1



The main showroom with the staircase to the mezzanine on the left.



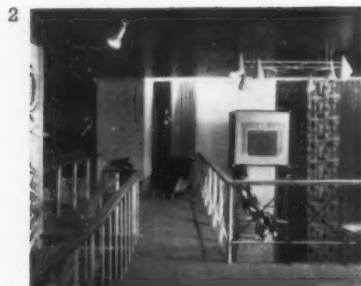
Robert and Roger Nicholson: designers

The architects of these showrooms for the Cotton Board Colour Design and Style Centre in Manchester were asked to provide a showroom and fittings that would allow an exhibition of almost any product—fabrics, designs, paintings or ceramics—to be easily assembled and speedily arranged. (A recent exhibition was in fact assembled in 24 hours.)

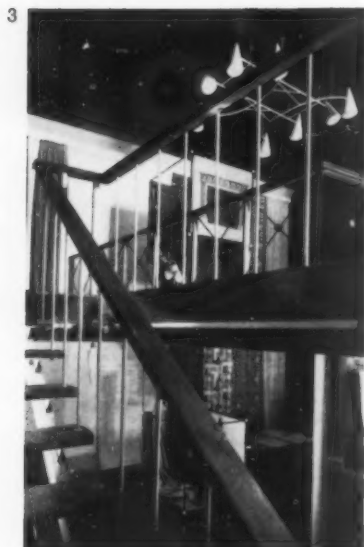
The original room was about 16 feet high with rather ugly alcoves and an entrance into a larger hall screened above by a wall of glass bricks. This room has been given a partial mezzanine and the staircase placed in the alcove formed by removing an existing partition wall and concealed stairs. New entrance doors and a window into the street have also been made. The alcoves are

TWO SHOWROOMS IN MANCHESTER

6, opposite, a general view showing both floors. The photomural in the staircase well is an enlarged map of Manchester and Salford. The ceiling is finished with copper metallic paint and metalwork is picked out in black and white. Timber stair treads are natural.



Part of the mezzanine. The chair was specially designed, and is covered with tan and black corduroy.



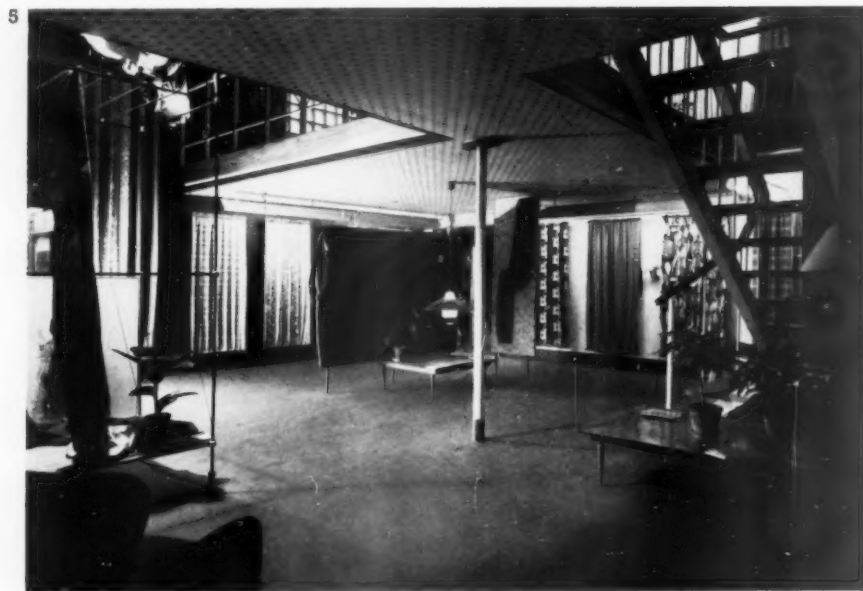
View from the staircase showing both ground floor and mezzanine. Below the chandelier stands the assembly of rod units forming a support for floor-to-ceiling drapes of cloth.



Below the staircase on the main floor is one of the low display tables; by fitting different legs it can be raised or lowered.

screened off completely by stud partition walls giving clear surfaces.

The walls and many of the special screens have been holed with brass at definite distances so that special fittings for fabric display can be placed wherever they



are wanted. These holes besides taking two types of fitting can also be used for plant holders or small brass rimmed boards for notices. In addition interchangeable screens are provided and also black and white rod cages which can be combined in any variation of 3-foot cubes. Boards and rods have been made to fit these cubes as boxes, so that they form shelves or screens for the display of fabrics or three-dimensional objects. Other units have been designed for use as either platforms or low tables, according to the adjustment of the legs.

There is fixed trough lighting for general illumination and additional points in the floor and ceiling allow for special lighting. A central fixture in the upper ceiling has been designed for directional lighting with a rod structure allowing any arrangement of long drapes of fabric from ceiling to floor.

Colours and materials used are as follows: Wall opposite entrance, both floors—white paint; street wall, both floors—green-black paint; entrance wall, lower floor—white paint, upper floor—grey-cream textured wallpaper; stair wall, both floors, before staircase—light yellow and dark green three-dimensional-patterned wallpaper, staircase—black and white photo mural, recesses—red, after staircase—white paint; upper floor ceiling—copper metallic paint; floor—cinnamon-coloured felt; mezzanine ceiling—white Regency pattern wallpaper with mustard rosettes; floor—hazel-nut-coloured felt. Black and white are the colours used for details and fittings.

A general view of the main floor with the base of the rod structure for draping samples on the left. The floor felt colour is hazel-nut and the ceiling paper is white with mustard-coloured rosettes.



Gordon and Ursula Bowyer: architects

7, the partitioning of the corridor which separates the individual office space from the main showroom, seen looking towards the main entrance in 8.



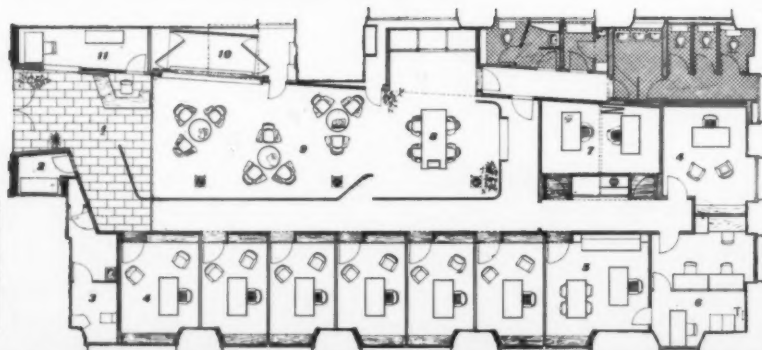
9, the display case set in the reception foyer partition with the end of the reception desk on the right. Plant containers were designed by the architects. 10, part of the demonstration table shown fully in 12. The end wall comprises sample cupboards with sliding doors. 11, an office. 12, the demonstration table with its control panel from which the lighting unit above it is operated. This unit throws down several different kinds of light; English summer daylight, English winter daylight, ballroom light, Cape Town average daylight and Sydney average daylight.

2

SHOWROOMS FOR A TEXTILE MANUFACTURER

The clients, Messrs. Tootal, Broadhurst, Lee, a firm of textile manufacturers, had no adequate showroom for overseas customers and wished to convert a part of their existing building for this purpose. The area chosen was approximately 80 ft. x 40 ft. x 13 ft. high, approached directly from the main entrance hall. One of the long sides faced on to the street and part of two of the others overlooked a poorly lit loading bay. The space was completely free internally except for a hoist, a directors' cloakroom which could not be disturbed and some structural columns. The clients required, in addition to the showroom, an office for the export director, private offices for seven market managers, a general office, temporary accommodation for overseas managers visiting Manchester and adequate cloakrooms and storage space. In the showroom a certain amount of display space was asked for but emphasis was laid on prestige and facilities for entertaining customers rather than attempting to show too many products.

The offices and cloakrooms have been planned along the outside walls for natural light and the showroom is placed in the resulting internal space. As this space tended to be long and narrow an attempt has been made to break up its length architecturally by means of changes of ceiling height, screens, recesses, materials and colours as well as in the arrangement of furniture. Apart from this, access to the offices is provided from the showroom itself and not from a separate corridor which would have reduced its width even further. The entrances to the offices are masked by a screen which can also be used for displaying fabrics. The existing hoist which projected into the showroom has been hidden by bringing the side wall of the showroom out to the face of it and using the space on



key
1, reception. 2, staff cloakroom. 3, existing directors' cloakroom. 4, the seven market managers' offices. 5, director. 6, general office. 7, overseas manager. 8, demonstration table. 9, main showroom. 10, display box. 11, telephone exchange and cloakroom.

scale: 1/20 in. = 1 ft.





13

tube shining on to a recessed trough in the lowered ceiling. General lighting in the showroom is provided by an over-all pattern of small metal reflectors recessed into the ceiling with a continuous lighting trough at the reception end throwing indirect fluorescent light on to the ceiling. Adjustable spotlights are attached to the columns for illuminating the display screen. A particular feature of the showroom is a demonstration table where fabrics can be examined under different types of light. Nearby are fitted cupboards for storing the samples.

Materials and finishes are as follows:—
RECEPTION FOYER: floor—black tiles; walls—polished sycamore panels on pale grey; splayed wall—lemon yellow; ceiling—pale blue with white recessed lighting trough; entrance door handles—cast aluminium, stoved enamelled pale

each side for a window display, cloakroom and sample cupboard recess. The private offices are of minimum size as it is intended that managers will normally receive customers in the showroom and not in their own offices. The customer upon entering the export department can leave his hat and coat with the receptionist, who then directs him either into the showroom or to one of the private offices. The reception foyer is lit

grey and polished ebony. SHOWROOM: floor—light olive green carpet; side walls—pale grey; end wall—dark grey; recessed panel above lighting canopy—lemon yellow; ceiling white; recess between ceiling and wall—dark blue; lighting canopy—fibrous plaster, underside and edges—white, top—dark grey; screen—elm veneered with white beech divisions, supporting tubes—dark grey; display case in screen—ebonised beech frame, inside—white; window display—Honduras mahogany outer frame, inner frame—dark grey and white, rear screen—white; door frames—white; structural columns—Ashburton marble facings with sycamore strips. MARKET MANAGERS' OFFICES: floor—natural haircord carpet; side walls—pale grey and white with Danish wallpaper, end walls—white; ceiling—white acoustic tiles; window frame—white; window fitting, recessed plinth—dark blue; storage fitting, central recess—pale grey-blue, recessed outer frame—dark blue, finger grips—black; curtains—lemon yellow lined with pale grey.



14

13, a directional wall lamp, and 14, a table, both designed by the architects.
15, the showroom seen from the main entrance. The partition on the right conceals a corridor leading to the individual offices.



15

Kenneth Browne

T R I M

THE TREATMENT OF JUNCTIONS VERGES AND MARGINS

In order to achieve an integrated and vital urban landscape it is important that no details however small should be passed over as not worth bothering about. Though they may appear insignificant on a street plan, these are often the finishing touches and if they are left to chance or hastily improvised at the last moment the whole character of the scene is bound to suffer.

That character is to a large degree determined by the sensitive and appropriate handling of a collection of humble details; the way they are fitted neatly into the townscape pattern whilst at the same time satisfactorily performing their particular jobs. This article attempts to focus at close range on some of these details, which have been grouped under the heading *trim*—one small but vitally important part of the urban paraphernalia that we see every day yet hardly ever notice.

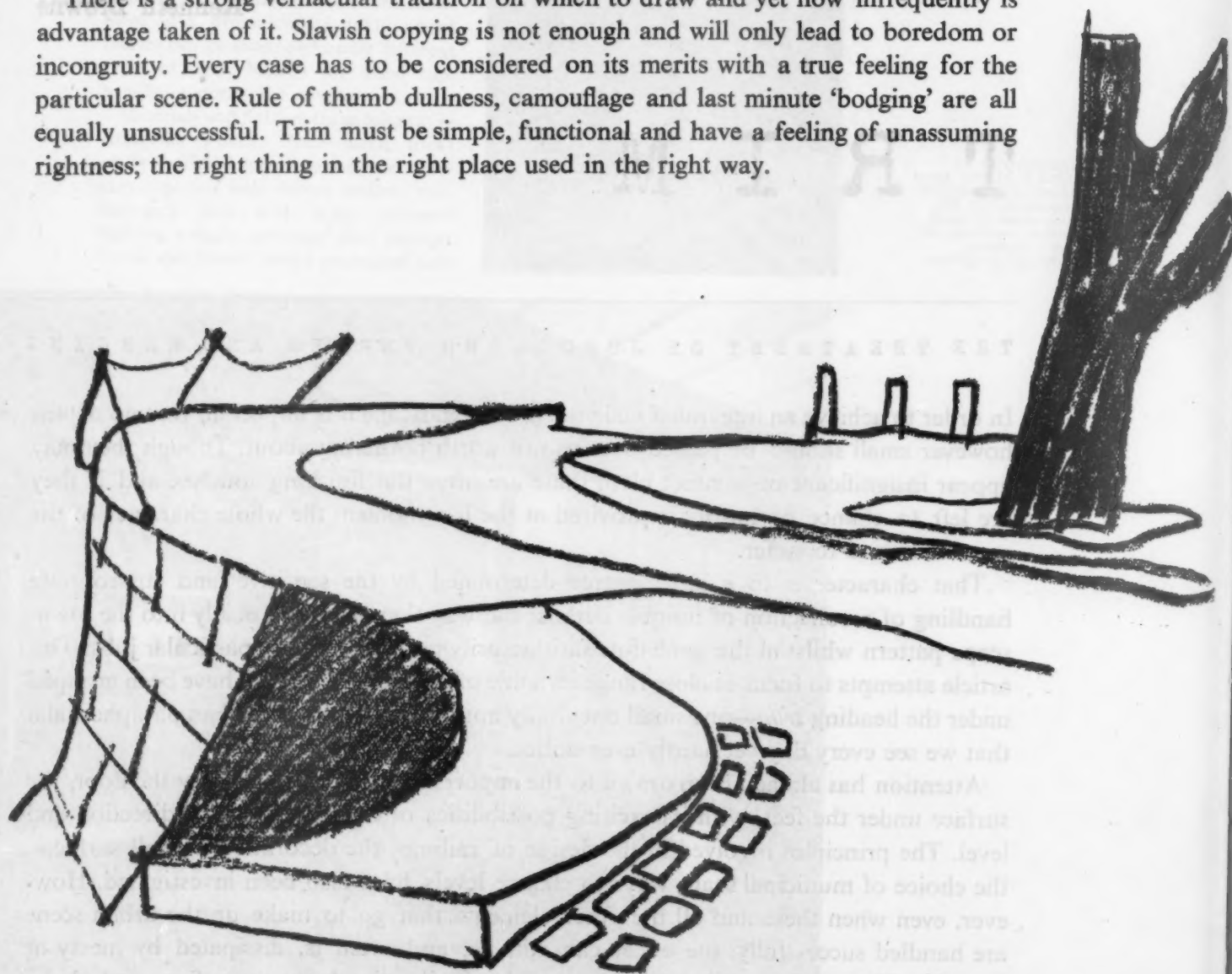
Attention has already been drawn to the important role to be played by the floor, the surface under the feet, with its exciting possibilities of changing pattern, direction and level. The principles involved in the design of railings, the decoration of wall surfaces, the choice of municipal seats, ways to change levels, have also been investigated. However, even when these and all the other elements that go to make up the urban scene are handled successfully, the effect can still be, and often is, dissipated by messy or fussy handling of the edge or trim that marks the junction between surfaces and planes and gives them their meaning. In the floorscape picture, for instance, the edges are the vital lines and their clear statement is essential, they are the boundaries, and by their

sharpness, roundedness, straightness, direction, the whole mood of the scene can be expressed.

As an example let us take a rail on the edge of a quay. The design of the railing itself may be good yet the final effect can still fail to carry conviction unless the following questions have been asked. Is a rail really necessary here at all? Is this the right type of railing to use? How far back should it stand from the edge? How should its supports join the floor? The first two questions are ones that previous articles have considered; the second two may seem to be concerned with minor points but these points are equally vital to the success of the final effect, and it is the kind of attention to detail they represent that is here named trim.

Again a plea must be made for studying the whole environment of the site and letting the atmosphere sink in. Too often decisions are made on plan alone and differences of level are not sufficiently taken into account and their possibilities are wasted.

There is a strong vernacular tradition on which to draw and yet how infrequently is advantage taken of it. Slavish copying is not enough and will only lead to boredom or incongruity. Every case has to be considered on its merits with a true feeling for the particular scene. Rule of thumb dullness, camouflage and last minute 'bodging' are all equally unsuccessful. Trim must be simple, functional and have a feeling of unassuming rightness; the right thing in the right place used in the right way.



road-footpath

A very clear statement and full of character, a road-gutter-pavement junction in Dokkum, Holland, 1. The cross pattern of bricks forming the road surface is neatly stopped by four courses of bricks laid at right angles which emphasizes the direction of road and water flow. The transition from gutter to path is defined by a curb of larger units which form a slim edge to the considerably larger paving slabs. By contrast, 2, at Honiton, shows the familiar ill-defined junction where the gutter is merely a dip in the tarmac which creeps untidily towards the curb line. It lacks interest and character.

A strong curb-line of precast, interlocking units, as at The Hague, 3, provides a contrast in scale, texture and direction with the small bricks of road and footpath. The pattern of the key gives added interest and a single row of bricks following the curb both at pavement and road level neatly stops the brick courses. Strong visual definition is given by the light tone of the curb; an advantage to walkers and drivers. A trap for walkers, the bull-nosed brick curb in the Victoria Embankment, 4, is also too hard and unsympathetic. Where the pavement surface is laid in situ and not in pre-cast units a thin, strong edging which acts as permanent shuttering is a good solution both practically and visually. In 5, at Sidmouth, the metal trims to footpath and ramp admirably fulfil their purpose, in defining, with utmost economy, the contour like a strong pen-line.



road-grass

Grass, like all living features of townscape, requires sensitive handling. In 6, at Tetbury, a clear statement of road to grass is maintained despite the fact that it has not been necessary to build a railing or wall. But the attraction of grass is completely cancelled out at Lemmer, Holland, 7, by the unpleasant angle iron trip barrier posts stabbed into the grass.

path-grass

The junction of grass with another surface calls for a light touch. In 8, at Chippenham, the slim on-edge stone slabs are in harmony with the grass and mark its boundary without fuss. The heavy handed method, 9, at Hereford, produces a depressing and inhuman character; a combination of dismal untended grass and a heavy, shapeless concrete plinth of exactly the same material as the pavement. Whereas the familiar metal hoop, 10, is light and transparent, a kindly edging to grass.

8



10



road-wall-path

In this view, 11, at Bristol, there are two points of interest. First the continuity of road and pavement which is always a pleasant feature; the division is provided by the strongly marked gutter. Secondly, the horizontal stone courses of the retaining wall are neatly stopped by the strong sloping top course of narrow stones. Simple but exciting treatment is also shown in 12, Tetbury, where the lines are not fussed and the rail is not carried beyond the point where it is absolutely necessary. Too often the result is like that in 13.

11



12



path-barrier-road

14

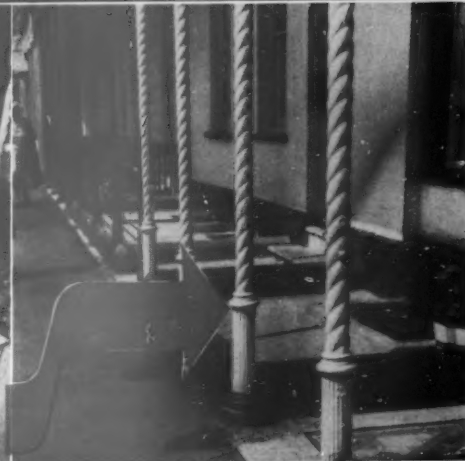
The change from vehicular to non-vehicular territory is clearly defined in this view, 14, at Harlingen, Holland. The edge of the square path units is echoed by the finely shaped wooden bollards standing in their own narrow band of small bricks which in turn trim the brick courses of the road surface.



path-building

15

Here, 15, at Woodstock, the threshold is defined by a single smooth slab contrasting with the cobbled, non-pedestrian surface which extends to the wall of the house. A clear cut and unambiguous statement. A variation from this can be seen in the example from Sidmouth, 16, where the junction of pavement and house is marked by a light screen of columns springing from the plinth.



16

path-flowerbed

17

A straightforward and economical solution, 17, from the Festival of Britain, shows a smart concrete curb. By contrast the ill-defined and scruffy rusticated rockery edge fails as trim, 18, the Victoria Embankment. Earth seeps through on to the path and the bed is difficult to keep tidy.



18

path-trees

The surround to trees, which are a living element of landscape, must give no feeling of restriction to growth. 19, at Nîmes, shows foresight. The paving slabs are terminated by a neat surround and the tree is seen to be growing from the earth not the pavement and has room to breathe. Frequently, however, this careless treatment, 20, is to be seen. The tree's growth is hardly encouraged and it appears to have burst its way through the asphalt. A pavement grid, 21, Menton, allows the tree to breathe and rain to get at the roots. It is also an attractive addition to floorscape. The heavy wall ringing the bole, 22, is illogical and unnecessary.

19



20



21



22



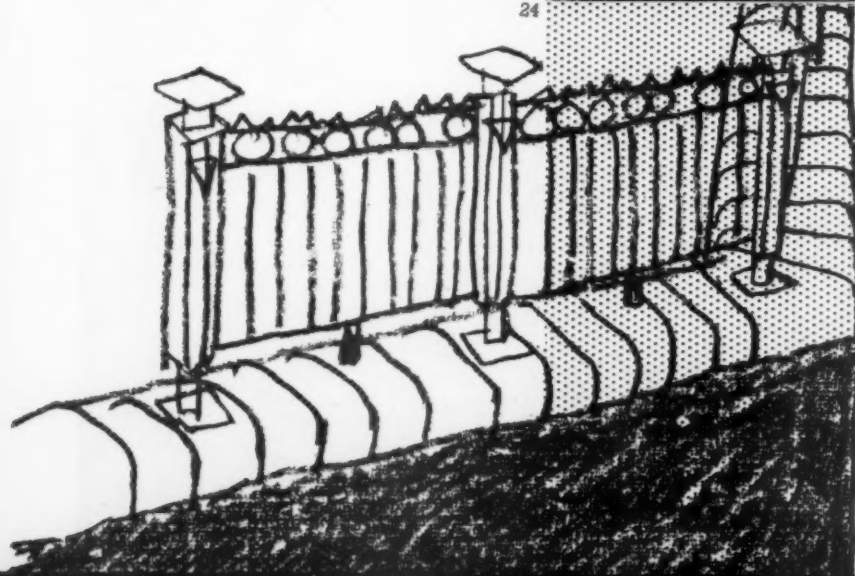
path-water

A stream running along the side of the street is a charming and refreshing feature of many small towns but to get the best out of it demands careful handling. The clarity of this picture, 23, Lyme Regis, emphasizes the great difference between trim and trimmings. The sharp edge and crisp directions coupled with the way the wall of the building goes straight down into the stream gives drama to this scene whilst 24 shows what might, and usually does, happen.

23



24



path-rail-water

Noteworthy points about this rail, 25, at Orrebro Castle, Sweden, are the tapering supports which terminate in very satisfactory bolted feet which are placed not so near the edge as to appear unsafe. Also the graceful swing of the rail at the change of direction is not hampered by intermediate posts whilst the strong band of stone slabs forming the edge makes a good stop to the small setts of the quay surface. The overhang of the slabs provides an unexpected subtlety of profile. A quayside barrier, 26, at Minehead, of metal posts and chains is simple and logical. The posts are set well back from the edge giving them a feeling of security to which the square detail of the foot contributes. Again the accent is on simplicity, a quality well displayed in the wooden bridge, 27, on the Thames. This detail shows the rail posts contained by the boards of the foot-walk which are cut back to house them neatly.

25



26



27



path-rail-grass

Here, 28, at Beaminster, the extremely simple form of the metal rail with its generously spaced supports and its lively brackets at every fourth support, in no way obscures the grass it protects. The floor carries through unobstructed and the rail is set in its own textured band and at just the right distance in from the paving slabs, the outside line of which remains unbroken. Functionally it marks the limit of the walkway. The division of grass and path, 29, at Sidmouth, is accompanied by the worst possible collection of elements; chicken wire, concrete posts and low hedge. The real junction of grass and path is destroyed. The next example, 30, at Richmond Green, shows the junction effected naturally. The finely shaped bollards, painted white, are set in from the pavement allowing the grass to appear uncaged.

28



29



30



path-rail-drop

In junctions of this type the placing of the rail in relation to the edge is vitally important—the eye requires assurance of stability. The simplicity of the rail, 31, at Richmond, and the placing of the posts well back beyond the trimming slabs produce a generous feeling of strength. This is increased by the broadening of the posts towards the base and the T section. Note also the wide spacing of the uprights and the simple termination of the rail when it ceases to be necessary. Unnecessary complication characterizes the next example, 32, at Cambridge. Why not move the rail in from the edge and avoid the heavy and complicated bracket detail. The posts themselves are very uncomfortably placed on the junction of slope and path. In spite of the leg bracket the rail looks weak and the meeting of path and cobbled slope is indefinite and messy. These clumsy concrete posts, 33, at Bourton, are badly placed on a stone slab edge and the slack chain is ludicrous and dejected.

path-fence-garden

A clear statement—the neat trim of traditional white painted picket fence, 34, at Dorchester, divides path from garden. Between the main posts the barrier is raised slightly from the ground allowing the latter to flow through underneath. It also acts as protection from rot and allows the ground to be kept tidy. By contrast the confusion of 35, Sidmouth, fails visually and functionally.

water-grass

An excellent example of trim at the river edge this landing stage, 36, on the Thames, below Boulter's Lock, employs the vigorous contrasts of the nautical style. The rhythm of the sturdy piles gives a necessary feeling of support to the thin white edge boards. The sketch, 37, shows a scene which will be familiar to those who sail the Thames. The river tradition has been lost in the outbreak of suburbia.

31



32



33



34



35



36



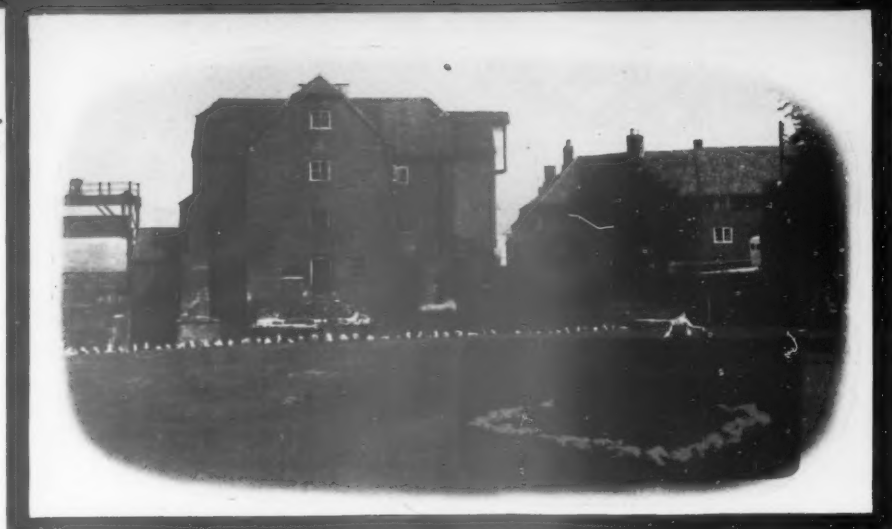
37



grass-floweredbed

38

A simple and charming scene, 38, at Tewkesbury, has been spoilt by the pathetic rustic junction of grass to flowerbed.



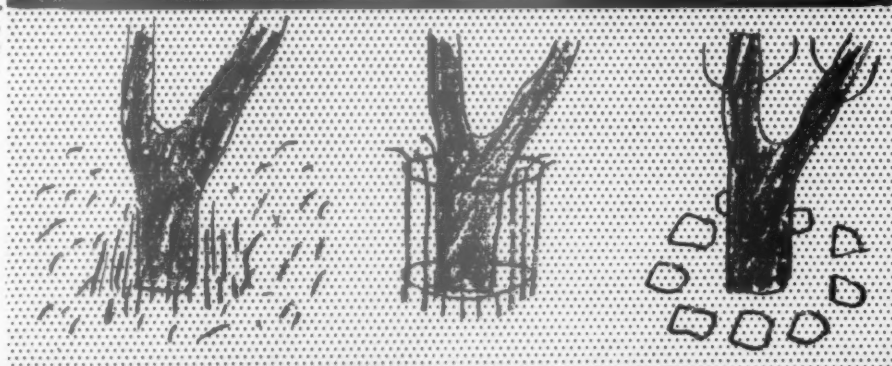
grass-tree

39

40

41

A tree looks happiest when left to grow naturally out of the grass itself, the grass being allowed to grow tall round the bole as in sketch 39. Hemmed in by a railing, 40, the tree is imprisoned whilst a rockery ring, 41, is uncomfortable and unnecessary.



handrail-step

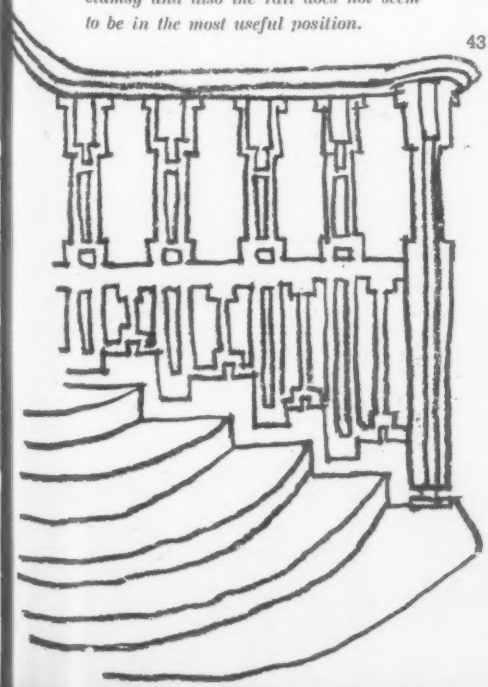
42

A good example of rail and step design together with harmony and rhythm, 42, at Richmond. The supporting posts are economically spaced and housed regularly on every fourth step. Municipal and pretentious, this fussy rail, 43, at Richmond does not echo the line of steps but rather confuses. Apart from considerations of style the last example, 44, at Chipping Norton, shows good elements put together discordantly. The combination of rail and step is awkward, the junction of rail and posts is clumsy and also the rail does not seem to be in the most useful position.

43



44







A more thoughtful, sensitive approach to pattern and colour on the floor is beginning to manifest itself as designers grasp the nettle with rather more courage and assurance than has been apparent for many years past. Refuge has too often been taken in the excellent but neutral character of wood, clay tiles and stone, while design in the relatively new materials—linoleum, rubber and thermoplastics—has too often been left to the manufacturers. Both illustrations on the facing page are of rubber flooring, the upper showing part of the Qantas Empire Airways office in Piccadilly, designed by James Cubitt and Partners, the lower the reading room of The Architectural Press in Queen Anne's Gate.

DESIGN REVIEW

H. McG. Dunnett

TOP DRESSING

A REVIEW OF FLOORING MATERIALS

The art of floor design is today largely a neglected one. This may be due in part to the attractions of hardwood floors which provide a simple, dignified solution free from design complications. It must be admitted, however, in view of the many horrors committed in carpet and linoleum design—the two main pattern providers during the last fifty years—that the popularity of such neutral floors has saved us from much visual distress.

A study of recent developments in flooring materials shows that though crude colour and nondescript patterning are still in evidence, a gradual change has been taking place. The trouble nowadays lies less in the colours and patterns of the manufactured materials than in the unintelligent application of them. There are ample opportunities for the exploitation of colour and pattern in floor surfaces. The ball is in the designers' court, for it is evident that the more far-seeing manufacturers have been endeavouring recently to adjust their colour ranges to meet the demands of contemporary design, where previously they have tended to concentrate their best efforts on the technical and physical aspects of their products.

It is interesting to observe that the main method of introducing pattern has changed little from the days of marble and stone. The assembly of geometric shapes is still

favoured, with the occasional introduction of a formalized trade mark or coat of arms. This problem of decorative treatment applies of course to floors for non-industrial purposes only, and for that reason the scope of this article is limited to these. Floor-coverings intended for jointless floorings certainly do not lend themselves to decorative experiments and for present purposes will therefore be excluded. This leaves three basic types of floor for consideration: sheetings of linoleum or rubber which are either produced in plain colours, inlaid patterns, or in small all-over designs such as marbling; hardwood floors whether in strips, blocks or tiles, which provide little opportunity for positive colour and pattern; and lastly, where the main opportunity for introducing good pattern on any scale arises—floor-covering applied as tiles, whether of clay, stone, composition of all kinds, linoleum or rubber. Such tiles are produced most economically in geometric shapes and are often arranged in repeats of a standard pattern. If the repeat is large and the units vary in shape and size some very awkward problems can arise when the design has to fit into an irregular shaped room, or a room with supports. Much freer arrangements of colour and pattern are possible without unnecessarily multiplying the shapes and sizes of tiles, and with the good colours available to-day this offers at least one method of reviving the art of floor design.

Leaving aside the problems of colour and pattern, choice of floor-coverings resolves itself into a problem of balancing cost—including that of treating the sub-floor and subsequent maintenance, with such factors as the amount of traffic expected, qualities of warmth required in the material, resilience, noise and slipperiness.

Hardwood in blocks and strips scores in the matter of wear, warmth, maintenance and appearance, though colour, obviously, cannot be introduced. Its cost, however, is higher than many of the alternative materials, though plywood and hardwood laminated with soft wood are less expensive variations. Rubber, likewise, has excellent qualities in use, with the added advantage of availability in good colours. It is also one of the more expensive floor-coverings whether used in sheet or tile form. Cork tiles may best be compared with hardwood though they provide a quieter surface in use. They likewise compare in price with hardwood and with rubber. Thermoplastic tiles, a post-war development particularly suitable for fixing direct to concrete floors, are extremely hard-wearing and are available in a variety of colours and two alternative thicknesses, which enables the cost to be varied according to the use expected.

Linoleum tiles, which can be had in a quarter-inch thickness, offer the greatest range of good plain colours, providing a surface resistant to quite heavy wear without, at the same time, being noisy. Clay tiles in all forms tend to have more specialized uses, but in their own sphere their wearing qualities are outstanding. Stone and similar based composition materials also have particular applications, especially where a very hard-wearing surface is required in large-sized tiles.

Finally, there are a wide range of composition floorings based on a variety of materials, available as blocks and tiles, some of which have been on the market for a number of years and are therefore well established. For the most part these are in neutral colours more closely related to timber and cork.

Whatever the type, however, one thing is common to all flooring materials—laying them is a highly skilled job, and good results are impossible otherwise. Correct preparation of the sub-floor is also essential before laying, as is correct maintenance once the floor is laid.

rubber

- 1, Metropolitan Rubber Co.
- 2, Cellulin Flooring Co.
- 3, Dunlop Rubber Co.
- 4, Aron Rubber Co.
- 5, Runnymede Rubber Co.

1 and 2 (on page 114) and 3 here, show a new approach to the arrangement of rubber tiles in colour combinations. All three are applicable to rooms of irregular shape, and, indeed, would seem to be a much better solution than the formal trade designs which often require borders and tend to exaggerate their regularity. In 1 the main area is white with the lines in broken strips of blue, red and black, and in 2 the colours are white, grey and black. In 3 the floor is white with an asymmetrical arrangement of rectangles in blue, red and yellow. 4 is a more conventional design in black and white used in a large bank. The bar floor, 5, is laid in rubber sheet in an abstract arrangement of plain and marbled colours. Rubber sheet and tile flooring is made in several thicknesses $\frac{1}{8}$ inch, $\frac{3}{16}$ inch, $\frac{1}{4}$ inch, $\frac{5}{16}$ inch and $\frac{3}{4}$ inch. The first is really suitable for domestic purposes only, where the wear is light, and generally speaking, one of the second two is generally essential for satisfactory wear, while the thicker types are designed for especially heavy wear or where extra sound deadening is required. Both types require the use of an adhesive and a very carefully prepared and rigid sub-floor.

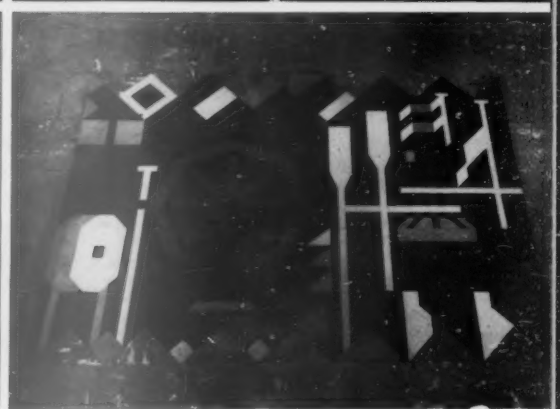
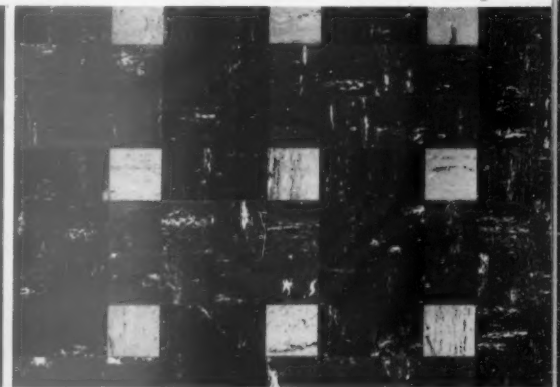


5

thermoplastic

- 6, Armstrong Cork Co.
- 7, Marley Tile Co.
- 8, Samiez
- 9, Marley Tile Co.

The application of the resin-bonded process to floor-coverings has, since the war, added an entirely new range of flooring materials with remarkable wearing properties, due to mineral based components which are fused together under extreme pressure. The normal asphalt base tile is 9 inches by 9 inches in $\frac{1}{8}$ inch and $\frac{3}{16}$ inch standard thicknesses. Since the addition of colour is possible, the result is a range of decorative tiles in the same class as rubber in appearance, though they are only available as tiles, not in the sheet and so are less flexible in application. The range of plain colours is relatively small, however, due partly to manufacturing conditions, while the marbled patterns avoid the main decorative snags referred to in connection with rubber, harsh contrasts of colour being avoided, either by retaining a mass of one dominant colour or by breaking it up with only small areas of contrast. Due to the standard size of tile, decorative arrangements are better confined to geometric patterns, which, though a limiting factor, still leaves considerable scope, as the illustrations show. The irregularity of the colour repeat in 7, in a variety of marbled designs, combined with the regularity in positioning is an effective example of this. The regular pattern of 6, in red, buff and black marbled tiles, shows a less conventional arrangement than most formal repeat techniques. In the school classroom interior, 8, strong pattern is clearly out of place and this illustrates the relatively restrained effect possible with an all-over pattern in dark marbled tiles. The nautical design of 9, set in a marbled tile surface, shows that thermoplastic tiles possess the highly decorative applications usually associated only with the more traditional materials. The cutting of designs such as this can be carried out on site, but the simpler they are the better. There are, in addition, a number of flexible types of plastic tiles



9

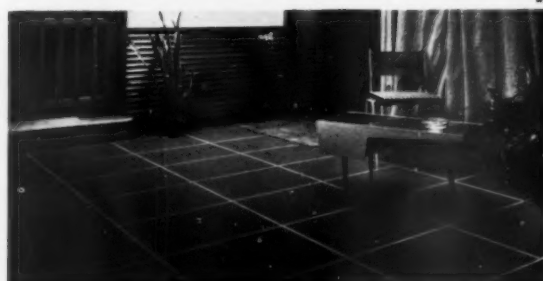
in P.V.C. or combinations of it, and there are likely to be many more applications of plastics to flooring in the future.

Plastics have the practical advantage of not being affected by damp but an adhesive must be used for laying.

linoleum

10, Korkold Decorative Floors.
11, 12, Linoleum Manufacturers Association.

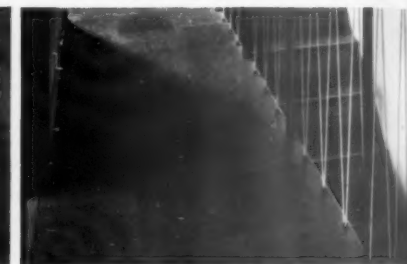
Linoleum is a versatile material available as sheet and tiles in a wide range of thicknesses to meet practically any degree of traffic. In the $\frac{1}{8}$ inch thickness, which is very hardwearing yet quiet in use and warm to the feet, the range of good plain colours is greater than in any other material. Mottled and marbled patterns are also made, but the decorative problems with these are similar to those for rubber. The showroom, 10, is laid in specially coloured $\frac{1}{8}$ inch grey-green linoleum tiles with the separating lines in white. The plaid pattern, 11, in inlaid linoleum sheet suggests that perhaps a new era of design is dawning for this material. In 12, the pattern is in three colours in a marbled finish. The thicker varieties of linoleum require an adhesive and any linoleum must be protected against rising damp or water penetration at the edges.



cork

13, Armstrong Cork Co.
14, W. Sapsote and Sons.

Cork tiles are made by compressing natural cork under heat and cutting it into sizes ranging from 6 inch squares up to 3 feet by 2 feet, a choice of thicknesses being available from $\frac{1}{8}$ inch to $\frac{3}{4}$ inch. 13 is a boardroom, in which two colours have been combined to produce a pattern, and 14 a domestic interior.



timber

15, 16, 17, Figers.
18, Horsley-Smith Co.
19, Figers.
20, Veneercraft.

15 shows the reconstructed floor in the banqueting hall of the Stationers' Company, where oak strips are combined with American black walnut. In 16, teak strip is combined with polished stone in the foyer of the Royal Festival Hall. The variations of texture produced by the graining and the natural variations of wood colours provide adequate pattern at close range without disturbing the character of the large scale effect. The dance pavilion, 17, illustrates a use of hardwood for which there is no practical alternative. The surface is $\frac{1}{8}$ inch European oak strip laid in a spider's-web pattern, the object being to lay the strips so that the dancers should always move in the direction of the grain and so reduce the friction of their feet on the floor. Since the foundations were laid on waterlogged ground, they comprise first, brick walls, then wood fillets, then a sub-floor of laminated hardwood and softwood strips, then a layer of bituminous paper and then a plywood interlayer. Wood blocks as in 18 illustrate one of the standard patterns possible with this established type of flooring, here carried out in African Muhuhu, a hardwood. The wood block floor in 19 is of deal, a softwood. Plywood is a less expensive method of using wood and is, at the



same time, not subject to the lateral movement of solid timber. 20 shows Columbian pine plywood squares. There are also types of laminated wood flooring strips with a thin hardwood surface on a softwood base which economizes in the cost of the more expensive hardwood. Softwood board is also a normal flooring material but requires to be quarter-sawn if it is to be left as the wearing surface.



19

20

clay

21, W. T. Wheeler.
22, Ruabon Tiles.
23, Carter and Co.
24, Richard Tiles.

Clay tiles fall into two classifications, quarry (from the French carré, meaning square) tiles, which are made from coarse clays such as those used for bricks, and tessellated tiles which cover all other types. Quarry tiles are made in larger sizes than the tessellated—4 inch by 4 inch by $\frac{1}{2}$ inch up to 12 inch by 12 inch by 2 inch thick—in a fairly narrow range of colours—blues, reds and buffs—depending on the type of clay used. Nevertheless they have good decorative qualities of a neutral kind where no pattern is needed. The hall in 21 is laid in 6 inch quarry tiles and illustrates a practical domestic application of this product. In 22, a 9 inch tile has been used for a living room floor where a neutral background was wanted. Tessellated tiles are made in a larger range of types and colours, and in sizes of 6 inch square and smaller. As they are made from more refined clays and by the dry process, a much closer, smoother texture is achieved. General categories comprise the plain type, the vitreous type and ceramic and vitreous mosaic. Colours in the first category are in general red and brown, though other colours can be obtained by staining the clay. The vitrifying process renders the tile impermeable and good colours are available in white, blues, greens and greys, and in mingled colours for the 3 inch square size. Black and white vitreous tiles have been used in the passage and bathroom in 22. In 23, the entrance hall to a school, the floor is laid in a non-vitreous tile in a light buff colour. Ceramic and



21

22



23

24

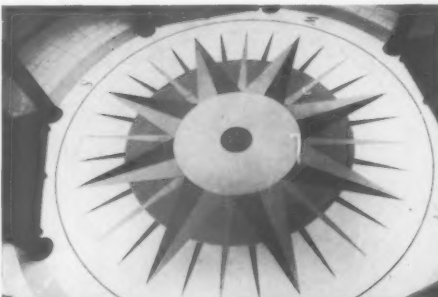
vitreous mosaic tiles are made $\frac{1}{4}$ inch thick, in squares, circles, hexagons and pentagons, in much smaller sizes, varying from $\frac{1}{2}$ inch sides on squares to 2 inch diameter for the pentagons. 24 shows glazed hexagonal tiles laid in a bathroom. Other shapes are made for

producing fan patterns. The properties of clay tiles lie in their hard surface which makes for resistance to abrasion, long wear under heavy traffic and low maintenance costs for a relatively moderate initial cost.

stone

25, Marriott and Price.
26, Jaconello.
27, Thomas E. Beach.

Marble is usually limited in application to surroundings where a rather formal note is required. Chippings of marble mixed with cement are, however, used to face the composite material known as Terrazzo; this may be laid either in situ or as precast tiles from 6 inches square up to 2 feet square, or in slabs of up to 9 square feet in size. These are available in a range of colours, with a typical texture provided by the marble aggregate. The compass rose design, 25, illustrates a rather specialized use in four colours and was laid in situ. In 26, a natural colour terrazzo in precast tiles has been broken up and laid in a random fashion. The restaurant floor, 27, is made from pieces of broken white marble and broken slabs of coloured precast concrete in blues and greys, set in cement to produce a variegated random pattern. The most remarkable decorative use of marble is of course as mosaic, where marbles of many colours are broken into small pieces, known as tesserae, and laid to form designs and patterns. The designs are laid out in the studio, attached to paper and divided up into sections of 2 feet by 1 foot for transfer to the site for bedding in cement. The example, 28, from the new floor in the National Gallery in London illustrates this traditional form of floor decoration.



25

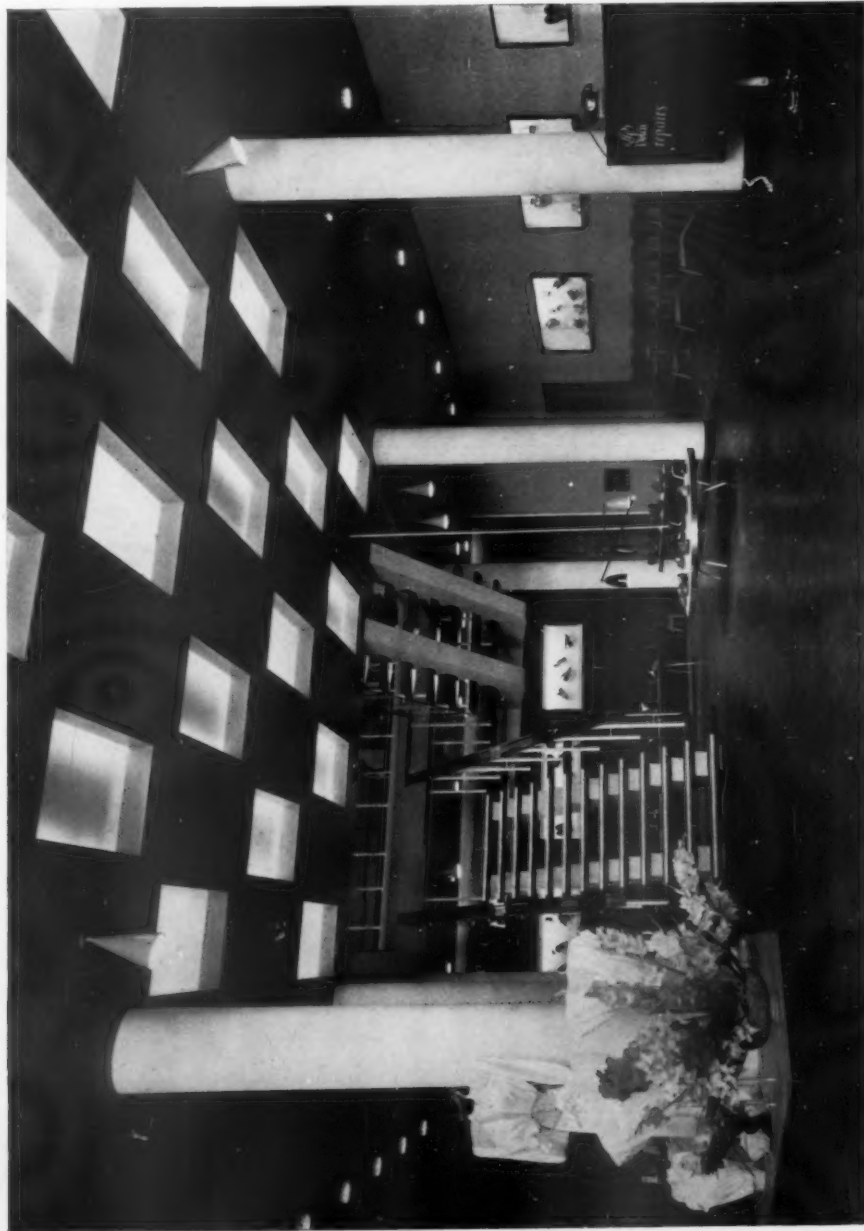
26



27

28

current architecture recent buildings of interest briefly illustrated



1, a general view of the ground floor.

SHOE STORE IN BRISTOL

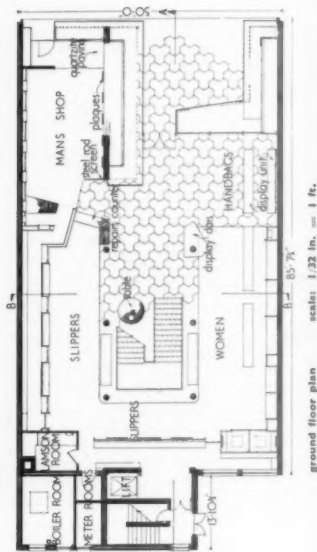
ARCHITECT: ELLIS E. SOMAKE

This shop is on three floors. The ground floor is used for sale of lingerie, handbags, slippers and 'impulse' sales; the first floor for ladies' and children's shoes, and the second floor for stock, staff and office accommodation. The reinforced concrete frame has hollow tile floor slabs and brick wall panels. The front elevation is faced with reconstructed Clipsham stone and polished Portland stone panels. Finishes are: shop front metal work, polished bronze; stall risers and frieze of men's shop, cellulosal aluminium; fascia sign, mounted on polished marble. Floors: sales areas, black or travertine

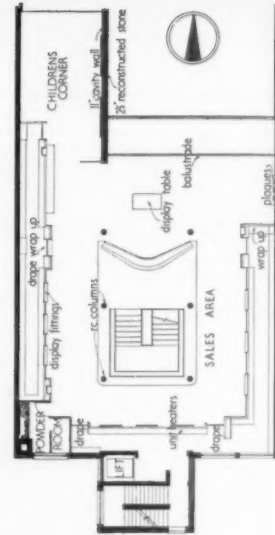


2, the exterior from the north.

terrazzo with brass dividing strips, fitted carpet; men's shop entrance lobby, random quartzite; stock areas, linoleum tiles. Ceilings: ground floor, Italian blue, pale lemon yellow and white coffers; first floor, deep red carried through from lobby. Walls: at rear, deep red as ceiling.



Ground floor plan scale: 1/32 in. = 1 ft.



first floor plan

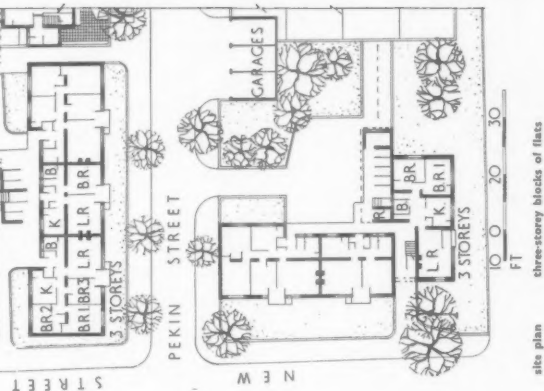
HOUSING AT LANSBURY, POPLAR, LONDON

ARCHITECTS: BRIDGEWATER AND SHEPHEARD

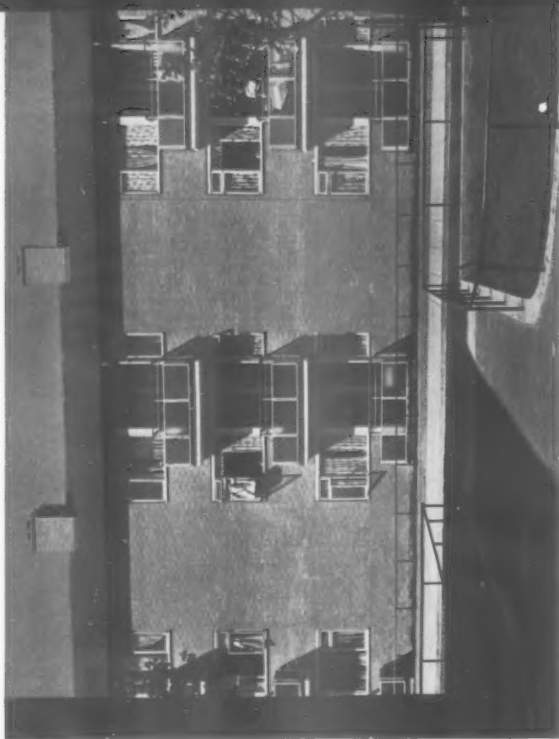
The layout for these 27 houses and 30 flats was issued by the town planning department of the London County Council, while the detailed planning was done by the private architects. The terrace houses are planned with all access, including that to kitchens, coal spaces and dustbins on the road side and within a 20-ft. front-



3



5



4



3, terrace houses facing Pekin Close which is paved with artificial stone and has granite setts and old cast iron bollards from the city. 4, linked houses and terrace houses facing Pekin Close. 5, south elevation of flats facing Pekin Street.

covered with asbestos cement slates and windows are timber of the heavier E.J.M.A. section. Although elevational treatment was left to the architects, the town planning authorities expressed a preference for a London stock, or similar brick, and a 25-deg. pitched roof, slated. Living rooms have precast concrete window surrounds and windows, gutters and all trims are painted white. Front entrance doors are painted various colours and have panels of wired cast glass. Ground floors are finished with thermoplastic tiles and first floors to houses are boarded on joists at 16-in. centres. Ceilings are of plasterboard, plastered and distempered. Hot water in all houses and flats is by a back boiler to the living-room fire.

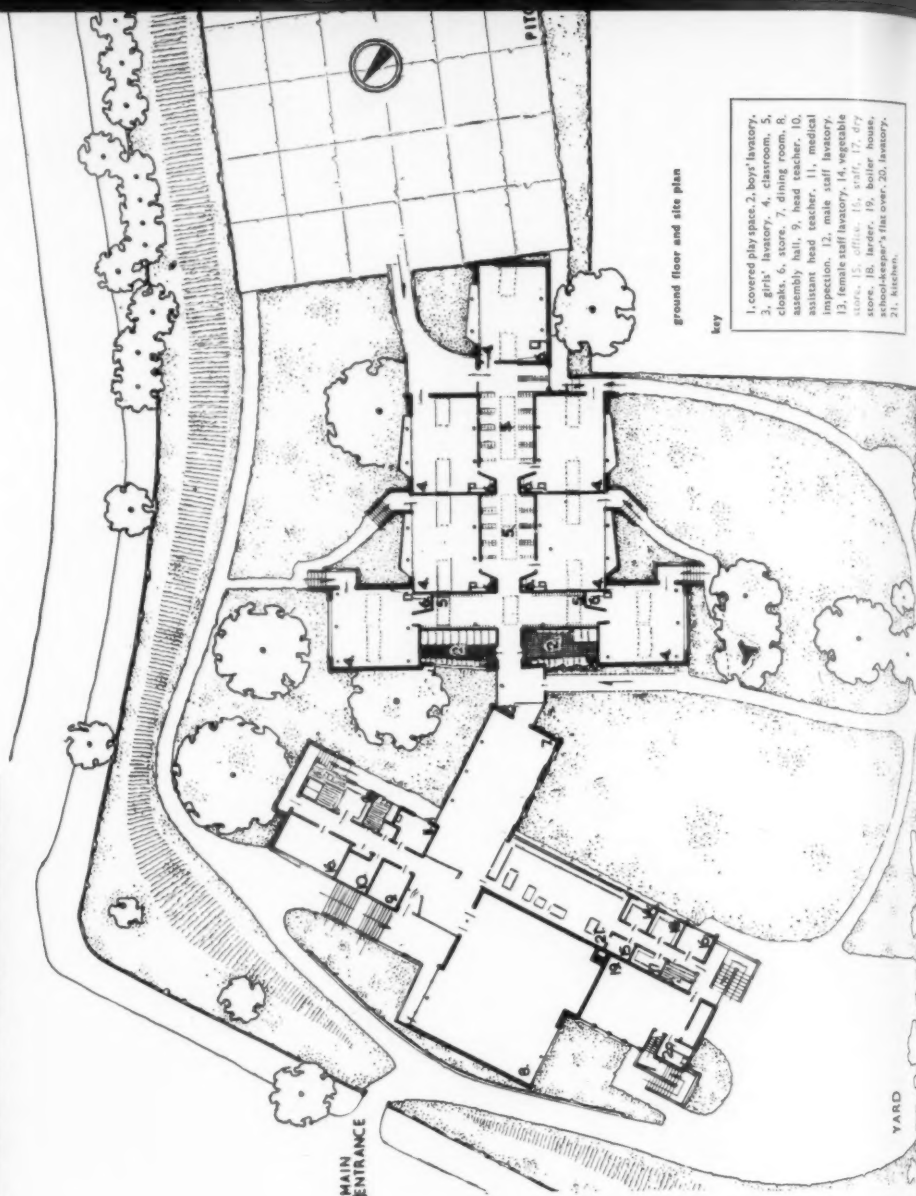


6, the main entrance: teaching staff quarters on the left, assembly hall on the right.

PRIMARY SCHOOL AT CHISWICK, LONDON

ARCHITECT: C. G. STILLMAN

The Cavendish Primary School, a one-form entry junior and infant school for 280 children, is one of twenty primary schools completed by the Middlesex County Council for the 1950 education programme. The designs for all these schools have been largely standardized to save drawing office time. The site consists of two acres, well planted with mature trees but liable to flooding. The buildings are therefore raised some feet above the ground in some parts on piles. The school comprises a standard classroom block, with seven classrooms, cloakrooms and lavatories, and an administration block, raised on a light reinforced concrete frame, under which a covered play space is provided. A development of this standard plan has now been produced, wherein the accommodation in the administration block is to be housed under the classroom block giving an even more compact plan for restricted sites (within the Ministry's latest cost figure of £140 per place). The construction of the superstructure is based on a frame of light steel tubular columns supporting welded steel trusses built of light angles. The roofs are of reinforced wood wool with a half-inch screed and ply-felt finish. External and internal walls are cavity brick.



ground floor and site plan

key

- 1, covered play space; 2, boys' lavatory; 3, girls' lavatory; 4, classroom; 5, cloak; 6, store; 7, dining room; 8, assembly hall; 9, head teacher; 10, assistant head teacher; 11, medical inspection; 12, male staff lavatory; 13, female staff lavatory; 14, vegetable store; 15, office; 16, staff; 17, dry store; 18, school; 19, school; 20, school; 21, kitchen.

BOOKS

THE LAST OF 1851

PALACE OF INDUSTRY, 1851. By C. R. Fay. Cambridge University Press. 15s.

HIGH VICTORIAN DESIGN: A STUDY OF THE EXHIBITS OF 1851. By Nikolaus Pevsner. Architectural Press. 12s. 6d.

These two books complete the centenary picture of the original 1851 exhibition. We have already had a good but facetious general account, a full and documented study of the Crystal Palace and its political and social background, and an album of illustrations and contemporary comment. Dr. Fay now rounds off the general story from the standpoint of an economic historian. In a delightful (but far too expensive) book he brings out very clearly the importance of the Crystal Palace in nineteenth century history—as a symbol of material progress allied with genuine idealism, as a stimulus to competitive trade and as a turning-point in popular education. This, of course, with a well-merited pat on the back for the Exhibition's £186,000 profit, which still brings in some £29,000 a year for the benefit of educational and scientific services.

But Dr. Fay's book is also valuable for its brief but sufficient survey of the great colleges and teaching institutions brought together at the Prince Consort's suggestion on the South Kensington site. This great area of land was the first purchase by the Commissioners after their permanent re-appointment in 1852.

If the Crystal Palace had done nothing else, its existence would have been amply justified by the magnificent impetus to science and education which the purchase of that site provided. But Dr. Fay points to a number of other direct and indirect benefits—the idea of the multiple store, revision of the patent laws, international hospitality and—of great interest to us now—the immediate creation of railway excursion traffic. One must be thankful that an economist was interested enough in that extraordinary event in Hyde Park to complete its story and especially to accent its solid gifts to posterity.

Professor Pevsner, on the other hand, has had the most picturesque task, a task oddly enough never attempted before. He has made an assessment of the taste shown in the exhibits. Art historians have been particularly foolish about the Victorians. Most of them feel besmirched by what they feel is such bad taste that they will not realize that the objects—whatever their intrinsic value—are important problems in the relation to art, industry and patronage. Professor Pevsner has no such artistic snobbery and makes this first and extraordinary tour of the 1851 exhibits.

It is impossible to summarize the findings. Dr. Pevsner turns the taste round on a turn-

table, examining its significance from to-day's standpoint—its formal symbolism of the social order, its plodding eclecticism and the rather pathetic idealism threading its way through so much confusion—and examining the contemporary examiners, who were by no means all approving. Much of the analysis revolves around the ethics and aesthetics of an art which was engulfed by technology, respectability and material abundance of the most bewildering profusion.

Perhaps one basic realization emerges—that the collision of so many derivative art-forms with so many technical processes, and resulting in such a combined welter of irrelevance and practical utility, cleared the air for all time. Steam, photography, archaeological research, sentimentality, middle-class respectability, the unblinking conviction of progress, and the rest of the ingredients were baked into just about as many cake-forms as we can imagine. Once baked and presented for inspection the road was clear for a complete revision of aesthetic ideas. Oddly enough one of the prophecies of advance, realized by a few even then, surrounded and covered these strange exhibits of art and industry in the form of Paxton's prefabricated structure of glass and iron which *Punch* had christened the Crystal Palace.

C. E. Gibbs-Smith

MANIERISMUS IN ENGLAND

DIE ARCHITEKTUR DES MANIERISMUS IN ENGLAND. By Ernst Wusten. E. A. Seemann, Leipzig, 1951.

As Mannerism is a German invention it is right and proper that the first book dealing with English sixteenth century architecture in terms of Mannerism should come from Germany. It is an immature book, somewhat naive in its eagerness to label everything Mannerist, and it comes from the Eastern Zone of Germany which means that it tries at the same time to be up to date politically. 'Art,' the author writes, 'is a function of society.' His Marxism appears on the surface only occasionally, but it involves him in curious complications. Sir Thomas More, for instance, is a good man because he depicted a Communist State of the future, but 'the Mannerist terror of the period broke him' (33). Enclosures are progressive, but the brutal expropriation of peasants is Mannerist (22-23).

To be in the Eastern Zone of Germany had another disadvantage for the author. Although he had lived in England from 1939 to 1946, he could not succeed in keeping his book up to date in its references to literature; he does not take account of the most recent publications in *Country Life* (Longleat and the Smythsons), *The Mint* (Mannerism in Italian Architecture) and *THE ARCHITECTURAL REVIEW* (John Thorpe, Wollaton). That is a pity; for the book has quite a number of good and original

observations, even if it is not always easy to detect them in long, closely packed pages of analyses in the accepted German way. These analyses, trying to apply the categories to England which have been developed for Italy, are sometimes a little funny, especially where later alterations are interpreted as typically Mannerist perversities, but interpreting as such, as against mere describing, is a good thing, and one done too rarely in English architectural books.

Amongst the worth-while observations on motifs in the Elizabethan style which must be regarded as Mannerist are the gables of the bay windows of Kirby bent into semicircles in plan, the Gothic motifs of Wollaton rightly registered as Gothicism, that is revival and not survival, the chimneys at Wollaton bent together like a crown (or like the flying buttresses of the Newcastle and Edinburgh spires), the long, low Long Galleries, the pendants hanging 'like spooks' from low plaster ceilings, and the staircases with posts rising high and pendants reaching low.

The most interesting part of the book is the seventy-five pages in which an attempt is made to label as Mannerist the style of the English early sixteenth century manor-house, from Great Snoring and East Barsham to Thornbury and Laver Marney, Sutton Place and Hampton Court. Twisted chimneys, for instance, are taken as typically Mannerist. That is hardly convincing. They are much closer in spirit to the twisted columns of the late Gothic style at St. Severin in Paris and at Brunswick. Similarly to call the English open timber roofs with their long medieval tradition Mannerist, because they form a 'confused upper ending' to a room (p. 207) will not do. On the other hand, the author overlooks the contribution of the Italian Renaissance (as against Italian Mannerism) to the development of architectural style in England. Symmetry, for instance, cannot simply be called a Mannerist innovation (pp. 128-129). Altogether the book is weak on precise derivatives of elements and individual motifs, whether from Italy or France and the Netherlands. This comes out badly in the omission of any reference to the most classical buildings and features in England which all belong to the mid-sixteenth century; that is, Somerset House, Lacock, the Dormer tomb at Wing, Caius College, Cambridge, and so on.

On the problem of Mannerist space the author is understandably cautious. Yet, if he had illustrated plans—the book contains not one—he might have risked one or two generalizations, beyond those on Long Galleries and such 'fantastic forms' as Thorpe's J.T.-house, the triangular lodge at Rushton, and so on.

If one's serious occupation with the book is sometimes interrupted by amusement over alien misconceptions and irritation over mistakes and misprints, one should not be too severe. Gresham appears as Cresham, Pugin as Pegin, Pepys rather enjoyably as

Pepy, and a house at Exeter under the name 'Fore Stree.' It is perhaps a little more disquieting, because more important, if Thornbury Castle is interpreted as more Gothic and less Mannerist than, say, Layer Marney, because it uses stone rather than brick. The real reason is, of course, that one is in the Cotswolds and the other in Essex. That shows a preference for the far-fetched over the natural explanation which the author would no doubt call a symptom of Mannerism.

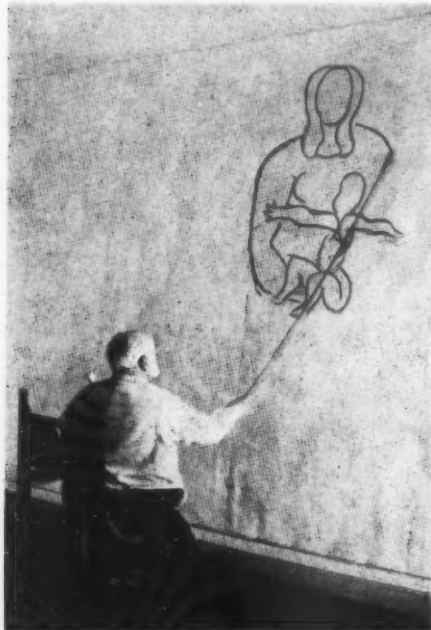
Nikolaus Pevsner

LUXE, CALME . . . ET VENCE

MATISSE: HIS ART AND HIS PUBLIC. By Alfred H. Barr, Jr. *The Museum of Modern Art, New York.* \$12.50.

This book is a heavy precision-instrument, produced for the benefit of students who wish to tackle Matisse with plenty of reproductions and all the facts, or nearly all the facts, before them. Like all complex instruments, it is handled effectively only after some practice. Once understood, it becomes a source-book of great value.

Mr. Barr makes his chief contribution to the book in the form of a long survey (1860-1950) of Matisse's life and work. The survey is divided into nine sections arranged under headings such as: Early Youth in Picardy; Moreau as (Matisse's) Teacher; Matisse the King of the Fauves; Matisse as Teacher; Architectonics and the First World War; Sculpture, 1930; the Second World War; the Church at Assy; and the Chapel at Vence. There is an interesting passage on *Luxe, calme et volupté*, an important picture of 1904-5



Matisse drawing a study for the Virgin's head.

which, with Beaudelaire's phrase for title, epitomizes one aspect of the artist's work. The text is supported by footnotes (cleared to a separate section) representing patient and expensive research. Details of the paintings are embedded in the text. Ten appendices, A-J,



Interior of the Dominican Chapel of the Rosary at Vence, South of France, looking towards the stations of the Cross.

are devoted to first-hand notes by a pupil of Matisse; also to contracts with dealers; reviews and criticisms; and to statements by the artist about his book decorations. Of special interest is Appendix F, listing the paintings by Matisse in the public museums of English speaking countries. There are seven in the British Isles: five at the Tate, two at Glasgow—that is all. There is also a massive bibliography (about four hundred items) and a full index. A total of something like five hundred illustrations includes twenty-three colour plates, nearly fifty reproductions in line and well over four hundred in tone. About thirty reproductions are devoted to the Dominican Chapel of the Rosary at Vence, South of France.

We are shown a plan and models of this clumsy building, also some details typified by the accompanying reproduction. None of the Vence pictures is in colour and the text, here, is also inadequate. We are reminded of the author's statement that his book was 'completed and produced against time.' The chapel was largely designed and entirely decorated by Matisse over a period of four years. It was consecrated in 1951 when the artist was eighty-two. Presenting the chapel to the Sisters of Vence, Matisse says in a careful letter that it 'represents the result of his entire active life' and he adds that he considers it his masterpiece. These words are not to be taken lightly. Certainly the text of Mr. Barr's book and the reproductions of all other phases of Matisse's art convince us of a gift which can invent and control entrancing combinations of flat, pure colour. We are bound to acknowledge the painter's ability to flood a canvas with light and to create desirable images. Uneasy hedonists will be reassured by Mr. Barr's whole-hearted tribute to a man who paints visual pleasure from the golden heart of the experience. But was Vence likely to

provide occasion for the crowning masterpiece of gifts like these? We are entitled to ask, for example, whether Matisse, with six-foot charcoal-pencil in hand and working for reproduction on glazed tiles, has provided that background for religious experience to which Mr. Geoffrey Webb recently referred in connection with Mr. Graham Sutherland's opportunity at Coventry. Mr. Barr does not venture into discussion on this level.

Charles Handley-Read

Shorter Notices

DAS MUNSTER. Verlag: Schnell and Steiner, Munich. 21M. 60Pf. a year.

Dr. H. Schnell, author of one of the best and most original books on German Baroque, is the editor of this new German magazine dealing with the history of art and architecture. It is published from Munich, but can also be subscribed to from Switzerland. Five numbers which have come to hand give a good idea of the interest and seriousness of the contents. In these five numbers, there is an article on Asam drawings, one on comments on the Minster of Freiburg by writers of the Romantic Movement, one on the Buxheim choir stalls which are now in a chapel in the Borough of St. Pancras, one with many illustrations on the restoration of the Romanesque churches of Cologne, two on modern church art, one on emergency church buildings, and one on Romanesque façades in the south-west of France. Many of the authors are amongst the most competent scholars in Germany. In the case of the restorations at Cologne, it is specially instructive to see that, while all shapes are reproduced correctly, ornamental details are simply left out, in order not to introduce mechanical copy. The results seem curiously modern, in spite of being essentially correct. There are also reports on excavations and articles on painting and sculpture. The magazine is published every two months and every number is of about sixty pages. N.P.

SCULPTURE

THE MAN WITHIN

*When so much application of sculpture to architecture is merely added decoration, it is startling to find a building where the two arts are as intimately bound together as in the Casa del Girasole.** Much contemporary Roman architectural enrichment consists only of superficial arabesques,



but Moretti's employment of these fragments, 1, buried in the masonry of the wall, puts the two arts into an intense and active relationship, producing an undeniable emotional impact. Yet their exact significance is difficult to read, and many people will dismiss the problem with the useful explain-all catchphrase—'mannerist.' But this is too easy; our historical situation is not much like that of the generation after Raphael. If we must have an historical parallel, surely the great architects of the 'twenties are more like the generation of Brunelleschi and Alberti, and we, now, are like those minor masters the Rossellini and the Laurane, who made the discoveries of the great generation acceptable to a wider and more conservative public—which is what Moretti appears to be doing in this building.

And looking at these fragments, where is the mannerist contradiction and strain? The leg takes its load easily, without contortion. What load? Surely, the weight of the upper part of the building. Had this figure stood outside the wall, with the superstructure resting on his head, there

* See Casa del Girasole, page 73.

would have been no difficulty in reading his significance as a caryatid. But this is a frame building whose load-bearing members are hidden by its outer walls, so its caryatids must be inside as well, with this one glimpsed returning to his post in a shadowy platoon of Atlases who bear the weight of the upper storeys. C. Forehoe

THE ARTS AT HATFIELD

The sculpture and paintings executed for Hatfield Technical College, though their relationship to the architecture is less intense than in the previous Italian example, are nevertheless works of great assurance and refinement. However, they are too modest in size, and perhaps too obviously portable, to transform interior space or modify exterior appearance, and they function more effectively as images than as elements in a decorative scheme.* At close range, they intercede for the humanities with force and clarity, and their justification as commissioned works is to be found in the unusually subtle relevance of their imagery to the institution they serve. The paintings by Ben Nicholson,

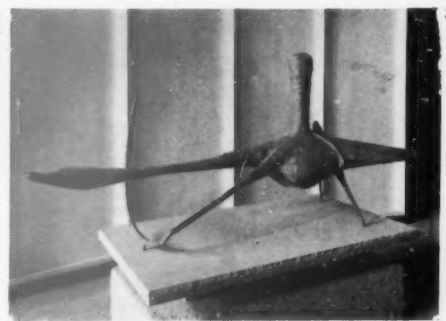


1, above and 24, p. 86, create a visual poetry of the basic forms the students use every day in their machine drawings. Nicholson has remarked of his 'forms in tension' that since they are concerned with the interplay of forces they are related to Arsenal v. Tottenham Hotspur as well as to the stars in their courses. 2 shows Barbara Hepworth's relief, a carving in Hoptonwood stone, which has been placed at the far end of the façade, a long way from the main entrance. This is

* See Technical College at Hatfield, pages 78-87.



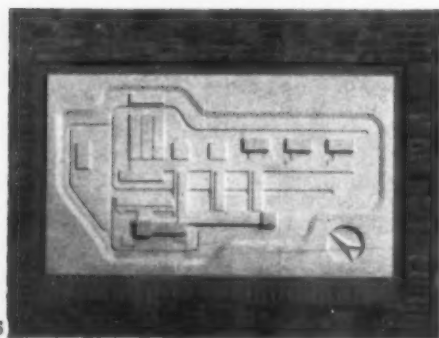
obviously the only position it could occupy, but it would have to be one of a series of such plaques before its verticality and its qualities of relief and incised line could achieve architectural significance on so extended a façade. With its three abstract forms on the verge of becoming anthropomorphs, it stands midway between the extreme points of this sculptor's range, and has the appearance of being a poignant stage in a sequence of transitions beginning with three interlocking geometries and ending with the three graces embracing. This work also occupies a midway position between Nicholson's pure abstracts and the organic forms of Reg Butler's free-standing bronze, *The Oracle*, 3. Butler's piece has the characteristic disquiet of the vital figuration of



our time, and at close quarters, 4, is as startling as a live snake in the bathroom. Its mixture of closed forms and naked armature develops this sculptor's most recent experiments in forged iron. He has had in mind not only the oracles and sphinxes of antiquity, but the earliest known flying creatures, the pterodactyls,



and the biomorphic aspect of the latest jet aircraft, and has succeeded in expressing the prophetic nature of his figure on a formal plane. 5 is a Bianco del Mare plaque



carved by Trevor Tennant, which represents the ground plan of the college buildings.

Messrs. Easton and Robertson and the Hertfordshire County Council must be congratulated on obtaining strikingly imaginative returns from a small marginal expense.

R.M.

WORLD

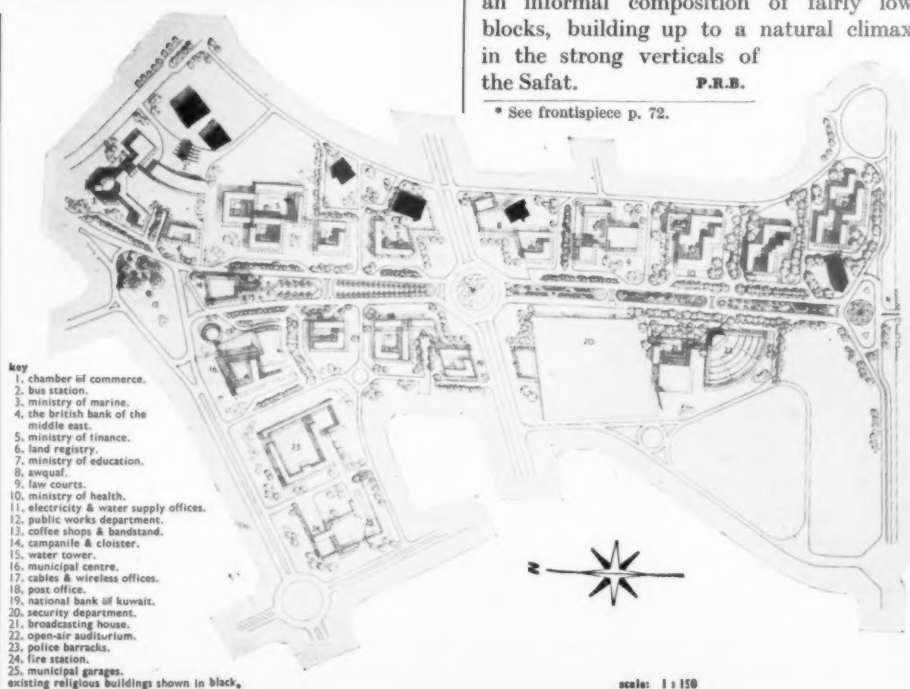
NAIF AVENUE, KUWAIT

The buildings to be erected in the Safat for His Highness the Ruler of Kuwait will form a monumental closure to Naif Avenue, and the focus of a group of important thoroughfares already established in the general plan for the city. As the design of those buildings was crystallised it became clear that their relationship to surrounding structures—particularly the new government offices along Naif Avenue—was critical, and the architects, Messrs. Farmer and Dark, with the State Development Department, prepared the plan below which establishes general principles of design and siting.*

Intense sunlight dominates planning in Kuwait; shade is essential both for physical comfort and the appreciation of detail and colour, so the scheme proposes that new construction should loosely follow the local courtyard tradition, with more shaded circulation space formed by open ground floors and covered connecting ways. To induce the area's large vehicle population not to park in main thoroughfares, the buildings are set back in small precincts, where trees shading the parking bays will prevent the sun heating car bodies to intolerable temperatures. Since the exact requirements of individual ministries have not yet been established, the final appearance of the area cannot be anticipated, but these planning principles should result in an informal composition of fairly low blocks, building up to a natural climax in the strong verticals of the Safat.

P.R.B.

* See frontispiece p. 72.



PAINTING

LONDON CAPRICCIO

The aperçu, the sudden turn of a phrase so as to cause surprise and amusement, is perhaps the most significant characteristic of the Rococo in literature. In painting what corresponds to it, is not only Fragonard's *Swing*, but also the *Capricci* of Tiepolo and the architectural *capricci* of Guardi. As a capriccio also that remarkable picture, 1, by Canaletto must be considered. It belongs to the National Gallery at Parma and was painted in 1759 for Count Algarotti. Algarotti was a friend of Frederick the Great, and an author who wrote amongst other books one with the characteristic Rococo title *Neutonianismo per le Dame*.

Here we see Palladio's projected bridge across the Grand Canal with Palladio's Basilica at Padua on the right and his Palazzo Chierigati at Vicenza on the left—a Rococo *hommage à Palladio*.

Less familiar than this painting by Canaletto is, 2, by William Marlow* which



was recently shown at the gallery of Messrs. Roland, Browse and Delbanco. It comes from the collection of Sir Richard

* William Marlow (1740-1813) was a pupil of Samuel Scott and worked in Italy and France in 1765-68.

Sutton at Benham Park near Newbury and shows St. Paul's seen from the west, seen from the exact angle of the present approach up Ludgate Hill. But instead of London houses and the graceful spire of St. Martin's, there is on the left a strip of the Grand Canal in Venice with a Palazzo similar to the Palazzo Balbi Guggenheim, and the canal itself flows gently towards the portico of St. Paul's. There never has been a picture making a more successful use of incongruity. If only surrealists kept to this plane of incongruous and pleasing surprise, it would deserve a welcome from all quarters. N.P.

CRITICISM

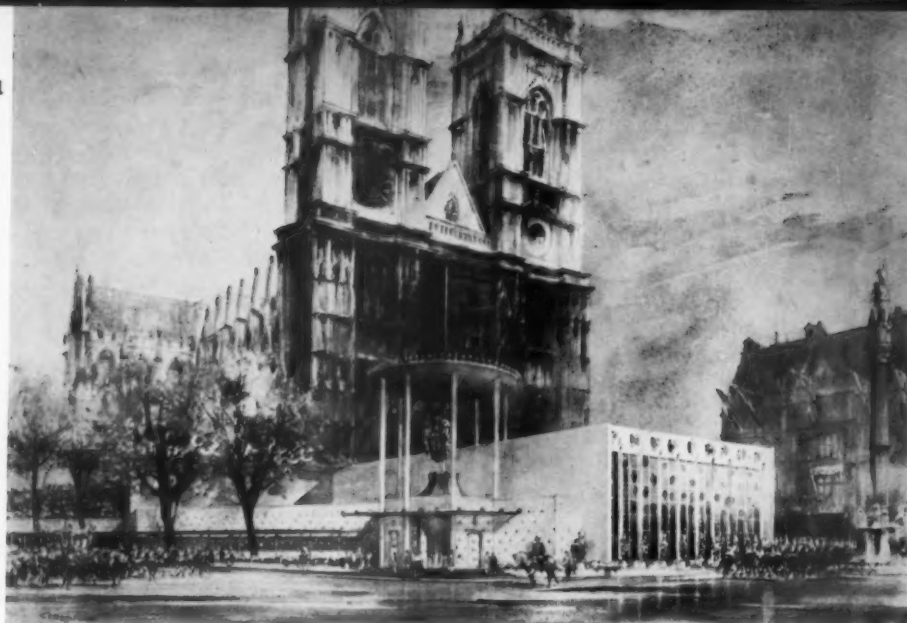
THE ABBEY ANNEXE

To put a Coronation annexe on to Westminster Abbey is as difficult a task as an architect could be asked

to undertake. This is so for several reasons besides those, connected with propriety and style, which always arise when an historic building has to be added to. The site is oddly shaped and contains trees that must not be disturbed. The building has to be planned inside to suit a complex ceremonial programme and outside to suit difficult conditions of public access and traffic movement. Its character has to be such as to provide an effective background to the Coronation-day spectacle during some of its most significant moments, and at the same time to furnish Westminster with a not too unsightly addition to its street scenery during the several months when it will be in place. Finally, organizing the Coronation itself is so complex an undertaking, in which so many and various authorities have an interest, that the process of working out a design is inevitably interfered with by high-level decisions not influenced by architectural considerations.

It is only fair to the architects of the Ministry of Works, when criticizing their design for an annexe for this year's Coronation, 1 (next page), to emphasize that they had to work under all these handicaps, because they explain why the final outcome is something of a compromise. Mr. Eric Bedford and his colleagues have, nevertheless, improved on the efforts of their predecessors in at least one way: by making the annexe itself part of a larger structure containing public grandstands stretching along the whole north side of the Abbey and across the flank of St. Margaret's church, they have achieved a unity and dignity of scale which the isolated



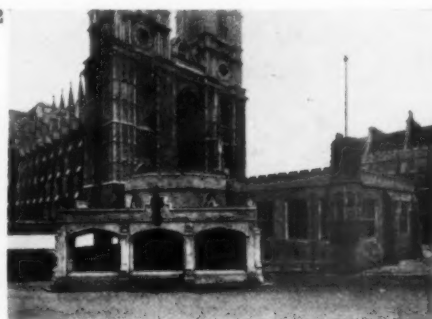


temporary structures put up for previous Coronations noticeably lacked.

The essence of all work of this kind is its temporary nature, and in order not to affront the enduring architecture of the Abbey, in order to achieve a gay and festive character and in order to obtrude as little as possible into a familiar London scene, this annexe should not only be, but should *look*, temporary, and the first criticism that must be made of the published design is that the expanses of plain walling, with their impenetrable box-like character, suggest solidity of construction when in fact they are only tubular steelwork sheathed in building-board. The construction is a skeleton, and the 1951 South Bank architects showed that there are a number of ways of exploiting the skeletal nature of light frame structures in order to give them an appropriately fragile and graceful character. Sufficient privacy is, of course, required, since the building is to serve for a robing room as well as for assembling the Coronation procession before it enters the nave of the Abbey. But if the architects felt justified in filling the whole western side of the annexe with a large window (which is to have obscured glass) then surely an equally light (which does not mean literally transparent) treatment could have been provided elsewhere, avoiding the feeling of a cardboard monumentality which the present design provokes.

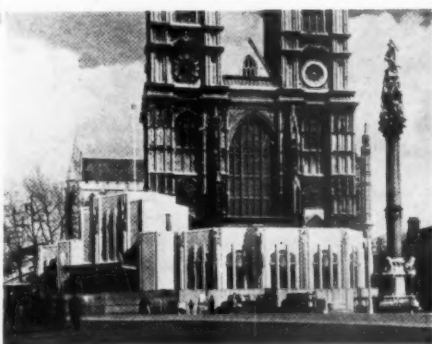
When we come to the question of architectural character we can, nevertheless, be grateful to the present generation of Ministry of Works architects for showing a better sense of what is appropriate than their predecessors. For King George V's coronation in 1911 they built a battle-mented and turreted annexe, so conscientiously Gothic that its walls were painted to imitate the stained and weather-worn stonework of the Abbey, 2. We have outgrown that kind of childishness now;

indeed, we had done so in time for King George VI's coronation in 1937, when the annexe was energetically modernistic, 3,



in that angular style so much in evidence at Wembley exhibition and at the Paris exhibition of 1925.

It had the same fault of deceptive



solidity as the 1953 design, and if we are bound to say that the latter has advanced only so far as to be reminiscent, not of Wembley exhibition, but of the British Government pavilions at the international exhibitions of the 1930's, that is not to suggest that up-to-dateness is at all an important criterion on an occasion like this. It is only a reminder that the particular form of up-to-dateness most highly valued in official circles in the 1930's was a genteel restraint, based on a fear of not being

in good taste, and this tends to inhibit a revival of the vigour and robustness which has always characterized British ceremonial design at its best. The new annexe is discreetly tasteful; the heraldic emblems with which it is to be decorated should have a pretty effect. It is, perhaps, unfair to expect more. Official designs can only be as positive as the public taste they aim to please, and when public taste is as confused as it is now, official objectives are inevitably limited to avoiding the grosser errors.

J. M. Richards

HISTORY

ART NOUVEAU IN ZURICH

One of the few compensations of ageing historians which they alone can enjoy is to see their childhood memories become history: this happened to me on the occasion of a visit to the recent exhibition at the Kunstgewerbe Museum in Zurich, 'Um 1900, Art Nouveau und Jugendstil.'

This exhibition was organized at the suggestion of its director Johannes Itten by Dr. A. H. Curjel, with the help of Dr. W. Rotzler. It was comprehensive and seemed unbiased; perhaps that is the reason why one came away with more questions than answers. Paramount was the question of the *raison d'être* of the style, and following it questions as to its origin and provenance and finally its unity or otherwise. The organizers tried to make out a case for such a unity in spite of apparent diversities: 'Three different forms appear: the "floral," deriving from the organic, the "dynamic," deriving from the power and rhythm of the abstract line, the "static-geometric," developing from construction. These three emanations are interconnected in manifold ways and supplement each other. Hence the unified character of the period of about 1900, in spite of many differences in detail.'

The longer, however, one looked at the exhibition the more the diversities became apparent. Not only is there no stylistic connection between a sturdy Loos table, 1,





and Obrist's design for a monument, 2, there also is none between a Kolo Moser vase of early Wiener-Werkstätte times and Ruskin pottery, nor very much between glass by Lobmeyr and Tiffany.

The arrangement of the exhibition itself by pointing to the different roots goes far to explain the differences as well as the likenesses. First the sources are shown: the Japanese influence, the popular tradition, William Morris's medievalizing tendencies, as well as his ethical and reforming ideas, and then post-impressionist painting.

The suggestion that the latter was the greatest influence and contributed most to the general impression of unity, put forward by Dr. Rotzler, is convincing. The long drawn-out flowing lines of van Gogh and Gauguin—especially apparent on a vase for which Gauguin gave the design—much of what one sees in Toulouse Lautrec and above all the colour schemes of these masters are obvious sources of Art



medievalizing tendencies of William Morris, however, had manifold repercussions such as the frequent use of semi-precious stones or cloisonné, with metal, and the use of stained glass; an interesting example in

Holland is a little metal kettle, by Berlage, put on a burner encased by orange glass walls.

If the medieval tradition played a great part in the English school, the French school grew out of the second Rococo. This influence is seen clearly in a music stand by Charpentier, 3, and a chair, 4, by



Nouveau. The way the Japanese prototype influenced particularly pottery is very interesting. Mostly shapes and glazes were imitated, the dark red glaze of Royal Doulton for instance could hardly have originated without the knowledge of Japan, in other instances Japanese floral patterns taken from lacquered objects were applied to ceramic ware. The popular tradition on the other hand becomes apparent in several pieces of furniture, chairs by William Morris and Riemerschmied for instance, and also in pottery by Max Läuger. The

Guimard. The *pièce de résistance* of the French section was part of an entrance to the Metro in Paris, 5, also by Guimard, of wrought iron painted green and lit by two deep yellow-orange lamps.

Van de Velde's work followed next; without doubt he emerges as the great genius and a master of fertile imagination, not only as the primary exponent of the new style; all the exhibited works are of great interest, beauty and power, and also of the finest workmanship; whether it be a tea set, 6, cutlery, trays, lamps or many-

branched candlesticks. The centre of his oeuvre at Zürich was the large writing desk, 7, made for Meier-Graefe, the art critic who played such a prominent role in



the Art Nouveau movement. In this desk every line and ornament makes sense: it is large and commodious with plenty of



drawers and some open shelves; the kidney shape enhances its usefulness, since its remoter parts can thus easily be reached by the user.

Several photos of Gaudi's work were shown, though of course in the absence of colour the principal connecting link of Gaudi with Art Nouveau, namely the colour, could not be seen. Work from the United States also had to be represented. The perfectly delightful glass of Tiffany is by now well known. In addition there were only photographs as a reminder of Sullivan, Frank Lloyd Wright, Maybeck and Greene & Greene.

The geometric-static-structural element in Art Nouveau was characterized in the Dutch section by furniture of Berlage, a desk for instance in a primitive frame construction, all parts of which are clearly marked, and in the English section by Mackintosh and Mackmurdo. Though both these masters also created work of a different character Mackmurdo, besides the well known title page to Wren's City Churches of 1883, duly shown, also made a chair with a floral back; and of Mackintosh was also exhibited besides a delightful lamp, consisting of oval discs in silver, white and lilac, and a mirror, a wrought iron stand from which hung a Chinese bell.

In Germany one important centre was

Darmstadt with the Grand Duke of Hesse as patron and Joseph Olbrich as his prophet, who made the fairy-tale-like furniture—of very solid construction—for the princesses; another Munich; there the 'Jugend' was published, which gave the style its name. The Austrian section, the last in this perambulation, contained objects of the end of the period: a sturdy table and chairs by Adolf Loos—the latter, incidentally, of a somewhat peculiar and inconsistent construction and the former not at all well built—are confronted with vases of the early Wiener Werkstätte; two irreconcilable enemies are united here: Loos, the master whose work points to the future and signifies the end of Art Nouveau and Kolo Moser and others setting out on a pernicious way towards playfulness and genteel prettiness.

Looking back at the exhibition—the first of its kind ever attempted in Europe—the visitor who reads the extracts from the various theoretical writings which are printed in the catalogue will be struck by many contradictions: the emphasis placed by the writers on creating a 'new' style for instance, on looking for a brighter future, and on the discarding of all historic styles is not borne out by the many objects, which take up Japanese, vernacular, prehistoric or Roman motifs, besides medieval ones.

In all these writings there is one recurring theme. A passage from Otto Wagner formulates it most clearly: 'The revolution will be so powerful that we can hardly speak of a Renaissance of the Renaissance; a complete re-birth, a "Naissance," will emerge from this movement.' Similarly van de Velde speaks of a re-birth in his memoirs (see AR September 1952) and also on other occasions: 'My furniture shows that it is made of wood; with pride and joy I expose every joint and try to find new methods to join the parts together. I feel this to be the honest thing to do, as a protest against the *senile taste* (my italics) which makes no difference between metal and cardboard. We can now look forward to the work of the future with faith, as we believe that it must develop out of a new bond of life and art'.

Passages in the same spirit are quoted in the catalogue from Sullivan. They all prove that the movement started in all countries from a spiritual source: the wish for a re-birth, and a Renaissance. The parallel to the *renovatio* and *reformatio* ideas of the Renaissance proper are too close to be overlooked, queer as it may seem. As the Renaissance turned to the beginnings of Italy, to ancient Rome, so Art Nouveau turned right back to the beginnings of mankind, to primitive peoples, to the roots of all being. Hence perhaps the many motifs derived from water lilies and the manifold allusions to water generally.

S. Lang

INDOOR PLANTS

KLEINIA NERIIFOLIA (Compositae)

The Kleinias are some of the best of house plants if only for the good reasons that they are long suffering and can be revived after gross neglect, and also because their appearance adds a touch of humour to any collection. *Kleinia neriifolia*, illustrated here, looks at first glance like a miniature palm tree, and *Kleinia articulata* like a rather tired, burned-out candle. Closer inspection reveals that they have thick, fleshy, cylindrical and jointed stems, each section being balanced rather awkwardly on the section below.

They were introduced from the Canaries about mid-eighteenth century when they



were known as *Cacalias*. They were later listed under their generic name of *Senecio*. *K. neriifolia* is a greenhouse perennial which is said to grow to a height of four feet and have yellow flowers in winter. Both of the *Kleinias* mentioned here should be placed in the sunniest window or be given plenty of light, otherwise they will quickly show signs of etiolation. They can be propagated easily in spring from young shoots inserted in sandy peat under glass or with heat. They should be watered sparingly in winter.

These plants are not effective as displays, but make good room plants, and they have been used as such for some time in cottages.

H. F. Clark

DECORATIVE



FLOORINGS

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ORNAMENT AND PROFIT

Larch and fir plantations have been spread, not merely with a view to profit, but in many instances for the sake of ornament. To those who plant for profit, and are thrusting every other tree out of the way, to make room for their favourite, the larch, I would utter first a regret, that they should have selected these lovely vales for their vegetable manufactory, when there is so much barren and irreclaimable land in the neighbouring moors, and in other parts of the island, which might have been had for this purpose at a far cheaper rate. And I will also beg leave to represent to them, that they ought not to be carried away by flattering promises from the speedy growth of this tree; because in rich soils and sheltered situations, the wood, though it thrives fast, is full of sap, and of little value; and is, likewise, very subject to ravage from the attacks of insects, and from blight. Accordingly, in Scotland, where planting is much better understood, and carried on upon an incomparably larger scale than among us, good soil and sheltered situations are appropriated to the oak, the ash, and other deciduous trees; and the larch is now generally confined to barren and exposed ground. There the plant, which is a hardy one, is of slower growth; much less liable to injury; and the timber is of better quality. But the circumstances of many permit, and their taste leads them, to plant with little regard to profit; and there are others, less wealthy, who have such a lively feeling of the native beauty of these scenes, that they are laudably not unwilling to make some sacrifices to heighten it.

WILLIAM WORDSWORTH (*A Guide Through the District of the Lakes in the North of England with a description of the scenery, &c. for the use of tourists and residents*). Fifth Edition. Hudson & Nicholson, Kendal; Longman & Co., Moxon; and Whittaker & Co., London. 1835.

MARGINALIA

Inigo Jones

On December 9, the tercentenary of his death, a small exhibition of drawings by Inigo Jones was opened at RIBA. The word *small* is important; because of limited space this was by no means a representative exhibition of his work. Decisions, obviously difficult ones, had to be taken about what to exclude, and the aspect of his output which suffered most was the costume drawings for the Royal masques. As a result, one had a rather biased view of this all-round genius, and it was fortunate that his other parts managed to grin through here and there. Most of what was shown was what Jones himself would have called 'solid architecture,' enclosing a slab of relative frivolity, a number of stage sets.

The blessing is that many of these drawings have been overscribed with Jones's characteristic figure drawings. These will always come as a surprise to those who think of him as the slightly prim architect of the Queen's House, for they are fluent, immensely professional, and full of the fancies and devices of late Italian

mannerism—fully as abreast of the times as the work of his post-Michelangelesque contemporaries in Italy, notably close at times to Guercino. They bring out those qualities of a fashionable *uomo universale* which might otherwise be lost in this collection, and reinforce his claim to be our first genius of the arts, which was how Horace Walpole rated him.

Among the more 'solid' designs, the outstanding performances were, without doubt, the projects for Whitehall Palace, conceived by Jones and drawn out by John Webb with a fanatical precision which is as English as Jones's scribbled *pensieri* are Italian. It was difficult to know which to admire most here: the hairline exactitude of the draughtsmanship; the confident, if occasionally eccentric, handling of Mannerist detail; or the grandeur and scale of the total conception. The tendency to raise a patronizing eyebrow when the size of Jones's projects is mentioned can easily be cured if one recalls that the Louvre existed only in fragments, the Palace of Versailles and the colonnade of St. Peter's not at all when these drawings were made. Like an occasional figure drawing from his pen, like all his late details for the Queen's House and Wilton, his designs for illusionistic ceilings and his knowledge of the systematized symbolism of Ripa's *Icono-*

logia, these projects look forward to the Baroque and its grand manner. From the master himself there seemed to be no finished drawings after about 1630; his conceptions, sketched or scribbled, must have been handed to assistants like Webb for execution, but the surviving sketches are full of an impromptu quality which gives one some idea of a creative mind at work.

But in point of sheer delectability, these serious projects must give place to the masque drawings. As suggested above, the costume sketches were thinly represented, the settings much more fully shown. These range from fairly straight cribs of the old pattern-book designs of Serlio to more romantic, and more sophisticated, trifles which suggest a wide knowledge of landscape art, as well as the theatre designs of his Continental contemporaries; the pick of them all being the lucid little design for *Luminalia*, quite untarnished, when seen in the original, by one's inevitable over-familiarity with reproductions.

A stimulating exhibition in many ways, but by no means worthy of the father of English architecture. There are a clear twenty-one years to run before the fourth centenary of his birth; let us hope that he will then be celebrated in a manner worthy of his all-round genius.

Architects in this Issue



Architect of Technical College at Hatfield (see pages 78-87). HOWARD MORLEY ROBERTSON, born in Salt Lake City 1888, lived there for twelve years except for schooling in England. (Central heating and hardwood floors memorable, for those times) 1900 studied at the AA for three years and then on advice of Arthur Davis (Mewes and Davis of Ritz, Morning Post, and RAC fame) went to Ecole des Beaux Arts until 1912. Worked for Stanley Hamp in his Le Touquet office (domestic mainly). First private job was a £750 cottage

for a cousin at Godalming. Set up partnership in 1919 with Easton because of a £20,000 job of Easton's in South Street and winning a competition for a new hall for the Horticultural Society. His wife is an architect from Melbourne. (They met when he was principal, she a student at the AA.) Lives in Montagu Square. Likes travelling as a means of seeing new buildings, impressionist music. Plays piano once a fortnight, to keep sane. Ambition to design civic building.



Designers of Showrooms for the Cotton Board (see pages 99-104). ROBERT and ROGER NICHOLSON both born in Sydney, 1920 and 1922. Came to England, 1930, lived in Kent. Studied at Medway Technical College. Robert who at one time wanted to be a doctor joined RAMC at outbreak of war, Roger in tanks. After war Roger obtained diploma at Royal College of Art, joined brother on first job, exhibition stand for CIBA. Since then done mainly interiors and stands, also furniture (office) and books (lithographs of London for Coronation). Office on fourth floor looking over and belonging to the Coliseum, usually work by themselves. Both are married, live in Victorian houses, in which they have studios, Robert a flat which he has just finished decorating at Beckenham, Roger a house at Bromley, has two children. Both interested in gardens, junk shops, furnishing, travelling, reading. Roger paints and illustrates (Tea Centre catalogue). At present working on British Pavilion for Rhodes Centenary at Bulawayo, two BIF stands, exhibitions for Cotton Board, Manchester. Coronation decorations for Savoy and Berkeley Hotels and a range of office furniture for Hammers and interior showroom for an exclusive dress shop.

Architect of Showrooms for a Textile Manufacturer (see pages 99-104). GORDON and URSULA BOWYER. He born in London, she in Berlin. Both studied at Regent Street Poly, where they met. He taught and painted murals before setting up office off Baker Street on



strength of the 'Cotton Show,' a travelling exhibition for the COI. Married when firm was established and practise together. Believe in a small firm and general practice although present jobs tend towards interiors and alterations. Feel that job in this issue may be indirect result of projected design for a fashion theatre for FOB 51. Live in part of a late seventeenth century coaching inn three doors from Vanbrugh castle, high up in Greenwich (can read the time from Big Ben on a clear day). Main occupation is the family; now have a second son, Martin. His interests: good living, gardening, painting and their house.

Unesco: Latest Developments

The latest instalment from Paris of the Unesco saga suggests that a wholly contemporary building may after all emerge from the controversy that has surrounded the design for the Unesco headquarters since its inception. This seemed hardly possible as recently as November, when the Prefecture of the Seine refused to approve the Breuer-Zehruss-Nervi design (illustrated in the REVIEW in December) for the Bois de Boulogne site on the ground that an uncompromisingly modern building would be an affront to Paris, and the French Government in consequence withdrew their offer of this site and announced that they proposed themselves to put up a building for Unesco on the Ecole Militaire site (which Unesco had previously rejected) with the promise that it would be in the neo-classical style generally approved for French public buildings.

Happily Unesco's international team of architectural advisers, led by Walter Gropius, persuaded the Unesco headquarters' committee to stand firm against such a proposal, and the French Government, faced with the possibility that Unesco might go so far as to consider a move to another European capital if its needs could not be met in Paris, eventually decided to offer the same site free of all restrictions

except for height. Unesco have accepted the offer and have reappointed the same advisory panel (Gropius, Markelius, Costa, Rogers and Le Corbusier) and the same architects, Breuer, Zehruss and Nervi.

The new site is by no means such a desirable one as that alongside the Bois de Boulogne, but has certain advantages such as that of being close to the centre of Paris. And although on paper the site looks like part of the formal Gabriel layout, in practice, owing to the size of the Place de Fontenoy and the trees that fill it, it does not read as a whole and it should be possible to avoid damaging the architectural character of the neighbourhood without striving after symmetry of plan or conformity of style. The restriction on height need not be a handicap as the site is large enough to contain all the accommodation Unesco requires without building high. The architects have till April to produce their design for the new site, which this time will at least not suffer the same fate as before because the site, being Government land, is exempt from the authority of the Prefecture of the Seine.

Le Corbusier Vindicated

M. Le Corbusier has emerged triumphant from a somewhat ludicrous lawsuit which has just been concluded in the French courts. The *Société pour l'Esthétique de la France* brought an action against him for destruction of national amenities, claiming 20 million francs damages, on the ground that his Marseilles flats were 'contrary to the French style and aesthetic.' They also criticized the planning and justified their action by saying that the building had been put up without all the necessary planning consents being obtained.

It was thus an attack on Le Corbusier's patron, Claudius-Petit, Minister of Reconstruction (who has taken a personal interest in the project), as well as on Le Corbusier himself. While the lawsuit was pending the flats were officially opened and the Government gave an indication of their support of Le Corbusier by choosing that moment to make him a Commander of the Legion of Honour. The case was heard on December 14, and the Society not only lost but had to pay all the costs.

EXHIBITIONS

The Institute of Contemporary Arts takes a nostalgic and uncritical view of surrealism: it has managed to make a surprisingly inclusive Max Ernst retrospective from works in English collections, but has presented it without comment, and as if surrealism were still an active movement. The catalogue merely quotes the encomiums of his surrealist friends, and although these phrases served well enough as propaganda for the movement, they have no validity as value judgments. In a quotation from Eluard, we are told that Ernst 'conducts us into a liberated world,' but liberation in the pictorial

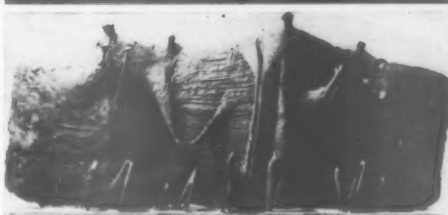
MISCELLANY

sense implies a development in the conception of space, and Ernst has not invented a new spatial system or even used existing systems with much plausibility. The results of some of his rubbings and combings contain the seeds of spatial ambiguities which have been developed by artists with greater natural gifts for painting; he has conducted a sustained campaign against 'inspiration' which has put an end to a good many artistic pretensions and given rise to others; he is unsurpassed as an exploiter of collage and automatic techniques, and his brilliant revaluation of ready-made material has provided him with a flood of macabre, grotesque, blasphemous and sadistic imagery; but his methods do not allow him to be more than a fantasist.

The eight large pictures which Francis Bacon painted towards the end of 1952, and exhibited at the Hanover Gallery, are untitled. The ostensible subjects are easily identified, and reflect the artist's recent journeys through Africa, but they do not provide much of a clue to the content of the pictures. An elephant crosses a river in the evening light, a male nude crawls into or out of hiding, a negro squats in tall grass, a rhinoceros pretends not to be peering at us, pariah dogs cross flower-beds and geometrical shadows. They are beautifully painted pictures, and the relaxed bravura of the brush strokes, and the ease and economy with which they cover large areas of canvas convey the exhilarating impression that the artist doesn't have to try very hard. But Bacon has found what might be called an excessive solution for the problem of defining the momentary. He doesn't simply catch his figures on the move, but somehow manages to imply that he has come across them in suspicious circumstances. For no apparent reason, they look as if they have been 'caught red-handed.' This effect must be due in some measure to his habit of dividing his pictures into two distinct parts: a single figure is isolated in a spacious foreground seen from above, and the top third of the canvas is used for a background which



4, Dog, by Francis Bacon (Hanover).



5, Collage, by Max Ernst (Institute of Contemporary Arts); 6, Trompe l'oeil, by Richard Chopping (Hanover); 7, Seated Group Listening to Music, by Kenneth Armitage (Gimpel Fils); 8, Study for 'The Origins of the Land,' by Graham Sutherland (Redfern).

joins on to the foreground like a scenic 'flat,' and operates as an oblong of infinity. Many people consider that Bacon doesn't need such tall canvases; they feel that the real picture is concentrated in the lower two-thirds and that the background is an afterthought. But I would say that this device is essential to the haunting overtone, for the figure in the foreground, already caught in movement, is now walled in by space, and the loneliness of the figure assumes a tragic significance.

At the same Gallery, Richard Chopping has been showing *trompe l'oeils* in watercolour. Butterflies and bluebottles settle lightly on fruit, playing cards, curling theatre tickets, torn letters and bits of newspaper. Everything is in free-hand, and the bits of newspaper are as readable as actual cuttings from *The Times*. By all the rules, these little pictures should leave an impression of sterile virtuosity but in fact acclaim a refined, gentle and modest spirit.

The sculptor Kenneth Armitage, whose small bronze groups scored so great a success with foreign museum directors when they were exhibited at Venice last year, has just held his first one-man show at Gimpel Fils. These free-standing, double-sided reliefs have a charm and loveliness which is rare in modern sculpture. His families and groups of girls going for walks, sometimes on windy days, inhabit one extended, screen-like body with engaging intimacy, and disclose their separate whereabouts only in the placing of little breasts and sudden plump behinds. At one time it was permissible to wonder how soon the novelty of Armitage's formal devices would be exhausted by repetition, but the screen is becoming even more animated and expressive, shuddering in fiercer winds, and his large, recently completed



bronze called 'Seated Group listening to Music' is his most impressive work to date. There is a radical change of mood, and the lightness and charm have given way to a brooding, calamitous stillness. The forms have only a remote relevance to the title, and the screen has become a wall which looks as if it has been built by savages to ward off evil spirits, with the knees of the sacrificed protruding from it like hoops. There is every sign that Armitage is going to be one of the most important sculptors of his generation.



9, Race-Course, by Raoul Dufy (O'Hana).

'Scottie' Wilson, one of the most original of modern primitives, has also been exhibiting at Gimpels. He has long since reached the limits of virtuosity which his 'home-made' technique allows, but is still able to introduce new effects into decorative panels of birds, trees, flowers and potato-nosed men, executed in coloured inks on black paper. This time, all the eyes are dead white, and they shine like a beady incrustation or the lights of a city at night.

The Redfern Gallery has just held a fascinat-

ing exhibition of Graham Sutherland's preliminary sketches for the Festival painting 'The Origins of the Land.' They are passionate little studies of piled-up rocks, of naked, unseemly, reptilian roots, and of primeval flying creatures with bared teeth which emulate the cruelty of the famous thorn studies. Sometimes these watercolours and gouaches are on fire with volcanic reds, sometimes they sparkle in a frost of mauves and greens. Few of them were used in the big composition, and their wide-ranging exploration of the theme reveal the extraordinarily rich background of forms and ideas from which the artist's monumental image of centuries of slow growth emerged.

Mr. Jacques O'Hana's new Gallery in Carlos Place is one of the largest and most elegant in London. He has opened it with the Petrides collection of race-course pictures by Raoul Dufy. They were painted in England and France between the wars and are among the most distinguished demonstrations of Dufy's ability to render complex spectacles in a lucid system of animated signs.

Robert Melville

CORRESPONDENCE

To the Editors,

THE ARCHITECTURAL REVIEW

SIRS,—Mr. Betjeman, with the support of two bishops, and of other distinguished Anglicans, has appealed for funds to restore Pugin's church at Tubney, Oxon, one of his few buildings for the Church of England.

As Pugin's co-religionists are precluded from assisting in this praiseworthy commemoration of his centenary, it is felt that Catholic recognition of his genius, and of the part he played in the Catholic Revival, could most suitably be shown in a memorial forming part of the restored St. George's, Southwark. The form and nature of this memorial would be dictated by the amount subscribed.

Among Pugin's admirers, the participation of Catholic architects, artists and craftsmen would be especially appropriate. Pending the emergence of an official committee, all those interested are invited to communicate with the final signatory of this letter.

Yours, etc.,

H. S. GOODHART-RENDEL.
JOHN ROTHENSTEIN.
M. R. TRAPPES-LOMAX.
LINWOOD SLEIGH.

Wimbledon.

Italian Eclecticism

To the Editors,

THE ARCHITECTURAL REVIEW

SIRS,—We were very interested in Mr. Rayner Banham's article on 'Italian Eclecticism,' which appeared in the October number of the ARCHITECTURAL REVIEW. Italian architecture is at the moment very much in vogue, and the indiscriminate gathering of anything Italian as suitable subjects for criticism or imitation has caused many of us to share the disquiet which Mr. Banham expresses. Nevertheless, in this particular case his anxiety seems exaggerated. The building chosen for discussion was designed by an architect whose work has until now not been considered as at all outstanding or characteristic of anything very particular. On examination the building appears as an undistinguished example of the style adopted for the '42 exhibition in Rome (whose ruins Mr.

Rudofsky so brilliantly described in the REVIEW a few months ago) embellished with a few features of more recent date. Since Mr. Banham has chosen to mention it with only one other Italian building of this century, Terragni's Casa del Fascio in Como, acknowledged as one of the finest buildings of the inter-war period, one must assume that he considers it in some way comparable in quality. There is call, sir, for much more serious criticism of architecture; and many Italian architects, those of the younger generation especially, would welcome informed criticism however derogatory of the work produced over here. The cause of criticism and mutual understanding would not be very much helped if an article appeared in an Italian magazine, criticizing only (to take a parallel, though much more important example) the new government offices in Whitehall, and comparing the Highpoint blocks with them, to the latter's disadvantage.

Yours, etc.,

Milan.

MICHAEL BURTON,
JOSEPH RYKWERF.

[Mr. Banham replies: 'From this letter it appears that Messrs. Burton and Rykwerf have two explicit objections to my article. The first is to the building itself—but I think that the opening words of the article make the reasons for discussing the Palazzo Grande quite clear, and no further explanation or apology is needed. The second objection is completely nugatory. They assume that I consider the Palazzo Grande comparable in quality to the Casa del Popolo in Como, and in their last sentence they imply that I think it even better, but if they re-read the relevant passage they will see that the two buildings were compared only on the grounds of siting and symmetry—both stand in a positive relationship to a centralized church facade—and for no other reason. The implication of their letter, however, is that this is an attack on the modern movement in Italy as a whole, but it can only appear so to those who regard architecture through the mental filter (in this case CIAM-coloured spectacles) of some orthodox body of received opinion. To refer to the architect as someone whose work has "not been considered" to be this or that suggests an acceptance of pre-digested opinions which I find most sinister, the pre-echo of a Modern Academicism. The "cause of architecture and mutual understanding" will best be served by looking objectively at the buildings and speaking as one finds—the acceptance of hand-out criticisms is a disservice to the Modern Movement and to the organic ideals of CIAM.']

Recent Buildings in Oxford and Cambridge

To the Editors,

THE ARCHITECTURAL REVIEW

SIRS,—May I support Mr. Richards in his vigorous and witty attack on the sterility of recent building for the Universities of Oxford and Cambridge. Correspondence in your December issue serves to reinforce his castigations. However, it is un-



10 fortunate that he overlooked one smallish post-war building in Cambridge, the addition to the Physical Chemistry Laboratory in Free School Lane, by Professor Basil Ward, of Ramsey, Murray and White. If attention is drawn to this building it might encourage the responsible officers of the Universities to revise their criteria of architecture.

Yours, etc.,

London.

JEREMY B. ROWE.

INTELLIGENCE

A competition open to manufacturers for the design of seats out of doors has been arranged by the Council of Industrial Design and the Corporation of Birmingham. Particulars from COID. Notification of intention to compete required before February 14; entries by April 30.

An International Exhibition of Architecture will be held as part of the II Biennial of the Sao Paulo Museum of Modern Art. Those architects wishing to be represented should write to Rua 7 de Abril 230, Sao Paulo.

TRADE & INDUSTRY

Heat and Power

Post-war housing and all its problems, despite universal agreement as to its urgency, has nevertheless been the source of much ammunition for political battles, from the House of Commons downwards. How many dwellings can be squeezed each year from our straitened capital resources, what sort of dwellings they should be, where they should be built, how they shall be owned, what they should look like are questions which provide ample grounds for disagreement. But there is another battle which rages round the housing estates, of an entirely different character from the first. It is a three-cornered battle of giants, and oddly enough it is never won or lost.

Every dwelling must be provided with heat, light and power and this is where battle commences, for the protagonists are the gas industry, the electricity industry and the solid fuel industry. In spite of the curious mixture of nationalization and free enterprise which is intermingled in each—the supply of the energy is nationalized but that of the appliances in which each is used is not—it is evident that freedom to compete with each other is valued by all three. The battle is of course not always a three-sided one, and sometimes there is no battle at all. In lighting the home, there is no rival to electricity and no one has evolved any appliance alternative to the electric vacuum cleaner. The main fireplace is still dominated by the solid fuel appliance, whether economical or otherwise. The gas industry has a very big hold on the market for cookers while the industry's other main product, coke, holds a formidable position in the supply of hot water. The battle for consumer preference perhaps rages hottest round the appliances for periodic room-heating, for summer hot-water heating, for refrigerating and for laundering.

The remarks are prompted by two recent publications, issued by the Gas Council and the British Electrical Development Association respectively. The first, entitled *Cooking in the New Homes*, points out the extent to which the average consumer favours a gas cooker for this function and presents a very strong case for the inclusion of gas facilities in every home. Another important point brought out is the importance of proper coal utilization to the national economy, for not only does gas production result in two fuels, gas and coke, becoming available, but the process itself is highly efficient and releases a multitude of valuable by-products such as coal-tar, fertilizers and benzole, which play a very important part in modern industry.

[continued on page 136]



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The electricity industry's booklet *Electric Kitchen Planning* approaches the task of consumer persuasion from a different angle. Undoubtedly the metamorphosis in the kitchen during the last generation owes more to the efforts of these two industries than to any other agency, for the close attention to the design of appliances, which became such an important part of sales policy before the war, together with the kitchen's diminution in size, raised problems which logically embraced the kitchen as a unit. This booklet examines more closely than most previous ones the different types and sizes of kitchen that have to be planned, not only those in new houses but in old ones too. Problems of storage of all kinds are examined in considerable detail, as are those of laundering, water-heating, illumination, and working-levels.

There will always be room for argument as to the best form of installation even in a given set of



11, wall radiators at Cavendish House, Norwich, made by Gulf Radiators.

circumstances, but circumstances, requirements, preferences and even prejudices vary between different householders, between town and country dwellers, flat and house dwellers and from one part of the country to another.

A Panel Radiator

At one time a radiator was a bulky, ugly, obtrusive, undustable object, quite unmanageable in any decorative scheme unless hidden, but unavoidable if one had to have that continuous all-pervading warmth which only central heating could provide.

Technical advances in the manufacture of radiators and more discerning ideas on the part of manufacturers have in recent years resulted in big strides in radiator design. The illustration, which is of Cavendish House, Norwich, a modern office building converted from a factory and warehouse, shows radiators painted in blue and picked out in white in a reception area. Made by Gulf Radiators Ltd. of Penarth Road, Cardiff, from pressed steel sections and electrically welded, they are available in any number of sections yet take up very little space. Both column and panel types are made, the former capable of being curved round corners, the latter of being curved or angled. The panel type can also be used to heat two rooms simultaneously by being installed as part of the dividing wall, thus involving a great saving in materials without loss of heat.

Corrugated Aluminium Sheet

This is an age of many new materials and it is hardly likely that the text books of the future will find a convenient label for it to compare with those of the 'bronze age' or the 'iron age.' But if any metal were picked in this way, aluminium would be well up in the running.

One of the most valuable applications of aluminium in building is as a roofing material in the form of corrugated sheeting. Being non-corro-

sive, it does not require additional protection with paint, though it can be painted, it has a highly reflective surface and so makes for cool internal conditions inside a building in summer and warm ones in winter, while corrugated sheets when laid on plain sheeting form an air-space between aluminium which results in a good standard of insulation.

I.C.I. Metals Division, Witton, Birmingham, manufacture 'Kynal' aluminium sheets for this purpose both from commercial aluminium and from 1½ per cent. manganese alloy and 2 per cent. magnesium alloy, in a variety of tempers. Corrugations are available corresponding with those adopted by the steel industry, pitched on centres from one to five inches. The normal standard is three inches with ½ inch deep corrugations. Standard lengths are six feet and eight feet usually with eight or ten 3 inch corrugations. Maximum sizes in the heavier grades go up to 12 feet by 3 feet 11 inches.

Many advantages accrue in transport and construction from the light weight of aluminium, reducing considerably the problem of handling. In assembly, aluminium alloy fittings are most suitable but hot-dipped galvanized and sherardized fittings may also be used. Copper and copper alloy should not be used for these unless they are properly insulated from the aluminium.

Two New Metal Chairs

Sebel Products Ltd., manufacturers of tubular steel chairs and tables, of 39-41, New Oxford Street, W.C.1, have recently announced the introduction of a Nest-a-bye steel and canvas chair. With a frame of ½ inch steel tube, seat and back rest in polished canvas, the chair is of what is now a conventional shape for this type of product.

A less conventional model is their new Fold-a-bye chair which is shortly to be introduced. It is also in ½ inch tubular steel finished in plastic enamel in a

[continued on page 138]

Furniture for Special Needs

Industrial and other organisations are becoming increasingly alive to the value of display and exhibition techniques when planning interior decoration. Heal's have many years' experience of working in this field as well as in carrying out schemes for offices, boardrooms, restaurants and hotels, and offer their services to architects. They are always ready to provide original designs of their own or work to your plans.

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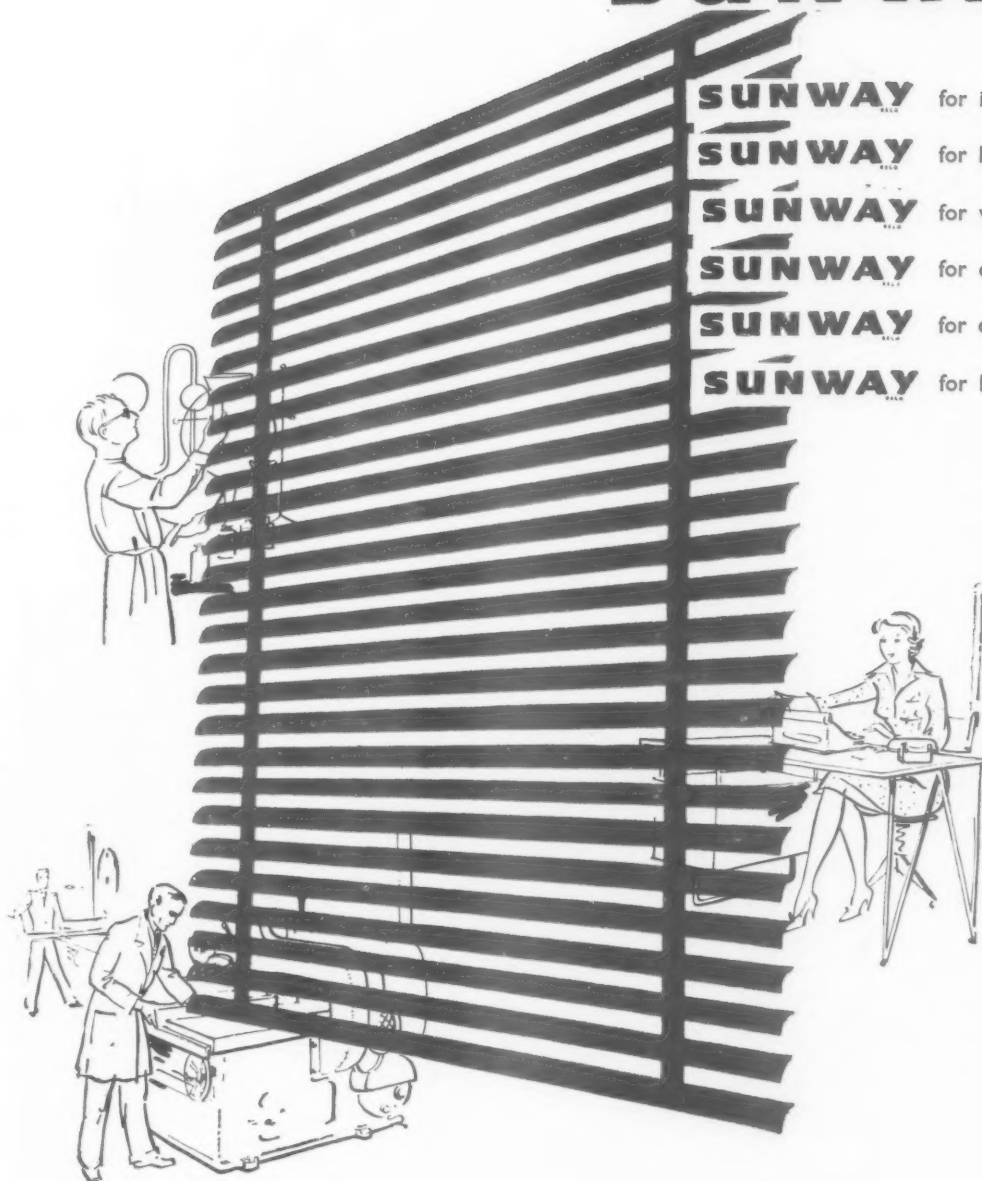
The Exhibition Room, the International Wool Secretariat, Dorland House, London, S.W.1. Architects: Halfhide and Partners. The furniture and fittings of Australian walnut were made by Heal's Contracts Ltd. in collaboration with the architects.

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choice of six colours. The seat and back are moulded and are in a plastic 'wrinkle' finish which is highly resistant to wear, burns and insect attack, and is available in several colours. Alternative seats are made with perforations for rain drainage in outside use, and in a specially processed rayon pile fabric with a suede type of finish.

The chair weighs just under 10 lb. and when folded is no more than 2 inches thick. Overall width and depth when open is 17 inches and 20 inches, giving a seat width of 14 inches and a depth of 15 inches. The height is 31½ inches.



12, Sebel Products' new tubular steel folding chair.

The chairs may also be clamped together in twos, threes and fours for auditorium use, without affecting their folding capabilities. If clamped permanently in position, they are exempt from purchase tax.

Booklets Received

Enchiridion, a periodical issued by Firth-Vickers Stainless Steels Ltd., Sheffield, deals with various uses of stainless steels, together with some notes on the company's new Shepcote Lane Rolling Mills.

Zinc Bulletin 10 published by the Zinc Development Association, Turl Street, Oxford, and available on request, includes another Z.D.A. Information Sheet—on zinc weatherings—together with news of zinc applications in the building and other industries.

Notes

The Gypsum Building Products Association, 11, Ironmonger Lane, E.C.2 announce a price reduction as from last December, for Gypsum plaster-board. All prices of Wallboard, Baseboard and Lath will thus be reduced by ¼d. per square yard.

Medway Buildings and Supplies Ltd., of Rochester, have been awarded the contract for supplying pre-fabricated buildings for a construction camp to house two thousand men at a new oil refinery in Aden. Including a 150-bed hospital, it will be completed in three months and the contract is valued at over £250,000.

CONTRACTORS etc

Technical College at Hatfield. Architects: Easton & Robertson. Consulting Structural Engineer: Felix J. Samuely. Main contractors: Gilbert-Ash Ltd. Sub-contractors: precast concrete units: Holland

& Hannen & Cubitts Ltd. Heating and hot water services: G. N. Haden & Sons. Electrical services: T. Clarke & Co. Specialist joinery: Norbury Joinery & Cabinet Works Ltd. Windows, metal doors, etc.: Crittall Mfg. Co. Sanitary fittings: John Bolding & Sons. Asphalt and 'Valchrome' floorings: Val de Travers Asphalt Paving Co. Doors: D. Burkle & Son. Fittings: Educational Supply Association Ltd. Boiler house chimney: Chimneys Ltd. Plastering and painting: A. Horrocks & Sons. Kitchen and cafeteria equipment: Benham & Sons. Flooring: Korkoid Decorative Floors; Granwood Flooring Co.; Stevens & Adams. Roof lights: British Challenge Glazing Co. Blinds: J. Avery & Co. Plumbing: J. S. Wright & Co. Bricks: Uxbridge Flint Brick Co.; Cement Marketing Co. Lettering and special plastering: The Lettering Centre; E. J. & A. T. Bradford. Ceiling treatment: Tentest Fibre Board Co. Shutters: Arthur L. Gibson & Co. Balustrades: C. Johnson Bros.; Grundy Arnatt. Quarry tiles: A. Bleakley & Co. Chalk boards: J. Starkie Gardner. Cement glaze: Robb's Cement Enamel Finishes. Steel ladders, railings, etc.: F. A. Norris & Co. Curtain suspensions: Hall & Dixon. Terrazzo: Art Pavements & Decorations. Steel lockers: Sankey-Sheldon Ltd. Ironmongery: N. F. Ramsay & Co. Cycle racks: Alfred A. Odoni & Co. Cedarwood shingles: W. H. Colt (London) Ltd. Special fittings: Fredk. Sage & Co. Special furniture: George Hammer & Co. Tip-up seats and nesting chairs: Cox & Co. (Watford) Ltd. Lighting fittings: Thorn Electrical Industries Ltd., Troughton & Young Ltd., Courtney Pope (Electrical) Ltd.

Showrooms for the Cotton Board. Designers: Robert and Roger Nicholson. Consulting Engineer: Laurence Kenchington. Contractors: Russell Brothers (Paddington).

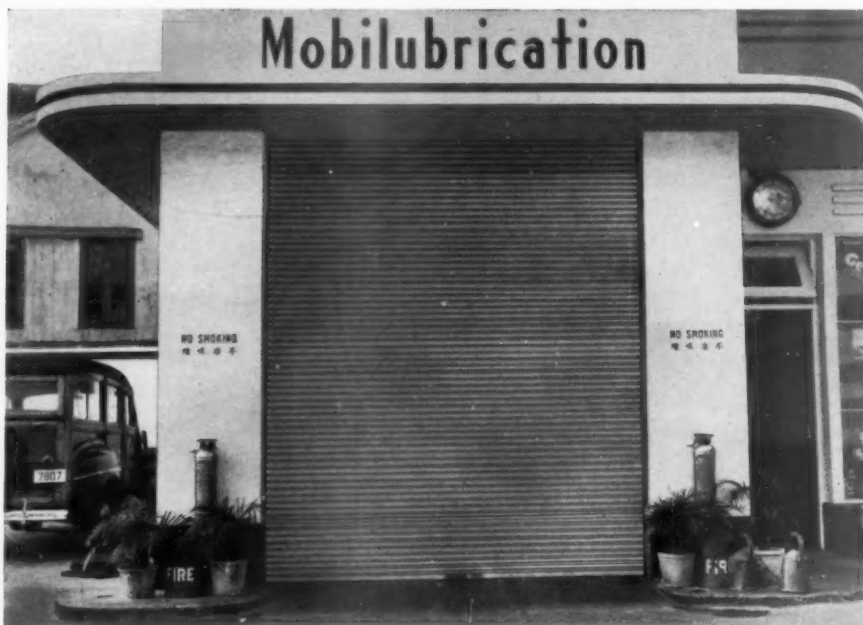
Showrooms for a Textile Manufacturer. Architects: Gordon & Ursula Bowyer. General contractors: J.

[continued on page 140]

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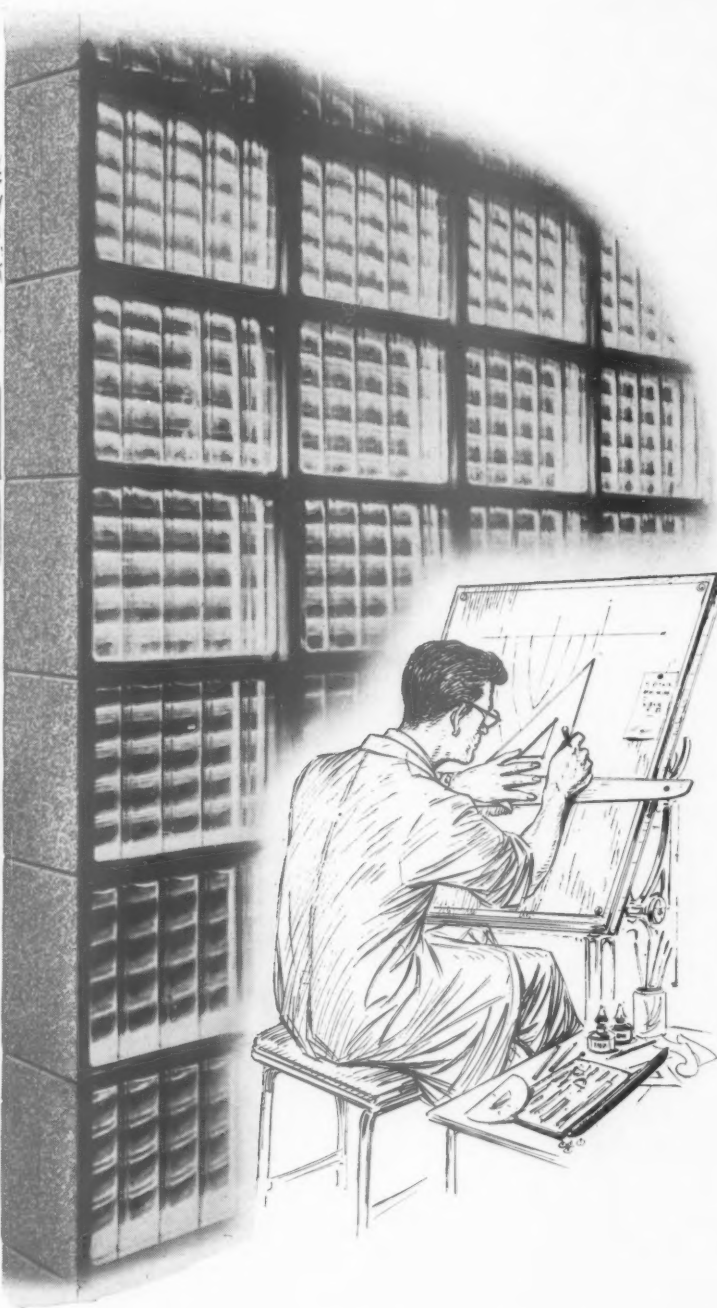
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continued from page 138]

Gerrard & Sons. *Sub-contractors: electrical contractors:* Hubert Smith & Co. *Special lighting:* Thorn Electrical Industries Ltd. *Light fittings:* George Forrest & Son; Merchant Adventurers Ltd.; Troughton & Young Ltd. *Automatic fire alarms:* Associated Fire Alarms. *Automatic sprinklers:* Mather & Platt. *Heating and ventilating:* Ashwell & Nesbit. *Fibrous plaster and suspended ceilings:* David Esdaile & Co. *Suspended acoustic ceilings:* Newalls Insulation Co. *Sanitary fittings:* Stitsons Sanitary Fittings Ltd. *Ashburton marble:* Fenning & Co. *Floor tiling:* Carter & Co. *Architectural metal work:* A. Arden & Co. *Perforated metal panels:* G. A. Harvey & Co. (London). *Door furniture:* A. J. Binns Ltd. *Entrance door handles:* A. Arden & Co. *Accordo blind:* Hills (West Bromwich). *Venetian blind:* Tidmarsh & Sons. *Chairs:* S. Hille & Co. *Special furniture:* J. Gerrard & Sons; A. Arden & Co. *Decorative glass:* London Sand Blast Decorative Glass Works.

Shoe Store in Bristol. *Architect:* Ellis E. Somake, Staff Architect to the Dolcis Shoe Co. *Consulting engineers:* Malcolm Glover & Partners. *Quantity surveyors:* Gardiner & Theobald. *General contractors:* William Cowlin & Son Ltd. *Shopfitting contractors:* Courtney Pope Ltd. *Electrical contractors:* Courtney Pope (Electrical). *Sub-contractors: artificial stone:* T. W. Hop & Sons. *Plumbing:* Arthur Scull. *Metal windows:* Williams & Williams Ltd. *Ironmongery:* Comyn Ching & Co. (London). *Lift:* Keighley Lifts. *Heating and ventilation:* Rosser & Russell. *Sanitary fittings:* W. N. Froy & Sons. *Paints:* Thomas Parson & Sons. *False ceilings:* Tomei & Sons. *Blinds:* Adam Ltd. *Asphalt roofing:* Ragusa Asphalt Co. *Quartzite:* John Stubbs Ltd. *Marble:* J. Whitehead & Sons. *Pneumatic cash tubes:* Lamson Engineering Co. *Terrazzo pavings:* Marriott & Price Ltd. *Chairs and footstools:* Geo. Hammer & Co. *Fabric panels and display felts:* F. G. Minter Ltd. *Carpets:* P. E. Gane Ltd. *Drapes and fabrics:* David Whitehead Ltd. *Wallpapers:*

Primavera. Plastic lettering: The Lettering Centre. **Housing at Lansbury, Poplar, London.** *Architects:* Bridgwater & Shephard. *Quantity surveyors:* John Leaming & Son. *General contractors:* A. E. Symes Ltd. *Sub-contractors: asphalt:* Natural Rock Asphalte Co. *Reinforced concrete, structural steel:* Twistell Reinforcement, Ltd. *Slates:* Poilite Asbestos Cement Slates, laid by Whittaker & Co. Ltd. *Patent glazing:* W. Tabor & Son (Glass). *Patent flooring:* Marley Floor Tile Co. *Grates:* Broad & Co. *Electric wiring:* Haines & Sheppard. *Plumbing:* Matthew Hall & Co. *Door furniture:* Nicholls & Clarke, Ltd. *Casements:* Jayanbee Joinery, Ltd. *Plaster:* Co-Plastering (East) Ltd. *Metalwork:* Clark, Hunt & Co. *Shrubs and trees:* Wallace & Co.

Primary School at Chiswick, London. *Architect:* C. G. Stillman, County Architect. *Sculpture:* Jan Koper. *General contractors:* Prestige & Co. *Sub-contractors: roofing:* Permanite Ltd. *Steel trusses:* Boulton & Paul Ltd. *Tubular columns:* Tubewrights Ltd. *Bricks:* E. H. Smith (London) Ltd. *Heating, gas and hot water installation:* Edward Deane & Beal Ltd. *Electrical installation:* W. T. Bushell Ltd. *Metal windows and doors:* Crittall Manufacturing Co. *Metal door frames:* Morris Singer Co. *Flush doors:* Flexo Plywood Industries Ltd. *Ventilators and controllable louvres:* Colt Ventilation Ltd. *Balustrading:* City Display Organization. *Ironmongery:* Nettlefold & Moser Ltd. *Sanitary fittings:* Thomas O'Brien. *Asphalt path and playground:* General Asphalte Co. *Entrance gates:* Clark, Hunt & Co.

Child's Chair by Ambrose Heal

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The Voysey Inheritance

Mr. Ablett, Chief Architect, Hemel Hempstead Development Corporation collaborated with W. Leslie Jones on the design of Alford and Alder factory (December, 1952).

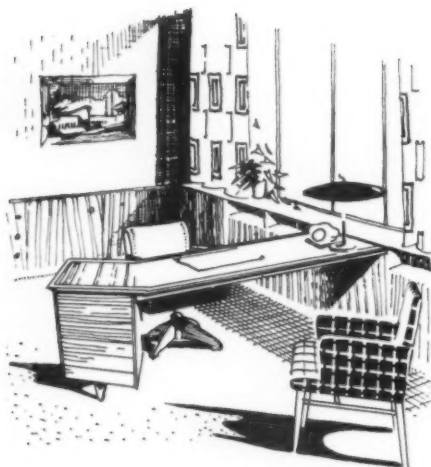
ACKNOWLEDGMENTS

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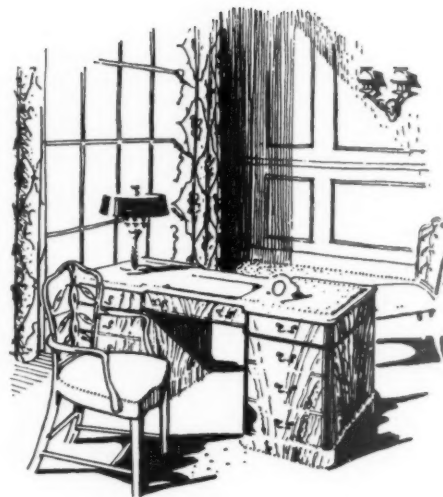
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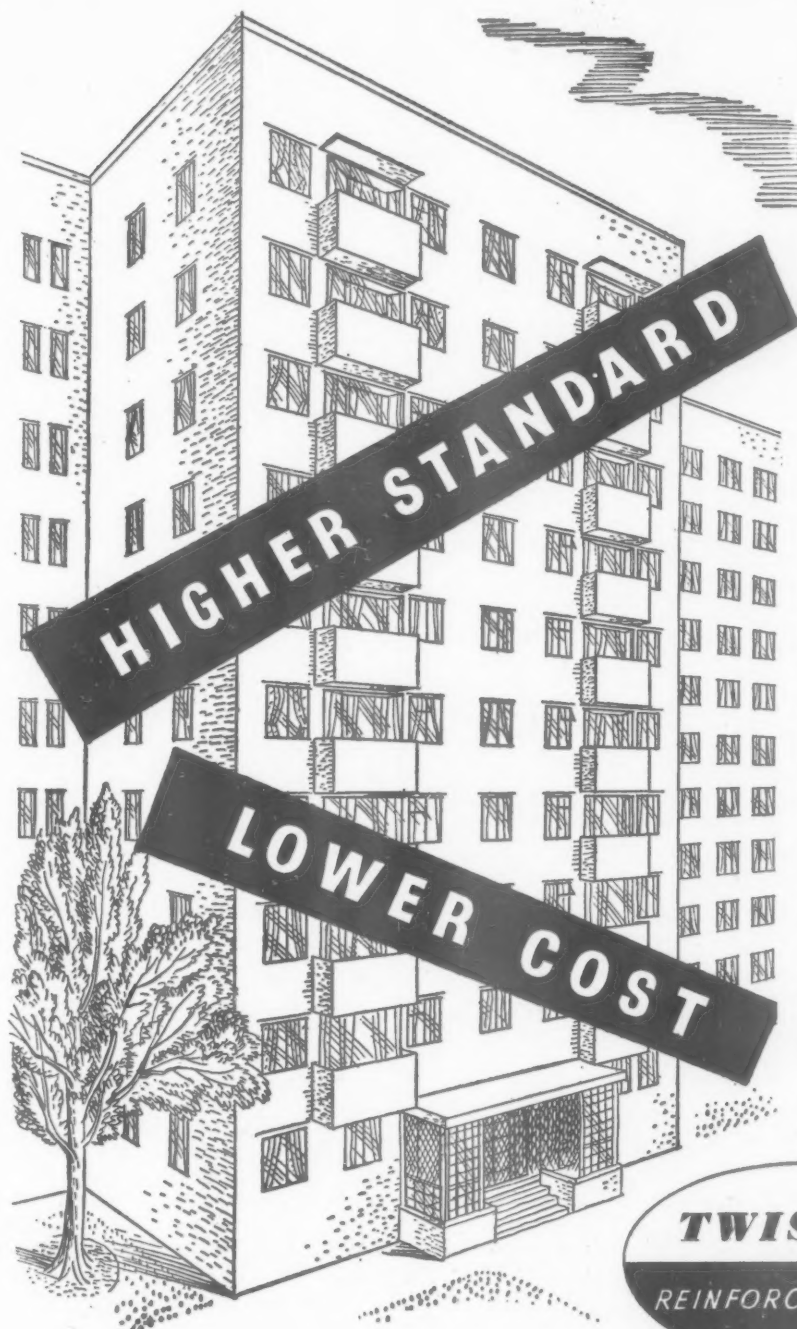


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